

Earls Court Applications 1 and 2 Draft Framework Construction Logistics Plan (FCLP) EC Properties Ltd

June 2012

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1 Introduction

1.1 INTRODUCTION

1.1.1 WSP has been appointed by EC Properties Ltd to provide transport consultancy advice for the redevelopment of land in the London Borough of Hammersmith and Fulham (LBHF) and the Royal Borough of Kensington and Chelsea (RBKC).

1.1.2 WSP has prepared two separate Transport Assessments (TAs) to accompany planning applications to redevelop the land within RBKC (Application 1), and a separate planning application for the redevelopment of the land within both Boroughs (Application 2). Together, Applications 1 and 2 comprise the redevelopment of the Earls Court Site.

1.1.3 This document is the Framework Construction Logistics Plan (FCLP) that is applicable to each application and will be the basis for subsequent detailed CLP documents to be developed upon appointment of a contractor and where necessary on a phase by phase basis.

1.2 SITE LOCATION

- 1.2.1 The Application 1 site comprises the following main land holdings:
- Earls Court Exhibition Centre One on land within RBKC
- 1.2.2 The Application 2 site comprises the following main land holdings:
- Earls Court Exhibition Centres One and Two on land with RBKC and LBHF respectively
- The West Kensington and Gibbs Green Housing Estates on land mostly owned by LBHF. The western section of the site is occupied by two estates – West Kensington (to the south) and Gibbs Green (to the north) – which are typically 1960s in their form and character. Though a few substantial tower blocks of 9, 10 and 11 storeys are present, the estate accommodation is primarily low and medium scale density in buildings. This area also includes the Gibbs Green School, as well as a low rise factory building.
 - The Lillie Bridge Depot owned by Transport for London. This maintenance yard and rail tracks are located in the central and northern portions of the site. The depot is currently used as a maintenance facility by TfL. A nine storey office building is on the northern edge of the ECWKOA and is used as a TfL training facility.
- The railway lines which pass through the main site and associated rail sidings owned by Network Rail.
- Empress State Building located to the west of Earls Court 2 is the 31storey (110m) Empress State Building, which is the highest building within the immediate area and currently occupied by the Metropolitan Police Service.

1.3 DEVELOPMENT PROPOSALS

1.3.1 Outline planning permission is sought for Applications 1 and 2 which when combined form the Site Wide Scheme. The development quantum for Applications 1 and 2 are set out below in Tables 1.1 and 1.2 below.

Land Use	Use Class	Proposed Area (GEA)	Units
Residential	C3	139,458	930
Business	B1	13,132	-
Retail	A1-5	3,414	-
Hotel	C1	7,381	-
Education / Community / Culture	D1	6,067	-

Table 1.1 Application 1 RBKC Development Option Quantum of Development

Table 1.2 Application 2 Site Wide Development Option Quantum of Development

Land Use	Use Class	Proposed Area (GEA)	Units
Residential	C3	763,872	6775
Office	B1	120,615	-
Retail	A1-5	30,339	-
Hotel	C1	22,445	-
Leisure	D2	13,936	-
Medical	C2	11,687	-
Education / Community / Culture	D1	18,641	-

1.4 REPORT PURPOSE

1.4.1 This FCLP will form the basis of agreeing the construction arrangements with RBKC and LBHF, as appropriate. The logistics will be dependent on the suppliers, working methodology and programme to be co-ordinated by the principal contractor.

1.4.2 This FCLP provides a framework to better manage all types of freight vehicle movement to and from the Earls Court construction sites. It is envisaged that this FCLP will be conditioned as part of any forthcoming planning consent.

1.5 POTENTIAL USE OF RAIL

1.5.1 The ECWKOA SPD states:

"the provision of a freight rail transfer facility for construction materials and the removal of spoil should be investigated as part of the development proposals. If this is not proposed by development the applicant will have to demonstrate why such a facility is not feasible. The facility would reduce the impact of heavy vehicles on the surrounding area and reduce the environmental impact of construction"

1.5.2 In accordance with this requirement, during 2011 the Applicant prepared an outline feasibility report for establishing a rail freight service from Lillie Bridge Depot to Ruislip Depot, facilitating onward connection to Network Rail. Although early discussions with LUL and Network Rail were promising, the Applicant recently received confirmation from TfL that LUL operations and infrastructure are unable to support the potential to operate the proposed rail freight service. This option has therefore been discounted.

1.5.3 The Applicant has also examined the potential to introduce a rail freight head located at the Northern Access Road, but due to the estimated duration of freight operation (<3yrs), rail signalling complexities, the close proximity of proposed

freight operations to residents, the site logistical constraints resulting for locating a freight head on the eastern side of the West London Line and the overall cost of introducing such a scheme, make this proposal impracticable. This option has therefore been discounted.

1.5.4 The Applicant is currently examining the potential to introduce a rail freight connection from the WLL to LUL District Line to Lillie Bridge Depot (LBD) feeder road and in to LBD. The outline estimated duration and capacity of freight operation makes this option worthy of further investigation. Discussions with LUL and Network Rail are continuing following a recent joint site visit to consider the associated complexities and constraints.

1.5.5 Currently there is no agreement with LUL or Network Rail to use Rail Freight and therefore for the purposes of assessing the Construction and Demolition Strategy a road based strategy (presenting a 'worst case' scenario) should be assumed at this stage and so this is the analysis presented in this document.

1.5.6 For the avoidance of doubt, the feasibility of introducing rail freight is ongoing and due to the logistical, operational and rail infrastructure complexities will not be resolved prior to determination of Applications 1 or 2. However, the Applicant remains committed and determined to work with the Rail Operators and Freight Operating companies in developing a suitable Rail Freight connection for both waste removal and delivery of construction materials.

1.5.7 Updates on any of the above, will be provided to the EC Transport Steering Group. In the final analysis should rail freight be deemed feasible, then this CLP will be updated accordingly.

1.6 CLP OBJECTIVES

1.6.1 Construction and Logistics Plans (CLPs) developed through the planning process seek to support sustainable development.

- 1.6.2 This FCLP will therefore seek to achieve the following objectives:
- Demonstrate that construction materials can be delivered, and waste removed, in a safe, efficient and environmentally-friendly way;

Identify deliveries that could be reduced, re-timed or even consolidated, particularly during peak periods;

Help cut congestion on local roads and ease pressure on the environment;

- Improve the reliability of deliveries to the site; and
- Reduce freight operators' fuel costs.

1.7 REPORT STRUCTURE

- 1.7.1 The report is set out as follows:
- Chapter 2 presents the proposed construction and servicing provision on the site including details of construction site management.
- Chapter 3 identifies the objectives of the Construction Logistics Plan;
- Chapter 4 presents the measures and initiatives to be employed to increase construction servicing efficiency for the Earls Court site; and
- Chapter 5 presents the proposed methodology for monitoring, review and complaints.

2 Construction Proposals

2.1 INTRODUCTION

2.1.1 This Chapter provides an overview of the preliminary construction strategies for the Earls Court site. This Chapter provides an overview, with the details to be expanded and finalised for the final versions of the CLP's.

2.1.2 Due to the scale of redevelopment, the development proposals have been divided into a number of phases. Each phase has been subdivided into yearly 'timeslices'. To account for the overlap in phases, the 'timeslices' have been grouped to form three Deconstruction / Demolition and Construction Sequences.

2.1.3 Planning for enabling works, deconstruction, demolition and construction is broad at this stage and may be subject to modification during the detailed enabling planning. This initial assessment is based on reasonable assumptions at this early stage and experience on similar projects.

8.1 APPLICATION 1 RBKC DEVELOPMENT OPTION

Application 1 Demolition & Construction Phasing Programme

2.1.4 The demolition and construction activities for the RBKC Only Development Option have been planned for implementation during a 10 year deconstruction/demolition and construction programme, anticipated to commence in July 2013.

2.1.5 The existing Earls Court 1 and 2 buildings (EC1 and EC2) are both likely to be deconstructed. Both these buildings sit on a slab which covers the Network Rail operational tracks of the West London line (WLL) and LUL District Lines. It is the intention to maintain this existing slab over the operational tracks.

2.1.6 The deconstruction of EC1 is likely to be split into two key stages as follows:

Stage 1 - Deconstruction from the top of the existing roof level to the top of the existing ground floor slab followed by;

Stage 2 – Demolition from the top of the ground floor slab to the top of basement slab.

2.1.7 The existing EC1 link building, will also be deconstructed. Currently it is the intention to deconstruct this as part of the EC1 deconstruction operations.

2.1.8 It is likely that the existing link bridge between EC1 and EC2 will also be removed as part of the EC1 deconstruction operations.

2.1.9 The deconstruction of EC2 could also be split into 2 key stages, as follows:

- Stage 3 Deconstruction from the top of the existing roof level to the top of the existing ground floor slab followed by; and
- Stage 4 Part demolition of the west section from the top of the ground floor slab to grade level

2.1.10 The deconstruction of EC1 and EC2 will overlap with new construction works related to the Development Option (RBKC) Proposals. For the purposes of this assessment, it is assumed that EC1 and EC2 will be demolished concurrently, however, the demolition of EC2 may be delayed if EC2 can be utilised for construction logistics / storage.

2.1.11 Although EC2 lies outside of the redline boundary of Planning Application 1, as it is anticipated that EC1 and EC2 will be deconstructed concurrently, therefore, the deconstruction of EC2 will be considered by this part of the FCLP.

Application 1 Construction Gates & Use of Northern Access Road

2.1.12 The options to access the demolition site include use of a new road in the areas of the site associated with the previously consented Northern Access Road (NAR). This new road would connect the existing Earls Court Exhibition Centre podium with Fenelon Place via the existing 100 West Cromwell Road basement coach park (Gate 1 on Figure 2.1). In accordance with the legal deed for use of this road, Gate 1 will be maintained as a construction access for the build out of Earls Court 1 and 2. Any construction work in the area of the NAR will be sequenced to maintain a construction access. The final service access goes under the building leading up to the Tesco's basement. Other entrances can be provided at West Brompton (Gate 2), Warwick Road (Gate 3) and Cluny Mews (Gate 4) can provide flexibility to reduce the number of vehicles using the NAR if required.





2.1.13 Gate locations G1, G2, G3 and G4 will be maintained throughout the construction programme. To further minimise the likelihood of congestion, strict monitoring and control of vehicles entering, egressing and travelling across the site will be maintained. Delivery schedules will be produced to regulate deliveries and eliminate bottlenecks. A holding area close to the Heathrow/A4 corridor will be used to control the number of construction vehicles coming into the Earls Court area.

Application 1 Main Access Routes

2.1.14 Initial analysis of the local routes for construction & demolition traffic shows that the A4 and the A40 to the north of the site would be the most suitable routes for the vast majority of vehicle movements. The approach to and egress from Gate 1 would be via the A4 and Fenelon Place and the existing 100 West Cromwell Road

basement coach park. This would provide a direct access from the north, avoiding the Earls Court One Way System and residential areas around the perimeter of the site. Vehicles egressing G1 will leave via Fenelon Place with a left hand turn into Warwick Road across the junction leading onto Holland Road (A3320) followed by a left hand turn at Holland Park Avenue onto the A40.



G1 Access Gate Routing

2.1.15 The approach to the other site access gates, will be via a right hand turn off the Eastbound A4 onto North End Road. Demolition and construction traffic can then enter the Earls Court Site at any of the other gates using Lillie Road, Old Brompton Road, and Warwick Road. Vehicles leaving the Earls Court Site will do so via a left hand turn off Warwick Road onto the Westbound A4 junction away from the site.



2.1.16 The final routing will be subject to review and finalisation by the principal contractor and confirmed in the final CLP.

Application 1 Road vehicle movements

2.1.17 The number of construction vehicles accessing the site during the programme has been calculated by Mace, based on the expected volumes of material to be removed during demolition and delivered during construction. It is forecast that vehicle movements would peak at 10 vehicle movements per hour (i.e. five in and five out : a delivery every 12 minutes) in Years 2 and 3.

2.1.18 It is anticipated that there will be 3 to 4 vehicular access gates in operation at this time. On this basis, the frequency will reduce to a delivery every 30 minutes per access gate if an even use of gates is assumed. However, for all phases of construction and demolition, the potential to weight construction traffic onto specific and primary access gates (G1) can be agreed prior to the production of agreed Construction and Logistics Plans for each phase of development. This will see reduced impacts on more minor routes and roads with bus routes. It is acknowledged that subject to the agreed routes the frequency of movements may be greater along a particular route than the average quoted for each gate.

2.1.19 In making these forecasts, Mace/SRM have given consideration to reducing the number of vehicle movements by:

- the possible reuse of circa 28% of the crushed concrete produced during deconstruction of EC1 and EC2;
- reuse of excavated material for filling (based on its suitability);
- potential provision of an on-site soil hospital to remediate soil on site (the current extent of contamination and remediation required is unknown at this point);
- potential provision of a mortar batching facility on site;
- the use of reusable hoardings where they can be used in non-aesthetic locations; and

the potential for the use of prefabrication techniques and modern methods of construction where practical and viable to do so without compromising quality.

2.1.20 The Applicant is committed to exploring the viability of each of the above measures with any appointed contractor to ensure that impacts are minimised wherever possible.

2.1.21 It is proposed that a construction stage Travel Plan will be devised. There will be a general policy of not providing any car parking on site and the site labour force will be encouraged to use public transport. Provision will be made for essential parking only and cycling will be encouraged with secure bicycle storage and shower facilities made available on site.

2.2 APPLICATION 2 SITE WIDE DEVELOPMENT OPTION

Application 2 Site Wide Demolition & Construction Phasing Programme

2.2.1 Deconstruction and demolition of the existing buildings and infrastructure and construction of the Site Wide Development Option is divided into 6 indicative phases and an overall 19-year deconstruction / demolition and construction program is anticipated.

2.2.2 The anticipated timing of each of the 6 phases are set out below:

- Phase 1 Year 1 to Year 8 inclusive;
- Phase 2 Year 3 to Year 10 inclusive;
- Phase 3 Year 3 to Year 10 inclusive;
- Phase 4 Year 7 to Year 11 inclusive;
- Phase 5 Year 9 to Year 15 inclusive; and
- Phase 6 Year 13 to Year 19 inclusive.

2.2.3 The 6 phases of development have been sub divided into one year 'timeslices' which have then been grouped into logical 'Deconstruction / Demolition & Construction Sequences' as follows:

- Sequence 1 Phases 1, 2 and 3, which equates to a 6-year time period;
- Sequence 2 The remainder of Phases 1, 2 and 3 plus Phases 4 and 5, which equates to a 6-year time period; and
- Sequence 3 the remainder of Phases 5 and 6, which equates to a 7-year time period.

Development Phases, Yearly Timeslices & Sequences



Application 2 Construction Gates & Use of Northern Access Road

2.2.4 The options to access the demolition site include use of a new road in the area of the site associated with the previously consented Northern Access Road (NAR). This new road would connect the existing Earls Court Exhibition Centre podium with Fenelon Place via the existing 100 West Cromwell Road basement coach park (Gate 1). In accordance with the legal deed for use of this road, Gate 1 has been maintained as a construction access for the build out of Earls Court 1 and 2, and will only be used for minor deliveries from yearly timeslice 9 onwards until yearly timeslice 13 when it will be used for the remaining cover slab over the WLL and for the construction of WV01 and WKO4 as the final part of Phase 6 with these buildings falling under the demise of the Exhibition Centre area.

2.2.5 Any construction work in the NAR will be sequenced to maintain a construction access with the flexibility for an additional access gate off Cluny Mews to assist the construction of this area. The final service access goes under the building leading up to the Tesco's basement.

2.2.6 Other entrances at West Brompton (Gate 2) and Warwick Road (Gate 3) can provide flexibility to reduce the number of vehicles using the NAR if required.

2.2.7 Initial analysis of the local routes for construction & demolition traffic shows that the A4 and the A40 to the north of the site would be the most suitable routes for the vast majority of vehicle movements. The approach to and egress from Gate 1 would be via the A4 and Fenelon Place and the existing 100 West Cromwell Road basement coach park. This would provide a direct access from the north, avoiding the Earls Court One Way System and residential areas around the perimeter of the site.

2.2.8 Gate locations G1, G2 & G3 will be maintained throughout the Sequence 1 construction programme until areas are completed and occupied as shown on the timeslice plans. Subsequent site entrances will be provided at G4 and G6 on North End Rd and G5 on Lillie Rd. The final access point G7 will be formed at the new access location on the A4. G7 will form the second primary access point to complement G1. The current proposal is to establish the new proposed A4 junction within Sequence 1 to minimise the potential congestion on surrounding roads. The potential to deliver this access as early as possible is being explored.

2.2.9 To facilitate some access gates minor kerb and footway alterations may be necessary. The extent of these changes is likely to be minor with Notices and details of traffic management proposals associated with works to the highway and footpaths will be given under the Highway Acts 1980 and Road Traffic Act 1998.

2.2.10 To further minimise the likelihood of congestion, strict monitoring and control of vehicles entering, egressing and travelling across the site will be maintained. Delivery schedules will be produced to plan and regulate deliveries and eliminate bottlenecks. A holding area close to the Heathrow/A4 corridor will be used to control the number of construction vehicles coming into the Earls Court area and details of this provision will be provided.

2.2.11 During construction on the land currently occupied by Earls Court Two and of the new stabling facility on the Lillie Bridge depot, a temporary access to the depot via Beaumont Avenue may be required. This route is being considered as a temporary access route to Lillie Bridge Depot (LBD) and is not being considered for construction traffic. LUL will be using this route during the Olympics (3 ½ t vehicles) and the Applicant has suggested proposals for 60ft vehicle access (the largest vehicle used by LUL). Further examination of this option is being undertaken by LUL – supported by the Applicant, and it is proposed that the following information will be provided as part of this exercise:

Current traffic movements,

- Reduction in traffic movements resulting from EC2 demolition / reduction in car parking / re-location of LBD facilities.
- Topographical study of the road
- a swept path assessment of typical vehicles that will use the road full route review.

2.2.12 In order to minimise impact wheel washing facilities for all construction vehicles will be implemented at the site entrance locations and site management will monitor and manage construction traffic to ensure that vehicles do not block the highway on entry and exiting.

Application 2 Main Access Routes

2.2.13 The main access / egress route to the Earls Court Site is along the A4.

2.2.14 When using G1, construction vehicles will access the gate via a left hand turn off the Eastbound A4 onto Warwick Road and a left hand turn into Fenelon Place leading into Tesco's basement. Vehicles egressing G1 will leave via Fenelon

Place with a left hand turn into Warwick Road across the junction leading onto Holland Road (A3320) followed by a left hand turn at Holland Park Avenue onto the A40.



G1 Access Gate Routing

2.2.15 The approach to the other site access gates, (except G7, which would have direct access to the Earls Court Site from the new A4 junction) will be via a right hand turn off the Eastbound A4 onto North End Road. Demolition and construction traffic can then enter the Earls Court Site at any of the gates around the perimeter of the site using Lillie Road, Old Brompton Road, and Warwick Road. Vehicles leaving the Earls Court Site will do so via a left hand turn off Warwick Road onto the Westbound A4 junction away from the site.



2.2.16 The main access/egress route the Seagrave Road site is via a right hand turn off the Eastbound A4 into North End Road and a left hand turn at the crossroads into Lillie Road, (and Old Brompton Road) and a right hand turn into Seagrave Road just before Lillie Bridge.

2.2.17 Seagrave Road is a dead end road and therefore vehicles leaving the site will return to the Lillie Road junction, turn right, and then turn left into Warwick Road and left via the A4 Westbound junction away from the site.

2.2.18 Secure access points with wheel cleaning facilities will be established at the site entrance locations. Pedestrian access points will generally be located close to the main vehicular access gates with separate pedestrian gates and footpaths provided.

2.2.19 The possible servicing routes available for construction vehicles have been reviewed, with the opportunities identified above. The final routing will be subject to review and finalisation by the principal contractor and confirmed in the final CLP.

Application 2 Construction Vehicle Movements

2.2.20 The number of construction vehicles accessing the site during the programme has been calculated by Mace, based on the expected volumes of material to be removed during demolition and delivered during construction. Estimated quantities of materials being delivered and removed from the site are provided in the Mace document appended to this technical note.

2.2.21 In making these forecasts, MACE/SRM have given consideration to reducing the number of vehicle movements by:

- the possible reuse of circa 28% of the crushed concrete produced during deconstruction of EC1 and EC2;
- reuse of excavated material for filling (based on its suitability);
- potential provision of an on-site soil hospital to remediate soil on site (the current extent of contamination and remediation required is unknown at this point);

potential provision of a mortar batching facility on site;

- the use of reusable hoardings where they can be used in non-aesthetic locations; and
- the potential for the use of prefabrication techniques and modern methods of construction where practical and viable to do so without compromising quality.

2.2.22 The Applicant is committed to exploring the viability of each of the above measures with any appointed contractor to ensure that impacts are minimised wherever possible.

2.2.23 For all phases of construction and demolition, the potential to weight construction traffic onto specific and primary accesses can be agreed prior to the production of agreed Construction and Logistics Plans for each phase of development. In advance of this agreement and for the purposes of this note and the associated appendix, an average figure across all gates is provided. It is acknowledged that subject to the agreed routes the frequency of movements may be greater along a particular route than the average quoted for each gate. The below figures are for the Site Wide Scenario and therefore include the Application 1 totals.

- In Sequence 1 it is forecast that vehicle movements would peak at 22 to 28 vehicle movements per hour (i.e. a delivery every 4 to 6 minutes) in years 5 and 6. It is anticipated that there would be three or four access gates in operation at this time, so their use would equate to a frequency of one movement every 12 to 18 minutes per access gate.
- In Sequence 2 it is forecast that vehicle movements would peak at 37 vehicle movements per hour (i.e. a delivery every 3 minutes) in year 8. In this year it is anticipated that there would be two access gates in operation so their use would equate to a frequency of one movement every 6 minutes per gate.
- In Sequence 3 it is forecast that vehicle movements would peak at 20 per hour (i.e. a delivery every 6 minutes) in year 13. Over this year it is anticipated that there would be one main access gate in operation.

2.2.24 If the measures highlighted above were not to be implemented then there would be an increase in road vehicle movements. Endeavours will be made to ensure all measures are implemented but at the request of TfL and the Boroughs, the change in vehicle numbers by sequence has also been calculated and this is set out below:

- In Sequence 1 it is forecast that vehicle movements would peak at 30 vehicle movements per hour in year 6, an increase of under 10% on the mitigated figures forecast
- In Sequence 2 it is forecast that vehicle movements would peak at 40 vehicle movements per hour in year 8, an increase of 10% on the mitigated figures forecast
- In Sequence 3 it is forecast that vehicle movements would peak at 21 vehicle movements per hour an increase of 1 vehicle over the previously forecast mitigated peak movements

2.2.25 It should also be noted that should rail based freight strategy be deemed possible as promoted by the Applicant, the number of road vehicle movements would be significantly less subject to the detail of the rail facility brought forward.

2.2.26 It is proposed that a construction stage Travel Plan will be devised. There will be a general policy of not providing any car parking on site and the site labour force will be encouraged to use public transport. Provision will be made for essential parking only and cycling will be encouraged with secure bicycle storage and shower facilities made available on site.

2.3 APPLICATION 1 & 2 PARKING

2.3.1 On-site parking for construction workers will be restricted to an absolute minimum as there will be a general policy of not providing any car parking on the site. The construction workers will be encouraged to use the highly accessible public transport services available at Earls Court, West Kensington and West Brompton stations and the large number of bus services provided locally. Provisions will be made within the site for essential on-site parking if required for emergencies etc. and a minibus set down point.

2.3.2 With the government's emphasis on cycling to work and the development's sustainability commitments the use of bicycles as a form of transport will be encouraged with bicycle storage and shower facilities made available on site.

2.4 APPLICATION 1 & 2 DELIVERIES

2.4.1 To minimise the likelihood of congestion during the demolition and construction period, strict monitoring and control of vehicles entering and egressing and travelling across the Earls Court Site will be implemented. All on-site construction deliveries will be pre-arranged and pre-booked as part of the efficient operation of construction work. The use of a booking system and having the delivery times agreed with each contractor means that vehicles are not caused to wait prior to entering the site.

2.4.2 Delivery schedules will be produced in order to look at the profiles of up and coming deliveries and to regulate deliveries and eliminate bottle necks. A holding area, likely to be close to the M4 / Heathrow corridor, will be used to control the number of construction deliveries coming into the area. Contractors will be issued with a project route map to pass on to their delivery drivers. A delivery vehicle would be held in the offsite holding area until the site is ready to receive the delivery. Radio contact links will be provided and maintained between the site and the holding area to call vehicles into the site area on a controlled basis. Specific time slots will be allocated to contractors for the use of cranes and hoists, to ensure that the main plant will be utilised efficiently.

2.4.3 The proposed construction vehicle access routes avoid using minor roads as far as possible, and have specifically avoided residential roads adjoining the sites. These measures will ensure that delivery vehicles have minimal impact on surrounding residential roads to the site. In addition, waiting vehicles will be avoided through strict management of delivery times.

2.4.4 The form of delivery management of vehicles will be set out at the tender stage and reinforced onsite. The success of the proposals will be monitored through the Construction Environmental Management Plan for the scheme.

3 Delivery and Servicing Management Measures

3.1 INTRODUCTION

3.1.1 This Chapter outlines the overarching measures and initiatives included within the FCLP.

3.1.2 This FCLP will specifically aim to ensure that construction and servicing of the Earls Court Site can be carried out efficiently, minimising negative impacts upon the local highway network, residents and commercial occupiers within and surrounding the site, and the environment. In order to ensure impact is minimised the contractor will commit to the 'considerate contractor' code of practice.

3.1.3 The proposed management measures and initiatives have been grouped into the following areas and these will apply to both Applications 1 and 2:

- Design;
- Procurement Strategy;
- Operational Efficiency;
- Waste Management;
- Traffic Management and Diversions;
- Pedestrian Routing; and
- Construction Sustainability.

3.2 DESIGN

- 3.2.1 The final CLP will:
 - Illustrate the on site delivery and collection points off street;

Complete a swept path analysis showing how freight vehicles will access the site;

Conduct a risk assessment of the loading points.

- 3.2.2 The following initiative will be considered:
- Secure drop off facilities away from the main site to reduce the number of failed delivery trips and to encourage out-of-hours deliveries.

3.3 PROCUREMENT STRATEGY

3.3.1 The procurement process should demonstrate an awareness of all vehicle activity associated with the site, its impacts and appropriate measures to reduce it. This will be undertaken by site management.

3.3.2 The strategy should demonstrate a commitment to safer, more efficient and more environmentally friendly distribution by contracting operators registered with a best practice scheme, such as FORS. FORS members, or those who can demonstrate that they meet FORS membership standards, will where possible be the contracted suppliers.

3.3.3 It is also encouraged that contractors source items locally, or from the same supplier, to reduce the number of deliveries required.

3.4 OPERATIONAL EFFICIENCY

3.4.1 The anticipated core hours of construction (excluding Engineering Hours & Possession Periods) for demolition and construction will be:

- 08:00 18:30, Monday to Friday excluding Bank Holidays and weekends;
- 08:00 13:00, Saturdays.

3.4.2 In order to maintain the above working hours, the Principal Contractor may require at certain times a period of up to one hour before and after normal working hours to start and close down activities (this will not include works that are likely to exceed agreed maximum construction works noise levels). Specialist construction operations and deliveries may also be required to be carried outside these core hours in agreement with RBKC and LBHF and other relevant parties.

3.4.3 Certain operations carried out close to existing Network Rail assets and London Underground tunnels will need to be undertaken during engineering hours, weekends or blockage periods (including night time working). The timing of these operations will be agreed with Network Rail, LUL, RBKC and LBHF.

3.5 WASTE MANAGEMENT

3.5.1 In general and in accordance with the principles of the UK Government's 'Waste Strategy 2000' a principal aim during demolition and construction will be to reduce the amount of waste generated and exported from the site. This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary.

3.5.2 All principal and trade contractors will be required to produce a construction Site Waste Management Plan (SWMP) on a phase by phase basis which will contain:

Classification of all wastes;

- Performance measures and target setting against estimated waste forecasts;
 - Measures to minimise waste generation;
 - Opportunities for re-use and recycling;
 - Provision for the segregation of waste streams on site that are clearly labelled;
 - Recording of proposed carriers and licences for disposals sites;
- An audit trail encompassing waste disposal activities and waste consignment notes;
- Measures to avoid fly tipping by others on land being used for construction;
- Measures to provide adequate training and awareness through toolbox talks; and
- Considerable alternative means of removing waste other than by road.

3.5.3 All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation by:

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

- Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- Use standard size components in design detailing to eliminate risk at source where possible to do so;
- Attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- Re-use of materials wherever feasible, e.g. re-use of crushed concrete from demolition process for fill (crushed using an off-site concrete crusher); reuse of excavated soil for landscaping. Concrete will be taken off site for crushing and re-use. The Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice, contractors will be required to maximise the proportion of materials recycled;
- Segregation of waste at source where practical;
- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and resale for direct re-use or re-processing);
- Skips will be colour coded and signposted to reduce the risk of cross examination and covered to prevent dust and debris blowing around the site, these will be cleared on a regular basis; and
- Burning of wastes or unwanted materials will not be permitted on site.

3.6 TRAFFIC MANAGEMENT AND DIVERSIONS

3.6.1 As previously discussed, the A4 will be used as the main northern approach for all construction delivery vehicles. The use of the Northern Access Road for demolition and construction works to the east will help alleviate the impact of construction traffic on surrounding residential areas as will the new A4 junction formed in Sequence 1 to serve the west of the site for Application 2.

3.6.2 For Application 2 access points will be provided along Lillie Road and North End Road to serve the south western side of the site until the new A4 junction is in place. Demolition and construction deliveries will be carefully planned with a booking system implemented to regulate delivery. A holding area close to the M4 / Heathrow corridor will be used to control the number of construction vehicles coming into the Earls Court Site. Upon appointment of a contractor details of this holding area will be agreed.

3.6.3 Effective wheel cleaning facilities will be provided at the main entrance gate locations together with concrete hard standing. Recycled water will be used wherever possible and supplementary cleaning will be provided as necessary using suitable means to keep the surrounding highway clean. Collected debris will be disposed of as controlled waste at a licensed waste disposal facility.

Stopping Up

3.6.4 For Application 2 Stopping Up Orders will be required to existing roads running through the existing West Kensington and Gibbs Green Housing Estates. These roads will be stopped up ahead of demolition and the commencement of new plot construction. Temporary roads may be required to maintain access routes to existing housing.

3.6.5 New highways will be constructed internally to the site boundary utilising existing junctions with the surrounding roads or the forming of new junctions onto

Lillie Road and North End Road. These junctions and roads will be constructed early to provide construction site access and egress.

Traffic Management

3.6.6 Highway alteration works are proposed at the existing road junctions and entrances and surrounding areas in Lillie Road, Old Brompton Road, Warwick Road and North End Road. These are fairly minor in nature and extent. More extensive highway works are required for the A4 junction for Application 2 where the existing 3 lane A4 will be reduced to 2 lanes to create a working zone for the new junction. The construction of the new A4 junction and associated traffic management will be carried out in accordance with notices for works on the highway in accordance with the Highway Acts 1980 and Road Traffic Act 1998 and agreed with TfL to minimise the impact on the surrounding area.

3.6.7 Notices and details of traffic management proposals associated with works to the highway and footpaths will be given under the Highway Acts 1980 and Road Traffic Act 1998.

Road Closures

3.6.8 Road closures are not anticipated however they may be required in order to establish and remove the tower cranes or to deliver large items of building plant and infrastructure items. This will be agreed with RBKC and LBHF prior to commencement. Notices regarding any planned closures and diversion of either roads or footpaths shall be given by the principal contractor to RBKC, LBHF, the police, fire brigade and other emergency services sufficiently in advance of the required closure or diversion.

3.7 PEDESTRIAN ROUTING

3.7.1 Pedestrians, the general public and any on site depot employees, rail operatives, local residents and employees associated with other existing uses across the site will be kept separate from the deconstruction, demolition and construction activities at all times.

3.7.2 It is envisaged that pedestrian routes will be maintained for public use around the perimeter of the site. Where temporary closures may be required for the erection of scaffolds and incoming services connections, permissions and licences will be obtained for the rerouting of pedestrian thoroughfares. Where more extensive closures or diversions of the existing footpath are required, temporary proposals will be agreed with RBKC and LBHF.

3.7.3 During construction works, existing pedestrian routes and footpaths crossing the West Kensington and Gibbs Green Housing Estates will be maintained as far as is reasonably practicable. Temporary footpaths may be required in the interim until permanent footpaths are available.

3.8 CONSTRUCTION SUSTAINABILITY & COMMUNITY ENGAGEMENT

3.8.1 A draft CEMP has been prepared and phase specific CEMPs will be developed for the construction phases and will include a strategy for minimising carbon emissions. The CEMPs will detail the approach for a range of resource efficiency principles including locally sourcing materials and services, auditing materials to demonstrate environmental performance and options for the re-use of supplies. The CEMPs will be carried out alongside a carbon foot printing procedure that will minimise carbon demands of the development, identify the use of renewable resources of energy and incorporate efficient energy supply and low

carbon technologies such as Photo Voltaic Cells and Solar Thermal Units where feasible.

3.8.2 The potential for sustainable construction and transport practices to be shared with local community groups is one of the proactive approaches that will be explored in the Community Strategy.

3.8.3 The Community Strategy will detail how full and fair employment opportunities, training, education and procurement opportunities for local residents and businesses are made available and how these are monitored. The community strategy has successfully been implemented on previous projects through the following proactive approaches:

- Established links with local schools and businesses to offer training and employment opportunities via work experience and apprentice schemes; and
- Establishment of a learning centre offering language, maths and other courses to the site workforce.

3.8.4 A Community Strategy and Community Liaison officer will be appointed to maintain an active dialogue with residents, ensure that the neighbourhood is not detrimentally affected by the construction works and to maintain the proactive approaches outlined in the Community Strategy.

3.8.5 The Community Strategy and Community Liaison Officer will arrange meetings with the community and also be responsible for providing information to be circulated to households and businesses in the area at each phase of the development. The frequency of meetings and workshops will be set out in the Final CLP and each meeting will be advertised in the local media in advance.

4 Monitoring, Review & Complaints

4.1 MONITORING

4.1.1 A programme of monitoring and review will be implemented to generate information by which the success of the CLP can be evaluated against the objectives set out within Chapter 3.

4.1.2 Monitoring and review of construction activity to the site will be the responsibility of the principal contractor.

4.1.3 This process will provide the opportunity for construction operations and procedures on the site to be reviewed and new management measures to be implemented (if necessary) to achieve the objectives set out within Section 3. Monitoring will be documented and available to RBKC and LBHF upon request.

4.2 COMPLAINTS PROCEDURE

4.2.1 As part of the ongoing process for ensuring that impacts due to construction traffic are minimised, a forum will be established between the appointed Contractor, RBKC, LBHF, and TfL.

4.2.2 In addition to the forum, the 24-hour independent public hotline will be made available to members of the public. The hotline number will be published so that the Contractor can hear any queries or complaints.

4.2.3 The forum would act as the body responsible for focusing on the impacts of traffic, providing early warning of forthcoming events, to overcome any difficulties that have arisen or that may arise and to summarise any calls received form the hotline.

