STRATFORD CITY

SITE WIDE CONSTRUCTION METHOD STATEMENT

May 2007

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Drawing showing zones

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GLOSSARY TABLE

&	Diameter
BS	British Standard
BT	British Telecom
CBR	California Bearing Ratio
CCHP	Combined Cooling Heat and Power
CoCP	Code of Construction Practice
COSS	Controller Of Site Safety
CST	Common services tunnel
CTRL	Channel Tunnel Rail Link
EPA	Environmental Protection Act
ES	Environmental Statement
HGV	Heavy Goods Vehicle, here includes construction site service vehicles
HV	High Voltage
IP	Intermediate Pressure
kV	Kilovolts
LBH	London Borough of Hackney
LBN	London Borough of Newham
LBTH	London Borough of Tower Hamlets
LBWF	London Borough of Waltham Forest
LUL	London Underground Limited
MOL	Metropolitan Open Land
MP	Medium Pressure
NGC	National Grid Company
NTH	Northern Ticket Hall
NR	Network Rail
NRSWA	National Roads and Street Works Act
OCMS	Outline Construction Method Statement
ODA	Olympic Delivery Authority
PM_{10}	Particulate matter with an (equivalent aerodynamic) diameter of ten microns or less
PTE	Public Telephone Exchange
PTSC	Personal Track Safety Card
REW	Regeneration Enabling Works
SCDL	Stratford City Developments Limited
TCL	Town Centre Link
TW	Thames Water

1 INTRODUCTION

1.1 Planning Requirements

This Site Wide Construction Method Statement is prepared in accordance with the requirements of London Borough of Newham Planning Permission for the Stratford City Development, Schedule 2. It is to be read in conjunction with the following other site wide strategies:

i) Environmental Sustainable Design Strategies and associated manuals
ii) Estate Management Framework
iii) Site-wide Air Quality Strategy

In addition to providing the guidelines for the whole of the Stratford City Development, this document establishes the framework from which the individual zonal Construction Method and Management Statements are to be developed.

Refer also to Appendix A for Planning Permission Conditions related to construction activities. Compliance with these conditions is mandatory.

1.2 General Introduction

This Site-Wide Construction Method Statement sets out a series of standards, mitigation measures and procedures that will be observed through the construction process, in order to minimise adverse environmental effects of the construction process, and provides a detailed description of how the proposed construction works will be managed.

These measures will be updated as the design progresses, as new information becomes available and on receipt of detailed planning permission and approval of reserved matters for the development. The Project Methodology will be developed from a series of individual construction method statements for each Zone.

All work in each Zone is to be carried out in accordance with the respective Zonal Construction Method and Management Statement.

The environmental and management issues that have been specifically considered within this document fall into three main areas, within which there are subsections, namely:

i) Construction and phasing
ii) Environmental issues
iii) Management issues

The construction of the Stratford City Development will affect the local environment. However, the impact will be mitigated through careful and accurate construction planning and management, adoption of Environmental Best Practices, good neighbourhood policies and regular liaison meetings with local borough councils, to ensure that the development is managed in a way that is not detrimental to the local environment and amenities of the local community.

1.3 Olympics

The London 2012 Olympics bid was successful and the Stratford City Team has already commenced discussions with the Olympic Team in order to facilitate the integration of both projects.

SCDL is developing this relationship with the Olympic team to ensure that a joint working approach is adopted to ensure that all interested parties' objectives and goals are achieved. Regular meetings with the project managers for the Olympic Delivery Authority are already in progress on key logistics issues such as the Construction Code of Practice, site access, sustainable delivery solutions, programming and site accommodation, DLR extension, and any issues relating to Network Rail to ensure coordination between the parties.

In addition, regular meetings have been held, and continue to be held, with the Olympic Construction Team to address logistics, transport, security, construction methods, vehicle and personnel movements and key interfaces (e.g. utilities). This is discussed further in part 4.4.1 of this document.

This document therefore represents an interim assessment of the final requirements and will be updated and reissued as appropriate during the currency of the development process.

2 Construction and PHASING

2.1 Phasing of Development

The Stratford City site has been divided into 7 zones, based on broadly different land use proposals. It is not intended that any development will start prior to the first land possession in 2006. Following possession, works will commence in accordance with the "development thresholds "(as described in the Development Specifications), initially with provision of key elements of infrastructure to allow the intended first phase of construction to commence.

The overall phasing of the development incorporates the following:

i) integration of the 2012 Olympic requirements including the construction of the Olympic Village
ii) integration of works by others by transport infrastructure companies and utilities companies
iii) construction of Zone 1 including the town centre link, and creating connections between the regional and international stations service diversions/off and on site utility supplies
iv) rail possessions
v) off site infrastructure

2.2 Site Constraints and Considerations

The Stratford City Development will be located on the site of the former railways Freightliner depot. This land is bisected by the CTRL box, which houses the Stratford International Railway Station and the Channel Tunnel Rail Link from St Pancras Station to the Channel Tunnel.

Existing roads and other temporary constructions associated with the CTRL will be used during early stages of the construction of the SCDL but will ultimately be removed.

Existing structures on various parts of the SCDL land will be demolished when the land upon which they are constructed is acquired.

These structures include the following:

i) Powerhouse and associated buildings in Zone 1
ii) Frigoscandia cold stores in Zone 5
iii) Following the acquisition of these lands and demolition of the structures, land remediation and contour remodelling will be necessary in certain areas.
iv) Existing NG and EDF power lines that cross the SCDL area have to be realigned or undergrounded (by others)

In addition to the above constraints, the construction of the Olympic Games facilities is programmed to be complete to achieve a 'lock-down' period from the beginning of 2012 until the opening of the Games. This will impose considerable constraints on the Stratford City Project, particularly with respect to access to SCDL works and the continuation of SCDL construction generally. Routes for service vehicles and the public will need to be maintained to the retail centre which is due to open prior to the Olympic Games.

The Stratford City Development continues after the Olympic Games with the refurbishment of the Legacy buildings (Olympic Village and school) and the construction of the remaining buildings in the development.

2.3 Site Establishment and Construction Methodology

2.3.1 Site Establishment: All Zones

Before any major construction work commences, SCDL will have taken the following actions:

i) Implemented community initiatives
ii) Implemented good neighbours policy
iii) Installed complete security enclosure
iv) Installed site directional and safety signage in and around the site area
v) Implemented the agreed traffic routes, signs and policy
vi) Installed operational wheel wash facilities with road sweeping equipment in position ready for use
vii) Published SCDL Traffic and Parking policy and implemented with the supply chain
viii) Published Project Environmental Plan

The site will be managed in accordance with the requirements of LBN and other local borough councils/statutory authorities and Codes of Construction Practice.

2.3.2 Health & Safety

A safe working environment for everyone involved with the project is paramount. Health and Safety issues on this project are a fundamental factor in influencing the construction methods and programme of the project.

A Project specific Health & Safety Management Plan will be established in accordance with current Health & Safety regulations as a minimum and the content of this document will be implemented during the currency of the Project being reviewed and updated as site conditions change. The document will include detailed procedures for risk assessments and method statements for all aspects associated with the effective management of Health & Safety in relation to the Stratford City Development and other related works.

A permit to work system will operate on this project and before a permit is authorised by the responsible manager they will have personally inspected the area and location of the works in order to ensure that all necessary safety measures have been completed before the relevant works proceed.

2.3.3 Site Access

Access to all zones of the Stratford City site will be via the two existing entrances in Temple Mills Lane (from the North – main SCDL access) and via Waterden Road (from the West – secondary SCDL access). Access will be controlled by SCDL in accordance with a methodology to be agreed.

These connect to existing temporary site roads that will be retained for as long as they are useful to the construction works.

It is anticipated that the Temple Mills Lane entrance will be used to service Zones 3, 4, 5 and 6 with the western entrance facilitating access of Zones 1 and 2 as long as possible with respect to the Olympic works. Access via Carpenters Road is desirable and SCDL will work with the ODA, particularly for access to Zone 2 and the south side of Zone 1. Alternative access will be required while Temple Mills Lane is being realigned with programme and details to be agreed.

Initial discussions with the Olympic Team have identified potential co-ordination considerations relating to the long-term use of these entrances and with regard to the management of traffic within the site and surrounding areas.

A joint logistics appraisal is being carried out with the Olympic Team in order to ensure that all parties are able to maintain access at all times to the respective work sites and the surrounding areas.

Once this review has been completed, traffic will be managed in a co-ordinated manner between the two projects to ensure that:

i) Liaison with all the relevant authorities is carried out as a co-ordinated process between the SCDL and Olympic projects.
ii) The impact of construction traffic on local roads is minimised
iii) Traffic movements are co-ordinated between both projects to minimise peaks by smoothing traffic flows throughout the day.
iv) Emergency service routes and provisions are observed at all times
v) Joint responsibility for the cleaning and maintenance of adjoining roads is implemented
vi) Clear site directional signs will be installed
vii) Transportation of materials is co-ordinated between the projects where possible to avoid vehicles either arriving or leaving empty

2.3.4 Traffic Management Plan

Prior to commencement, SCDL will develop a Traffic Management Plan for the project that will address the following key issues:

i) Measures for reducing the impact of construction road traffic, particularly with respect to the use of rail transport as an alternative
ii) Procedures for reducing congestion during peak periods
iii) Off site holding and marshalling areas
iv) Control of materials to site (see Stratford City Site-wide Strategy: Materials, especially with respect to site-wide materials handling and purchasing strategy)
v) Protection of the public
vi) Personnel transport and off site car parking arrangements
vii) Enforcement of obligations
viii) Just in Time (JIT) deliveries to maintain traffic flow.
ix) Control of delivery by smaller vehicles (“white vans”), large numbers of which are expected, especially during the fitout stages

With regard to transport to and from the site, there are adequate facilities for all management, operatives and visitors to access the area using public transport and only minimal on-site parking will be provided. This will be made clear to all contractors in their sub-contract documentation.

Protection of the public will be of prime importance at all times. In discussion with LU and Transport for London, an ongoing review of all safety requirements and measures to be implemented will be maintained.

During the construction operations, wheel-washing facilities will be installed adjacent to the main entrances and all traffic leaving the site will use this equipment in order that the main site access and egress routes and public roads do not become contaminated

Compliance with the Traffic Management Plan will be obligatory and SCDL will take whatever action is necessary to enforce this policy.

The Traffic Management Plan will be linked to the Traffic Plan.

2.3.5 Working Hours

The intended normal working hours (with the exception of interfaces with the railway, where working hours will be restricted to available railway possessions) will be from 0800 to 1800 on weekdays and from 0800 to 1300 on Saturdays. Sundays, Bank Holidays or Public Holidays will not be normal working days. The Project will adhere to these normal working hours for each site as far as reasonably practicable. However, certain operations are season and weather dependent and in these instances it may be necessary to extend the working hours for such operations to take advantage of daylight hours. It is further envisaged that internal works such as fitout of retail units may extend beyond the hours stated. In addition, in certain circumstance related to the timely completion of the Olympic Games it may be necessary to work extended hours. Also, it is anticipated that any works which do not cause disturbance as defined in condition G5 of Stratford City planning permission (see Appendix A), may proceed outside of the hours outlined above.

Any special or unusual activities to take place (such as road closures or deliveries of large plant) will be carried out by prior agreement with the relevant local /statutory authorities.

Working hours near or over existing rail lines will be governed by agreements/possessions set by the relevant controlling bodies, and will include night time/shift working

Where such working outside normal hours has been previously discussed and accepted, the relevant Local Authority will be given notification in advance of the works and their likely duration.

2.3.6 Temporary Site Accommodation and Screening Of The Works

It will be necessary to create temporary site accommodation at various locations for administrative, welfare and laydown purposes. Alternative areas are being considered for this accommodation including Zone 2, Zone 5 and the overlay areas to the north of Zones 5 & 6. Satellite facilities will be installed adjacent to construction areas as required.

Where practicable, all site accommodation and welfare facilities will be within the site boundary, laid out in a regular manner and decorated in uniform colour. The principal site welfare accommodation will comprise offices, mess rooms, locker rooms, toilets, canteens and showers, all of which will be prefabricated as far as possible with final assembly taking place on site. This accommodation will be cleaned and maintained on a daily basis and preventative pest control measures will also be put in place, i.e. appropriate storage and regular collection/handling and disposal of waste. Regular inspections will be carried out to ensure that good housekeeping measures are maintained at all times.

The existing topography will be utilised to screen between development zones as far as practicable. In addition, consideration will be given to the segregation between occupied zones and areas under construction. Measures such as exclusion zones,

hoardings/fencing/temporary screening and the use of temporary earth mounding for noise reduction, and earth mounding and planting to reduce visual intrusion will be set in place, but will be dependent on location, existing use, construction activities and permanent landscape design. Transport infrastructure provision and the installation / diversion of new / existing utility supplies will need to be considered.

The standard of fencing / screening generally will be selected in order to maintain effective site security and visual effect – laid out in a regular pattern and decorated in uniform pattern.

There will be a number of CTRL facilities including minor utility routes, substations and roads constructed adjacent to the station box. Potential conflict with SCDL proposals will be minimised through an ongoing liaison process between the management of both projects. There are also existing Network Rail utilities that will be affected by the SCDL proposals, mainly at the southern boundary of the site. These issues will be discussed and solutions agreed during the design process.

Temporary power, water and drainage etc will be installed and located to suit working areas/construction camps/welfare.

Where possible, the existing supplies will be retained to supply the main accommodation, storage yards, site lighting etc.

2.3.7 Construction

The works will be carried out in such a way as to limit, as far as practicable, any environmental impact arising from the construction activities and will be in accordance with the following general provisions:

i) Planning approval from local authorities
ii) Project Environmental, Health and Safety Plan
iii) Project Execution Plan
iv) Environmental/Area Management Plan
v) Appropriate Considerate Contractors Scheme
vi) Highways and utility organisations, statutory and other stakeholders

The following sections provide an outline of construction in each zone

2.3.7.1 Zone 1

Zone 1 is the main core area of the Stratford City Development. Within Zone 1 there are retail, residential, commercial, hotel and leisure facilities.

The principal initial construction operations will include, but are not limited to, the following:

i) Service diversions
ii) Cut and fill operation to prepare site for construction
iii) Critical rail cross-overs and tunnels to maintain site access and construction progress requirements
iv) Construction of retail, residential and commercial facilities and all associated external works
v) Install primary site services infrastructure including, but not limited to the following:
   - Mains gas supplies
   - Primary electrical supplies
   - Mains water infrastructure
   - Mains sewer runs (foul and surface water)
   - Communications network ducting
vi) Installation of zone specific temporary services and primary construction facilities, hard standings, temporary roads, tower cranes, hoisting facilities etc.

vii) Preparation for the works associated with and adjacent to Stratford regional station including the perimeter road bridge, northern ticket hall foundation and sub-structure, extensions to the existing western and central subways, works associated with the town centre link foundation and sub-structures.

viii) Continued liaison with relevant bodies and authorities who will also be working in or preparing to work in this location, including, but not limited to the following:

- Transport for London
- London Underground
- Docklands Light Railway
- Olympic Authorities
- Network Rail

ix) Construction of substructure works to the main core structures including piling / foundation, under slab services, preparation for and construction of ground floor slabs, forming structures to facilitate construction over the North London Line loop.

x) Works to the main superstructures will follow in sequence from the completion of substructure works.

xi) External roads and services will be installed initially to provide access to work areas in and around Zone 1 for for site traffic

xii) External Roads, paving and landscaping to Zone 1 will follow the main structures and will be completed in advance of the opening dates.

2.3.7.2 Zone 2

The Olympics Master Plan locates the Sponsors' Village in Zone 2. Initial SCDL works in this zone will be limited during the early stages of the project to the following:

i) Grade and level the site area
ii) Install temporary access as required
iii) Install primary infrastructure, roads, tunnels and bridges within this zone

2.3.7.3 Zone 3

Adjacent to the Stratford International Station rail box, Zone 3 comprises residential, commercial, hotel and transport interchange facilities. The principal construction works will consist of, but are not limited to, the following:

i) services diversions and utility tie-ins
ii) construction of DLR station (by others)
iii) road works and landscaping related to Zone 3 development
iv) car parking, transport facilities and related transportation facilities
v) hotel and residential (part of the Olympic Village)

There will be a number of CTRL facilities including minor utility routes, substations and roads previously constructed that will need to be removed to allow the SCDL/ Olympics works to proceed.

2.3.7.4 Zones 4 & 5

The Olympic Village, housing the athletes at the Games, will be located in the residential blocks to be constructed largely in the SCDL Zones 4 and 5.

There are two major constraints that affect the construction programme within this zone:

i) relocation and undergrounding (by others) of the existing overhead power lines which conflict with a large proportion of the residential development within these Zones,
ii) vacating and demolition of Frigoscandia cold stores area, any necessary remediation and topographic raise,

These items are critical to the timely completion of the Olympic Village and close coordination with the relevant authorities to achieve this is essential.

In order to facilitate the Olympic requirement, works within these zones will be completed during 2011. The main operations, which will be carried out prior to this date include, but are not limited to, the following:

i) General re-grading and levelling of the site area.
ii) Service diversion and utility tie-in.
iii) Land raising and regrading
iv) Installation and adapting of new and existing temporary site infrastructure and roads
v) Installation of primary infrastructure services, bridges, tunnels and roads
vi) Demolition and remediation of the Frigoscandia site
vii) Land raising and grading of the Frigoscandia site
viii) Residential development
ix) Adequate provision of external landscaping / water feature, local parklands etc
x) Bridges
xi) Utilities and infrastructure work required to prepare overlay areas in these zones for use by the Olympics Team

The residential development to be constructed and used for the Olympic Village will only be partially fitted out at this stage. Temporary kitchens and messing areas will be equipped by the ODA.

After the completion of the Olympic Games and the Paralympic Games the residential units already constructed will be refurbished prior to release on the market.

The remaining residential blocks in these zones will then be constructed to an agreed post-Olympics timetable.

2.3.7.5 Zone 6

This zone is comprised entirely of an education campus including nursery, primary school, secondary school and adult education facilities.

During the Olympic Games the campus will provide dining facilities for athletes and officials and will be fitted out accordingly by the ODA. Post 2012, the campus will be fully converted in accordance with its educational function.

2.3.7.6 Zone 7

In this zone it is intended to maintain ecological value. The principal construction works will consist of, but are not limited to the following:

i) Landscaping
ii) Services Diversions / Off and On Site Utility Supplies
iii) Bridges (southern access)

2.3.8 Utilities

The installation will be phased to provide a supply on a zone by zone basis. All services to the proposed development are new connections and will be connected back to points on the respective networks, via new or existing bridges. In the event that these bridges are not suitable, under track crossings will be provided.

Works will typically be undertaken by utility companies under NRSWA on public highways or be registered multi-utility installers under the same legislation. Works will be co-ordinated wherever possible such that where more than one utility is installed in the same road/trench is it not dug up twice, minimising the disruption to the local residents.

For the purpose of this method statement, it is assumed that the principal system for ‘service routing‘ is to bury them in excavated trenches (buried system). An exception is the proposed under-grounding of the existing overhead HV supply.

The use of proprietary systems such as Trenchless Technology for works of a standard nature, for the installation of new pipes , cables , ducts, etc. are being considered where possible.
Traffic management will also be required within the surrounding residential and commercial areas, while utility supply or reinforcement work (including off-site road construction and upgrade works) is being undertaken.

Discussions are now being held with the Olympic Team in order to produce an overall strategy that integrates and combines the requirements of both projects whilst taking into account the specific nature and requirements of the local environment and community.

As plans and methodologies are developed by the team, the appropriate procedures will be maintained in order to consult with and gain approvals from the relevant authorities.

The requirements for SCDL have been identified and preliminary schemes prepared. Preliminary discussions have commenced with the relevant suppliers and authorities with regard to the Stratford City Development. There are however, opportunities to review current proposals for Stratford City with the Olympic requirement in order to explore the potential to combine or share supplies and distribution networks both on and off site.

There are potential benefits from this process that include the following:

i) Less disruption to the local community and infrastructure of site works
ii) Reduces environmental impacts
iii) Improved efficiency of installation
iv) Economics of scale
v) Reduction in overall installation periods by combining individual supplies for both projects
vi) Opportunity to combine different services for both projects in the same supply zone or trench

These discussions are ongoing and currently refer to the following services or supplies:

i) Gas
ii) Electricity supply
iii) Mains Water
iv) Storm water drainage
v) Foul water drainage
vi) Data and telecommunications

The desired strategy is to limit utility infrastructure to that necessary to facilitate each zone of development without disrupting previous zones already constructed. The utility companies have been consulted on this basis, but as a result of limited local spare capacity, significant off site measures are generally required in order to service the proposed individual and combined development sites for SCDL and the Olympics.

2.3.9 Section 278 Works

External road connections and associated Section 278 works will be programmed to be completed to suit the adjacent work zone completion dates. These works will be coordinated with the Section 278 works adjacent to the Olympics areas.

The design and timing of these works will be subject to agreement with the local authorities and other interested parties. In addition, the SCDL programme requirements will be coordinated with the Olympic Team in order to ensure that all works are carried out with the minimum effect in the locality of Stratford and the surrounding areas.

It will be necessary to review the scope of the required Section 278 Works with the appropriate authorities, as the revised Olympic Games Master Plan precludes compliance with the original S278 agreement .

2.4 Rail Related Work

All works adjacent to the railway lines will be carried out in accordance with Rail Track's Rule Book / Contract Requirements and Network Rail Guidelines.

Full and detailed method statements will be issued for any works where possession or isolation work is required, demonstrating that safe systems or work are in place, which address the hazards of the activity.

Personnel near or on the line will be briefed/trained (hold a valid individual Personal Track Safety Card – PTSC) in the hazards of the working environment and a Controller of Site Safety (COSS) appointed to implement a safe system of work. Personnel who are not required to work on or near the line, i.e. at least 3 metres from nearest rail, will not be required to hold a PTSC card, as this is deemed to be working in a 'High Street Environment'. However, a COSS will still be required to set up a safe system of work.

Where mobile cranes / tower cranes are to slew over or within 3 metres to the rail company's operational equipment or boundary fence, a recognised 'collision prevention system' will be used.

2.4.1 Rail Bridge Construction Methodology

The following new Bridges will cross the operational railway lines in the vicinity of the SCDL development:

i) Zone 1
   Bridge 17 Town Centre Link.
   Bridge 8 Southern access road.
   Woolwich Line Enclosure (below SCDL Retail development).

ii) Zone 2
   Bridge 9b

iii) Zone 3
   Bridge 6 (Existing CTRL East Road bridge)
   Bridge 20 West Road Bridge.
   Bridge 25 (Existing CTRL West Road bridge).

iv) Zone 4
   Bridge 2 Henrietta Street.
   Bridge 3 Alma Street.
   Bridge 4 High Meads Loop
   High Meads Loop enclosure

v) Zone 6
   Bridge 1 Temple Mills Footbridge.

vi) Zone 7
   Bridge 12 Carpenters Road.
   Bridge 13 River Lea.
   Bridge 14 West Road bridge widening.

Due to the nature of the works, all construction activities "on or near the line" are required to be notified and agreed with the rail authorities (NR/LUL/DLR) in order that a construction methodology can be agreed. Any construction works that directly affect the railway operation have to be completed within negotiated dates and timescales as an agreed railway possession. The emphasis within these rail possessions is to complete the planned works within the given possession time and then return the railway at the end of the possession to normal service such that the train timetable is unaffected. All works that potentially affect the operational railway are subject to pre-notification to Her Majesty's

Railway Inspectorate and any risks to the passengers or rail service mitigated to “as low as reasonably practicable status”, (ALARP).

This Method of Possession working has implications for the bridge construction works in that the rail authorities will define the periods of working available which are likely to be combinations of the following for each bridge:

i) Weekday overnight typically 01.00hrs to 05.00hrs.
ii) Saturday overnight midnight to 05.30hrs.
iii) Sunday overnight midnight to 04.30 hrs.
iv) Saturday dayshift subject to availability.
v) Sunday dayshift subject to availability.
vi) Normal SCDL site hours working for items that do not affect the railway.
vii) Bank Holidays, where a full rail closure has been negotiated. (potentially Bridge 17 TCL).
viii) Weekends, where a full rail closure has been negotiated.

Each bridge construction site will have its own Safety, Health and Environmental Plan and Construction Method statement that will include measures for noise and dust mitigation, however due to the location of in particular bridges 1, 2, 3,12 and 17 with local housing immediately adjacent some noise intrusion and site traffic movement is unavoidable. However the appointed contractors will be required to notify the Local Authority of the works and timescales and maintain correspondence to keep disturbance to a minimum.

The construction sequence for a bridge will typically be:

i) Track and abutment surveys. (normal days by approved and trained track surveyors).
ii) Site establishment. (off the railway, normal hours).
iii) Enabling earthworks as needed (off railway, normal hours, limited night normal possession if required)
iv) Deliveries to site. (off the railway, normal hours).
v) Rig/crane standing pads construction (may be possession working dependant upon location).
vi) Bridge slide pad construction (Bridge 17 and 20). (possession and normal days)
vii) Bridge abutment piling works. (under rail possession)
viii) Pile cap construction. (under rail possession).
ix) Delivery of span sections. (off the railway normal hours).
x) Construction of spans (under rail possession).
xi) Bridge finishes (some under rail possession).

It is planned that the majority of material / component deliveries for the Bridge works will be made during the day via the existing access roads onto the site. The emphasis within the Bridge designs will be off site manufacture in preformed sections and this strategy will assist in reducing the overall build period of each bridge. Crane standing positions and pads will need to be established for each bridge and for Bridges 17 and 20 Bridge-slide enabling works put in place. Mobile cranes will be required to lift both Piling steel cages and lift bridge span sections into place.

The piling equipment and rigs will enter the bridge worksites immediately prior to the rail possession. The piling contractors generally work from self contained vehicles comprising a large van or medium lorry pulling a self contained piling rig. In addition, self contained water bowsers will be towed to each site and silenced compressor driven portable generators will be used. Should the design require very large piles (possibly Bridge 17 and 20) then larger rigs may need to be taken onto the site on articulated lorries. Piles will be auger bored as this method gives minimal vibration and generates little noise to the surrounding areas. Deliveries of concrete for the bridge piles and pile caps will occur at the appropriate time either during the day or in rail possession hours.

2.4.2 Zone 1 Rail Related Construction Works

Zone 1 construction works represent SCDL early stage objectives comprising but not limited to:

i) The Northern Ticket Hall and subways.
ii) Bridge 17, the Town Centre Link.
iii) Bridge 8, Station Avenue.
iv) Bridge 9b First Avenue
v) Phase 1 Woolwich Line Enclosure (beneath the retail development).
vi) The demolition of the Powerhouse Bridge.

The Northern Ticket Hall crosses the Woolwich Line and hence the enclosure structure over rail is built in possession. Once the structure over the Woolwich Line is in place, the remaining structure and subways are of sufficient distance away from the operational railway that construction can occur during normal SCDL site hours. However construction of the subways and link up with the DLR works may require some rail possession working. Material and equipment deliveries will occur via the SCDL site access points. The NTH works are early stage as they are required to be finished to enable Bridge 8 to progress.

Bridge 17, the town centre link will require a series of negotiated rail possessions for construction of the bridge piers and a further series of rail possessions whilst the bridge slide is undertaken. To accommodate the bridge slide, piling will need to be completed for the bridge slide base structure and structural elements of the slide mechanism installed, these enabling works will be on the north side with the slide cantilevered towards the south landing point adjacent to the Jubilee Line terminal building All works will be conducted behind site hoardings. The piling for TCL on the Stratford Town centre side will be conducted in overnight rail possessions. Material deliveries will also occur at night, due to the location on the Stratford side use of the roads for deliveries is unavoidable.

Bridge 8 Station Avenue, is another early stage objective as the bridge is a major utilities crossing and will also carry site traffic and manpower. The bridge crosses the Woolwich line and all works will be completed under rail possession.. Deliveries will occur to a lay-down area during normal SCDL site hours via the agreed access points.

Bridge 9b First Avenue will be built concurrently with Phase 1 of the Woolwich Line Enclosure. The objective is to have Bridge 9b built as early as possible in the event that the existing Powerhouse Bridge (which provides site access) is to be be demolished. All construction works apart from placing of formwork and placing the span sections will be constructed in normal SCDL site hours. Works will be conducted in night time possessions of the Woolwich line including some piling. Material deliveries will occur via the site access points in normal SCDL site hours. Concrete pours will occur in normal SCDL site hours.

The Woolwich Line Enclosure Phase 1 will also form early stage works as these works have to be completed for the retail development to progress. The enclosure will involve re-grading of land on either side of the Woolwich line and continuous piling on either side of the railway. An application has been made to NR such that these works will occur in normal SCDL site hours. Similarly the pile caps and the wall formwork will be constructed in SCDL possession. The concrete walls will be poured in normal SCDL site hours. Pre-cast beams and composite deck will be installed in night-time possessions of the Woolwich line. Material deliveries will occur via the site access points in normal SCDL site hours. Concrete pours will occur in normal SCDL site hours.

Subject to its possible use for site access, it is anticipated that the Powerhouse Bridge will be dismantled after Bridge 9b is constructed and operational. Demolition will commence

in night possessions to remove the span sections and those sections of the bridge within 3 metre of the tracks. The remaining sections will be removed in normal SCDL site hours.

TfL are currently proposing the reconstruction of Angel Lane bridge and, while this is outside the scope of this Construction Method Statement, any implications arising from these works will be addressed in Zone 1 Construction Method and Management Statement.

2.4.3 Zone 2 Rail Related Construction Works

Zone 2 construction works also entail early stage construction objectives and comprise: Phase 2 Woolwich Line Enclosure.

It is anticipated that Phase 2 of the Woolwich Line Enclosure will commence upon completion of Bridge 8 and Phase 1 works and will follow the same construction principles as Phase 1 above.

2.4.4 Zone 3 Rail Related Construction Works

Zone 3 rail related construction works are:

i) Bridge 20 West Road Bridge.
ii) Bridge 6 Existing over CTRL box.
iii) Bridge 25 Existing over CTRL box.
iv) Bridge 21 Existing over CTRL box.

The construction method for Bridge 20 is as follows:

i) Raise land to suitable level on both sides.
ii) Construct abutments. (In possession for south abutment.)
iii) Construct piles. (Normal SCDL days)
iv) Install spreader beams. (In rail possessions)
v) Install Launch rails (in rail possessions).
vi) Assemble bridge for slide.
vii) Slide bridge in a 4-day possession of the High Meads Loop at Christmas 2007.

Bridges 6, 25 and 21 are already in situ, the remaining works will comprise completion of the link roads and footpaths. These works will be completed in normal SCDL site hours.

2.4.5 Zone 4 Rail Related Construction Works

Zone 4 construction works are:

i) Bridge 2 Henrietta Street - single span bridge
ii) Bridge 3 Alma Street. - single span bridge
iii) Bridge 4 High Meads Loop enclosure - requires a rail blockade in order to complete its construction.

2.4.6 Zone 5 Rail Related Construction Works

Zone 5 construction works are:

Bridge 26A and Bridge 26B/ High Meads Loop enclosure.

2.4.7 Zone 6 Rail Related Construction Works

Zone 6 construction works are:

Bridge 1 Footbridge. Temple Mills Lane.

2.4.8 Zone 7 Rail Related Construction Works

Zone 7 construction works are:

i) Bridge 12 Carpenters Road.- multiple span It is important that this bridge is constructed as early as possible to facilitate access to Zone 1
ii) Bridge 13 River Lea - existing single carriageway road bridge that is to be widened to dual carriageway
iii) Bridge 14 West Bridge - an existing single carriageway road bridge that is to be widened to dual carriageway

2.4.9 Potential New Rail Freight Siding

Pending the findings of the study of feasibility of moving freight and waste by rail and water, it may be possible to deliver aggregate and other building materials by rail to the SCDL site in order to reduce potential road congestion in the surrounding streets of the site. In order for this to occur the following stages would need to happen:

i) Rail siding location selection. The siding must be adjacent to a non-build area. A site for the siding is being investigated on the down Temple Mills line, north of Temple Mills Lane Bridge.
ii) Outline design prepared. Grip stage 4 design to be submitted to NR.
iii) Timetable issues discussed with NR. Possession and train paths developed.
iv) Agreement in principle to location received from NR.
v) Town Planning application to the local authorities..
vi) Consultation period with locals.
vii) Appointment of freight company.
viii) Contract for supply of wagon hoppers negotiated.
ix) Design of loading and off loading facility.
x) Grip stage 5 detail design submitted to NR.
xi) Planning permission achieved.
xii) Construction of siding(s).
xiii) Construction of off loading and materials distribution facilities.

If it is decided to proceed with this rail head and siding, it is planned to have the installation complete and as soon as is practicable. It is anticipated that the facility could be used for up to three years. The proposed area would then have to be filled for use initially as part of the Olympics overlay facilities and post Games as the playing fields for the adjacent Zone 6 education campus.

3 ENVIRONMENTAL ISSUES

Adequate environmental mitigation measures will be put in place where necessary for each zone before work commences in a particular zone and will be described in the respective zonal Construction Method and Management Statement (CMMS).

A CMMS for each zone will be produced to supplement this Site-wide Construction Method Statement and will provide a more detailed description of the proposed construction strategy for the respective zones. They will be produced to suit the construction phasing of the project. These specific measures will reflect the general content of this section of the Site-wide Construction Method Statement.

3.1 Public Access and Traffic Management

3.1.1 General Provisions

The works will be carried out in such a way that inconvenience to the public arising from increases in traffic flows and disruptive effects of construction traffic on local and main

roads is minimised. All diversions/replaced rights of way etc will be notified in advance and where appropriate temporary routes will be provided.

A Traffic Management Plan, will be developed for the SCDL project and coordinated with the ODA, The strategy, as identified in the Outline Traffic Management Plan submitted as part of the planning application, will be developed to take into account current legislation, Police, Fire Authority and HSE guidance and Local Authority /Borough Transport Schemes and Neighbourhood Lorry Restrictions. The Traffic Plan will be reviewed and updated in line with the construction programme and will typically include details of the following:

i) temporary traffic control measures
ii) temporary and permanent access to the works – for personnel/vehicles
iii) traffic control within the project
iv) off-loading and storage areas
v) bulk materials handling
vi) traffic management procedures for waste disposal vehicles
vii) personnel and vehicle segregation
viii) equipment, e.g. road cones, traffic lights, Heras fencing and signage etc
ix) site inductions.

Site boundary hoarding/fencing will be erected to prevent unauthorised entry. Suitable access and egress gates will be installed with security guards in attendance.

It is not envisaged that highway improvements will be required during the early stages of construction. This shall be reviewed on a regular basis in the Traffic Plan.

For large pre-planned loads or abnormal loads, LBN/local authority guidelines (including statutory bodies) and designated routes will be complied with. In addition , large pre-planned loads or abnormal load deliveries shall be organised with the assistance of cross-county traffic police. These procedures shall be discussed at the monthly meeting of the Olympic Construction Transport Management Group.

3.1.2 Construction Traffic

During the initial stages of the development traffic generated by the proposed development will use the access from the local highway network adopted by the CTRL works, Temple Mills Lane and existing roads within the Railway Lands. In addition, distribution of works traffic on the local road network will be the same as that adopted for the CTRL construction site.

The estimated peak traffic flows generated by the development, has been assessed against a background of completion of the M11 and associated upgrade works on the distribution of works traffic. SCDL are also in discussion with the Olympic Team in order to establish the total traffic volumes that will be generated by the combined construction activities during the development programme.

SCDL traffic related issues will be fully considered in line with the effects and implications of the adjacent Olympic works in order to produce a fully integrated and co-ordinated strategy for the project.

3.1.3 Construction Access/Routes

Construction traffic routing on the external road network is expected to be via the A12 from the M11 direction, from the A12 through the Blackwall Tunnel (height restriction permitting), or A12 from the A13. Directional signage to and from site and principal local and regional roads will be provided. These will be agreed with the highway authorities.

Generally, the primary traffic entrance for SCDL construction purposes will be from Temple Mills Lane and via Waterden Road for Olympic traffic. Traffic within the larger Olympic/ SCDL project will be kept separate between the Olympic and SCDL zones

wherever possible and this will be controlled by a joint security force to ensure enforcement.

However, there will need to be a reciprocal arrangement between the two parties to ensure that access is possible to each zone at all times, allowing for road closures, ad hoc working arrangements and other restrictions that may impede traffic flow.

Vehicles travelling through Hackney and other residential areas will be restricted. However, there will be site traffic on Leyton Road, down to Angel Lane for the land locked development to the eastern corner of the site near Chobham Farm Lands.

The main SCDL on-site vehicle access will be from the northern end of the site, utilising the same temporary road infrastructure currently being used by CTRL for construction of the channel rail link for most of Zone 1 works, until completion of the north access road link. A secondary connection to the site for use by SCDL vehicles will be by the western access at Waterden Road and bridge. During the works, the existing infrastructure/emergency access routes will be required to be maintained and shared for a 12-month period with CTRL. Regular co-ordination meetings will be critical at the start of the development to ensuring good housekeeping. For the remaining development, access will be via earlier completed roads.

Site personnel access to the site will be via security-manned posts/gates and will be segregated from on-site construction traffic, by means of vehicular barriers/fencing/hoardings etc, as outlined within the Traffic Management Plan. Provision needs to be made for operatives arriving by car with both on and off site parking. Similarly provision will be made for operatives arriving by public transport, ensuring that they can get from transport points and the site boundary to places of work.

As the adjacent Olympic related works come on stream the traffic management strategy will be periodically reviewed and regular coordination meetings will be held with the Olympic Team to consider any variations to combined traffic volume generated by Stratford City and the Olympic Scheme and action agreed as necessary. SCDL will liaise with all the relevant bodies and authorities in order to ensure that this is managed in an integrated and co-ordinated manner throughout the duration of the project.

Construction access will be maintained to the CTRL station as required. A further consideration is the possible requirement for public access to the CTRL Station which may be required from 2007 onwards. Any such requirement would need to be included in construction traffic planning.

3.1.4 Off Loading and Storage Areas

Laydown areas and materials marshalling yards will be designated at strategic locations on the project. These will be agreed with the ODA and may have to be resited during the currency of the overall scheme to reflect changing circumstances as the various zones of construction are progressed.

Vehicles will be directed to their designated holding/storage areas, which will be marshalled by SCDL logistics personnel at all times, ensuring that only authorised personnel are given access, especially during unloading/manoeuvring activities.

3.1.5 Bulk Materials Handling

Should the rail siding proceed (refer to Section 2.4.9) it could enable the SCDL project to be supplied with bulk materials by rail and equally to support the removal of waste, relieving the local transport network of a large part of the possible construction delivery traffic.

The establishment of an on-site concrete plant is being investigated, capable of providing all the concrete requirements of the project. Sand, aggregate and cement would all be delivered by rail to this batching plant.

A bulk rebar storage compound, together with a cut-and-bend/prefabrication facility, could be set up in the same area. The bulk rebar would be delivered by rail and prefabricated reinforcement would then be locally distributed within the site to suit programme requirements.

In addition, it would be possible to deliver other construction components by rail to this area, such as precast concrete elements, major M&E equipment and pre-containerised general material deliveries. A tarmac premix set up could also be established in this area.

Surplus spoil and construction waste could also be removed by rail and this capability will be explored further.

An alternative, offsite holding area close to the M11/M25 Junction is also being investigated.

3.1.6 Traffic Management Procedures for Waste Disposal

Waste materials will be collected in central consolidation areas on the project for onward disposal. It is proposed that waste types are segregated to support the site-wide waste management strategy and in particular to help meet waste recycling targets.

All compactor and skip wagons will arrive at designated times agreed by the SCDL Logistics Manager. All vehicles will enter the project via security manned posts/gates. Drivers will be briefed by the traffic supervisor and will be issued a copy of the site rules and route maps indicating storage areas, routes, and speed restrictions.

3.1.7 Personnel and Vehicle Segregation

Pedestrians and traffic will be kept separate wherever possible.

All pedestrian routes will be clearly defined utilising pedestrian route signage where necessary. Pedestrian crossover routes will have appropriate warning signs displayed, e.g. give-way signs, vehicle crossings etc.

Site roads will be managed by the respective SCDL/ Olympic logistics and security teams to ensure that pedestrians respect the segregation from the traffic.

3.1.8 Site Specific Inductions

All operatives will be given a specific site induction, and briefed with reference to the use of designated pedestrian access ways and crossover points.

3.1.9 Public Transport

Construction workers and all others associated with the development will be encouraged to use public transport in order to gain access to the site.

3.1.10 Cycles

Provision will be made for construction operatives arriving by cycle or on foot as well as public transport. (e.g. cycle sheds)

3.2 Noise and Vibration

3.2.1 General Provision

Refer to Appendix A Section O for planning conditions related to noise and vibration.

Condition O3 of the Stratford City planning permission requires that a strategy for perimeter monitoring of noise during construction must be submitted to and approved by the planning authority.

Noise and vibration levels will be controlled and consent sought from the relevant local authority under Section 61 of the Control of Pollution Act 1974, Environmental Protection Act 1990 and local Policy guidelines, to ensure that the development is operated in a way which is not detrimental to the amenities of local residents.

Storage sites, fixed plant and machinery, equipment and temporary buildings etc, will be located to limit adverse environmental effects. All reasonable precautions will be taken for operation of plant and equipment, to avoid nuisance and excess noise impact on the surrounding residents.

Please note that, while this document addresses the requirements for controlling construction noise, control of environmental noise during the operation of Stratford City is addressed within the Microclimate site-wide strategy (Stratford City Site-wide Strategy: microclimate).

3.2.2 Construction Noise

Estimates of the impact of construction noise and vibration relating to the proposed development would be based on the latest available information.

Demolition of the existing structures within the Powerhouse site area (plus some off-site infrastructure) will be the first significant activity, followed by excavations, piling works and foundation construction.

Once the buildings within the proposed development rise above the ground, there will be some noise from scaffolding and formwork erection, but the majority of activities and plant (e.g. concrete pumping) and the levels generated, are considered to remain at a low level.

The construction of the off-site infrastructure works is not yet known in sufficient detail to predict noise levels to surrounding areas and their associated impacts. Much of the construction is likely to involve linear works (e.g. road works for pipe or cable laying/surface and upgrade works) and as such, will not remain in any one location for a significant length of time. Impacts expected are not thought to be significant. In addition, any plant associated with these installations will be specified and controlled to ensure that target noise criteria are not exceeded. Similarly, trenchless and minimum excavation techniques will be used where possible. Impact piling will be avoided, wherever possible.

During construction, the following measures summarised below, are to be employed:

Details of construction activities, prediction levels/assessments will be discussed with the relevant authority, both prior to and during construction. Detailed construction programmes will be available in advance of work starting on site. Prediction, evaluation and assessment of noise and vibration, will be a continuous activity throughout the construction period.

Unless otherwise agreed with the relevant local authority, the standard hours of working will be as previously described. As it is sometimes not possible with certain operations (e.g. casting large floor slabs, bridge constructions over existing rail lines, etc) certain concessions would be applied for and detailed method statements submitted.

Where the potential for noise or vibration exists i.e. during piling/demolition/etc, “Best Practicable Means”, as defined in Section 72 0f the Control of Pollution Act 1974, will be used to reduce noise to achieve compliance consistent with the recommendations of BS 5228, and may include:

i careful selection of plant items, constructions methods, programming, implementing a “noise and vibration protocol”, which outlines quiet periods/monitoring frequency/action levels etc

ii design and use of site hoardings and screens/noise barriers, to provide acoustic screening at the earliest opportunity

iii choice of routes and programming for the transport of construction materials and

Unless otherwise agreed with the relevant local authority, noise and vibration values will be predicted in accordance with the methods set out in and the requirements of BS 5228 – Noise Control on Construction and Open Sites. In addition, the guidance and procedures given in BS 5228 Parts 1,2 and 4 will be complied with. In the case of vibration, reference will also be made to BS 7385 and BS 6472.

In addition, specific measures could be written into all binding agreements (i.e. those set out under a Section 61 consent) to be made between the development partners, local Boroughs and potential Trade Contractors, to limit noise at the site boundary.

As with the CTRL works, which have currently in operation multiple Section 61 consents, prior consents could be applied for by the proposed development to control noise from the construction works.

Initial vibration monitoring if needed, will be carried out in/next to the existing stations and tunnel. This will monitor and set the threshold vibration levels required.

Regular monitoring will be carried out during construction, from previously established and agreed monitoring stations around the development, to ensure that there have been no exceeding of levels set and agreed.

3.3 Air Quality

3.3.1 General Provision

The requirements set out here are in line with the general site-wide air quality strategy (see Stratford City Site-wide Strategy: Air Quality).

The works will be carried out in such a way as to limit the emissions to air of pollutants (particularly dust and fine particles (PM_{10}), employing Best Practicable Means. The site will be managed in accordance with the requirements of the GLA London Best Practice Guide (Control of Dust and Emissions from Construction and Demolition), and LB Newham and other local borough councils/statutory authorities Codes of Construction Practice (CoCP) to minimise the potential effects on air quality from construction.

Monitoring will also be undertaken throughout the construction period to enable proactive management of dust and PM_{10} levels. Wind speed and direction will be included in the monitoring. There will also be on-going liaison with local boroughs regarding the construction control measures set in place.

The principal concerns relating to air quality from construction activities will depend on the potential for emission (the type of activities) and the effectiveness of the control measure. In general terms, there are two sources of emissions that will need to be controlled to minimise the potential for adverse environmental effects:

i dust emissions from site activities and

ii exhaust emissions from site plant and vehicles.

Dust emissions from construction activities are likely to be variable and would depend upon type and extent of the activity. The significant sources are :

i demolition activities, due to the breaking up and size reduction of concrete, stone and compacted material

ii earth moving, due to the excavation, handling, storage and disposal of soil and sub-soil materials

iii construction aggregate usage, due to the transport, unloading, storage and use of dry/dusty materials

iv movement of heavy goods vehicles (HGV's)/mobile cranes on dry untreated or hard surfaced surfaces and

v movement of vehicles over surfaces contaminated by muddy materials brought off the site – for example, over public roads.

Vehicle emissions from construction vehicles will depend on the vehicle types and emission standards of the vehicles, as well as the quantity of vehicles.

The emissions from these sources will be controlled through measures to be employed during the construction period relating to materials storage and handling, construction plant, vehicle emissions and general site management practices. These measures are summarised below.

3.3.2 Effective Material Storage and Handling

The storage and handling of construction materials can be a significant dust emission source. The adoption of appropriate dust control measures will however greatly reduce dust emissions from these sources and ensure that any adverse effects are greatly reduced or eliminated.

Handling and storage areas will be sited as far away as reasonably and practically possible, from public/residential areas. Handling and storage areas will be actively managed and fine, dry material will be stored inside enclosed shield /buildings or within a central storage area. Any storage areas that are not enclosed will be covered/sheeted. Prolonged storage of debris on site will be avoided. It will also be ensured that vehicles carrying dusty materials into or out of the site are sheeted to prevent any escape of materials onto the public highways/railways or waterways.

One or more concrete batching plants may be operated during the construction period to allow concrete to be manufactured on site. It is expected that cement and other powdered cementitious materials that would be delivered by rail would be transferred through a closed system of heavy-duty hoses to storage silos/ or delivered to in-line covered bin storage areas. This would minimise the potential for any dust emissions. Alarms or sensors will also be installed to prevent overfilling or system failure.

Additionally, adjoining undeveloped zones will be seeded/planted to reduce dust from the erosion of topsoil – refer to Section 3.4 Landscape Phasing Strategy.

3.3.3 Construction Plant

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts. The following measures will be employed:

i site plant and equipment will be kept in good repair and maintained in accordance with the manufacturer's specifications. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for emissions. For example, tower cranes proposed for construction are likely to be electrical

avoiding exhaust emissions, although this will be confirmed once detailed design work has been undertaken

ii plant will not be left running when not in use

iii fencing/enclosures will be erected around major construction plant items – on site batching plant area

iv plant with dust arrestment equipment will be used where practicable and

v where practicable, cleaner fuels will be employed for construction plant.

3.3.4 Vehicle Movements: On Site Haul Roads/Public Highways

Vehicle movements may result in dust emissions and exhaust emissions. However, a number of control measures can be adopted to eliminate or minimise such emissions.

i all-weather surfaces will be provided on heavily used haul roads and regularly cleaned

ii effective wheel cleaning will be undertaken of traffic leaving work or construction sites onto site haul/public highway roads by the use of wheel washers at all appropriate points of egress, road sweepers and vacuum sweepers.

iii during prolonged dry periods or as directed by the site manager, haul roads will be dampened down

iv speeds will be restricted on haul roads across the site

v all site vehicles will be kept in a good state of repair and maintenance and

vi the use of low emission vehicles will be specified in construction contracts where practicable (i.e. specified EURO standard – for example, EURO IV).

3.3.5 Operational Control – Good Site Management Practice

Dust emissions from construction will be controlled through careful pre-project planning and effective site management.

The following control measures and good management practices will be employed:

i site operations will be planned to take into account local topography, prevailing wind patterns and local sensitive receptors (e.g. schools, residences and ecologically designated sites)

ii burning of any waste materials on site will be prohibited

iii loading and unloading will only be permitted in designated areas

iv greater provision of water sprays and wind/dust fences where possible, particularly in dust sensitive locations. For example, during demolition works, there will be no blasting, and water spraying and/or screening will be undertaken prior to and during demolition

v personnel will be trained/inducted with regard to on-site practices and

vi an appointed person will oversee/control activities and handle public enquiries.

3.4 Light

Lighting to site boundary and associated areas will be provided with sufficient illumination for safety of the passing public/personnel, and positioned such that it does not intrude on adjacent buildings and land uses, or to cause distraction or confusion to passing drivers or constitute a road hazard. Lighting will be chosen to limit light pollution effects such as “glow in the sky”.

The visual intrusion of construction sites on nearby residents and users of local facilities and amenities will be contained and limited.

Details of lighting schemes will be included in zonal Construction Method and Management Statements (CMMS).

3.5 Landscape Phasing Strategy

Temporary and permanent buffer tree planting will be installed in key areas along with erection of temporary security fencing to the site boundaries.,

The landscaping works will be carried out with the individual construction phases.

Each phase will be managed as an individual zone with its own construction programme for that zone which will be co-ordinated with the overall Master Programme of the Project, the installation of landscaping will be an integral part of the construction process.

Once areas are sufficiently advanced from a construction viewpoint the general landscaping works will be commenced such that when an area is completed the planting and landscaping will be the final process prior to handover of an area for occupation or operation.

During the landscaping phase concurrent works will include, but will not be limited to, the following:

i Installation of decorative landscape features

ii Commissioning of water and other features

iii Spreading and leveling of topsoil

iv Seeding or turfing of grassed areas

v Installation of directional and other signage

vi Installation of paths, paving and special features

vii Installation of trees and planting to all Zones and areas

viii Maintenance and treatment of areas as appropriate following planting

ix Clean down and clear the respective areas.

The appearance of the site will evolve over time with the sequential phasing of development. The temporary grass seeding and tree buffer areas will be maintained in a clean and tidy state, and be replaced by phased development which will establish a new built environment consisting of buildings and public space with a landscape which will mature over time.

An on-site tree nursery may be established to provide a consolidation area for trees as they are located, procured and delivered to the Project. This will allow the trees to be naturalised and prepared for final planting in the appropriate season.

3.6 Contaminated Land Procedures

3.6.1 Existing Conditions

The ground that will be disturbed by construction of the Stratford City development will mainly comprise land raise fill materials placed on the site during the CTRL works. These land raise materials were required to comply with a specification, which includes numerical soil quality criteria compatible with negligible risks to the environment or futureusers of the site.

In addition to the land raise material, the construction works for Stratford City may disturb the soils and groundwater beneath the land raise fill materials and existing ground in areas of the site where no land raising is being carried out. The CTRL works have

involved contamination remediation of the most heavily contaminated areas of ground, however some localised areas of contaminated ground may remain on the site on completion of the CTRL works.

It is recognised that there are certain areas of buried contamination as indicated in traceability reports. The management of contaminated land will be in accordance with the requirements of conditions within Condition M of the planning permission. (Contaminated Land and Remediation Strategy: Appendix A)

3.6.2 Operational Control

Control methods to mitigate any potential adverse environmental or health and safety effects caused by construction will include the following, as appropriate:

i identification and assessment of the potential for residual ground contamination to be present prior to the start of any piling or excavation construction work

ii sampling and testing of excavated spoil and piling arisings, in order to assess the suitability of materials for re-use on site against site specific criteria

iii use of piling systems designed to minimise impacts on the groundwater

iv dust suppression from any contaminated soils by the regular use of water sprays during dry conditions, sheeting of stockpiles and haulage vehicle loads, use of wheel washers

v stockpiling of contaminated materials will be avoided wherever possible. If this is necessary, stockpiles will be located on areas of hardstanding or plastic sheeting to prevent contaminants infiltrating into the underlying ground. Stockpiles will be covered to prevent windblown dust or ingress of water and surface water will be controlled by appropriate drainage from the area

vi adequate drainage will be designed and installed during construction work and cut off trenches/dewatering measures will be used across the site to manage surface water run off and prevent any contaminated water from entering watercourses, either directly as surface run-off, or indirectly via the surface water drainage systems

vii the flow of traffic across the site, speed restrictions, the siting of wheel wash facilities and sheeting gantries will be designed to take account of the potential presence of contaminated ground during construction activities in certain areas and the minimisation of associated potential health and safety and environmental risks

viii any arisings from the areas of land raise containing remnants of invasive/noxious weed-type materials shall be treated as controlled waste and disposed of off-site at a landfill site that is licensed to receive such material. Disposal of any invasive weed-type material will follow the disposal recommendations referred to within the relevant Environmental Agency code of practice

ix the handling and storage of potentially hazardous liquids on site, e.g. fuels and chemicals, will be controlled and best practice guidance, such as that published by the Environmental Agency, will be followed. Storage tank/container facilities will be appropriately bunded within designated areas and sited as far as possible from any watercourse or surface drain

x if hazardous liquids escape, remedial action will be taken as soon as possible and

xi where unforeseen contamination is identified during the course of the work the CM will instruct specific investigations in the areas in question and implement appropriate Health and Safety procedures during decontamination or removal of material.

3.7 Surface Water Procedures

The works will be carried out and working methods adopted to ensure that construction activities generally do not disturb ground contamination to adversely affect surface water and ground water quality. The following Best Practice measures will be adopted :

i discharge to public sewers – after prior agreement with TW

ii the existing storm water drainage system will be retained where possible during construction, with modifications made as necessary to prevent ingress of debris

iii discharge via sediment traps/ settlement tanks or ponds

iv control of spoil and other materials to prevent spillage, particularly during periods of high local surface flood risk (September to March), through appropriate handling and selection of spoil/material storage locations

v issues relating to contaminated land affected by the construction, together with proposals for protection of surface and groundwater .

vi all drainage arrangements will be determined in consultation with the Environment Agency, the local water company or sewerage undertaker and the Local Authority.

3.8 Archaeology

The redevelopment of the Stratford Rail Lands and the off-site elements of the works will generally have limited impact on the archaeological resource.

Following completion of the construction of the CTRL the core part of the site will have been raised by approximately seven metres with material derived from construction activities to create a development platform. This will result in the preservation *in situ* of the archaeological resources, with limited impacts from piling and the excavation of basements.

Localised truncation of the archaeological resources will occur during the redevelopment of the site as a result of deep piling, however, such disturbance is considered minimal. Within other parts of the site where this protection is not afforded – consisting mainly of the area to the south of the railway line and areas outside of the limits of the Stratford Rail Lands, archaeological mitigation in advance of, or during construction activity will be required. The nature of such mitigation will be dependent on the impact of the development on the archaeology.

3.8.1 Off Site Infrastructure Works

The off-site works are in most cases unlikely to be of sufficient depth to impact on archaeological resource, except in the case of the utilities works where the excavation of trenches for the installation of utilities and larger areas of excavation for junction boxes and similar works can be anticipated. The likely impacts have therefore been based on previous experience of similar utility works.

The provision of the utilities will mainly be located within existing highway corridors where previous construction activities including the construction of the highway and any existing utilities will have resulted in damage/truncation of the archaeological resource. Although the works are located in areas where previous works have taken place, the works are likely to result in additional impacts on the archaeological resource in addition to that that has already take place.

The impacts on the archaeological resources within this area are likely to be limited. A programme of archaeological mitigation will be agreed with the Greater London Archaeology Advisory Service (GLAAS) in advance of the implementation of the works. The most likely form of mitigation is a watching brief.

3.8.2 Construction Impacts

The impact of the provision of basements and the impact that these have on the archaeological resource will require consideration on a case-by-case basis, to determine the impacts from construction on the archaeological resource.

Within the area of the land raise the site of the Chobhams Manor (the site of a medieval manor house) will be preserved beneath the land raise. The preservation of the archaeological resource *in situ,* is in accord with best practice and accords with the requirements of the Local Planning Authorities as defined in their UDP. The provision of basements will require consideration in respect of this, to ensure that its continued preservation or that a programme of archaeological works is designed and implemented if the basement strategy is such that this feature cannot be preserved. The scope of such works will require agreement with the GLAAS.

As part of the redevelopment of the site the some remodelling of the earthworks left on completion of the CTRL works will take place. This will involve changes to the land form of the land raise to form the profiles for the redevelopment and the extension of the land raise to encompass the area currently occupied by Frigo Scandia which is located beyond the limits of the CTRL works.

The provision of utilities within the site is likely to involve deep excavation. The impact of these works on the archaeological resource will be dependant on their location in relation to the depth of the land raise fill and the spatial extent of the works. It is likely that in some areas extensive excavation, for example at junction connections, is likely to be required which may, if not contained within the land raise fill material, have an impact on archaeological resources.

During construction, the works will be carried out in such a way to ensure that disturbance to these areas of archaeological interest are controlled and limited. Supervision and observation during the construction phases will be undertaken to minimise the risk of damage or destruction of undiscovered archaeological remains

3.9 Waste Management

3.9.1 General Provision

The overall strategy for the management of waste is set out in the Stratford City Site-wide Strategy: Sustainable Waste Management. The disposal of waste, including any surplus spoil, will be managed to maximise the environmental and development benefits from the use of surplus material and to reduce any adverse effects of disposal. In general, the principles of the waste management hierarchy, which favours waste minimisation, re-use of materials and recycling over disposal to landfill, will be favoured.

3.9.2 Construction and Demolition Waste

It is anticipated that the volume of waste generated during the construction phase of the proposed development will be around 10% of the materials brought onto site. Opportunities will be investigated to maximise the recycling potential of demolition and construction materials, i.e. structural steelwork will be removed from site for recycling, plasterboard off cuts will be recycled where possible, etc. It is anticipated, that concrete and masonry will be crushed for possible reuse for backfilling – Powerhouse site, and other purposes.

Buildings and materials containing asbestos will be fully assessed in advance of demolition works commencing. Any identified asbestos will be removed by a licensed contractor in accordance with the relevant legislation and regulations. No other deleterious or contaminated materials are expected but if identified, will be isolated and disposed of in accordance with the relevant legislation and regulations. There is a possibility that waste refrigerants and other materials and equipment may be present at

the Frigoscandia site. If present, these materials should be managed in accordance with relevant legislation. It is known that there has been a spillage fuel on this site which will have to be remediated.

The volume of material removed/excavated for construction of any basement is likely to be significant and where possible, will be reused. These basements should, if possible, be excavated during the general earthmoving activities so that the excavated material can be disposed of on site as part of the cut and fill balancing exercise. Due to the lime stabilisation of the site, excavated materials are likely to have a high pH level and, as such, may warrant classification as special waste for disposal purposes in the event that these materials are removed from the site. It is therefore important to try to use up all excavated material in the cut and fill activity. Any such wastes will be stored and disposed of in accordance with relevant best practice guidance and legislation.

For the purposes of this method statement, it is assumed that the waste arisings generated by off-site infrastructure works, will be dealt with by the appointed contractor and will not be considered in this method statement.

Other residual waste, e.g. general office waste, etc will be removed from site by licensed carriers to suitable licensed disposal sites. Where possible, segregation and recycling of materials, such as office paper will be undertaken.

3.9.3 Operational Control

Procedures will be put in place to ensure minimisation of wastes arising on site and the sale or reuse where possible, either directly or by recycling, waste monitoring and setting of targets. Recyclable materials such as metal, timber, cardboard and office paper will be put in colour coded bins, ready for collection by the appropriate contractor.

Initiatives to reduce other waste streams include:

i reducing raw material waste through design principles where possible (see Site-wide strategies for Materials and Environmental Building Design)

ii making a commitment to develop waste minimisation opportunities by maintaining a role in the management of the supply chain during construction. Measures such as bulk buying and the use of ‘large customer purchasing power’ to influence and make demands on suppliers will be utilised (see site-wide Strategies for Materials)

iii liaison with suppliers to enable packaging material to be sent back for reuse, the use of off-cuts where possible and the recycling of off-cut material by the supplier (see Site-wide Strategies for Materials) and

iv engaging contractors in the process of maximising the use of recycled aggregates for hardcore and alternative cements according to application.

Ensure that only Environment Agency licensed waste hauliers, waste management contractors and landfill sites are used, to ensure compliance with legislative requirements.

Suitable protection measures will be incorporated in the design of the waste management area to prevent pollution, and regular inspections carried out to ensure that stored waste are covered to prevent accidental spillage and from being blown away.

Movement of waste by haul road and public highways will avoid, where possible, the use of access routes through residential areas. When leaving site, vehicles will be sheeted/covered to prevent any escape of materials onto the public highway. Waste transfer notes will be held by the management team in accordance with Duty of Care requirements. Information regarding the type and quantity of material returned to the supplier and copies of all waste documentation will be supplied to/held by the Logistics Management Team.

3.10 Materials Handling

All materials entering the site will be managed by an SCDL logistics management team, responsible for implementation of the delivery, material unloading and handling strategy including controlling on site storage. The Logistics Manager will set up delivery schedules to control logistics externally/internally to the project, and establish the delivery strategy with the project team on critical issues affecting the project. In addition, the LM will also be responsible for setting up a total waste management system for the project.

As it is anticipated that many of the deliveries to site will be by road, traffic management arrangements will be discussed with the Highway Authority to minimise impact. Dependent upon the size and type of vehicle, load and frequency, special arrangements may be needed for some vehicles.

The main material route during Zone 1 works is via the northern access route over the existing Temple Mills Lane bridge, down the existing east emergency access road and across the box to the south side of the site, adopting the same construction/vehicular routes currently being used to carry out the CTRL works. This remains the primary access through Zone 1 works until the completion of the Waterden West access bridge, and the new north access haul road.

Where possible prefabrication of building elements will be encouraged, and on site fabrication/batching of bulk materials will be utilised. The objective here will be to utilise a "lean process" to construction, using an agreed methodology. The process will ensure that the supply chain is geared to meet the project's material requirement in the most efficient way. It will cover the on site material handling, delivery locations, material presentation (packaging etc), mechanical support, delivery timings and content, transport loads and waste avoidance.

4 MANAGEMENT ISSUES

4.1 Employment and Management of Workforce

Site labour levels will be calculated finally once the design is approved and detailed design completed. It is anticipated that the site labour numbers will gradually increase over the construction stages, to peak during fit-out works.

Peak labour levels are expected to be around 4000 in Zone 1 including retail, commercial and residential developments and over 5000 in the Olympic Village and surrounding buildings.

This indicates an anticipated peak labour force for the Stratford City Development of circa 9000 operatives. This will be confirmed when the exact work content is known and the programme finalised.

SCDL will develop and implement a Workplace Green Travel Plan in concert with ODA/LBN. It will include a statement explaining how the workforce will move into and around the site. If it is envisaged that the workforce is to be accommodated on site then separate approval will be sought from the local authority.

4.2 Local Training and Employment Opportunities

This section of the Construction Method Statement should be read in conjunction with the Stratford City Jobs and Business Strategy. This Jobs and Business Strategy will be updated on an annual basis and sets out objectives, the areas and sectors to be targeted, who will be involved in delivery, engagement with existing partnerships and organisations, the key planks of the strategy, including immediate actions, and the processes for securing local benefits.

During the construction phase of Stratford City there will be a requirement for up to 9,000 construction workers on the SCDL project, in addition to the labour force required to

construct the Olympic facilities. This will provide immediate opportunities of employment for local people, particularly those with construction skills.

For those without existing construction skills, SCDL, in partnership with all relevant stakeholders, including the Olympic team, will commit to enhancing local training provider capacity, using the opportunities of the construction site for innovative training opportunities and supporting the provision of bespoke training to enable local residents to gain the skills, experience and qualifications needed. This commitment will fit into the wider London agenda of skills and training, not seeking to replicate initiatives, but to support and develop existing and new projects and provide strategic leadership and guidance.

The opportunities arising from the development must be turned into real, tangible benefits for local people. A culture of thinking locally and coordinating activities with existing stakeholders should be integral to all site activity, meaning that supporting local employment, training and business is the absolute norm and is understood by all to be vital to the success of the Stratford City development.

The benefits for local people comprise the objectives of this Jobs, Training and Local Business Statement. These objectives, delivery and action plan are outlined below, together with associated targets for the construction phase.

4.2.1 Objectives

i The objectives for construction activity at Stratford City are to create:

ii Jobs for local people

iii A high standard of local training opportunities in relevant construction trades, together with supported access to lifelong learning and career qualifications

iv Enhanced capabilities of local schools in engaging with the construction process

v Benefit to local businesses

It is intended that the number of local residents employed in the construction of Stratford City is maximised and that high standards of relevant training and achievement of qualifications will be provided which will result in a skilled local labour pool from which employers can recruit. Also, that local schools participate in the learning opportunities afforded by the construction process through training and awareness-raising opportunities. Local businesses should be supported to win work through the promotion of available contracts, with the serious intent by contractors and sub-contractors for the local procurement of supplies and services.

Target areas for local activities are identified as the:

i 11,500 residents of Stratford City

ii residents and businesses of the London Borough of Newham, in which Stratford City is located

iii primary target area: the four Boroughs which join at the Stratford City site (Hackney, Newham, Tower Hamlets and Waltham Forest)

iv secondary target area: the four Boroughs and the remaining Boroughs in the East London sub-region (Greenwich, Barking and Dagenham, Havering, Lewisham, Bexley, Redbridge and the Corporation of London)

4.2.2 Culture

Stratford City is not a development being built in isolation to activity taking place elsewhere in London. It has both a London-wide and a strategic role to play, building

upon other successful models and experiences, and supporting the coordination of related activities to benefit local businesses, jobseekers and trainees. SCDL has a role in supporting the London-wide coordination of construction jobs and training, working with relevant stakeholders to ensure that delivery meets contractor needs, and working with contractors to both identify need and to support successful engagement with local businesses, trainees and jobseekers.

Developing this Stratford City culture of supporting local employment, training and business is of paramount importance. To this end, the following should take place from before the commencement of works:

i The establishment of contractor forums for the practical support of local training and the jobs brokerage and to encourage the active involvement of contractors and sub-contractors in defining their needs and offering specific opportunities to residents

ii A Stratford contract, setting out methods of recruitment, early warnings, interviews, employment and training, brokerage, co-ordination and signposting and working with schools

iii A Stratford charter, setting out routes to employment at the development through direct access to employment opportunities created by the development and addressing wider barriers to employment.

All contractors and sub-contractors working on the Stratford city project should be signatories to both the contract and charter with their presence at the Stratford City Contractors Forum (or similar) considered to be mandatory. Principal Contractor(s) should play a lead role in encouraging all those within the supply chain to work to agreed standards and guidelines.

4.2.3 Early agreement

Tender documents and preliminary agreements should contain major reference to local jobs, training and business with performance against targets encouraged in terms of local recruitment, purchase of goods/services and training opportunities provided. A defined number of trainees/ apprentices employed by every contractor working on Stratford City should form part of agreements, as should defined guidelines for local business development.

4.2.4 Knowledge

The principal contractor(s) must provide an outline report on the expected construction demand with a resulting detailed and regularly updated project training plan, based on resource schedules to allow for (bespoke) training according to future and real demand. The understanding should be that all training would be ongoing with a series of relevant programmes and initiatives taking place throughout the life of the Stratford City project.

4.2.5 Delivery

The following are the key requirements for successful delivery of the employment strategy:

i It is important that any local jobs, training and business strategy does not work in isolation, but fully engages with existing stakeholders and partnerships to complement established activities and programmes. This should include all related groups and activity within the Olympic area itself, plus those specific to Newham and Stratford City and London as a whole. Primary partners should include:

ii Jobcentre Plus

iii CITB-Construction Skills and other relevant Sector Skills Councils

iv Existing local labour in construction and job brokerage groups from the London Boroughs of Newham, Hackney, Tower Hamlets and Waltham Forest, plus those from the East London sub-region

v Colleges of Further Education with construction training departments from the adjacent Boroughs, plus those from the East London sub-region

vi Delivery of the jobs, training and business strategy should consist of:

vii A coordinated approach for all activities to maximise the benefits to all stakeholders in the Stratford City, Newham, wider Olympic and target communities areas

viii A partnership approach building on the strengths and established credibility of existing referral and training providers

ix A focus on target communities and groups that are under-represented in the construction industry (women, black/minority/ethnic groups, 16 – 24 age group, people with disabilities) to include those facing barriers to work

x The enhancement of local training provider capacity and the provision of bespoke training to enable local residents to gain the skills they require in line with employer requirements – building on the Stratford City Construction Training and Employment Initiative and working with CITB Construction Skills and the National Skills Academy for Construction to deliver both off and on-site construction training

xi The provision of information to ensure that appropriate training is in place to provide staff with the right skills and qualifications

xii A focus on apprenticeships, life-long learning and on-site assessment with the establishment of an on-site learning facility in partnership with local colleges and educational establishments. This will support the delivery of ESOL (English for Speakers of Other Languages), Skills For Life and, where possible, ICT, along with other relevant courses, to all site operatives

xiii The establishment and support of the on-site presence for a one-stop shop to work in tandem with the Stratford City One Stop Shop facility to provide supported access to site employment for local residents/act as a point of recruitment for site contractors

xiv Clear linkages and routes to Stratford City opportunities for local training providers and brokerage services

xv The monitoring of jobs, training and local business outputs and regular reports to SCDL

xvi A focus on local business support with the provision of information on contract packages, support to local businesses in tendering for contracts, local advertising of available contracts and an emphasis on the use of local business.

4.2.6 Targets

In accordance with the requirements of the S106 Agreement, reasonable endeavours shall be made to achieve the following targets:

Area	Target
Construction Apprenticeships and Improvers	800 from the Primary Area, of which 400 will be apprenticeships with employed status and studying to NVQ or equivalent and of these, at least 160 from Newham 400 employed status improvers (not working towards a qualification) at least 200 shall be from the Council's Area the majority of apprentices and improvers shall be recruited in the first 8 years.
Construction jobs in addition to Apprenticeships and Improvers	1,600 from the Secondary Area (east London sub-region plus Waltham Forest) of which 400 from Newham

4.2.7 **Industrial** Relations

Reasonable endeavours will be made to agree working practices with the ODA in relation to terms of employment, wage rate and all other aspects of industrial relations.

4.3 Business Support and Supply Chain

As much as there is a focus on offering employment and training opportunities to local people, there must be an equal focus on local business and supply chain development. Stratford City will bring great commercial opportunities and it is important that these opportunities benefit local business. Developing relationships between local small to medium businesses, principal contractors, major construction companies and trade contractors will be crucial to ensuring those opportunities materialise and result in the strengthening of the local economy. This document section should be read in conjunction with the annual Stratford City Jobs and Business Strategy.

The key objectives in relation to business and supply chain activities are:

i that Stratford City is home to dynamic and thriving businesses, from one person companies to international employers

ii that Stratford City businesses are an integral part of a wider thriving East London economy.

For this to be achieved there must be, in the construction phase, a commitment from all contractors involved for:

i high quality provision of information on contract packages

ii involvement in initiatives to support local business development, such as assistance in tendering for contracts

iii local advertising and publicity on available contracts.

SCDL will work with existing stakeholders and partnerships to ensure liaison with relevant agencies, including Business Link and business development initiatives and networks. This commitment to developing relationships with potential and existing business partners

can provide both a substantial boost to the prospects of local business success, and offer development opportunities for existing larger contractors. Committing to local business development and supporting access to the supply chain should be integral to the culture of the Stratford City development.

Contractors should support initiatives to develop local businesses by:

i Making contract opportunities available on a 'local procurement' website to include a searchable supplier database

ii Committing to an electronic pre-qualification procedure and electronic tender alert mail-outs

iii Providing support to local business networking activities and the development of links to relevant partner activities

iv Participating in a programme of 'Meet The Buyer' style events, and other specific supplier/client networking opportunities

v Engaging with delivery of workshops on tendering and procurement issues to strengthen participants' ability to respond effectively and successfully

vi Supporting local business development through offering skills support and mentoring

vii Purchasing goods, where possible, from the target areas identified above

viii Participating in events to share good practice

The Stratford Charter should also commit to the local procurement of goods and services where possible, setting out clear routes to local procurement through direct and supported access to local businesses and addressing wider barriers to local business development. This message, as part of the culture of Stratford City, should be reinforced by the Principal Contractor and driven down through the supply chain.

4.4 Public Relations and Community Liaison

The aim during the construction of the Stratford City development is for the site to bring positive benefit to local communities and to have minimal negative impact on those same communities. Stratford City is a tremendous opportunity and the ideal is that all benefit from its development.

During the works, there will be clear communication with the residents/neighbours on a regular basis. These communications will be structured to accommodate those with auditory and visual impairments. A regular newsletter will be issued to the surrounding neighbourhood/residents to keep all parties informed about progress to date and forthcoming works, and a public visitor centre available for people to visit. This centre will preferably be located within Stratford Town centre. Consideration will be given to a joint ODA/SCDL facility. It shall be available for the duration of the project. Appropriate amenities will be provided in accordance with statutory legislation. Any special or unusual activities to take place (such as road closures or deliveries of large plant) will be notified by way of a supplementary letter, issued to the relevant neighbours and local amenities.

A point of contact will be provided for the residents/neighbours and relevant bodies and a telephone help-line made available which will be operational 24hrs per day and 7 days per week.. A website providing relevant information about the site and construction progress, along with measures being taken to limit impact (with particular emphasis on identifying key dates when "high impact" construction activities are programmed to take place and the measures designed to address such impacts) will also be provided.

A complaints register will be established to record individual complaints and action taken to resolve each complaint. This will provide a permanent record of the performance of the project and will be forwarded to the local planning authority at monthly intervals. Any

complaint from residents or other parties will be treated seriously, and the complaint logged and cause investigated. Analysis of any complaints made will allow procedures to be implemented aiming to avoid any re-occurrence.

4.4.1 Local Communication

(Identifying and communicating with statutory and non-statutory bodies, interest groups and the public)

Project delivery involves liaising with many different public and statutory authorities with their team. SCDL will establish a one-stop shop strategy for liaising, informing and getting approvals. A coordinated partnering approach will be applied by establishing regular meetings with associated authorities. Meetings and contacts have been established between:

i London Development Agency

ii Transport for London - Buses, Streets, Network Assurance, Demand Management Bus Priority, Freight

iii Network Rail

iv London Boroughs of Waltham Forest, Tower Hamlets, Newham, Hackney, Greenwich

v LOCOG/ ODA/CLM

vi Union Railways

vii Local Resident Groups

viii Environmental Groups

ix Local Authorities

x Community groups

xi Metropolitan Police -Traffic, ODA,

This Meeting is the Olympics Construction Transportation Management Group and meets monthly.

Proactive liaison with the local community is a proven way of engendering and maintaining public support for projects. Presentations, leaflet drops and newsletters can all be used to good effect to give people information early, reduce fears and ensure an effective response to valid concerns throughout each project.

4.4.2 Community Initiatives

To ensure community relations issues are managed effectively SCDL supports the Considerate Constructors Scheme whereby an independently assessed voluntary code of practice covering issues such as environmental awareness, relations with the public, site welfare and safety of those on and off site is adopted and implemented.

The Stratford City site will be registered with the “Considerate Constructors Scheme” which is administered by the Construction Industry Board. This is a voluntary code of practice that seeks to:

i Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by construction sites to the immediate neighbourhood

ii Eradicate offensive behaviour and language from construction sites and,

iii Recognise and reward the constructor’s commitment to raise standards of site management, safety and environmental awareness beyond statutory duties.

The Scheme requires constructors to adhere to a Code of Practice that includes:

i Be environmentally aware in the selection and use of resources. Pay particular attention to pollution avoidance and waste management. Use local resources wherever possible and keep to a minimum at all times noise from construction site activity

ii Be considerate to the needs of all those affected by the construction process and of its impact on the environment. Special attention to be given to the needs of those with sight, hearing or mobility difficulties

iii Keep the Site clean and in good order and ensure that the surrounding area is kept free from mud, spillage and any unnecessary construction debris

iv Be a good neighbour by undertaking full and regular consultation with neighbours regarding site activity from pre-start to final hand-over. Provide site information and viewing facilities where practical

v Promote respectable and safe standards of behaviour and dress. Derogatory behaviour should not be tolerated under threat of the strongest possible disciplinary action

vi Be safe. All construction operations and vehicle movements to be carried out with care for the safety of passers-by, neighbours and site personnel

vii Be accountable to the public by providing site contact details and be available to deal with their concerns and develop good local relations.

4.5 Emergency Response Plans

This section refers to activities that have the potential to lead to an Environmental Emergency and outlines the Emergency Fire & Accident Procedures.

Environmental Incidents that MUST be reported in the unlikely event that these occur:

Spills or discharges to the atmosphere, water supplies, sewerage systems, rivers and other watercourses, or to the ground of:

i any chemical product or formulation

ii oils and fuels

iii effluents/ fumes and gases

iv waste or contaminated materials.

v Or damage to existing:

protected trees and wildlife

protected flora and existing demarked local habitats.

vi Alternatively, any environmental incident that could lead to:

local authority or regulatory enforcement

public complaint.

4.5.1 Control Measures to be employed

All fuels and chemicals will be stored in designated areas, with deliveries of all hazardous materials being supervised. In addition, a system of just in time deliveries will be in operation to minimise storage and reduce the risks of spillage on site.

In case of an environment emergency, immediate action will be taken to prevent any pollutants from spreading, reaching drains, leaving the site boundary or soaking into the ground. The appropriate agency will then be contacted in order to agree the appropriate course of action.

4.5.2 Emergency Fire and Accident Procedures

It is envisaged that all existing emergency routes and procedures will be adopted/adapted to suit the phasing of development and construction sequence, and generally follow the plan guidelines below:

i the management organisation and responsibility for safety

ii fire Prevention Measures, including good housekeeping of site, welfare facilities and offices

iii use of non flammable/fire retardant materials for protection of finished works

iv safe use and storage of flammable gases and materials

v waste management procedures

vi monitor the type and frequency of fire inspection/audits

vii site accommodation location, construction and detection/fire fighting systems employed

viii during construction , the installation of temporary detection and alarm systems, including early use of new or existing systems

ix development of evacuation plans, to include escape routes, muster points, means of sounding the alarm, and the setting of systems in place to ensure that emergency vehicles have been called/all personnel have left the site

x training and fire drills

xi the application of permit systems for, Hot Works, Confined Space Entry and Electrical Control

xii the provision of Fire Watchers and First Aiders

xiii ensure that emergency routes/exits are unobstructed at all times

xiv distribute the plan

xv continuous liaison with fire brigade/police/ambulance services and other emergency services, plus clients/occupants of adjacent buildings.

The Emergency Fire and Accident plan as outlined above, will be developed with local Fire Bridge/Emergency agencies. As sites are dynamic environments, emergency planning will be under constant and critical review to ensure their continued relevance.

Specific Emergency/Fire Plans will be submitted for each zone [phase] of the development, and submitted with future detailed planning applications.

4.6 Estate Management

In view of the fact that the phased construction of such a large project means that some parts of the site will be operational while others are still under construction, these activities are to be coordinated between the Estates Management Framework and the zone by zone Construction Method and Management Statements.

APPENDIX A

Planning Conditions Relevant to the Site Wide Construction Method Statement

APPENDIX A

Planning Permission Conditions Relevant to the Site-wide Construction Method Statement

Certain conditions of the Planning Permission for the Stratford City Development have specific relevance to this Site Wide Construction Method Statement, as follows:

(Note: these are extracts only and do not represent the complete document which should be referred to separately)

AA. DEFINITIONS AND INTERPRETATION

"Preparatory Works" means any operations or items of work of or connected with or ancillary to archaeological and contamination investigations, site surveys (including topographical and ecological surveys), exploratory boreholes, demolition, site clearance, construction site set up, off site utilities and works to relocate CTRL facilities (provided that details of such works to relocate CTRL facilities have first been agreed by the Local planning Authority in writing).

"Temporary Works" means temporary landscaping approved under Condition I1, the erection of fences and hoardings, construction of temporary access and service roads, construction of temporary services and the erection of temporary construction accommodation (excluding for the avoidance of doubt temporary residential accommodation).

C SITE WIDE STRATEGIES

C3. All works shall be carried out in accordance with the approved Site Wide Strategies, unless otherwise agreed in writing by the Local Planning Authority.

Reason: To ensure that the Local Planning Authority is satisfied as to the details of the development.

G. CONSTRUCTION

G1. Unless otherwise agreed in writing by the Local Planning Authority and save for Temporary Works, no development shall be commenced in any Zone until a Zonal Construction Method and Management Statement in respect of that Zone has been submitted to and approved in writing by the Local Planning Authority.

Reason: In order to minimise disruption and disturbance.

G2. All Zonal Construction Method and Management Statements submitted pursuant to Condition G1 shall be consistent with the site wide construction method statement approved pursuant to Condition C1 and shall as a minimum contain each of the following:

(a) details of environmental mitigation measures for the relevant Zone to minimise the impact of construction
(b) details of a lighting scheme for use during demolition and construction of development within the relevant Zone and
(c) details of how construction of development within the relevant Zone will be managed.

Reason: In order to minimise disruption and disturbance.

G3. Unless otherwise agreed in writing by the Local Planning Authority, all works of construction of the development in each Zone shall be carried out in accordance with the Zonal Construction Method and Management Statement approved for that Zone.

Reason: In order to minimise disruption and disturbance.

G4. All construction compounds for the development hereby permitted shall be erected within the site, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In order to minimise disruption and disturbance.

G5. No demolition, construction or maintenance activities audible at the site boundary of any residential dwelling shall be undertaken outside the hours of 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 Saturday or at any time on bank or public holidays without the prior written approval of the Local Planning Authority, unless the works have been otherwise approved in advance under section 61 of the Control of Pollution Act 1974.

Reason: In order to minimise disruption and disturbance.

G6. No impact piling shall take place without the prior written approval of the Local Planning Authority and shall only take place in accordance with the terms of any such approval.

Reason: To ensure that the development does not prejudice the enjoyment of neighbouring occupiers of their properties.

G7. Deliveries of construction and demolition materials to and from the site by road shall take place between 08:00 – 18:00 Monday to Friday & 08:00 - 13:00 on Saturday and at no other time except with the prior written approval of the Local Planning Authority.

Reason: In the interests of minimising disruption and disturbance.

G8. Save for works which have first been agreed by the Local Planning Authority in writing, the development shall not be commenced until a public telephone inquiry line has been installed to answer questions and log complaints relating to construction activities on the site. The inquiry line shall be staffed during the operating hours of the works on the site and the telephone number shall be prominently displayed at every entrance to the site and publicised in the surrounding area in accordance with a scheme to be submitted to and approved in writing by the Local Planning Authority.

Reason: In the interests of minimising disruption and disturbance and keeping the public informed.

G9. No works to relocate any works or facilities already provided in connection with the Channel Tunnel Rail Link within the site either pursuant to the Channel Tunnel Rail Link Act 1996 or the Channel Tunnel Rail Link (Stratford Station and Subsidiary Works) Order 2001or any consents granted pursuant thereto, shall be commenced until details of such works have been submitted to and approved by the Local Planning Authority in writing. Any relocation works shall be carried out in accordance with the terms of the Local Planning Authority's approval.

Reason: In the interests of minimising disruption and disturbance.

I. TEMPORARY LANDSCAPE AND EARTHWORKS

I1. Unless otherwise agreed in writing by the Local Planning Authority, no development shall be commenced in Zone 1 until details of the temporary landscaping of Zones 2-7 have been submitted to and approved in writing by the Local Planning Authority.

Reason: In the interests of protecting the appearance of the site.

I2. Unless otherwise agreed in writing by the Local Planning Authority, the details submitted pursuant to Condition I1 shall include the following:

(a) temporary grass seeding over those areas of Zones 2-7 to be developed, together with details of any proposed mounding, bunding and ground modelling

(b) the identification of areas of the site to be excavated for material to form the landscape bunding

(c) the production of a comprehensive ground level survey with AOD information relating to the existing and proposed ground levels

(d) plans and sections in positions to be agreed with the Local Planning Authority

(e) a planting, management and maintenance strategy including on site irrigation measures

(f) tree planting within buffer zones of a minimum 15 metre width on either side of the Zone 1 entry roads located in all undeveloped zone areas no further than 8 metres from the permanent street tree planting and

(g) tree planting within buffer zones of a minimum 15 metre width along the eastern/Leyton-side site boundary of Zone 4 at the top of the boundary batter.

Reason: To ensure that the Local Planning Authority is satisfied as to the details of the development.

I3. Unless otherwise agreed in writing with the Local Planning Authority, the temporary landscaping of Zones 2-7 shall be carried out prior to the opening of any retail or leisure floorspace within Zone 1 for trade with the general public and shall be maintained in accordance with the details approved pursuant to Condition I1.

Reason: In the interests of protecting the appearance of the site.

M. CONTAMINATED LAND AND REMEDIATION STRATEGY

M1. Save for works which have first been agreed by the Local Planning Authority in writing, no development shall be commenced until a ground resources and remediation strategy for the whole of the site has been submitted to and approved in writing by the Local Planning Authority.

Reason: In the interests of public safety

M2. The ground resources and remediation strategy submitted pursuant to Condition M1 shall contain details of the following:

(a) ground investigations already undertaken across the site;

(b) scheme proposals for earthworks;

(c) the protocol for tracking the movement of spoil around the site;

(d) compliance requirements and standards to be applied;

(e) chemical criteria for soils and other infill materials to define the acceptability of materials for their intended use on the site; and

(f) any long term monitoring requirements of soil, groundwater or ground gases.

Reason: To ensure that the Local Planning Authority is satisfied as to the details of any remediation.

M3. Save for the works which have first been agreed by the Local Planning Authority in writing, and for contamination investigations and exploratory boreholes, no part of the development shall be commenced until a ground contamination assessment report in respect of the part of the development has been submitted to and approved in writing by the Local Planning Authority.

Reason: In the interests of prospective occupiers of the land and to safeguard the water environment.

M4. All ground contamination assessment reports submitted pursuant to Condition M3 shall include the following information:-

(a) sufficient ground investigation data to assess the risks to human health and controlled waters from potential hazards at the site associated with soil and groundwater contamination or ground gases, taking into account the proposed land uses and required earthworks, and for the area covered by Union Rail's regeneration enabling works, such information can include the database of soil investigations, remediation and verification testing gathered on behalf of Union Rail and approved by the Local Planning Authority for the purpose of discharging conditions associated with planning permissions P/98/0024 (CTRL

Regeneration Enabling Works) and P/02/0192 (CTRL Deposition of Tunnel Spoil), subject to the suitability of such information;

(b) a source-pathway-receptor environmental risk assessment undertaken using CLEA methodology or equivalent national guidance as the Local Planning Authority may agree in writing is appropriate at he time such risk assessment is undertaken;

(c) a description of any remediation works that are necessary to be undertaken in advance of, or during, the construction works to render the site suitable for its intended uses;

(d) a programme for any remediation works, method statements, verification and validation programme and protocol and proposed environmental mitigation and monitoring measures to be employed, and

(e) a process for dealing with any other significant ground contamination not anticipated by the relevant ground contamination report, including details of when the Local Planning Authority will be notified, approval procedures and when works will be carried out and verified.

Reason: To ensure that the Local Planning Authority is satisfied as to the details of any remediation.

M5. Unless otherwise agreed in writing by the Local Planning Authority, the development shall be carried out in accordance with the ground resources and remediation strategy and the ground contamination assessment report as approved by the Local Planning Authority pursuant to Conditions M1 and M4 respectively.

Reason: To ensure that the necessary remediation is carried out satisfactorily.

M6. In the event that significant ground contamination not anticipated by the relevant ground contamination assessment report is encountered during development of the site, the Local Planning Authority shall be notified forthwith and an assessment for proposed remediation measures shall be submitted to and approved by the Local Planning Authority and remediation measures shall be carried out in accordance with the terms of the Local Planning Authority's approval.

Reason: To safeguard the public, the environment and surface and groundwater.

M7. A validation report detailing and verifying any remediation work carried out in compliance with the ground resources and remediation strategy approved pursuant to Condition M1 an each found contamination assessment report approved pursuant to Condition M3 (and including any further measures carried out under Condition M6) shall be submitted to and approved by the Local Planning Authority in accordance with the validation programme and protocol identified in the ground contamination assessment report approved pursuant to Condition M3.

Reason: To safeguard the public, the environment and surface and groundwater.

M8. No soils or infill material shall be imported on to the site unless it complies with approved chemical acceptance criteria to be defined by the ground resources and remediation strategy approved pursuant to Condition M1.

Reason: In the interests of prospective occupiers of the land.

M9. All spoil arising and intended for re-use on the site within areas of soft landscaping shall first be screened against a set of chemical and physical acceptance criteria which will have been approved pursuant to Condition M1 and only material complying with the acceptability criteria shall be re-used within areas of soft landscaping.

Reason: To safeguard the public, the environment and surface and groundwater.

O. NOISE & VIBRATION

Construction of the development

O1. Noise from construction activities shall not exceed 65dB Laeq 1 hour & 70dB Laeq 1 minute at any educational premises measured at 1 metre from the façade of the educational building in question during term time, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of amenity and educational well being.

O2. Noise from construction activities shall not exceed 75dB Laeq 10 hour between 8.00 and 18.00 Monday to Friday and shall not exceed 75dB Laeq 5 hour between 8.00 and 13.00 on Saturdays unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of amenity.

O3. Save for Temporary Works no development shall be commenced until a strategy for perimeter monitoring of noise during construction has been submitted to and approved in writing by the Local Planning Authority. The strategy will accord with the site wide construction method statement approved pursuant to Condition C1. The monitoring measures shall be implemented and undertaken during the demolition and construction of the development, unless otherwise agreed in writing by the Local Planning Authority. As a minimum the monitoring shall meet the following requirements:

(a) continuous monitoring of noise shall be undertaken throughout the construction phase and monitoring shall be at a minimum of 4 locations (1 permanent base station and 3 mobile stations) and the following parameters shall be measured: Laeq 1hr and LA1 1hr

(b) noise results shall be forwarded to the local authority within 48 hours of being taken and

(c) construction noise will be assessed using BS5228 (control of noise from construction sites) and best practicable means will be used at all times to minimise noise and vibration from construction.

Reason: In the interests of amenity

P. AIR QUALITY AND DUST

Construction of the development

P1. Save for Temporary Works, no development shall be commenced until a dust management plan has been submitted to and approved by the Local Planning Authority. The dust management plan shall accord with the site wide construction method statement approved pursuant to Condition C1 and shall include the following details:

(a) full ambient dust survey data taken from representative monitoring points around the site. Survey data should be undertaken using recognised techniques and for a minimum of four weeks and accounting for the seasonal changes to the environment

(b) using local knowledge and the ambient survey data appropriate dust trigger levels for mitigation should be set for each receptor location

(c) a monitoring protocol including information on monitoring locations, frequency of data collection and how the data will be reported to the Local Planning Authority

(d) details of dust generating operations and the subsequent management and mitigation of dust demonstrating full best practicable means compliance and covering construction activities, materials storage, on and off site haul routes, operational control, demolition, and exhaust emissions and

(e) where a breach of the dust trigger level may occur a response procedure should be detailed including measures to prevent repeat incidence,

and demolition and construction of the development shall be carried out in accordance with the approved dust management plan.

Reason: In the interests of minimising the adverse impacts of dust and other construction related nuisances.

P2. Save for Temporary Works, no development shall be commenced until details of wheel washing equipment have been submitted to and approved by the Local Planning Authority and the approved equipment has been installed. The approved equipment shall be maintained for the duration of the demolition / construction works at all relevant vehicle exits to the site to prevent the carriage of mud and other materials on to adjoining public roads.

Reason: In the interests of keeping adjoining roads safe and clean.

P3. All commercial road vehicles used in connection with the construction of the development shall meet the European Emission Standards of Euro 3 from the date of this permission and Euro 4 for any works that take place from 1 January 2007. In the event that any new standards are introduced after 2007 these standards shall be applied to all road vehicles serving the construction project within a period of one year after the date of introduction of the relevant EU Directive.

Reason: In the interests of minimising the impacts of construction on air quality.

P4. All non-road mobile vehicles with compression ignition engines used in connection with the construction of the development shall comply with the emission standards contained in EC Directive 97/68/EC. Vehicles shall meet stage III limits from the start of the works on site and meet any new Standard within one year of its introduction. No vehicle or plant to which the above emission standards apply shall be on the site, whether in use or not, unless it complies with those standards, without the prior written approval of the Local Planning Authority (which shall include any exemption granted by the Local Planning Authority).

Reason: In the interests of minimising the impacts of construction on air quality.

P5. Any diesel powered machines used on or otherwise serving the site shall be operated on ultra low sulphur diesel fuel meeting the specification of BSEN590 (also known as ULSD ‘cleaner diesel’ or ‘green diesel’ fuel).

Reason: In the interests of minimising the impacts of construction on air quality.

P6. Save for Temporary Works, no development shall be commenced until a strategy for perimeter monitoring of dust during construction has been submitted to and approved in writing by the Local Planning Authority. The strategy will be consistent with the Site Wide Construction Method Statement approved pursuant to Condition C1. The monitoring measures shall be implemented and undertaken by the developer during the demolition and construction of the development unless otherwise agreed in writing by the Local Planning Authority. As a minimum the monitoring shall include continuous monitoring of fine particulate including PM10, total suspended particulate, and PM2.5, at 4 perimeter locations. The data shall be remotely accessible via telephone line directly by this authority.

Reason: In the interests of minimising the impacts of construction on air quality.

W. WASTE MANAGEMENT

W2. Any building suspected of containing asbestos shall be surveyed prior to its demolition and a licensed waste contractor shall remove any asbestos found during demolition to an approved receptor.

Reason: To ensure that the development meets the policy targets in relation to sustainable waste management.

X. LONDON CITY AIRPORT

X1. Any building, structure or plant, including aerials and antennae whether permanent or temporary proposed to be constructed on the site to a height in excess of 154.95 metres AOD shall not commenced unless approved in writing by the Local Planning Authority in consultation with London City Airport.

Reason: In the interests of safety and operation of London City Airport.

X2. Save for Temporary Works no part of the development shall be commenced until details of any cranes or other plant and equipment, aerials and antennae or temporary structures of a height in excess of 154.95 AOD to be used in the construction of that part of the development have been submitted to and approved in writing by the Local Planning Authority in consultation with London City Airport.

Reason: In the interests of safety and operation of London City Airport.

INFORMATIVES

1. Under the terms of the Water Resources Act:

(a) the prior written consent of the Environmental Agency is required for dewatering from any excavation or development to a surface watercourse.

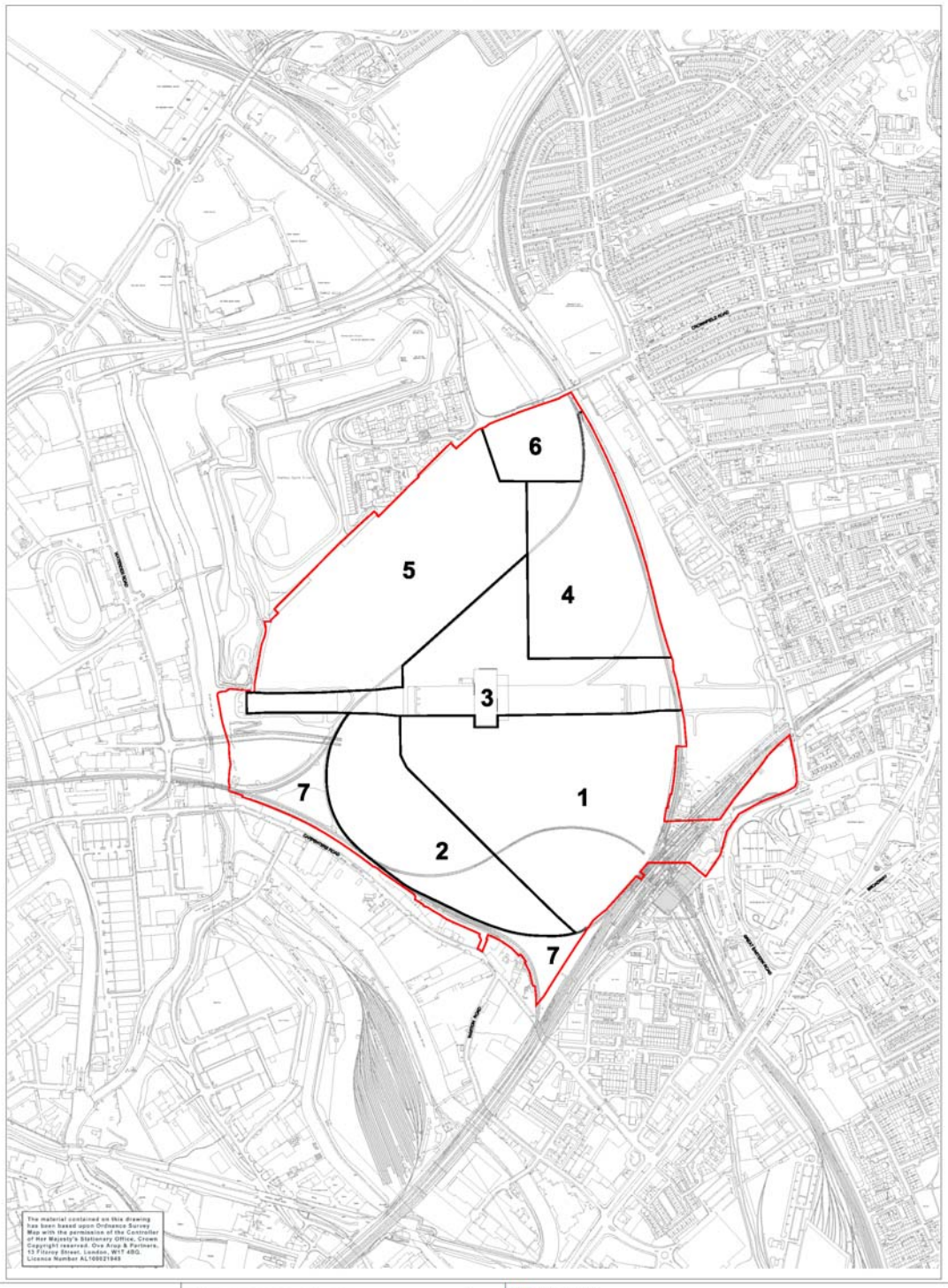
(b) culverting of a watercourse requires the prior written approval of the Local Authority under the Public Health Act 1936, and the prior written consent of the Environment Agency under the terms of the Land Drainage Act 1991/ Water Resources Act 1991. The Environment Agency seeks to avoid culverting, and its consent for such works will normally be withheld.

(c) under the terms of the Water Resources Act 1991 and the Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any proposed works or structure in, under, over or within 8 metres of the brink of the River Lea and Channel Sea main rivers.

(d) under the Water Resources Act 1991 and Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any works in, over, under or within 8 metres of a main river, or 16 metres landward of a main tidal river flood defence structure, irrespective of any planning permission granted. It is likely that such consent will be withheld.

APPENDIX B

Drawing Showing Zones



STRATFORD CITY

PARAMETER PLAN
DEVELOPMENT ZONES

4

Planning Application Boundary.

Scalebar:

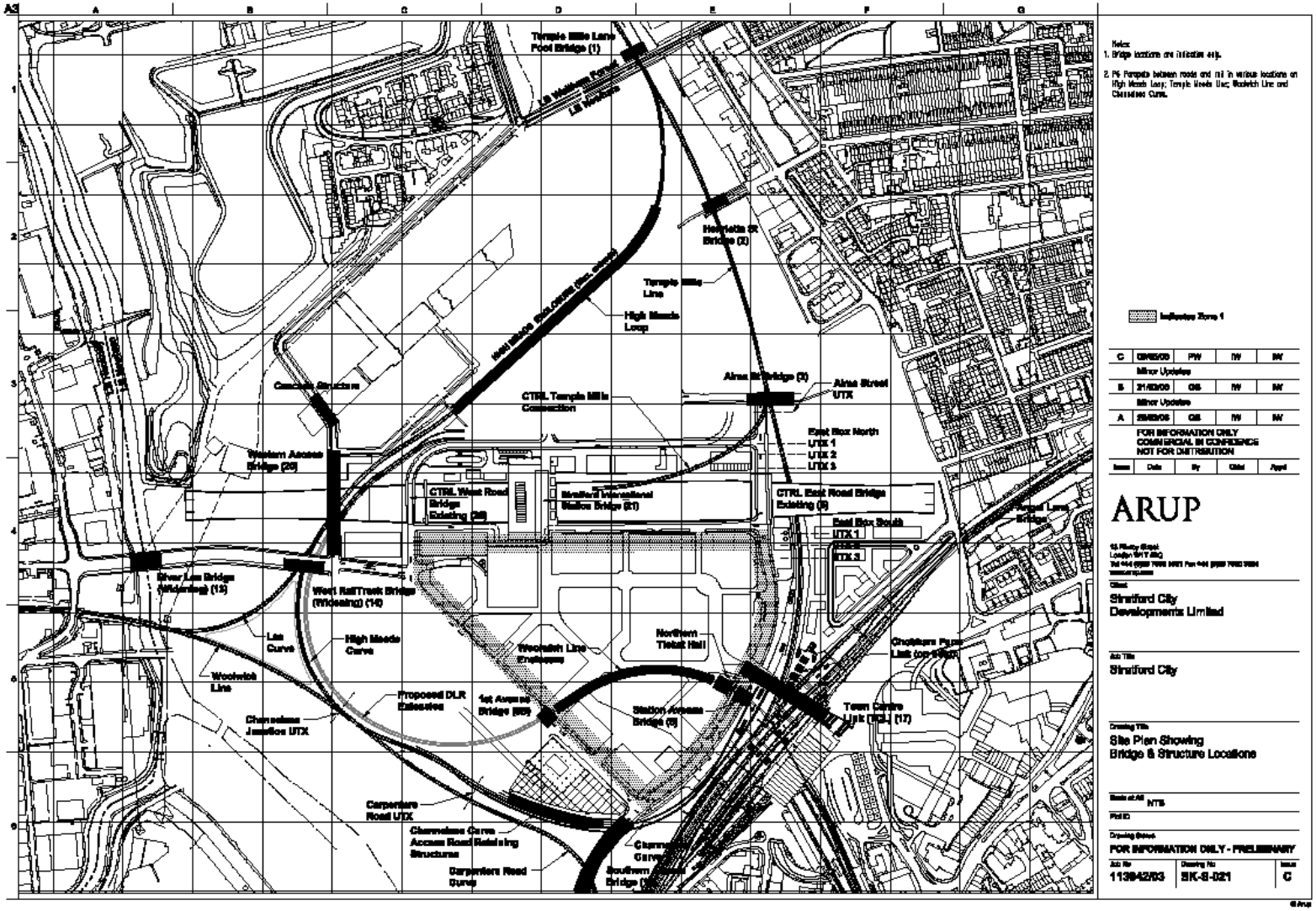
CHELSFIELD STANHOPE LCR

Scale: 1:2500 @A0 | Date: 27/03/2003

Dwg No. AA-39097/P-98-004 | Rev:

APPENDIX C

Drawing Showing Bridges


A3
Temple Mills Lane Foot Bridge (1)
LB Waltham Forest
LB Newham
Henrietta St Bridge (2)
Temple Mills Line
High Meads Loop
East Ham Flyover (Not shown)
Alma St Bridge (3)
Alma Street UTX
CTRL Temple Mills Connection
East Box North
UTX 1
UTX 2
UTX 3
Western Access Bridge (20)
CTRL West Road Bridge Existing (20)
Stratford International Station Bridge (21)
CTRL East Road Bridge Existing (9)
East Box South
UTX 1
UTX 2
UTX 3
Silver Lea Bridge (Widening) (13)
West RailTrack Bridge (Widening) (14)
Lea Curve
High Meads Curve
Woolwich Line
Northern Ticket Hall
Chelmsford Junction UTX
Proposed DLR Extension
1st Avenue Bridge (8b)
Station Avenue Bridge (5)
Town Centre Link (DLR) (17)
Carpenters Road UTX
Chelmsford Curve Access Road Retaining Structures
Carpenters Road Curve
Southern Bridge
Notes:
1. Bridge locations are indicative only.
2. P6 Parapets between roads and rail in various locations on High Meads Loop; Temple Mills Line; Woolwich Line and Chelmsford Curve.
Indicative Zone 1
C 03/03/03 PW IW IW
Minor Updates
B 31/02/03 GS IW IW
Minor Updates
A 28/02/03 GS IW IW
FOR INFORMATION ONLY
COMMERCIAL IN CONFIDENCE
NOT FOR DISTRIBUTION
Issue Date By Chkd Appd
ARUP
Client
Stratford City Developments Limited
Job Title
Stratford City
Drawing Title
Site Plan Showing Bridge & Structure Locations
Scale at A3 NTS
Plot ID
Drawing Status
FOR INFORMATION ONLY - PRELIMINARY
Job No 113942/03
Drawing No SK-S-021
Issue C