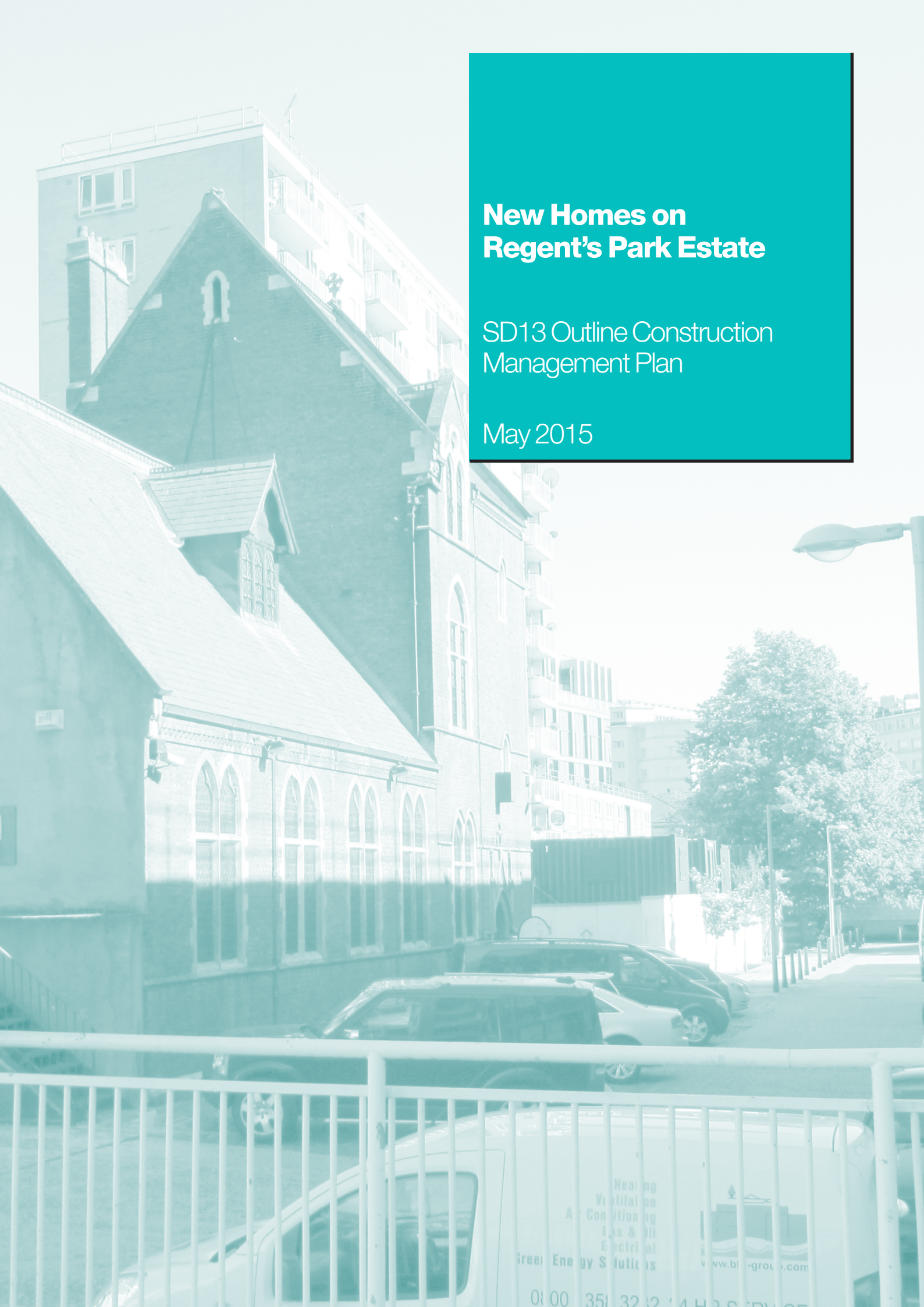

New Homes on Regent's Park Estate

SD13 Outline Construction Management Plan

May 2015

Camden

Tibbalds
planning and urban design

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CampbellReith
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Confidential

Regents Park Estate

Outline Construction and Environmental Management Plan (CEMP)

For

Camden

Project Number:

11775

May 2015

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Appendices

Tables

1.0 INTRODUCTION

1.1. Background

1.1.1. London Borough of Camden Council (LBC) (herein the 'Applicant'), is applying for full planning permission for the redevelopment of 8 plots (herein 'the Plots') located within the Regents Park Estate (RPE) (herein 'the Study Area'), situated in the Euston area of London Borough of Camden, London and collectively cover 2.52 hectares (ha). Plot 7 Camden People's Theatre (formally Site 9) will be applied via a separate application.

1.2. Eleven sites were originally assessed, however since the production of a number of technical surveys and assessments, the sites are now referred to as 'Plots' and only 9 of the previously identified 11 sites are being taken forward to planning. Note that one plot, Plot 7 will be applied for via a separate planning application. The Plots that are being taken forward to planning are listed in **Table 1.1** and will be referred to within this document. **Table 1.1** describes each plot and proposed development. **Figure 1.1** illustrates the plot locations.

1.3. Document Purpose

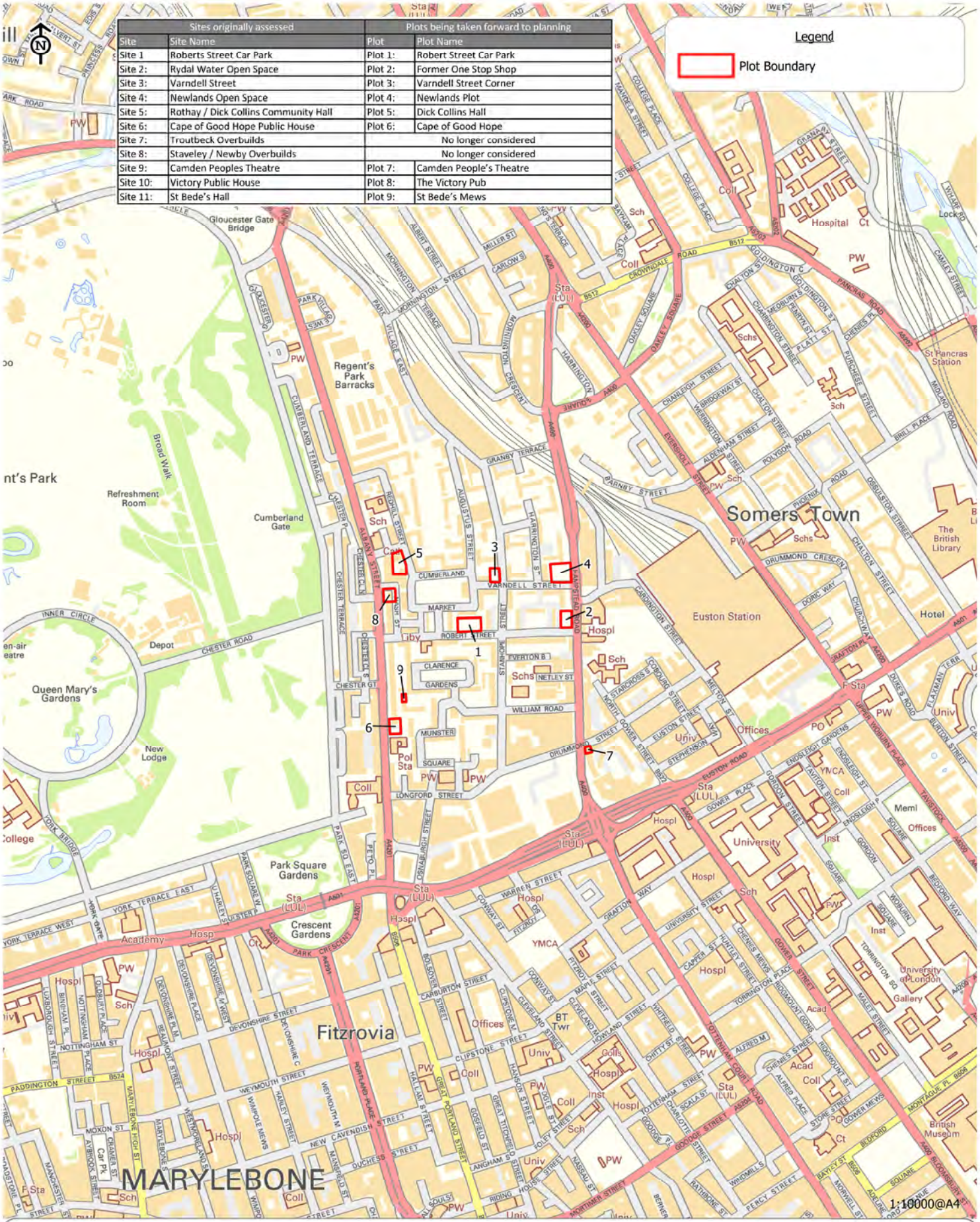
1.3.1. A Construction and Environmental Management Plan (CEMP) provides the management framework required for the planning and implementation of construction activities in accordance with the environmental commitments identified as part of environmental assessments undertaken in support of the planning application as well as any subsequent planning conditions or Section 105 legal agreements. Its purpose is to reduce the risk of adverse impacts on environmental resources, local residents and businesses.

1.3.2. The document describes the checking, monitoring and audit process that will be implemented to ensure works are being undertaken in accordance with these requirements, together with measures to enable appropriate corrective actions or mitigation measure are taken.

1.3.3. The CEMP forms part of the overall project management during the construction phase and as such, activities describes will be integrated with other Quality, Sustainability and Health & Safety Management process set up by the Principal Contractor. It is a live document that will be regularly updated, subject to environmental audits to enable construction activities to be satisfactorily managed and mitigated.

1.3.4. Although the CEMP is a stand-alone document, it will be supported by a range of associated documents likely to be required by planning conditions or existing agreements with regulatory authorities. The accompanying documents should be confirmed by the Principal Contractor:

- Waste Management Strategy;
- Construction Traffic Management Plan;
- Pollution Control and Contingency Plan;
- Dust Control Plan – Control of Dust from Construction;
- Noise Control Plan;
- Spillage Response Plan;
- Environmental Training Plan;
- Project Community Liaison Plan; and



Sites originally assessed		Plots being taken forward to planning	
Site	Site Name	Plot	Plot Name
Site 1	Roberts Street Car Park	Plot 1:	Robert Street Car Park
Site 2:	Rydal Water Open Space	Plot 2:	Former One Stop Shop
Site 3:	Varndell Street	Plot 3:	Varndell Street Corner
Site 4:	Newlands Open Space	Plot 4:	Newlands Plot
Site 5:	Rothay / Dick Collins Community Hall	Plot 5:	Dick Collins Hall
Site 6:	Cape of Good Hope Public House	Plot 6:	Cape of Good Hope
Site 7:	Troutbeck Overbuilds	No longer considered	
Site 8:	Staveley / Newby Overbuilds	No longer considered	
Site 9:	Camden Peoples Theatre	Plot 7:	Camden People's Theatre
Site 10:	Victory Public House	Plot 8:	The Victory Pub
Site 11:	St Bede's Hall	Plot 9:	St Bede's Mews

Regents Park Estate

Client: Camden

Figure 1.1:
Location of Plots within Regent's Park Estate

Scale: 1:10000@A4

Job Number: 11775
Drawn by - Checked by: RC - RJ
Drg No - Status/Revision: GIS092 - A
File location: O:\11750 - 11999\11775 R - Regents Park\Project_Workspaces\ (pdf in Outputs)
Date (Revision History): 11/05/2015 (A, First Issue, 11/05/15, RC)

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- Ecological Management Plan.

1.3.5. The London Borough of Camden (LBC) have sent out their draft Construction Management Plan (CMP) pro forma for internal consultation. At the time of preparing this report, this document has not been finalised. The final Outline CEMP will conform to the final version of LBC's CMP pro forma.

Table 1-1: Plot Description and Development Proposals

Plot numbers and names	Former Site numbers and names used in technical assessments / surveys	Area (ha)	Plot Description	Development Proposals
Plot 1: Robert Street Car Park	Site 1: Robert Street Car Park	0.12ha	Located to the north of Robert Street in the centre of the Regent's Park Estate. The plot consists of a car park which covers a large proportion of the site and a smaller strip of shrubs and trees to the north. The plot is bounded to the east and west by access roads, with high rise residential blocks beyond. Immediately to the north of the plot is pedestrian access to the residential block.	New residential block with ground floor community centre on the existing car park. The Dick Collins Community centre would be relocated to this plot. No. of units: 12 plus Community Centre No. of storeys: 5
Plot 2: Former One Stop Shop	Site 2: Former One Stop Shop	0.07ha	Located to the north of Robert Street and to the west of Hampstead Road. The plot comprises mainly soft landscaping; however the north west corner of the plot is paved and has two benches. A large willow tree occupies the north eastern corner of the plot. A temporary structure was previously situated on the plot and consequently there are areas with minimal vegetation. Immediately to the east of the plot is Hampstead Road, to the south of the plot is Robert Street, to the west is an access road with a locked gate to Robert Street and residential properties beyond. To the north of the block is a residential block and associated gardens.	New residential block with ground floor commercial facilities and community garden. No. of units: 24 No. of storeys: 7 to 8
Plot 3: Varndell Street Corner	Site 3: Varndell Street	0.05ha	Located to the north west of the crossroads between Varndell Street and Stanhope Street. Ground coverage comprises entirely soft landscaping, with trees lining the eastern border, and areas of shrubs and plants in the centre of the plot. The boundary of the plot to the roadways has a medium height hedge encompassing the fence. To the east of the plot is Stanhope Street, to the south is Varndell Street, to the west is a residential block, and to the north is a soft landscaped area.	New residential units adjacent to existing block. No. of units: 8 No. of storeys: 6
Plot 4: Newlands Plot	Site 4: Newlands Plot	0.16ha	Located to the north of Varndell Street and to the west of Hampstead Road. The plot comprises entirely soft landscaping with trees in the centre of the site, shrubs and small trees lining the boundary. BT boxes	New residential block with ground commercial facilities. Communal community garden.

			are set into the fence line along Varndell Street. To the east of the plot is Hampstead Road, to the south is Varndell Street, to the west is a pedestrian access way to the residential block beyond, and to the north of the plot is Cartmel Block, which is identified as a property which may be affected by the HS2 developments.	No. of units: 32 No. of storeys: 9 to 12
Plot 5: Dick Collins Hall	Site 5: Dick Collins Hall	0.11ha	Located to the south east of Redhill Street. Dick Collins Hall is a single storey community hall which occupies the northern half of the plot. There is a small garden area which occupies the central part of the plot, which has only pedestrian access. The southern area of the plot comprises vehicular access for the underground parking for the Rothay Block. This access passes underneath part of the Rothay Block in the south east corner of the plot. To the north and east of the plot is Redhill Street, and Rothay Block immediately borders the south and west of the plot. The Rothay Block has underground parking of unknown extent and layout.	New residential block. No. of units: 11 No. of storeys: 5
Plot 6: Cape of Good Hope	Site 6: Cape of Good Hope	0.07ha	Located to the east of Albany Street. Situated on the northern part of the plot is a vacant property, formerly the Cape of Good Hope Public House. The southern part of the plot comprises access roads and parking. The parking spaces are currently occupied by temporary storage containers in use by Lakehouse. To the north of the plot there is an approximately 8ft high retaining wall down to the basement level of the Troutbeck Block to the north. Immediately north of the plot is the Troutbeck block, to the south is an access road and the disused police station beyond.	New residential and community block. No. of units: 15 No. of storeys: 6
Plot 7: Camden People's Theatre	Site 9: Camden People's Theatre (CPT)	0.02ha	Located to the south of the cross roads where Hampstead Road and Drummond Street meet. The active community theatre and residential floors occupies the entirety of the plot.	New internal renovation for residential use. No. of units: 5 No. of storeys: up to 2 additional storeys
Plot 8: The Victory Pub	Site 10: Victory Pub	0.06ha	Located to the east Albany Street and to the south of Nash Street. The Victory Public House is situated to the east of the plot, with a garden to the west and is an active public house. To the south and east of the plot are residential properties, and Albany Street and Nash Street border the west and north of the plot	New residential and commercial block No. of units: 10 No. of storeys: 6

			respectively.	
Plot 9: St Bede's Mews	Site 11: St. Bede's Mews	0.01ha	Located off Albany Street to the east. The plot is currently an area of car parking to the north of St Bede's Hall, comprises entirely hard surfacing in reasonable condition. St Bede's Hall is situated immediately to the south of the plot, with access roads and parking for the surrounding residential blocks to the west. To the north of the plot is a pedestrian walkway between the Troutbeck block and Clarence Gardens and to the east of the plot is a soft landscaped area.	New residential block No. of units: 3 No. of storeys: 2

1.4. Construction Programme

1.4.1. The Proposed Development will be brought forward in two phases (Phase 1 and Phase 2) and is detailed in Lovell's 'Site Logistics' plan (ref: Site Logistics Lovell Submission_RegentsParkEstate_200215-2.pdf). Phase 1 will be split into four areas in order to create a strategy that minimises the impact of the existing residents and other stakeholders on the estate.

1.4.2. The phasing of the plots and number of units is summarised in **Table 1.2** and **Table 1.3** below.

Table 1-2: Phase 1 Logistics

Plot	Number of Units
Plot 1 Robert Street Car Park (formally Site 1)	12 plus Community Centre
Plot 2 Former One Stop Shop (formally Site 2)	24
Plot 3 Varndell Street (formally Site 3)	8
Plot 4 Newlands Plot (formally Site 4)	32
Plot 6 Cape of Good Hope (formally Site 6)	15
Plot 7 Camden People's Theatre (formally Site 9)	5
Plot 9 St. Bedes Mews (formally Site 11)	3

Table 1-3: Phase 2 Logistics

Site	Number of Units
Plot 5 Dick Collins Hall (formally Site 5)	11
Plot 8 The Victory Pub (formally Site 10)	10

1.4.3. **Table 1.4** provides a summary of an indicative construction programme for the Sites.

Table 1-4: Indicative Construction Programme

Plot	Activities	Duration	Handover
Plot 1 Robert Street Car Park (formally Site 1) Phase 1 Area 1	Enabling works, site preparation and removal of hardstanding	2 weeks	19/12/2016
	Earthworks	3 months	
	Construction	12 months	
Plot 2 Former One Stop Shop (formally Site 2) Phase 1 Area 1	Removal of greenspace	2 weeks	06/02/2017
	Earthworks	3 months	
	Construction	12 months	
Plot 3 Varndell Street (formally Site 3) Phase 1 Area 2	Removal of greenspace	2 weeks	24/10/2016
	Earthworks	3 months	
	Construction	12 months	
Plot 4 Newlands Plot (formally Site 4) (18 months) Phase 1 Area 2	Removal of greenspace	2 weeks	13/03/2017
	Earthworks	3 months	
	Construction	18 months	
Plot 5 Dick Collins Hall	Demolition and removal of	1 month	15/01/2018

Plot	Activities	Duration	Handover
(formally Site 5) Phase 2	hardstanding		
	Earthworks	3 months	
	Construction	12 months	
Plot 6 Cape of Good Hope (formally Site 6) Phase 1 Area 3	Demolition and removal of hardstanding	1 month	17/03/2017
	Earthworks	4 months	
	Construction	12 months	
Plot 7 Camden People's Theatre (formally Site 9) Phase 1 Area 4	Construction	12 months	31/10/2016
Plot 8 Victory Pub (formally Site 10) Phase 2	Demolition and removal of hardstanding	1 month	05/02/2018
	Earthworks	3 months	
	Construction	15 months	
Plot 9 St Bedes Mews (formally Site 11) Phase 1 Area 3	Demolition and removal of hardstanding	2 weeks	12/09/2016
	Earthworks	1 month	
	Construction	12 months	

1.5. Anticipated Construction Methodology

1.5.1. The logistics plans and traffic management proposals for each plot and area of build are included below (**Figures 1.2 – 1.5**). These have been extracted from 'Site Logistics' plan (ref: Site Logistics Lovell Submission_RegentsParkEstate_200215-2.pdf).

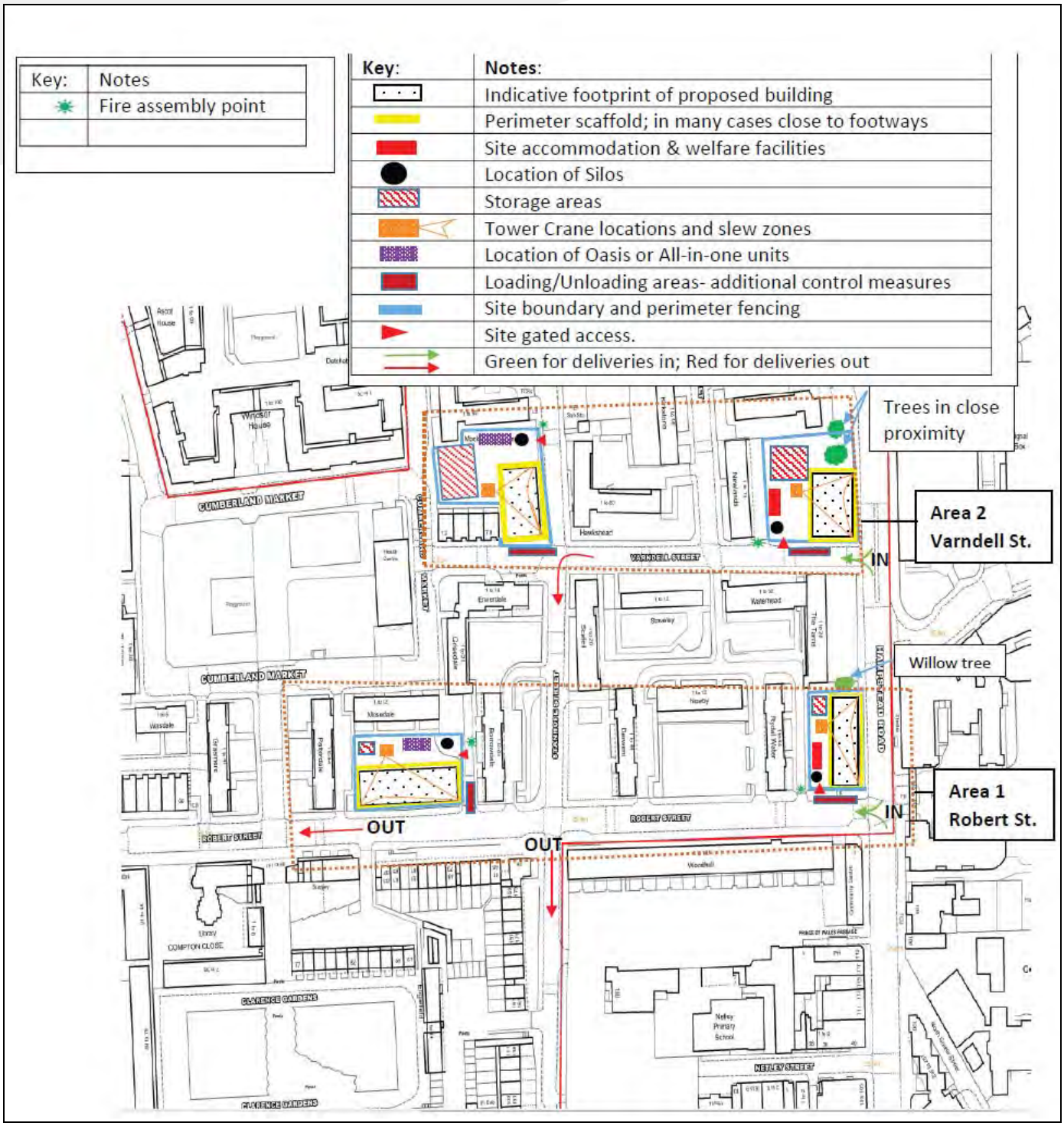


Figure 1-2: Logistics Plan – Area 1 Robert Street and Area 2 Varndell Street

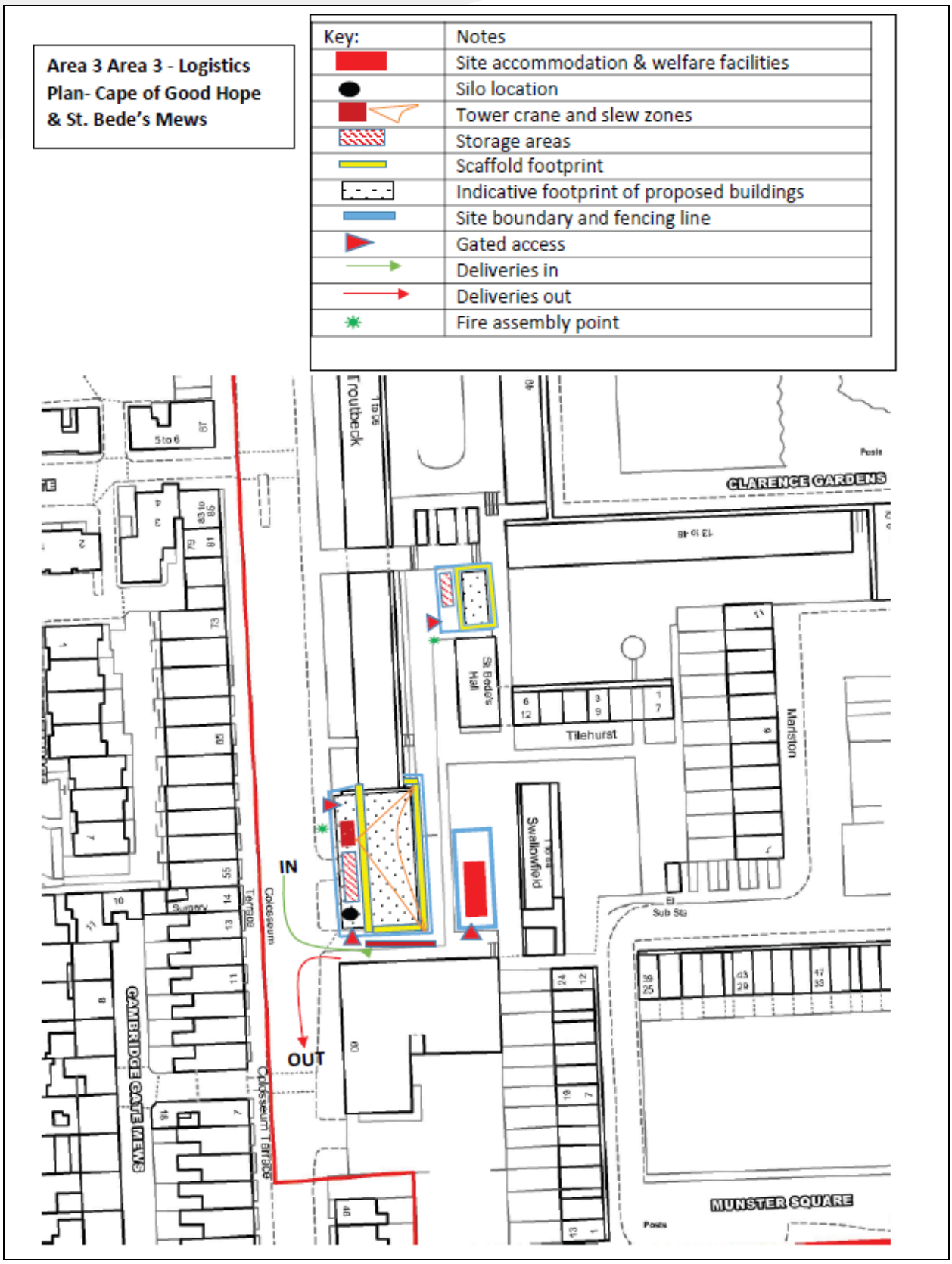


Figure 1-3: Logistics Plan – Cape of Good Hope and St. Bede's Mews

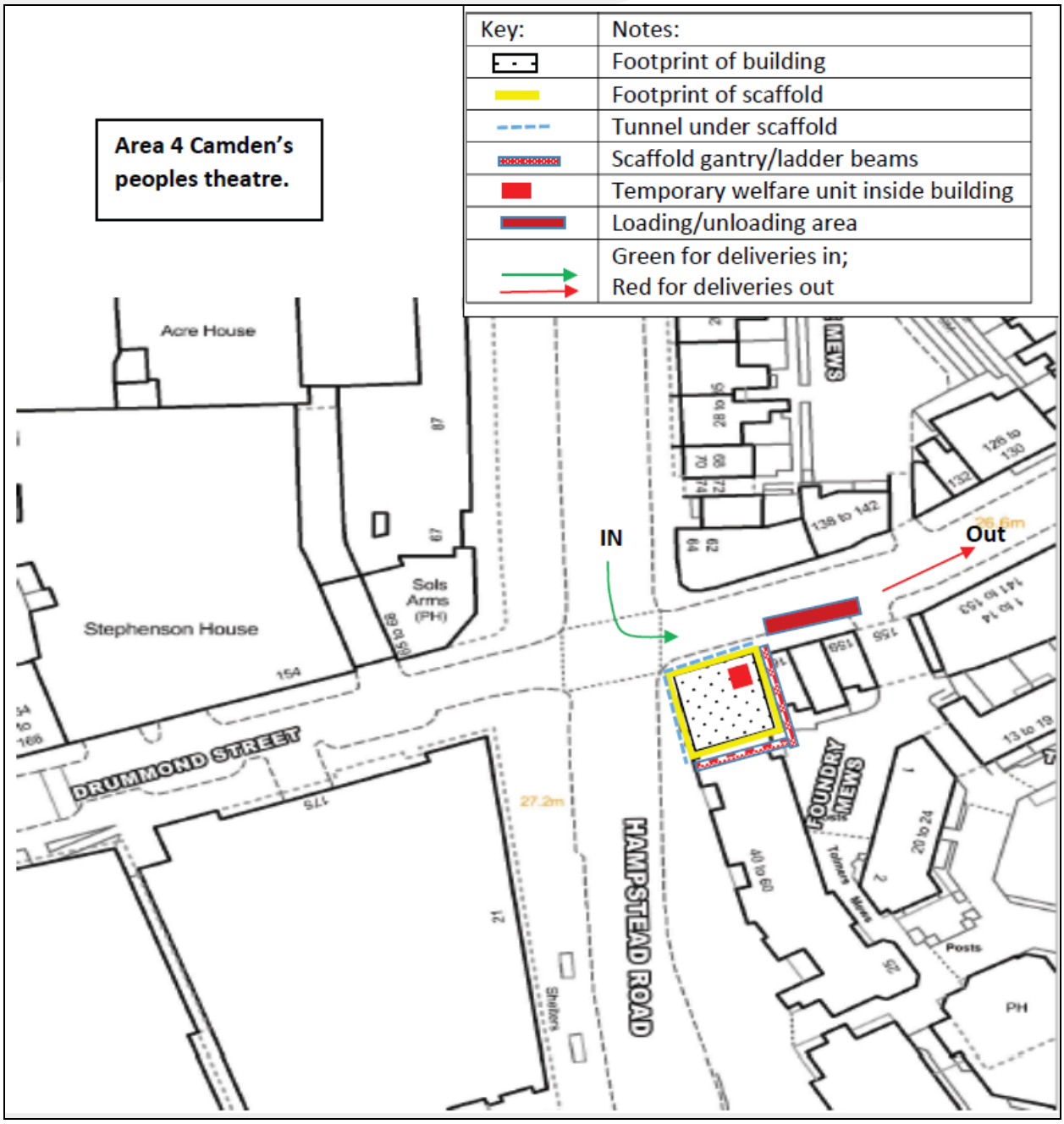


Figure 1-4: Logistics Plan – Camden People's Theatre

1.5.2. Plot 7 Camden People's Theatre will be applied for via a separate planning application; however it will form Phase 1 of the construction works.

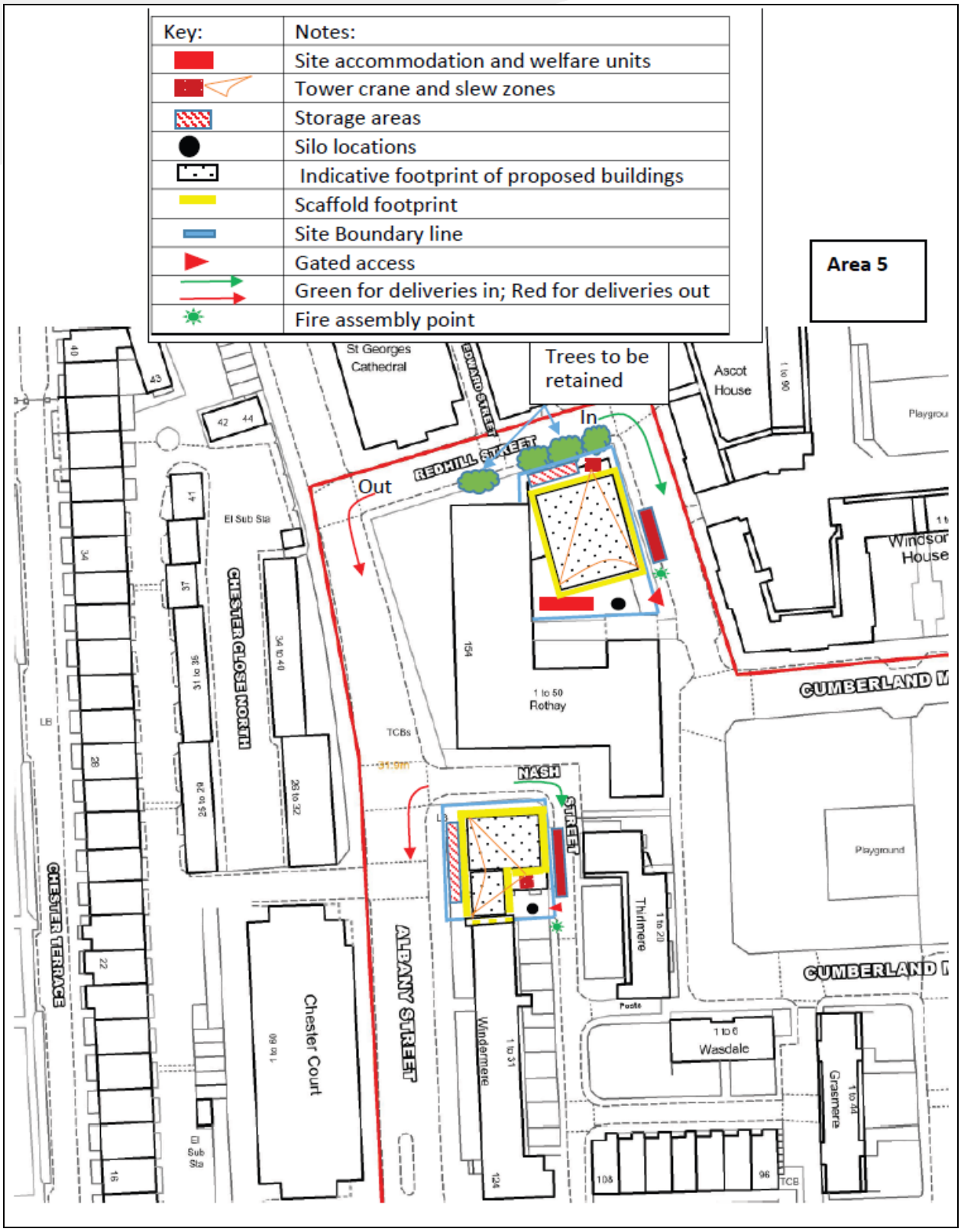


Figure 1-5: The Victory and Redhill Street

Construction Machinery

1.5.3. Consideration has been given to the types of plant that are likely to be used during the construction works on all of the plots. Note that some of the plant may not be used on Plot 7 Camden People's Theatre as the works comprise internal renovation works. The plant and equipment likely to be associated with each key element of the construction process is set out in **Table 1.5**.

Table 1-5: Plant used during the construction process

Plant	Stage	
	Enabling works, site preparation and removal of hardstanding	Demolition of Buildings
Tracked/wheeled 360 degree Excavators	X	X
Excavator mounted hydraulic breakers	X	X
Excavator mounted hydraulic crushers	X	X
Dumpers	X	X
Concrete Crushing Plant	X	X
Mobile Craneage/Tower Cranes	X	X
Eight-wheeler trucks	X	X
Air Compressors	X	X
Diamond cutting tools / saws	X	X
Hand Held Tools including breakers (pneumatic and hydraulic)	X	X
Power Tools including percussion drills, cutting disks, pipe-threaders	X	X
Wheel Washing Plant	X	X
Scaffold	-	X
Mobile access platforms	X	X
Delivery trucks	X	X
Skips & Skip trucks	X	X
Forklift trucks	X	X

1.6. Outline Construction Methodology

1.6.1. The construction methodology is provided in outline at this stage and will be the same for the majority of the plots unless otherwise stated below.

Enabling Works and Site Preparation

1.6.2. Enabling works and site preparation will involve:

- Construction of a temporary construction compound including site cabins which will contain offices and welfare facilities for management and construction workers;

- Construction of temporary access points for construction vehicles;
- Workshop facilities for maintaining the construction equipment;
- Erection of site hoarding around the Application Site which will be at a minimum height of 1.8m and painted using a uniform colour that recedes into its surroundings; and
- Installation of temporary surface water management measures for construction.

Removal of Hardstanding

1.6.3. All hardstanding within the plots will be removed and broken up to be reused where practicable as a drainage blanket during the later stages of the construction phase.

Demolition of Buildings

1.6.4. All the existing buildings within the plots will be demolished down to the ground slab with the materials reused or recycled where practical.

Construction Phase Vehicle Movements and Traffic Access

1.6.5. The number of HGVs travelling to and from the plots over a period of approximately two years is currently unknown.

1.6.6. The traffic management and access plans for each of the 9 sites are shown in **Figures 1.2 – 1.5** in section 1.5 above.

2.0 RELEVANT PARTIES AND KEY ROLES

2.1. The Client Team

2.1.1. The relevant parties and key roles within the client team are detailed below:

Client: London Borough of Camden Council

Address: 5 Pancras Square, London, N1C 4AG

Main Contacts: Lucy Gick

Telephone: 020 7974 4444

Email: Lucy.Gick@Camden.gov.uk

Contract Administrator: [TBC]

Address:

Main Contacts:

Telephone:

Email:

Environmental Manager: Alex Wood

Address: Tasman House, the Water Front, Elstree, WD6 3BS

Main Contacts:

Telephone: Email: alex.wood@lovell.co.uk

2.2. The Contractor Team

The relevant parties and key roles within the contractor team are detailed below:

Contractor Manager: Steve Bartram

Address: Tasman House, the Water Front, Elstree, WD6 3BS

Telephone: 0208 7313800

Email: steve.bartram@lovell.co.uk

Health and Safety Officer: Alex Wood

Address: Tasman House, the Water Front, Elstree, WD6 3BS

Telephone: 0208 7313800

Email: alex.wood@lovell.co.uk

Environmental Compliance Officer: Alex Wood

Address: Tasman House, the Water Front, Elstree, WD6 3BS

Telephone: 0208 7313800

Email: alex.wood@lovell.co.uk

External Relations Officer: [TBC]

Address:

Telephone:

Mobile:

Email:

Site Manager: [TBC]

Address:

Telephone:

Mobile:

Email:

Site Foreman: [TBC]

Address:

Telephone:

Mobile:

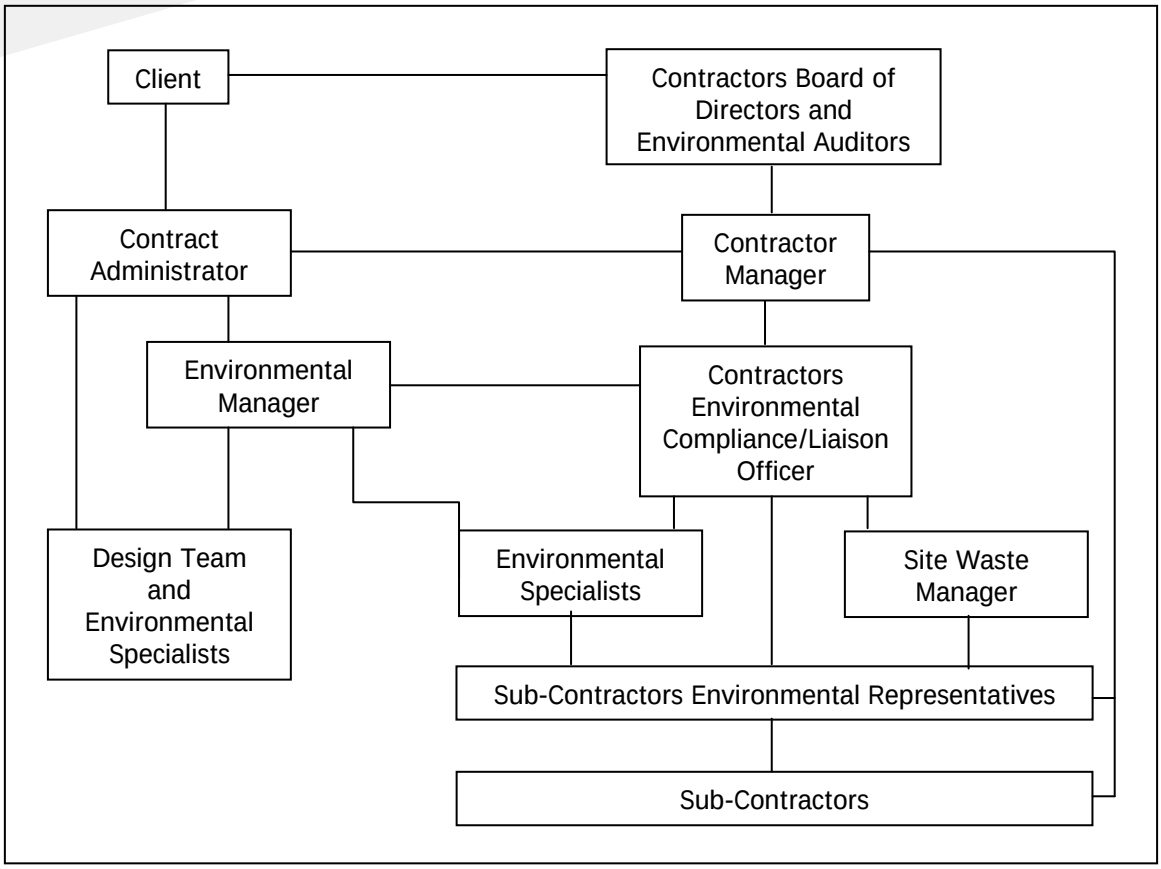
Email:

2.3. Management Structure and Environmental Responsibilities

2.3.1. A management chart is included (see below). In addition as shown in **Table 2.1** supervisory staff, including those of sub-contractors, will be made aware of the requirements of this plan that are relevant to their work.

Table 2-1: Environmental Responsibilities

Title	Name / Company	Key responsibilities
General Manager	Mick O'Farrell	Overall responsibility for the environmental performance of the contract.
Contract Manager	Steve Bartram	Overall on-site responsibility for the environmental performance of the contract.
Environmental Compliance/Liaison Officer	Alex Wood	Responsible for: The management of environmental issues as advised by the specialists (e.g. ecology and lighting); Obtaining the necessary environmental consents; Liaising with external third party organisations and individuals; Regularly reviewing and updating the CEMP and specialist procedures and identify any areas for improvements; and Review method statements for environmental aspects and advise the Project Manager as to their suitability.
Works Manager	TBC	Responsible to Contract Manager for the safe construction of the project with particular responsibility for safeguarding the environment.
Foreman	TBC	Responsible to Works Manager with particular responsibility for construction and assisting Agents with safeguarding the environment.
Traffic Safety Officer (as appropriate)	Site Manager	Responsible to Contract Manager. Overall responsibility for traffic management.
Site Waste Manager	Site Manager	Responsible to Contract Manager. Overall responsibility for overall waste management issues arising from the project.
Site Engineer	TBC	Responsible for environmental monitoring (except water levels) and the maintenance of records.
Environmental Specialists	TBC	To support the project as required and to provide mitigation measures described in the CEMP or in response to particular construction activities that may otherwise present an environmental risk. Their role will be undertake the detailed mitigation design with their specialist field, oversee its implementation, maintenance and monitoring.



2.4. **External Agencies**

2.4.1. A list of key contacts from external agencies is provided below [to be completed by the Principal Contractor]:

London Borough of Camden Council

Environmental Health (Air and Noise): [TBC]

Telephone:

Email:

Environmental Health (Ground Contamination): [TBC]

Telephone:

Email:

Traffic and Highways: [TBC]

Telephone:

Mobile:

Email:

Conservation Officer: [TBC]

Telephone:

Mobile:

Email:

Biodiversity Officer: [TBC]

Address:

Telephone:

Email:

Environment Agency

Nature Conservation: [TBC]

Address:

Telephone:

Mobile:

Email:

Development Control and Flood Risk: [TBC]

Address:

Telephone:

Mobile:

Email:

Natural England

Nature Conservation: [TBC]

Address:

Telephone:

Email:

3.0 ENVIRONMENTAL COMPETENCE OF STAFF AND TRAINING RECORD ON CONSTRUCTION ENVIRONMENTAL MANAGEMENT

3.1. General

3.1.1. The raising of environmental awareness is viewed as a crucial element in the appreciation and implementation of the CEMP. As a consequence, all staff will undergo environmental awareness training, initially by way of the pre-start induction process. A project specific training plan that identified the competency requirements for all personnel allocated with environmental responsibilities will be produced and contained within the CEMP.

3.2. Training Requirements

3.2.1. Training for all personnel identified in the training plan will be completed before commencement of the associated construction activities. Training will take the form of a site induction and toolbox talks. Line manager and supervisors will ensure that all personnel engaged in activities that may have an effect on the environment are competent to carry out their duties or, where necessary, arrange for suitable training to be undertaken. All staff and contractors working on-site are to be made aware of the plan and should know their role if an incident occurs.

3.2.2. Exercises are to be carried out periodically to familiarise staff with the operation of the plan to test its effectiveness.

3.2.3. Training will include:

- Risk assessment procedures, requiring all personnel to be aware of and sign off the appropriate risk assessment / method statement for the task(s) in which they are engaged;
- Full health and safety induction with emphasis on use of the correct PPE which is to be provided by the Principal Contractor.;
- Awareness of the potential for harm to both personnel and the environment from the materials held on-site;
- Awareness of the sensitivity of the environment surrounding the facility;
- Reporting to the Environment Agency if there is a risk of surface, groundwater or land contamination;
- Reporting to the Environment Agency if a discharge to the foul or combined sewer is involved;
- Clean-up, safe handling and legal disposal of contaminated materials and waste resulting from an incident (including arrangements for the use of specialist contractors and services);
- The appropriate decontamination or legal disposal of contaminated PPE;
- Implementation of the provisions of the Environmental Incident Response Plan (see Chapter 9); and ,

- General public relations and the need for exemplary courtesy and behaviour of all site staff towards the general public.

4.0 ENVIRONMENTAL REQUIREMENTS AND LEGISLATION

4.1. Client Requirements

4.1.1. LBC is committed to best practice standards of implementation to ensure safe and secure implementation of the project with the minimum possible environmental harm. These commitments are set out in Lovell Environmental Policy.

4.1.2. LBC will closely monitor the environmental, health and safety performance of any and all contractors subject to compliance with the present CEMP through all normal electronic and written media, telephone conversations and at least weekly visits.

4.1.3. LBC will seek to remedy within the law any breach of the requirements of this document by any contractor.

4.2. Relevant Legislation and Guidance

4.2.1. All works will be carried out in accordance with current legislation and approved codes of practice and guidance, where applicable.

4.2.2. The Environmental Compliance Officer will prepare and maintain a register of all relevant environmental legislation and guidance. This will be agreed with the Environmental Manager prior to being communicated to all relevant site workers.

4.2.3. The following regulations / guidelines / codes of practice are considered relevant to the works covered by this CEMP:

- Air Quality (England) Standards Regulations 2010;
- Anti-Pollution Works Regulations 1999;
- BRE Report 456: Control of dust from demolition and construction activities 2003;
- British Standard BS 5228: 2009: Code of practice for noise and vibration control on construction and open sites;
- Clean Air Act 1993:
- The Construction Plant and Equipment (Harmonisation of Noise Emission Standards) (Amendment) Regulations 1995;
- Contaminated Land (England) (Amendment) Regulations 2012;
- The Conservation of Habitats and Species (Amendment) Regulations 2012;
- Control of Pollution (Amendment) Act 1989;
- Controlled Waste (Carriers and Seizure of Vehicles) Regulations 1991;
- Controlled Waste Amendment Regulations 1993;
- Environment Act 1995;
- The Waste (England and Wales) Regulations 2011;
- Environmental Protection Act;
- Environment Agency Pollution Prevention Guidelines;

  - PPG1: General guide to the prevention of pollution;
  - PPG5: Works and maintenance in or near water:
  - PPG6: Working at construction and demolition sites;
  - PPG7: Refuelling facilities;
  - PPG8: Safe storage and disposal of used oils;
  - PPG13: Vehicle washing and cleaning;
  - PPG18: Managing fire water and major spillages;
  - PPG21: Pollution incident response planning; and
  - PPG22: Dealing with spillages on highways.
- Hazardous Waste Regulations 2005;
- Hedgerows Regulations 1997;
- Landfill (England and Wales) Regulations 2002;
- Town and Country Planning Act 1990;
- Water Environment (Water Framework Directive) Regulations 2003;
- Waste Management (England and Wales) Regulations 2006;
- Waste Management Licensing Regulations 1996;
- Water Resources Act 1991;
- Wildlife and Countryside Act 1981 (Amendment) (England and Wales) Regulations 2009; and,
- Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy).

4.3. **Method Statements**

4.3.1. Method statements will be completed on behalf of companies engaged to carry out works and written by engineers or other appropriate experienced personnel, in consultation with on-site environmental staff and, where necessary, environmental specialists. Their production will include a review of the environmental risks and commitments, so that appropriate control measures are developed and included within the construction process.

4.3.2. The Contractor in conjunction with the Environmental Compliance Officer shall decide which of the works have environmental implications using the following criteria:

- The work may result in an adverse effect on the environment or human health; and,
- The work is adjacent to a surface water drain or water course.

4.3.3. Where the works have environmental implications, the method statements will be passed to the Environmental Compliance Officer and Environmental Manager for approval prior to work commencing. If the method of work is changed from the approved method statement then work will cease. Any environmental changes deemed necessary will be approved in writing by the Environmental Manager and the relevant personnel informed before implementation.

Where necessary, method statements will be submitted to the enforcement agencies (Natural England, Environment Agency and Environmental Health Officer etc.) as appropriate. Method statements will contain at a minimum:

- Location of the activity and access/egress arrangements;
- Work to be undertaken and method of construction;
- Plant and materials to be used;
- Labour and supervision requirements;
- Health, safety and environmental considerations;
- Planning restrictions; and,
- Any permit or consent requirements.

4.4. **Risk Assessment**

4.4.1. All activities undertaken on the Application Sites will be subject to an environmental risk assessment. **Appendix 4** [to be inserted by the Contractor once complete] comprises an environmental risk register which summarises the key aspects and effects and their significance associated with the construction of the Proposed Development. The activities associated with the contract are identified, with individual tasks broken down into effects that could arise, or are likely to arise. The probability and importance of each effect is then determined.

4.4.2. The scoring applied to the effects is subjective according to knowledge of the task and the Application Sites in addition to information available (1: minimal risk, 2: below average risk, 3: average risk, 4: above average risk, 5: high risk). Significance is a weighted score achieved by multiplication of the score applied to probability and importance. The risk register will be updated and revised regularly. More detail is inserted for control measures if the score is greater than 12 i.e. a high effect. These effects are reflected in the objectives and targets section.

4.4.3. Risk assessments will be undertaken by trained staff and agreed with the Environmental Compliance Officer following an approved procedure which will:

- Identify the significant environmental effects that can be anticipated;
- Assess the risks from these effects;
- Identify the control measures to be taken and re-calculate the risk; and,
- Report where an inappropriate level of residual risk is identified so that actions can be taken through design changes, re-scheduling of work or alternative methods of working to reduce the risk to an acceptable level.

4.4.4. The residual risks are only considered acceptable if: the severity of outcome is reduced to the lowest practicable level; the number of risk exposures are minimised; all reasonably practicable mitigating measures have been taken; and the residual risk rating is reduced to minimum. The findings of the risk assessment, and in particular, the necessary controls will be agreed with the Environmental Manager and then explained to all operatives before the commencement of the relevant risks using the agreed instruction format.

4.5. Site Environmental Standards

4.5.1. The Site Environmental Standards will be agreed with the Environmental Manager and will detail the minimum measures that should be achieved for general operations that will fall outside the risk assessment / method statement procedures designed to cover the majority of construction activities. They will cover issues such as storage of materials, management of waste, water pollution, dust, noise and vibration and water pollution control. The standards will be printed on A3 posters, placed on site notice boards and used as a briefing tool on the plots.

5.0 HEALTH & SAFETY AND GENERAL SITE MANAGEMENT

5.1. General

5.1.1. There is a legal requirement to protect project personnel and the general public from any significant adverse effect of implementing the construction works.

5.2. H&S – Project Personnel

5.2.1. Appropriate induction training should be given to all persons visiting and working on the plots. All persons will be provided with a copy of the Contractor's 'Environmental Site Induction' upon entering the plots for the first time (**Appendix 5**) [to be inserted by the Contractor once complete]. The Contractor and their sub-contractors will fully comply with the site-specific rules contained in the 'Environmental Site Induction' and this CEMP.

5.2.2. It will be the responsibility of the Contractor to ensure that all site visitors and site operatives are given appropriate personal protective equipment (PPE) for the tasks being undertaken.

5.2.3. It will be the responsibility of the Contractor to ensure adherence to all standard safety procedures as laid down in the appropriate guidelines for the type of work and the pre-construction information.

5.3. H&S – General Public

5.3.1. It will be the responsibility of the Site Manager / Site Foreman to ensure that the plots and associated plant and machinery are secured during non-working hours.

5.3.2. It will be the responsibility of the Site Foreman to ensure that all heavy goods vehicles (HGVs) safely enter and exit the plots. All loading and unloading of HGVs will be undertaken within the work site boundary.

5.4. General Site Management

5.4.1. Working hours will generally be limited to between 08:00 – 18:30 Monday to Friday and 08:00 – 13:00 on Saturdays. All works outside these hours will be subject to prior agreement, and / or reasonable notice, by LBC, who may impose certain restrictions. It is not envisaged that any night time working will be required.

5.4.2. The Contractor will keep records of all construction plant / machinery used on the plots, which will be maintained at weekly intervals.

5.4.3. Access and egress points will be controlled by barriers and manned by a gateman during working hours and security personnel out of hours. However the delivery of construction materials, plant and equipment will be restricted to approved working hours, unless in exceptional circumstances. To ensure safe access to the plots, signage will be used in advance and throughout the construction works.

5.4.4. Pedestrian access will be segregated from the vehicular access and safe walking routes will be installed and maintained throughout the construction period.

5.4.5. The Contractor will determine appropriate intervals for the removal of waste from the plots and will ensure that this is deposed of at a suitably licensed facility.

5.4.6. The Contractor will be responsible for keeping detailed daily records of climatic conditions including rainfall, minimum and maximum temperatures and humidity.

5.4.7. On completion of construction works, the Contractor will clear away and removal all plant, surplus materials, rubbish and temporary works of every kind and leave the plots in a condition that satisfies LBC.

5.4.8. All necessary and reasonable measures will be taken to minimise fire risk and the Contractor will comply with the requirements of the local fire authority. Open fires are prohibited at all times.

5.4.9. The Contractor will not allow any living accommodation on site except with prior written consent of the relevant local authority. Mess rooms, locker room, toilets and showers will be permitted.

5.4.10. If plot security cameras are provided by the Contractor, these must be located in positions which will not cause offence to local residents or commercial business premises.

6.0 ENVIRONMENTAL CONSTRAINTS

6.1. General

6.1.1. The plots, as shown on **Figure 1.1**, are located in Regents Park Estate, Euston, London and lie in an urban residential area as described in Chapter 1.

6.1.2. The main environmental constraints for the Proposed Development are outlined below with the baseline survey results for ecology, air, noise, cultural heritage and contamination within **Appendix 6** [to be inserted by the Contractor].

6.2. Access

6.2.1. The Regents Park Estate is located within the south western area of the London Borough of Camden to the north of Euston Road. The estate is bounded to the west by the A4201 Albany Street and the A400 Hampstead Road forms the eastern boundary of the estate. The main access roads within the estate are Robert Street and Vardell Street, which run on an east-west axis, and Stanhope Street, Redhill Street and Augustus Street that run on a north-south axis.

Pedestrian Links

6.2.2. A good pedestrian footway network is provided through the core of the estate. Signalled controlled pedestrian crossing facilities are in place at the Hampstead Road/Cardington Street signal controlled junction. In addition a signal controlled pedestrian crossings are also provided on Hampstead Road north and south of the junction.

6.2.3. A signal controlled crossing is also provided on Albany Street opposite Troutbeck building, as well as at the junction with Robert Street. In addition there are pedestrian facilities at the signal controlled junction of Robert Street and Stanhope Street.

Public Transport

6.2.4. The estate is highly accessible to the London Bus network, with bus stops located on Albany Street, Hampstead Road and Euston Road being approximately 216, 279 and 590 metres waking distance from the centre of the estate. During the weekday peak hours there are typically 64 buses an hour in each direction stopping at these stops.

6.2.5. In addition to the bus network the Regent's Park Estate is also within easy walking distance of 5 underground stations, which are Great Portland Street, Euston Square, Mornington Crescent, Regents Park and Warren Street.

6.2.6. The estate also has access to the national rail network via Euston Station which is located approximately 900 metres walking distance to the east.

6.3. Landscape and Topography

6.3.1. The plots are not subject to any national landscape designations although the Regent's Park Conservation Area lies immediately west of and bordering Plot 5 Dick Collins Hall, (formally Site 5), Plot 6 Cape of Good Hope (formally Site 6) and Plot 8 The Victory Pub (formally Site 10). There is one Grade I Registered Park and Garden, Regent's Park which is located to the west of the estate.

6.4. **Archaeology and Cultural Heritage**

6.4.1. There are two Grade II Listed Buildings within the Regent's Park Estate which are both 19th Century buildings, a church hall (Mission Church of St. Bede formally known as St. Bede's Hall) located adjacent to Plot 11 St Bede's Mews (formally Site 11) and a public house (Prince of Wales Public House) located 50m south of Plot 2 Former One Stop Shop (formally Site 2).

6.4.2. Within the Study Area there is one Grade 1 Registered Park and Garden, Regent's Park and a further 60 groups of Listed Buildings.

6.4.3. There are two Grade II* Listed Buildings close to some of the plots which are:

- Christ Church is visible from the northern extent of Plot 5 Dick Collins Hall (formally Site 5).
- The Church of St Mary Magdalene is located immediately south of the Regent's Park Estate, but not visible from any of the individual plots.

6.4.4. There are three groups of Grade II Listed Buildings close to some of the plots:

- 55 – 77 Albany Street are immediately opposite Plot 6 Cape of Good Hope (formally Site 6).
- 34 – 48 Albany Street on the same side of the road as Plot 6 Cape of Good Hope (formally Site 6) separated by the police station.
- A number of properties on Stanhope Street are located just outside of the Regent's Park Estate, but are not visible from any of the individual plots.

6.4.5. There are no London Borough (LB) of Camden Archaeological Priority Areas within the Study Area, but there are four LB of Camden Conservation Areas which comprise:

- Regent's Park, an internationally important example of 18th century Masterplanning (immediately west of and bordering Plot 5 Dick Collins Hall (formally Site 5), Plot 6 Cape of Good Hope (formally Site 6) and Plot 8 The Victory Pub (formally Site 10));
- Camden Town, an example of 19th century speculative development (260m north of Site Plot 4 Newlands Plot (formally Site 4);
- Fitzroy Square, a distinctive and consistent area of late 18th and early 19th speculative development (c200m south of Plot 7 Camden People's Theatre (formally Site 9); and
- Bloomsbury, an internationally significant example of town planning (c185m south east of Plot 7 Camden Peoples Theatre (formally Site 9).

6.4.6. The potential for archaeological remains to be present within each of the plots varies from **very low** to **medium**, and any redevelopment is unlikely to greatly impact on any significant in situ archaeological remains. With the exception of Plot 7 Camden People's Theatre (formally Site 9) which has potential for medieval remains, it is likely that only 18th and 19th century remains will be identified where these have survived later truncation. Note that Plot 7 is being applied for via a separate planning application.

6.4.7. In summary:

- Plot 2 Former One Stop Shop (formally Site 2), Plot 4 Newlands Plot (formally Site 4) and Plot 7 Camden People's Theatre (formally Site 9) have **medium** potential for in situ archaeological remains to be present;
- Plot 1 Robert Street Car Park (formally Site 1),Plot 5 Dick Collins Hall (formally Site 5), Plot 6 Cape of Good Hope (formally Site 6), Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11) have a **low** potential for in situ archaeological remains to be present; and
- Plot 3 Varndell Street Corner (formally Site 3) has **very low** potential for in situ archaeological remains to be present.

6.4.8. The development will afford the opportunity through careful and sympathetic design to improve the setting of the Listed Buildings and Conservation Area. This would have a beneficial effect upon these receptors.

6.4.9. Following the production of the first draft of the Heritage Desk-Based Assessment in October 2014 it was presented to the Greater London Archaeological Advice Service (GLAAS) for consultation. In their response dated 18th November, only Plot 7 Camden People's Theatre (formally Site 9) merits further archaeological involvement. Note that this is being applied for via a separate planning application. However, this was based on the belief that this plot would be subject to ground disturbance. As development plans have stated no below ground impacts on the plot, it is believed that no further works would be required.

6.4.10. Based on current development plans, no further archaeological works are required for any of the sites assessed within the Heritage Desk-Based Assessment.

6.5. **Ecology and Nature Conservation**

6.5.1. The plots are located outside of any areas designated for ecology and nature conservation interest. However two statutory, 30 non-statutory designated sites, and priority habitats are located within 2km.

6.5.2. The development is unlikely to have an impact on designated sites or priority habitats as the plots are in an already heavily urbanised area and will be confined to the plot boundary.

6.5.3. The habitats within the plots comprise scattered broadleaved woodland, scattered broadleaved trees, species poor hedge, species poor hedge with trees, amenity grassland, fence, building, introduced shrub and introduced shrub / scattered broadleaved woodland mosaic. The habitats within the Application Site support a range of species including breeding birds and hedgehogs.

6.5.4. Two of the hedgerows could be classified as Habitats of Principal Importance (HPIs). Hedgerows PHT1 and PHT2 located within Plot 4 Newlands Plot (formally Site 4) which could be classified as Habitats of Principal Importance (HPIs).

6.5.5. Wall cotoneaster and Virginia creeper were both recorded present within Plot 8 The Victory Pub (formally Site 10) therefore measures should be made for the eradication of these species from the plot in advance of development.

6.5.6. External and internal (only Plot 9 St Bede's Mews) inspections for bats and 2 dusk emergence and dawn re-entry surveys were undertaken which confirmed that no bats were found to be present within the buildings in Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11). However as it was not possible to gain access into the into the roof

space of Plot 8 The Victory Pub (formally Site 10) to carry out a full internal inspection it is therefore recommended that a precautionary method is adopted. This should include an internal inspection prior to demolition works and that the demolition of the Victory Public House be undertaken following a 'Working Method Statement' under the supervision of a Natural England Bat Licence holder.

6.6. **Water Resources and Flood Risk**

6.6.1. The plots are not located within a groundwater Source Protection Zone and neither is it a Ground Water Vulnerability Zone. There are no major water features such as rivers, ponds or lakes near the estate. The estate is located within Flood Zone 1.

6.7. **Ground Conditions and Contamination**

6.7.1. The plots are expected to be underlain by a significant depth of Made Ground. The geological sequence of the area typically consists of Superficial deposits underlain by London Clay and the Lambeth Group. The plots are located within an area that has been largely residential land use since its initial development during the mid-1800s. Soil contamination of lead, PAH and TPH were encountered during the ground investigation on the majority of plots. Groundwater was only encountered on Plot 6 Cape of Good Hope (formally plot 6), and was not significantly contaminated.

6.7.2. Asbestos fibres have been encountered in made ground on a number of plots, however visible fragments of Asbestos Containing Material were not encountered. Asbestos quantification has been conducted on a number of samples, and has been presented as factual information only in 'Factual Report on Asbestos Contaminated Soils' contained within the CampbellReith LQS, 2015. It should be noted that ground investigations provide generalised soil conditions, and there may be ground conditions that are not consistent with the results of the ground investigation.

6.7.3. An asbestos risk assessment should be carried out by an appropriately qualified specialist where the risk to ongoing site users and construction workers should be quantified. Should significant volumes of ACM or ACS be encountered during future groundworks of the development, work that has the potential to disturb the ground should cease, and appropriate mitigation measures for work should be agreed with an asbestos specialist and the Health and Safety Executive. This may comprise the completion of a Control of Asbestos Regulations (CAR 2012) Risk Assessment as stated in CIRIA guidance C733 and determination as to whether the works are 'licensable work' (LW), 'notifiable non-licensable work' (NNLW), or 'non-licensable work' (NLW). Subject to the finding of the risk assessment, appropriate control measures may be required to be put into place to manage potential risks.

6.7.4. Ground gas monitoring identified only one instance of elevated carbon dioxide, which coincided with the lowest oxygen concentration. This was identified during only one monitoring round. Gas flow rates were generally low.

6.8. **Air Quality**

6.9. The Regent's Park Estate lies within an Air Quality Management Area (AQMA) declared by Camden Council for exceedences of the nitrogen dioxide and PM_{10} objectives. The key source of emissions currently affecting existing residential properties of the Regent's Park estate is from road traffic on the adjacent road network. The main air pollutants of concern related to traffic emissions are nitrogen dioxide and fine particulate matter (PM_{10} and $PM_{2.5}$).

6.10. Sensitive Receptors

6.10.1. The receptors which are considered potentially sensitive to the demolition and construction of the plots have been identified and are summarised in **Table 6.1**.

Table 6-1: Potential Sensitive Receptors

Category	Sensitive Receptor / Land Use
Residential	Surrounding residential development adjacent to all of the plots.
Transport and Infrastructure	Local highway network including the A4201 Albany Street and the A400 Hampstead Road Pedestrian links and public transport
Landscape and Views	Views from the existing urban areas of the Regent's Park Estate; Views from the Regent's Park Conservation Area; and Views from Regent's Park.
Ecological Features and Habitats	Flora and Fauna within and adjacent to the Plots
Cultural Heritage	Regent's Park Conservation Area; Listed Buildings within the Regent's Park Estate; and Registered Park and Gardens within or adjacent to the Regent's Park Estate. Potential archaeological remains within the plots

7.0 MITIGATION OF POTENTIAL EFFECTS DURING CONSTRUCTION

7.1. General

7.1.1. This section sets out the mitigation measures and any subsequent conditions to the planning application during demolition, potential remediation (**Appendix 2**) [to be inserted by the Contractor once complete]. The table contained within each subsection identifies the actions required of the Contractor and / or client team to ensure that the mitigation measures are suitably implemented.

7.2. Mitigation Measures

7.2.1. This section will be developed in more detail with the Contractor, to best reflect the actual methods of working and programming of construction activities. Construction teams will use the measures outlined below (**Tables 7.1-7.9**), whilst completing risk assessment and method statements which will in turn provide the appropriate mechanism for implementation on site.

Table 7-1: General Mitigation

Proposed Mitigation	Contractor Action	Client Team Action
The demolition, potential remediation and construction works will be managed and controlled under the Construction (Design and Management) (CDM) Regulations 2015 which control health and safety and define responsibilities to appropriate project stakeholders.	Appropriate induction training for all site workers, including providing key workers with a copy of the CEMP and COSSH data sheets. The use of appropriate PPE for all on site works, including (where necessary) overalls, dust masks, gloves and protective eye wear.	Monitor situation and undertake spot checks
Records are to be kept of all plant and machinery used on the plots, which are to be maintained at weekly intervals.	Keep a record on site, monitor situation and undertake spot checks.	Monitor situation and undertake spot checks.
All plant will be properly maintained (greased, blown silencers replaced, saws kept sharpened, teeth set and blades flat, worn bearings replaced, etc) and not left running when not directly in use.	Carry out daily visual inspections on plant.	Ad hoc checks
Vehicle speeds on unpaved surfaces will be limited to 20 mph	Spot checks	Ad hoc checks
The plots will be securely fenced prior to the commencement of any site works. The plot hoarding will be a minimum of 1.8m in height and of such a standard so as to deter trespassers onto the plots.	All fences / hoarding shall be inspected twice daily by the Contractor and any defects or breaches will be rectified immediately. Site security shall undertake regular inspections of these fences / boundaries outside of working hours.	Ad hoc checks

Proposed Mitigation	Contractor Action	Client Team Action
Contractor's compound, plant and material stockpiles will be located away from nearby sensitive receptors including watercourses and surface drains and close to services to ensure clean water to welfare facilities where practicable.	Ensure best practice is used at all times.	Monitor the situation
Fires will be strictly prohibited within the plots.	Spot checks	Ad hoc checks
Hot works permits will be issued when required.	Ensure all hot works are compliant with permits.	Ad hoc checks
Designated routes for construction vehicles will be implemented and used within and around the plots.	Keep a record on site, monitor situation and undertake spot checks.	Monitor situation and undertake spot checks.
Deviation from approved method statements will be permitted only with prior approval from the Principal Contractor and other relevant parties	A formal review will be undertaken before any deviations are undertaken.	Monitor situation and undertake spot checks
Records of daily weather conditions will be kept.	Record daily weather conditions.	Monitor the records.

Table 7-2: Control of Landscape and Lighting Effects

Proposed Mitigation	Contractor Action	Client Team Action
Hoarding (minimum of 1.8m in height) will be introduced along the plot boundaries in order to screen low level construction activities. This hoarding will be painted using a uniform colour that recedes into its surrounds (i.e. RAL5005 'Signal Blue') with advertising and fly posters deterred.	Weekly checks	Ad hoc checks
Where possible construction works will be restricted to daylight hours to avoid the potential for disturbance to people associated with mobile lighting.	Minimise the work needed to be carried out at night. Specified working hours, uses of lighting and the location of temporary floodlights will be agreed with LBC.	Ad hoc checks
The presence of cranes and higher level lifting activity will be limited to necessary works only and the length of construction time required for scaffoldings will also be minimised.	Plan activities to limit the presence of tall plant and machinery on the plots.	Ad hoc checks
Any trees to be retained will be protected in accordance with BS 5837:2012 – Trees in relation to	Tree protection plans will be produced, showing root protection zones and the precise	Ad hoc checks

design, demolition and construction.	locations of protective barriers to form construction exclusion zones around the retained trees. The barriers to be used should be fit for the purpose of excluding construction activity.	
Lighting usage will be minimised and switched off when not in use. Night-time lighting would be avoided where possible and, where necessary designed to prevent light spill.	Ensure that the lighting is adaptable and switched off when not required unless specifically needed for construction activities or for health and safety requirements.	Ad hoc checks
Security and site lighting which is required on a temporary or permanent basis through the night for security or safety reasons will be of a type with downward directional luminaries, low lighting columns (4-5m high) and low wattage luminaries to reduce light spillage.	Daily checks	Ad hoc checks
Light fittings will comply with the specifications and the requirements of CIE 150 (2003) and CIE 126 (1997).	Ensure that the lights are directed into the centre of the Sites. Lighting will be located and directed in such a manner that it does not cause unnecessary distraction to road users.	Ad hoc checks
The construction area adjacent to footpaths or roads will be lit and clearly defined at all times during the operational hours of lighting to ensure the safety of motorists and pedestrians.	Daily checks	Ad hoc checks
Hoarding and fences located near existing footpaths or roads will be well lit to assist in defining the limits of construction for motorists and pedestrians during lighting operational hours.	Care will be taken to avoid the site hoarding and fencing casting shadows onto adjacent footpaths or roads during lighting operational hours.	Ad hoc checks
All retained vegetation in and around the plots will be protected by fencing installed prior to construction and in compliance with BS 5837 (2012) – *Trees in Relation to Design, Demolition and Construction – Recommendations*.	Daily checks	Ad hoc checks
The Contractor's compound and material stockpiles will be located away from nearby sensitive receptors.	Daily checks	Ad hoc checks

Table 7-3: Protection of Protected Species

Proposed Mitigation	Contractor Action	Client Team Action
Daily inspections to ensure mammals are not trapped in excavations etc. RSPCA assistance to remove all found trapped.	Daily inspections to be undertaken.	Monitor the situation
All site operatives will be educated in the importance of the surrounding habitats and why the fencing has been erected.	Monitor and record induction training	Monitor the situation and undertake spot checks.
All areas of habitat outside of the working area are to be retained and protected by Heras fencing. No works or machinery are allowed within such areas at anytime, unless agreed with the relevant authorities.	Monitor and record induction training and monitor movement of machinery and state of Heras fencing.	Monitor the situation and undertake spot checks of Heras fencing and movement of vehicles.

Table 7-4: Transport and Access

Proposed Mitigation	Contractor Action	Client Team Action
Construction traffic will be managed through the construction traffic management plan (CTMP), which will set out measures to control construction vehicle movements and visitors to site.	Creation and implementation of construction traffic management procedures.	Monitor the situation.
The delivery of goods will be managed to ensure that arrival times occur outside of any sensitive periods. No deliveries will be accepted outside of the normal site working hours and vehicles will not be allowed to wait outside the site on the public highway.	Monitor and record deliveries	Monitor the situation
Identified routes for all demolition, remediation and construction traffic to be agreed with LBC prior to commencement of works. This will reduce the likelihood that vehicles will pass along sensitive roads (i.e. residential roads, congested roads, via unsuitable junctions).	Monitor situation. Construction traffic will be prohibited from using any side roads off the designated route.	Monitor situation
Large-scale vehicle movements will be timed to avoid peak hours on the local road network as far as reasonably practicable.	Monitor and record deliveries	Monitor the situation
On-site movements will be restricted to well within the Application Site and not near the perimeter or existing sensitive	Monitor the situation	Monitor the situation

Proposed Mitigation	Contractor Action	Client Team Action
receptors, wherever possible.		
All vehicle movements on the plots will be confined to designated haul roads and a one way system will be in operation, vehicles shall not exceed the speed limit of 10 miles per hour.	Monitor the situation. Persons reported for excessive speeding will be banned from driving on site. The contractor will be responsible for ensuring that traffic management arrangements will be briefed as part of the site induction.	Monitor the situation
Vehicles will be kept to hard standing and roadways at all times. All hard standing and roadways used for vehicles entering, parking or leaving the site will be kept clean and an in a maintained state, this will also include the site compound.	The surrounding highways and entrance and exit to the plots will be inspected regularly for mud and debris.	Monitor the situation with ad hoc checks.
All persons working on or visiting the site will park in the designated areas on the site and sufficient space will be provided to ensure this.	Ensure that sufficient space is provided for parking on the site.	Monitor situation.
Designated pedestrian walkways will be set up and signed around the compound area and where required around the plots.	The contractor will be responsible for ensuring that the traffic management arrangements will be briefed as part of the site induction.	

Table 7-5: Control of Dust

Proposed Mitigation	Contractor Action	Client Team Action
Liaison with LBC will be maintained throughout the construction phase and any incidents which lead to excessive elevation of dust deposition and / or PM_{10} concentrations at neighbouring sensitive receptors are reported to the Environmental Health Department. In addition nearby residents will be notified that dust emergence is being controlled on the plots.	Any complaints received from local residents will be documented in a diary or log held on site by the Site Manager or Construction Liaison Officer.	Ad hoc checks.
Visual checks for windblown dust will be undertaken.	Monitor the situation	Monitor the situation.
Limit the area(s) of working during construction so that vehicles are confined within an area that can be subjected to appropriate dust control.	Ensure that no dusty activities are undertaken within this control zone.	Ad hoc checks.
Use of appropriately designed vehicles for material handling.	Ensure that best practice is used at all times.	Ad hoc checks.
Material stockpiles will be	Provide facilities to enable water	Ad hoc checks.

Proposed Mitigation	Contractor Action	Client Team Action
enclosed at all times and dusty materials will be dampened using water sprays and / or sheeted during dry weather.	spraying on dry and windy days to suppress dust.	
Stockpiles will be located as far as possible from sensitive properties, taking account of the prevailing wind direction.	Ensure that stockpiles are appropriately located within the site.	Ad hoc checks
The roads will be maintained to minimise mud and dust build up. Surfaced and un-surfaced site access roads should be watered as necessary using a water bowser and surfaces kept in order.	Regular inspection of local highways and boundaries of the the plots to check for dust deposits (evident by soiling and marking) on vegetation, cars and other objects, taking remedial measures where necessary i.e. mechanical road sweepers. Inspections will be carried out on a daily basis during the working week, or more frequently depending on the nature of the activity being undertaken.	Ad hoc checks.
Dust control will be applied during cutting or grinding of material on site to minimise or mitigate dust.	Ensure that best practice is used at all times.	Ad hoc checks.
Vehicles carrying loose aggregate, fill materials or contaminated materials to and from the Application Sites should be sheeted at all times.	Carry out visual inspection on vehicles leaving the Site.	Ad hoc checks
Smoke emissions or fumes from site plant or stored fuel will be limited.	Ensure best practice is used at all times.	Ad hoc checks
Vehicles should be kept clean through the use of wheel washers as appropriate, particularly on departure from the plots onto the public highway. In instances where space restrictions prevent wheel washers, consideration of alternative mitigation should be applied.	Ensure wheel washing facilities are used and put in place procedures for ticketing vehicles	Road Sweeper as and when required no wheel wash.
Screening of earthworks and perimeter landscaping, where appropriate should be completed to provide a physical barrier between the plots and the surroundings.	Locations to be agreed. Regular checks.	Ad hoc checks
A bowser will be operated during periods of dry weather to keep site roads damped down to prevent dust being blown into the air by wind or passing vehicles.	Ensure that the bowser is available and used during dry periods.	Ad hoc checks

Proposed Mitigation	Contractor Action	Client Team Action
In addition to the mitigation detailed above, due to the identified presence of asbestos in soils on a number of plots, a separate management plan will need to be produced by a specialist asbestos treatment contractor.	Contractor to obtain asbestos management plan in regard to dust control.	

Table 7-6: Control of Noise and Vibration

Proposed Mitigation	Contractor Action	Client Team Action
Noise levels will be monitored prior to construction commencing and at regular intervals during the works especially when potentially noisy activities are occurring close to sensitive receptors. In addition nearby residents will be notified that noise and vibration are being controlled on site.	Monitor noise levels prior to and during construction works.	Ad hoc checks that noise monitoring is occurring and that levels are acceptable.
A Noise Control Plan is to be submitted and agreed with the Environmental Health Officer at LBC	Enforce the effective implementation of the Noise Control plan with construction being undertaken in accordance with BS5228 (Parts 1 and 2). Noise complaints will be reported to the Contractor and immediately investigated.	Ad hoc checks
The proposed working hours for the construction works shall be agreed in advance with the local authority, and strictly adhered to throughout, unless in an emergency.	Ensure that the proposed working hours are adhered to.	Ad hoc checks
Drop heights are to be minimised and chutes are to be used where possible.	Protocols and method statements to be agreed prior to works commencing.	Ad hoc checks
Silencers or mufflers as appropriate to be fitted to plant and machinery.	Weekly checks	Ad hoc checks
Plant known to emit noise strongly in one direction shall, where possible be orientated so that the noise is directed away from the designated site.	Monitor and ensure plant are orientated accordingly where practicable	Ad hoc checks.
Consideration will be given to temporary screening or enclosures for static noisy plant and equipment to reduce noise emissions and plant should be certified to meet any relevant EC Directive standards.	Ensure best practice is used at all times.	Ad hoc checks

Proposed Mitigation	Contractor Action	Client Team Action
The quietest possible plant that can reasonably practicably be obtained will be used for each construction task.	Monitor and record noise levels on a weekly basis. Where possible, electrically driven equipment will be selected in preference to internal combustion powered, hydraulic powered equipment.	Ad hoc checks
Use of radios, other sound systems or tannoys will not be permitted anywhere on the Application Sites.	Enforce the ban on radios or other sound systems or tannoys.	Ad hoc checks
Any cutting tools shall be well maintained and kept sharp to reduce frictional noise.	Monitor state of equipment	Ad hoc checks
All necessary lubrication shall be carried out in a timely fashion to reduce noise.	Ensure best practice is used at all times.	Ad hoc checks.
Loading and unloading of vehicles, dismantling or equipment such as scaffolding or moving equipment or materials around the Application Sites will be conducted in such a manner as to minimise noise generation.	Ensure best practice is used at all times.	Ad hoc checks

Table 7-7: Control of Emissions to Water

Proposed Mitigation	Contractor Action	Client Team Action
All necessary agreements or consents for the discharge of water from the Sites will be obtained.	Obtain all necessary agreements and consents	Ensure that the agreements and consents are in place and being adhered to.
All spills, regardless of size are to be reported.	Report all spills to the project management.	Ad hoc checks on records of spills.
Fuel, oil or chemical storage required during the demolition, remediation and construction phase will be stored on impervious bases of appropriate capacity and will be located away from watercourses in accordance with the Environment Agency's PPGs 1,2,7 as well as COSHH Regulations 2002 and the Control of Pollution (Oil Storage) Regulations 2004.	Ensure that fuel, oil or chemical storage occurs within impervious bunds to prevent spillage or leaks. Undertake training and provision of spill kit as required.	Ad hoc checks
Leaking and empty drums will be removed from the plots and disposed of appropriately.	Monitor the condition of drums regularly.	Ad hoc checks

Proposed Mitigation	Contractor Action	Client Team Action
Any refuelling of mobile plant and machinery will be undertaken in a designated area away from watercourses and surface drains, and supplied with appropriate spill kits and bunded bowser.	Monitor the refuelling of plant and machinery.	Ad hoc checks.
All mobile plant will have drip trays or the equivalent under them to prevent any leaks getting to the ground.	Regular checks and enforcement of the use of drip trays or the equivalent.	Ad hoc checks
The handling and storage of potentially hazardous liquids on site e.g. fuels and chemicals are to be controlled and best practice guidance from the Environment Agency is to be applied.	Monitor the handling and storage of the hazardous liquids on site. A Spillage Response Plan will be developed and implemented. Induct all new staff and keep records.	Ad hoc checks.
Biodegradable hydraulic oil to be used for machinery / plant where possible.	Control records to be kept	Ad hoc checks
Operational outlets to the public sewers to be protected from debris and filters / screens / sumps employed.	Daily checks	Ad hoc checks
All drums and barrels will be fitted with flow control taps and will be properly labelled.	Weekly checks	Ad hoc checks

Table 7-8: Contamination

Proposed Mitigation	Contractor Action	Client Team Action
Environmental protection during construction will be achieved by compliance with industry standard codes of practice such as CL:aire code of practice for the treatment of natural and made ground and implementation of construction environmental management procedures.	A decontamination unit will be provided for personnel working in the contaminated zones. Authorised personnel only will be allowed access to the contaminated zones. Where relevant works will require an appropriate Environmental Permit which will control the environmental effects of the permitted activity.	Ad hoc checks.
A discovery strategy detailing the procedure to follow in the event that unforeseen contamination is identified will be prepared.	Consultation with LBC and the Environment Agency and additional or extended remediation will be implemented if appropriate and with regulatory agreement to the works.	
A Health and Safety Guidance, Demolition and Refurbishment Asbestos Survey (NGS 264) of all	Authorised personnel only will be allowed access to the contaminated zones.	Ad hoc checks.

Proposed Mitigation	Contractor Action	Client Team Action
buildings and structures will be undertaken and all exposed surfaces will be sealed.		
Asbestos removal will be undertaken in accordance with current legislation and guidance, if identified during the survey.	Authorised personnel only will be allowed access to the contaminated zones.	Ad hoc checks.
Hardstanding will not be removed until absolutely necessary to do so, as the hardstanding will mitigate the effects of dust and direct contact with potentially contaminated materials and prevent the infiltration of rainwater to the underlying wastes.	Removal of hardstanding and buried foundations will be phased to limit the exposure to contaminated soils. Once removed pile matting or geotextile membranes will be installed as soon as possible.	
Where possible any stockpiles of soil should be stored on hardstanding or other appropriate impermeable surfaces to minimise the potential for mobilisation of contaminants to the underlying groundwater and should be covered to prevent wind-blow of dust.	Daily checks.	Ad hoc checks.
Contaminated soils arising from excavation will be transported to a designated containment area prior to waste classification and subsequent treatment of disposal.	Implementation of designated contaminated and uncontaminated areas to prevent cross-contamination.	Ad hoc checks.
Temporary management of surface water will follow the basic principle that surface water should not penetrate into the underlying waste materials, to prevent the mobilisation of contamination to the underlying groundwater.	Discharge arrangement for any surface water will be agreed with the appropriate water company prior to implementation. Once implemented regular checks will be undertaken of the management of surface water.	Ad hoc checks.
Environment Agency Pollution Prevention Guideline PPG6 will be complied with which gives requirements such as the bunded storage of any chemicals or fuel kept on site and the introduction of petrol interceptors to filter run off from areas of hardstanding created for construction plant.	Monitor the condition of drums regularly.	Ad hoc checks.
All gases and fuels to be stored in accordance with the current regulations for particular gases / fuels in question. These locations of fuel storage will be on the Fire and Emergency Plan.	Ensure all gases and fuels are correctly stored and that the locations of fuel storage are on the Fire and Emergency Plan.	Ad Hoc checks.

Table 7-9: Control of Littering and Waste

Proposed Mitigation	Contractor Action	Client Team Action
The waste hierarchy will be adhered to throughout demolition, remediation and construction. The Principal Contractor will establish a number of key performance indicators specifically for waste management.	The key performance indicators specifically for waste will be agreed with LBC prior to construction commencing.	Ad hoc checks and keep copes of the documentation.
The Site Waste Management Strategy will provide details about the transportation and management of waste within and outside the Application Sites.	Ensure that the Waste Management Strategy is fully implemented prior to demolition activities occurring.	Consult Environment Agency and Local Authorities.
Any waste material arising from the enabling works, site preparation and demolition suitable for reuse on the development will be retained and stockpiled where possible to incorporate such materials into the subsequent remediation and construction process.	Implementation of good practice measures in terms of on-site materials storage and waste segregation to assist in maximising reuse and recycling rates, and help ensure that high standards are maintained throughout the construction process.	Ad hoc checks
Suppliers of raw materials for the Proposed Development will be committed to reducing surplus packaging associated with the supply of any raw materials.	The Contractor will undertake improved procurement and consultation with selected suppliers regarding commitments to waste minimisation, recycling and the emphasis on continual improvement in environmental performance.	Ad hoc checks and keep copies of the documentation.
Carriageways and footpaths on and in the vicinity of the Application Sites are to be kept free of debris and litter.	Daily checks	Ad hoc checks

8.0 ENVIRONMENTAL INCIDENT AND AUDITING

8.1. General

8.1.1. An 'environmental incident' is any incident that, by its scale or nature, will have a negative effect on the environment. Such an effect is likely to result in a breach of environmental law, either by pollution to the environment or by endangering wildlife. As there are no restrictions on what constitutes an environmental incident, the system in place must remain flexible.

8.1.2. In accordance with 'Environment Agency Pollution Prevention Guidance 21: Pollution Incident Response Planning', an emergency pollution response plan is to be implemented on the Application Site.

8.1.3. The Environmental Compliance Officer will be informed of any environmental incidents by the appropriate site supervisor. All environmental incidents, dangerous occurrences or near misses will be recorded by the Contractor on an Accident/Incident Report form. Once the incident is reported and recorded, actions will be identified to avoid a recurrence and the site procedures will be updated accordingly.

8.1.4. In the event of a serious pollution incident the person in charge of the operation will immediately notify the relevant Director of the Contractor. All serious environmental incidents, dangerous occurrences and / or near misses will be thoroughly investigated by the relevant managers, assisted by the Environmental Compliance Officer, to establish the facts, the reasons for the incident and make recommendations to prevent recurrence. The Contractor will co-operate with all accident/incident investigation and enquiries as required by the Client. A report including photographs and witness statements will be forwarded to the Contract Administrator.

8.1.5. All accidents / incidents, dangerous occurrences and near misses will be reviewed by the Environmental Manager and where necessary changes to working practices/procedures will be implemented.

8.1.6. The following list details some of the incidents which it is anticipated may potentially occur, but the list is not intended to be exclusive:

- Leaking or poorly maintained machinery with no drip tray;
- Improper storage of chemicals;
- Incident leading to pollution of land, air or water;
- Incorrectly labelled or unlabelled waste, which may potentially be special (i.e. dangerous) waste;
- Waste left in an unsuitable and unsafe place; and,
- Disturbance to nesting birds.

8.2. **Pollution Incident Response Plan**

8.2.1. In accordance with the Environment Agency's Pollution Prevention Guideline PPG21, an emergency pollution incident response plan is to be implemented. This plan will take into account procedures laid down in PPG18 and PPG22. This is to include (amongst others) the following provisions:

- Contact list;
- Site drainage plan;
- Site chemical, product and waste inventory; and,
- Emergency procedures.

8.3. **Monitoring and Audits**

8.3.1. The Contractor will undertake monitoring and auditing as necessary to implement the described mitigation. Records of any monitoring undertaken, e.g. noise, vibration, dust and water quality will be forwarded to the Environmental Manager.

8.3.2. Addition ad-hoc monitoring may be undertaken by the Client.

8.4. **Control of Non-Conformance**

8.4.1. Non-confirming products or processes will initiate a Non-Conformance Report, which will identify the nature of the problem, the proposed corrective action taken to prevent recurrence of the problem and verification that the agreed actions have been carried out.

9.0 COMMUNICATION AND CO-ORDINATION

9.1. General

9.1.1. This section describes the main methods of communication and co-ordination of day to day activities on the plots during construction. Additional informal methods of communication and co-ordination should be undertaken as appropriate other than those highlighted below.

9.2. Internal Communication

9.2.1. Internal project communications will be via two processes:

- Regular environmental meetings; and
- Informal on site communication.

9.3. Regular Environmental Meetings

9.3.1. Regular environmental meetings, either weekly or fortnightly as appropriate, chaired by the Environmental Compliance Officer will be held with the Contract Manager, Works Manager, Site Foreman and Environmental Specialists to review performance and coordinate short term planning of forthcoming activities. The Environmental Manager and Contract Administrator may also attend these meetings as appropriate.

9.3.2. Environmental management representatives will use these meetings to report on the findings of their inspections together with any systematic or recurring issues. Actions from these meetings will be recorded via minutes and reviewed by the Contract Manager, Environmental Manager and Contract Administrator.

9.4. Informal On-Site Communication

9.4.1. Daily briefing / updates should be informally discussed between the Environmental Compliance Officer, Works Manager and Site Foreman to discuss changes in programme, issues with activities and potential risk to the environment.

9.5. Communications with the Public

9.5.1. A Project Community Liaison Plan will be established to provide a framework for managing communications with local residents and interested parties. This will be the responsibility of the Construction Liaison Officer.

9.5.2. In the event of unusual activities or events that can be anticipated, LBC and the relevant property owners, occupiers and neighbours will be notified wherever possible, at least 14 days in advance of the activity especially where the activity may cause a loss of amenity. The relevant activities will be determined by agreement with LBC once the detailed programme of construction is defined and will include:

- Commencement of construction in certain areas closest to neighbouring properties;
- Any necessary night time working (although none is currently envisaged);
- Weekend or evening working (outside core areas) of a type which may affect properties;
- Road or footpath closures / diversions and movements of wide loads; and

- Work on roads affecting land used by others.

9.5.3. Any complaints will be logged on-site and, where necessary, reported to the relevant individual with LBC as soon as practicable. The required actions to remedy the situation will be different in each specific case, depending on the operation, equipment or location or application of additional controls.

Appendix 1: Project Consents

[To be incorporated into Contractor's Construction Environmental Management Plan]

Appendix 2: Planning Conditions

[To be incorporated into Contractor's Construction Environmental Management Plan]

Appendix 3: Construction Programme

[To be incorporated into Contractor's Construction Environmental Management Plan]

Appendix 4: Environmental Risk Assessment

[To be incorporated into Contractor's Construction Environmental Management Plan]

Appendix 5: Record Proformas

[To be kept up to date in Contractor's CEMP

- Permission and Consents for Site Works
- Environmental Site Induction
- Project Environmental Training Record
- Method Statements
- Noise and Vibration Monitoring and Compliance Record
- Energy / Fuel Consumption Records
- Environmental Incident Report and Record of Follow-Up]

Appendix 6: Environmental Baseline Survey Results

[To be included by the Contractor]

- Ecology
- Water Quality
- Air Quality and Dust
- Noise and Vibration
- Contamination

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