Appendix K

Assessment of Olympic Park Application

Transportation and Highways Comments

February 2007

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Olympic and Legacy Travel Plan Group

Travel Plan Co-ordination

Volume 13a Section 1.3.16 identifies the need for committed and co-ordination and management of the Travel Plan to deliver site-wide and programme delivery-wide success. It is proposed that an Olympic Park Travel Plan Group is set up to deliver this across all phases of the delivery programmes from construction to occupation of the Legacy land uses.

The role of the group will be to:

- *Coordinate the Construction Phase transport and review transport effects through on-going development and implementation of the Code of Construction Practice and the Traffic Management Plan.*
- *Refine and implement the Olympic Transport Plan to deliver reliable, inclusive and sustainable transport for spectators and visitors*
- *Co-ordinate the construction traffic impacts during Legacy Transformation*
- *Co-ordinate the development, implementation and enforcement of Travel Plans for the Legacy land uses.*

The establishment of a Travel Plan Group is welcomed and will help to deliver a consistent, well managed, monitored and enforceable Travel Plan. Due the specific nature of the development and the impacts of the Travel Plan on the Highway network, bus routing, pedestrian and cycling facilities; along with the co-ordination of this travel plan along with future development proposals; it will be necessary for this responsibility to sit within the Transportation and Highway's section.

To facilitate the intense investment in time and detail this role will be required to deliver; the ODA should be conditioned to provide a contribution towards revenue support for officer time, from 2007 to at least 2014, with a review period in 2014 to identify contributions going forward to 2021, when management companies for venues and new residential and commercial land-uses will be required to manage and monitor their individual travel plans.

Highway Mitigation Measures

Management of Highway Mitigation Measures

In the TA (Volume 13a section 1.3.18 and section 10.4) reference is made to setting up a framework for identifying and taking forward mitigation measures for transport schemes that have been identified as necessary as a result of all Olympic Legacy and development associated with it, as well as contributions from developments within the wider Lower Lea Valley area. This would be known as OPTEMS – Olympic Park Transport and Environmental Management Schemes.

OPTEMS would be set up jointly with Boroughs, TfL and UDC. This would give Boroughs and TfL comfort that structures are in place for identifying, costing and taking forward schemes which are in line with policy – in advance of the detailed information being available.

These would include, initially, an Agreement between the ODA, TfL, LDA, UDC and the Boroughs and provide for constitution of a Lower Lea Valley Transport Investment Group with delegates from the each of the above bodies.

The setting up of OPTEMS and The Lower Lea Valley Transport Investment Group is welcomed and will provide a unique and effective way to control and implement highways mitigation measures. However there is a concern over staffing availability for this function.

The officer responsible for attending will come from Transportation and Highways – Development section, as they are best placed to liaise with Development Control over applications, as well as secure contributions from developers, along with liaising with Highways Design, Highways Asset Management and Capital Programmes and the Local Implementation funding team.

For this role to be fulfilled revenue funding must be supplied primarily by the ODA, supported by other developments in the Lower Lea Valley as they progress through planning. A Contribution to fund this role should be made available by the ODA from 2007 through to 2014 for this role as a condition of planning; with a commitment to continue funding to 2021 following a review.

OPTEMS needs to function with TfL's LIP programme, particularly where bids for next years work are already being drawn up. TfL's involvement in OPTEMS is vital. Also understanding that transport programmes, particularly signalling have long delivery times; it essential that these factors are taken into account in the delivery of programmes.

OPTEMS and the Lower Lea Valley Transport Investment Group needs to be set up as soon as possible, preferably prior to construction work begins. This should be a condition of the application.

Revenue Support

In light of the responsibilities we will have to the delivery of the Olympic Park, Games operation and Legacy, from both OPTEMS, Travel Plan Management, Network Assurance and Project Management, Tower Hamlets will need to ensure that they have the adequate resources necessary to deliver these key responsibilities in time.

Tower Hamlets is the borough that will deliver most of the traffic from Central London to the Games site. This includes the spectators, workforce (construction and Games), and the Olympic Route Network. This will require intensive levels of man power.

The ODA will need to supply revenue support to Tower Hamlets, Transportation and Highways section. This has been assessed as 3 FTE at PO2/4 staff members. These should be in place as soon as possible, preferably by July 2007, to enact the programme of works necessary.

The Existing Situation 2006

Modelling

Halcrows have been acting on behalf of all the boroughs in providing technical comments on the model. Hence they have really carried out the independent verification. Although we have had some concerns about the variation between counts and modeled traffic and public transport flows (in some cases buses were underrepresented by 90%) the resultant conclusions from the highway modeling are as we would have anticipated and reflect the impacts we identified two years ago for treatment through our LIP programme.

Existing Highway Network

The application (Volume 13a – section 4.7.7) identifies that there are a number of priority road routes that are of importance to the application, which fall within Tower Hamlets, these are:

- *East Cross Route – A12M*
- *Blackwall Tunnel Northern Approach – A12*
- *A11 – Mile End/Whitechapel Road*
- *A13 East India Dock Road*

These roads are part of the Transport for London Road Network (TLRN) and are priority red routes or urban motorways, as identified in the UDP. In addition priority routes adjacent to the borough must also be considered in respect of this application and how they will affect Tower Hamlets; namely:

- *A11 High Street Stratford*
- *A13 Newham Way*

In addition it will also be necessary o consider other A roads and distributor roads and how they will be affected; in particular with local and Olympic traffic displacement, these roads include;

- *Limehouse Link*
- *The Highway*
- *Burdett Road/Grove Road*
- *Roman Road/Old Ford Road*

Journey time surveys (13a - 4.7.22), undertaken in May 2006, indicate sections of the road network are congested. Routes were experience average speeds 9kph and 27kph, with the PM peak suffering the worst with average speeds of less than 12hph on 67% of the routes and less than 14kph on 83% of the routes.

These figures highlight concerns over construction effects on the road network and also disruption that may be caused by the transfer of passengers by bus and the distribution of the Olympic Family during the Games operations.

Roads that are planned to be closed during construction and the Games also are of concern, as these show significant traffic numbers (13a – 4.7.21):

- *600vph southbound AM peak, 450vph northbound PM peak on Waterden Road*
- *750vph westbound AM peak. 700vph eastbound PM peak on Carpenters Road*

Much of this traffic will be displaced onto the existing road network when the closures come in to place; exacerbating the congestion on these roads. This will impact on construction and Games traffic. Further studies, (13a - 4.7.25) using number plate recognition, have shown that 50% of the traffic using Carpenter's Road and White Post Lane is terminating within the Olympic Park site. There will be no access to the park and business will be relocated, this should have the effect of reducing the impact of the road closures on the remaining network.

Existing Junctions

In the Tower Hamlets locality there is one junction that has been identified as being at capacity or over in the AM peak – at a saturation point exceeding 100% (13a – 4.7.28):

- *Roman Road/Cambridge Heath Road/Bethnal Green Road*

With the following junction approaching capacity:

- *A13 East India Dock Road/ A12 Blackwall Tunnel Northern approach.*

The Roman Road/Cambridge Heath/Bethnal Green Road junction has been identified as being over capacity in the PM peak as well as on Saturdays.

Whilst neither of these junctions are identified as routes for construction; the A12/A13 junction may form part of the Olympic Route Network. All junctions however may suffer further problems due to increased traffic on the main distributor roads, which may encourage more local traffic to use these routes. In addition plans for the cycle parking to be located in Victoria Park during the Games will necessitate that the Bethnal Green, Roman Road junction will need measures to accommodate an increase in cycle traffic.

It must be noted that the junction with the A12 and A11 were identified as being at over capacity. This is consistent with other evidence and shows that the Bow Flyover is operating efficiently; however increases in construction and Games traffic will have a major impact on these junctions and will need to be closely examined.

The Roman Road/Cambridge Heath junction is f major concern; this junction operates as a throttle, controlling traffic flows on the wider network. Increased traffic would have significant effects not just locally but network wide. This junction needs to be seriously considered and approaches to it, from Olympic related traffic needs to be managed.

Accident Statistics

Current accident statistics have been included in the application and show that the majority of accidents on the main A routes were rear end shunts, lane change discipline or failure to give way with no major highway design cause (13a – 4.11). However there are concerns over accidents in the Mile End and Old Ford area where there were significant clusters of accidents around the Underground Stations. More

local traffic on these routes could increase accidents here and measures around these interchanges may need to be implemented.

Existing Rail Network

The area of the Olympic Park is served by a combination of rail services; these services have high frequencies and are detailed below (13a – 4.2.1)

- *One services through Stratford – AM peak 25 trains per hour (tph) – PM peak 23 tph.*
- *Lea Valley Line through Stratford – 1-2 tph*
- *North London Line - 4-6 tph*
- *C2C services – 2tph*
- *Central Line – AM/PM peaks 30 tph*
- *Jubilee line – AM/PM peaks 24 tph*
- *DLR – AM/PM peaks 7-9 tph*

West Ham Station

- *C2C services – AM/PM peak 12 tph*
- *Silverlink – 2tph*
- *District Line – AM/PM peak 20 tph*
- *Hammersmith and City – AM/PM peaks 20 tph*
- *Jubilee Line – AM/PM peaks 24tph*

All exiting loadings on the rail, underground and DLR for the morning 7:00 – 10:00 AM peak appear to be operating within their capacity. During the 08:00-09:00 peak hour both the Central line and Great Eastern line are operating near or above capacity (13a – 4.2.12)

Stations currently operational that are directly affected by the Olympic Application:

- *Stratford Regional*
- *West Ham*
- *Leyton*
- *Hackney Wick*
- *Pudding Mill Lane*

These stations will be directly affected by the application, however the following stations should also have been considered in the existing picture of rail services. Bromley by Bow, Bow Church and Bow Road, all of these stations are within easy walking distance of the application boundary. In addition Mile End Station should have been included for future comparison.

<u>Existing Bus Services</u>

The Park area is well served by a number of buses, however the western side is less well served than the others; bus networks currently serving the Tower Hamlets area are (13a – 4.4.5 table 4.5):

- *25 – Peak flow 12 buses per hour (bph), off peak 12, evenings 7.5*
- *108 – Peak 6, off peak 6, evenings 7.5 bph*
- *D8 – Peak 5, off peak 4, evenings 3 bph,*

- *S2 – Peak 7 , off peak 7 , evenings 4 bph*
- *276 – Peak 6, off peak 5, evenings 3 bph*

The passenger loads for these routes are as follows (13a – 4.4.7 table 4.6):

Service	Capacity/Passenger loads Mon – Fri (Passengers per Hour)			
	AM Peak	Off peak	PM Peak	Evenings
25	1,788/918	1,788/848	1,788/1,054	1,118/ n/a
108	360/177	360/116	360/205	180/ n/a
D8	250/118	200/88	250/122	118/ n/a
S2	385/166	385/193	385/168	220/ n/a
276	360/262	300/205	360/301	180/ n/a

Evening loading not available

Existing Coach Services

There are 37 return coach journeys per hour that stop at Stratford that pass through Tower Hamlets, and an additional 96 journeys per 2 hours that service Stanstead Airport terminating or originating from the City that stop at Stratford (13a – 4.5.1 table 4.8) Although it should be noted that none of these services stop in Tower Hamlets.

Existing Walk and Cycle

Walk routes

There are two walking routes near the Olympic Park that are designated as part of the London Strategic Walk Network (13a – 4.8.1):

- *Capital Ring – coincides with the Greenway and Lea Navigation Towpath*
- *Lea Valley Pathway – coincides with the National Cycle Network (NCN) route 1 north of Carpenters Road.*

In general the routes are poor quality due to heavily traffic roads, limited crossings and the number of waterways and railways that cross the routes. In addition there are perceived, as well as actual, personal security risks which discourage walking trips in the area (13a – 4.8.3)

Cycle Routes

There are almost no designated cycle routes crossing the Park. The main routes are (13a - 4.8.4):

- *The Greenway*
- *A12 – Temple Mill Lane*
- *Carpenters Road*

Gaps and constraints in the Existing Networks

There is no cycling on the A12 and is grade separated, therefore all crossings need to be provided on bridges or through underpasses. There are a number of crossings, but the underpass crossings at Wick Lane, Bow Interchange and Waterden Road present hostile environments and deterrents to walking and cycling (13a – 4.8.6)

Cycling on the A11 is permitted, but there are barriers. There is a lack of existing crossings, the severance of the Greenway and the Lea Navigation towpath, discontinuity of bus lanes and disallowing cyclists on wide footpaths (13a 4.8.7).

Usage data

Carpenters Road whilst having no dedicated facilities is well used by cyclists, due to its strategic east-west connections (13a – 4.8.14).

Mile End Road has a high cycle usage (up to 1,000 cycle movements per day) providing a fast, direct route to central London and providing wide bus lanes. Traffic free routes on the NCN Route 1 carry higher daily cycle flows than the surrounding road network (13a – 4.8.5)

Site Enabling and Construction

There are a number of elements to examining the effects of the construction of the site and its impact on transport, these are:

- The enabling works - road closures
- Construction Traffic
- Code of Construction Practice (CoCP)
- Workforce Travel

In addition the examination will consider the different modes of transport

- Public Transport – Rail, Underground/DLR and Buses
- Walking
- Cycling
- Roads and Highways
- Other modes – Water/Air

Site Enabling

To ensure that the Olympic Park is delivered on time and to ensure that security is kept at a consistently high level, the entire site will be sealed by a perimeter fence and access strictly controlled. This results in a number of roads being closed to all traffic. These closures will be in effect from July 2007. The road closures will be:

- Warton Road
- Quartermile Lane
- Marshgate Lane
- Carpenters Road
- Waterden Road
- White Post Lane
- Pudding Mill lane

The closure of White Post Lane leading into Carpenters Road across the Tower Hamlets Boundary will have the most direct effect on transport in this borough.

Highways

Highway Impacts

All assessments and modelling figures calculated for the construction phase of the site include the road closures detailed above. In addition the closure of the site to the public also means the relocation of businesses and commercial operations within the boundary. This equates to some 4,936 jobs (13a – 5.9.2).

Origin destination surveys undertaken in 2006 show that 2,500 vehicles enter and leave the site boundary during the AM and PM peaks; of these approximately 50% were through trips. Therefore around 1,250 vehicles will be diverted onto to the highway network as a result of the closure. The remainder will be lost due to the relocation f commercial activities to another site.

The effect of the 1,250 vehicles using other road networks has been modelled (13a 5.9.5) and the results show increases/decreases in the following:

- *Leyton High Road +4%*
- *Angel Lane -14%*
- *A11 Stratford High Street +17%*
- *A12 East Cross Route +6%*
- *The Eastway + 55%*
- *Ruckholt Road -20%*

These figures indicate that the main impact of the road closures will be on The Eastway. However it is felt that whilst the modelling is robust there will be more impacts experienced on the East Cross Route and Bow Interchange due to increases in construction traffic to the North of the site and east of routing the East Cross Route and High Street Stratford offers.

The site closures will affect junctions around the site, some junctions already experience congestion. Junction modelling has identified some junctions that will experience an increase of over 2% above 85% current saturation (12c 8.5.28); these are:

- *Bow Interchange*
- *Junctions associated with Wick Road/ East Cross Route intersection*
- *High Road Leyton/Grove Green Road*
- *Tredegar Road/St Stephens Road*

Whilst it is considered that the road traffic impact on Bow Interchange will not exacerbate the junction operation from a vehicular point of view, there is concern that the impacts on the bus interchange and the pedestrian crossing at this junction may be negative. Consideration must be given to bus, pedestrian and cycling activities at this point. This should take the form of signal priorities, more legible and desirable crossing facilities and signal timing changes.

The Wick Lane/Tredegar Road/East Cross Route Interchange may also suffer from congestion as traffic attempting to enter or exit the East Cross Route from either direction may encounter more delays. Continuous monitoring of queuing on the slip roads should be considered throughout the construction period. Should any increases in delays and queuing be experience here, mitigation measures must be considered and implemented.

In addition monitoring of Tredegar Road should be considered as a potential route to avoid Bow Interchange. If queuing of traffic at the Bow Interchange occurs, traffic may use Tredegar Road/Fairfield Road area as an alternative route to avoid the Bow Interchange. Should this occur, mitigation measures along Tredegar Road should be implemented to slow traffic and discourage this potential ‘rat run.’

<u>Construction Traffic</u>

Much of the modelling for the construction traffic impacts is considered in the modelling for the road closures. However there is an important concern over the plans submitted in this application. It has been impossible for full assessment of the impacts of construction traffic, mainly deliveries and removals from site, due to no detail of where the construction vehicle entry and exit points will be, with exception of comments stating:

"…with HGVs mainly routed along the M11 and A12. Most vehicles will access the construction site from the Lea Interchange. Whilst there will be additional access points to the south and southwest of the Olympic Park, these are secondary in importance." (13c – 5.5.2)

There is no location detailed, and comments such as construction traffic will arrive and leave via the North are insufficient to assess the impact fully. It is important, from an impact on residents and business point of view, to establish the proposed routes. The access points to the south could impact in the A12 Blackwall Tunnel Northern Approach, A13 East India Dock Road and the Blackwall Tunnel itself. Even as secondary routes, theses access points could generate a negative impact on traffic in the area, as well as create problems for local residents.

A number of measures detailed in the Code of Construction Practice are welcomed and discussed later, but with out details of the exact entry and exit points it is impossible to assess the impacts on local roads. Such ameliorative matters are secondary to the entry and exit points.

Routing is the single most important factor in considering the impacts of construction traffic and the omission of detail from the Transport Assessment is extremely disappointing.

It is noted that the number of vehicles anticipated daily will be 275 vehicles per day per direction, totalling 550 trips (13a – 5.5.2) this is a significant number and the true effects will need to be fully examined once construction routes are finalised.

A condition needs to be placed on the ODA to provide this information in advance of work starting and in consultation with the Highway Authority. This is of public concern and will need to viewed and agreed in public.

<u>Workforce Travel</u>

It anticipated that 10% of construction workers will arrive by car this equates to 225 vehicles entering and leaving the site a day (13c – 5.5.4). This shows a significant number will be travelling by public transport. This is acceptable from a highways and sustainability perspective.

However it should be noted that detailed monitoring and enforcement should be undertaken through the Olympic Park Travel Plan Group. 10% should be the absolute maximum and should be limited at that point. Again details of workforce access points will need to be submitted along with parking locations.

The locations of construction worker access points need to be detailed. Any non vehicular access points to the East, North East and South East corners of the site could encourage parking outside of the site. A particular concern is Fish Island, where no controlled parking zones exist at present.

Residents and businesses will need to be protected from construction parking and a CPZ should be a mitigation measure that is enacted as a priority.

A shuttle bus is mentioned in the application (13a – 5.5.4) that will operate from off-site railway stations to accredited entry points. The entry points need to be identified, as do the rail stations.

Highways Measures Envisaged

Vol13a – 5.10 details a number of potential measures that could be enacted to mitigate the level of impact created by the road closures and construction workforce. These include:

- *Signal timing optimisation at perimeter junctions*
- *Kerb and carriageway widening at perimeter junctions*
- *Improvement and replacement of signage, road markings, and street and junction lighting*
- *Restriction of movements at junctions as part of managing the proposed diversionary/alternative routes which may be required to assign traffic from congested junctions. This may be required at the junctions of B142 Tredegar Road/ A12 East Cross Route/ A12 Blackwall Tunnel Northern Approach and Cadogan Terrace/ A1o6 Wick Lane*
- *Construction management/ control of perimeter junctions to include*
    - *A12 Bow Interchange*
- *Local access schemes could be developed by the Contractor*
- *Off site junction management/Control*
    - *Tredegar Road/St Stephens Road*
    - *Devas Street/ A12 Blackwall Tunnel Northern approach*
    - *St Pauls Way/ Burdett Road*
    - *Cambridge Heath Road/ Old Ford road*
- *Enforcement of parking restrictions along routes to and from the Olympic Park to aid the movement of pedestrians, cyclists, public transport, construction workers and vehicles; to include*
    - *A106 Ruckholt Road*
    - *Leyton Road and High Road*
    - *Stratford High Street*
- *Introduce management and enforcement of parking within residential areas; to include:*
    - *Bow*
    - *Old Ford*
    - *Bromley by Bow*

It is felt that these are acceptable solutions, although they lack detail. This is of greater concern as construction will commence in the later part of this year and measures will need to be consulted and implemented very quickly.

It is possible that OPTEMS will deliver these in detail, however the OPTEMS system has yet to be set up and the Lower Lea Valley Transport Investment Group is not operational and only an idea in this application. It is a matter of priority that these groups be established and start work on the mitigation measures in time for the start of construction.

It is in the interests of the ODA to have established a significant level of detail concerning mitigation measures surrounding construction to assure and comfort local residents.

It is of vital importance that monitoring, enforcement and effect control is established to protect local residents and businesses from adverse impacts. Aspirations to inform residents, focus groups and information telephone hotlines and reporting lines are important but measures need to be detailed on what will happen to complaints and

what penalties will be applied to construction offenders. Similarly the measures need to be identified to prevent continued re-offending.

The Bow/Tredegar Road area has significant traffic claming measures in place currently. These appear not to have been taken into consideration. The current measures need an area wide review and new and replacement measures need to be implemented to ensure that the area is more efficiently managed and prepared for Olympic traffic impacts.

Permanent signalling of the A12/Wick Lane junction should be seen as a priority and will act as a control opportunity. This is welcomed.

The Olympic Travel Plan Group should monitor the effects of construction traffic and its impact on the highway network and inform OPTEMS of the need of mitigation measures which should then be carried out.

Public Transport

Bus Routes affected by closures

Service 276 – The closure of Carpenters Road will require amendment of the 276 bus route; the diversionary route will be in place throughout construction and the Games phase. The route agreed with London Buses is around the southern and western perimeter, via Stratford High Street, Bow Interchange, A12 East Cross Route, Wick Lane and Wansbeck Road. This diversionary route has been agreed by Newham, Hackney and Tower Hamlets and incurs an additional 2.2km and between 7-8 minutes additional journey (13a – 5.6.5).

This route whilst acceptable would be preferable if it was to include areas of Tower Hamlets currently lacking in adequate provision, it is not accurate to say that the diversion route has been agreed by Tower Hamlets. There is also concern over London Bus's potential plan covering changes to the S2 and new 425 routes, which appear to contradict plans agreed by Tower Hamlets and the ODA.

There is potential for further bus priority in the area and discussions regarding bus priority are on-going (13a – 5.6.11). These discussions need to be increased and action taken as a priority to deliver significant mitigation measures.

The relocation of East London Bus and Coach Company's 'Stratford' and 'Waterden Road' bus garages and First Capital East's 'Hackney' garage to a site in Wyke Road on Fish Island are currently pending application. Should this proposal be enacted bus routing needs significant discussion to ensure that Tower Hamlets realises significant bus route improvements for local residents and businesses.

Public Transport Effects

A significant number of workers are expected to arrive to the site by public transport, most arriving at Stratford Regional Station by rail services. It has been anticipated that 85% of the workforce will arrive by public transport (13a – 5.7.3)

It is anticipated that some 4,936 industrial jobs will be lost due to the relocation of businesses in the site; these will be replaced with 2,250 Olympic workers, rising to 5,000 in 2010. Therefore the impact on public transport would not be considered significant in terms of passenger increases and crowding (13a - 5.7.4).

Public Transport Measures Envisaged

Bus

The re-routing of buses will ensure the services are still running and bus priority measures will be discussed (13a - 5.8.2).

There needs to be discussion and agreement between the ODA, Boroughs and London Buses to enact these measures immediately. In addition real agreement needs to be made between all parties on the exact nature of route changes on the 276, S2 and 425 routes before implementation occurs.

Rail

The management of the effects of construction workers on rail services will be undertaken through implementation of the Travel Plan prepared by the contractors (13a – 5.8.3).

Severe concern is raised over the effectiveness of handing the Travel Plan responsibility to contractors when the ODA travel plan is so weak and appears to be lacking in any real guidance, enforcement or monitoring criteria.

Walking and Cycling

Planned closures

The closure of Carpenters Road will result in no cycle or walking access on east-west routes across the Park (13a – 5.11.1). The closure of Temple Mill Lane and part of the cycle path adjacent to the A12 will reduce northern access routes (13a – 5.11.2). Mitigation measures were assessed and preferred alternative routes were identified and agreed with the ODA in consultation with the stakeholders (13a – 5.11.3).

Walking and Cycling Measures Envisaged

Carpenters Road Closure – The use of the Greenway and then the Lea Navigation towpath will be implemented. This is the shortest route that minimises disruption and inconvenience (13a – 5.12.1)

Improvements to the Greenway and Lea Navigation towpath by July 2007 to include:

- *Vegetation removal to improve width and sightlines*
- *Railing and barrier removal to provide a continuous route*
- *Surface treatments and drainage to improve user comfort*
- *Lighting and treatment of vertical surfaces to create a safe, attractive environment*
- *Produce and disseminate new promotional route map/information*
- *Additional security measures such as CCTV and regular patrols*

(13a – 5.12.3)

These improvements are welcomed but the following measures need to be included to ensure that the best facilities are provided: the improvements to width and sightlines should be of a high standard and accommodate maximum demand for cycle and pedestrian flows anticipated. The improvements to surface treatments should be made to the London Cycle Design Standards. Approaches and treatments

to the Greenway should accommodate mobility impaired users. Measures will need to be designed and implemented to prevent the use of these routes by motorcycles.

It is possible that sections of both the Greenway and Lea Navigation towpath will be closed for periods during construction; requiring mitigation measures and signage. An alternative route would be along Stratford High Street and the River Lea Navigation towpath (13a – 5.12.5).

Concern is raised for inexperienced cyclists using the busy A11 as an alternative route, a dedicated cycle lane should be provided, the use of the Rover Lea Navigation towpath would be idea; but it must be to a standard to accommodate shared pedestrian and cyclist traffic.

Improvements to the A11 will be welcomed but particular focus must be made on the Bow Interchange which will be a critical crossing point coming off the River Lea and significant measures must be implemented to ensure safe, direct and fast crossing at this point.

Improved security measures will include:

- Permanent lighting
- CCTV and patrols on the corridors
- Random policing by the Metropolitan bicycle team
- Positive promotion and publicity to encourage usage and reduce the feeling of isolation

These measures are welcomed; a regular log of patrols and monitoring of patrols needs to be kept by the ODA for the duration of the construction, Games and transformation phases.

London 2012 Olympic Games and Paralympic Games

It is the ambition of the ODA to host a 'public transport Games' (13c - 6.2.3). Car parking will not be provided for ticketed spectators, with the exception of disabled people. Strict parking controls will be implemented around the Park during the Games to support the strategy to minimise car use. Visitors will be expected to access the Olympic Park through:

- *Public Transport*
- *Cycling*
- *Walking*
- *Park and ride services*
- *Coaches*

Highways

The Olympic Route Network (ORN)

This has been identified in the Olympic Transport Plan First Draft, which was open to consultation in the early part of 2007. The anticipated route will be along the Highway and then following the A12 Blackwall Tunnel Northern Approach.

A variety of temporary traffic management measures will be implemented along the ORN to ensure a reliable journey for Olympic Family vehicles (13a – 6.2.8). The ODA will have a range of temporary powers to manage traffic along the ORN to ensure the smooth operation of the road network during the Games.

It is essential that along with TfL, Tower Hamlets is consulted and included in the development of any traffic management measures implemented. With the effects of temporary traffic measures along East India Dock Road and The Highway impacting on local traffic, combined with increases in bus traffic and activities, such as the marathon, along Mile End Road/Whitechapel Road; could impact heavily on local residents and businesses. All measures need to be co-ordinated with Tower Hamlets as the Highway Authority.

In addition, any temporary measures to control traffic will need to be assessed and considered as to their effectiveness. It should also be considered as to whether the temporary measures would be better put in place earlier than 2012 and be permanent; creating a lasting legacy to local communities.

The Olympic Family will access the site through an accreditation area adjacent to the A12, accessed from Wick Lane, at the junction with the East Cross Route. As this is the main entry and exit point on the ORN a significant amount of traffic will be utilising this junction and will have priority over other traffic.

Diversionary tactics and notices will need to be in place to reduce traffic flows from the Bow and Old Ford area to this Junction.

The International Broadcast Centre and Main Press Centre (IBC/MPC)

This is situated on the Northwest corner of the Park; it is the centre of all media activities. Access to the IBC/MPC is from the A12 Eastway (13c – 6.6.25). The media forms 20,800 people and are part of the Olympic Family and are at present allocated 1,100 cars as transport (13c – 6.2.34/6). The IBC/MPC will have facilities for 30

coaches to pick up and drop-off; in addition there will be 1,300 car parking spaces in a multi-storey car park, which will be retained in legacy (13c - 6.6.25).

As the Media will have access to the ORN, they will be impacting on to roads that traverse Tower Hamlets. In particular the Bow Interchange. It is essential that effective management of this route and the junction is considered in conjunction with local needs and the needs of the bus network that will continue to serve local residents during Games events.

It is a concern that with the increases in the bus patronage by event visitors, particularly the Number 25 and those routes that interchange under the Bow Flyover, delays as a result of the ORN and associated transport, local residents will be unable to access the bus network ay the intermediate stops. This coupled with crowding on the underground network, especially the Central Line and DLR routes; and local traffic measures preventing car access; could mean that residents in Bow and between Mile End Road and East India Dock Road could find themselves isolated from essential services and amenities.

Highway Effects

Forecast models has predicted a general decrease in background traffic as a result of reductions due to natural August/Summer holiday downturns, reduced traffic due to Olympic Games reducing the attractiveness of travelling by vehicle in the area (13a - 6.11.2). Forecasts show the following (13a – 6.11.4):

- *Leyton High Road +2%*
- *Angel Lane +110%*
- *Stratford High Street +70%*
- *East Cross Route -9%*
- *Ruckholt Road -26%*

Junctions

During 2012 there will be a number of junctions that will exhibit increased capacity above 85%; these are (13a – 6.11.6):

- *Bow Interchange*
- *Stratford Gyratory*
- *Hackney Wick*
- *Along the ORN and North of the Blackwall Tunnel*
- *Junctions in Bethnal Green and Mile End area caused by traffic displaced by the ORN*

It is anticipated that during the Games junctions that provide direct access to the Park will be managed by a range of measures to include (13a – 6.11.8):

- *Manned junctions*
- *Temporary traffic signals*
- *Changes to existing signal timings*
- *Modifications to Public Transport access to the park and benefit pedestrian/cycle movements*

Specific measures to Junctions in Tower Hamlets

A12 Bow Interchange – *AM peak increases to 86% capacity, PM peak increases to 91% capacity, will require optimised signal timings to ensure that this junction operates satisfactorily as apart of the ORN (13a - 6.11.17).*

Whilst the ORN traffic is given priority, necessary consideration of the bus interchange under the Bow flyover must be taken into account to preserve local accessibility to the bus network.

B142 Tredegar Road/A12 East Cross Route – *This junction will provide access to the Olympic Family accreditation area. AM flows show an increase, but below 85% saturation, but could result in queues, PM peaks show increases to 111%. Signal controls will have to be implemented for the duration of the games. (13a – 6.11.18)*

It should be investigated as to whether permanent signals should be installed to facilitate safer pedestrian and cycle crossing and to regulate flow in legacy. This junction could also suffer from increased flows following legacy transformation and residential and commercial occupation of legacy land uses.

Highway Measures Envisaged

The application states that measures will be developed following responses on the first draft of the Olympic Transport Plan (13a - 6.12.1). Whilst this is understandable, more details could have been presented at this stage based on traffic modelling and known facts. These measures will need to be planned into the existing highway maintenance programmes so as to avoid and minimise further disruption; in addition work that should mitigate the construction phase may also be helpful for Games period. Completing the work at the same time would again minimise disruption. Therefore, it is essential to have full details as early as possible. OPTEMS should see this as a priority.

General transport management measures envisaged are:

- *Appropriate signage for pedestrians and cyclists to use alternative/diverted routes*
- *Appropriate highway and kerbside signage for diverted bus routes and temporary bus stops as well as notification to all users*
- *Improved lighting and security measures in order to increase usage of routes by pedestrians, cyclist and workforce*
- *Improved streetscaping, surface treatments and landscaping on routes and diversionary routes to communicate to vehicle users to respect the existing community they are passing through*
- *Monitoring and maintenance of road/line markings, lighting, signage, and general street cleaning and sweeping*
- *Improved streetscaping, surface treatments and landscaping or disabled people.*

(13a – 6.12.2)

The Olympic Transport plan sets out the overall games management proposals including the ORN, Olympic Lanes and management of all Games movements (13a – 6.12.3) this document was deficient in man areas covering the management of transport and was mainly aspirational with few details to examine. It is felt that this application does little to fill in the gaps that exist in the OTP.

Highway measures during the games will include management and maintenance of access to side roads where possible, particularly managing the movement of non-local traffic. Measures could include:

- *Signal timing optimisation at perimeter junctions*
- *Management of junctions vital to the operations, such as the transport malls, accreditation areas and at grade crossings to prevent disruption and delay to the traffic*
- *Selected access to areas for areas for residents and businesses only*

(13a – 6.12.4)

New or improved signalising of junctions at Bow Interchange and Tredegar Road/East Cross Route/Blackwall Tunnel Northern Approach (13a – 6.12.5)

Redirection of general traffic away from specific junctions in the vicinity of the Park to ensure efficient operation and movement of pedestrians, cyclists, public transport and games vehicles.

Management of Black Taxi traffic, providing a rank suitable for need at Stratford Regional Station, as well as providing access to taxi's carrying disabled passengers at the transport malls (13a – 6.12.7).

It is felt that taxi traffic scheduled for the rank should have a specific route to the drop off zone that avoids the A11 Mile End to Stratford route to prevent the event visitors hailing taxis along this important transport corridor, which could block bus lanes, and cause a public safety issue.

Public cars will be dissuaded form pick up and drop off around the site (13a – 16.12.8), this will need to be enforced and managed. The area of enforcement and control will need to extend for a considerable distance around the park, taking into account large areas around Bow.

Traffic claming in neighbouring areas will be considered to manage undesirable diversion of traffic into commercial or residential communities. This will be required in a number of areas including Bow, Victoria Park (13a – 6.12.9). This will be essential and necessary in Bow and the area between the A11 and the A13. The ORN in combination with the high traffic demands along the A11 will put pressure on this area and could result in accidents and negative impacts on the community.

The management, monitoring and control of off-site junctions (13a – 6.12.10/11). These are unspecified but a detailed plan needs to be included and needs to take into account other Games time operations, such as cultural events at Victoria Park, events at the Excel centre and at Greenwich.

Enforcement of parking and loading restrictions along routes to and from the Olympic Park (13a – 6.12.12), to include:

- *Bow*
- *ORN route*
- *Mile End Road*
- *Bow Road*

Enforcements and extensions to current CPZs in areas such as Bow (13a – 6.12.16), this needs to be extended to include Fish Island, areas around Bethnal Green (the predicted main cycle route), areas north of Poplar and around Bromley by Bow.

Coach Transport

The Olympic Transport Plan sets out an 8% arrival and departure by direct coach services, these services will terminate in dedicated coach facilities at the transport malls (13a – 6.17.1). In addition a further 10% of spectators are expected to use coach based park and ride services. These will shuttle between the Park and locations in the south-east of England. 8.1% of the Olympic workforce are also expected to use park and ride services (13a – 6.17.2).

Parking for direct service coaches – those who are chartered specifically for the Games or part of package tours, and park and ride coaches will have dedicated coach parking within the transport malls and off the public highway. This is welcomed.

Scheduled coach services will also operate, these will have defined drop off and pick up points outside the park entrances, which have yet to be defined. It is of concern that these stops will interrupt the flow of the highways and cause narrowing of pavements where passengers wait to alight.

The timing of pick ups and drop offs will have to be closely managed. It is highly likely that the times for pickups and drop offs will be similar and could cause queuing on the public highway. This must be managed effectively and no public highway disruption must be allowed, as this could interrupt the effectiveness of public transport operations. Similarly coaches should not be permitted to use bus lanes that will serve the Park; this will slow down the efficiency of the bus operation.

In addition there is concern that once these coaches have completed their drop off they will have to wait somewhere until they can collect their passengers at the end of the day. These locations will have to be defined and will have to managed effectively to prevent overcrowding and disruption to the highway on entry and exit.

Water Transport

The River Lea could provide services from a number of areas; from the north – Edmonton, Broxbourne, Hertford and Luton. Alternatively services could come from the Thames along the Limehouse Cut (13a – 6.18.3). Entry to the Park would not be permitted, but moorings could be established on the Lea Navigation and the Rover Lea. (13a – 6.18.4).

Hertford Union Canal and Regent's Canal could also take services servicing Shoreditch, Islington, Kings Cross, Camden and Paddington; at Paddington connections to the Grand Union Canal link into the national canal network. (13a – 6.18.5)

The River Thames does not serve the Park directly but there are good connections from many of the East London Piers with interchanges with other public transport services (13a – 6.18.6).

The use of river services should not be underestimated. The establishment of a river based infrastructure for the Olympics will provide a valuable legacy post games. The more people using the rivers as a transport route for the Olympics the more use

these networks will gain in legacy, this will bring about rejuvenation effects along all river and canal routes, this will increase to a greater use of towpaths and river walkways. This in turn will provide greater natural surveillance and increase activity.

The use of rivers and canals should not be seen as an aspiration, but as essential for delivering legacy benefits not just to the Park but to all the routes the canal and river networks traverse.

Public Transport

The London Olympics is planned to be a 'public transport games' with all ticketed spectators to travel on public transport or by walking or cycling, with those driving for part of their journey using park and ride services (13a – 6.2.3)

Rail

Three Stations have been identified as the 'Olympic Park Gateway Stations.' They are Stratford Regional, Stratford International and West Ham stations. 12 different rails services will operate through them. (13a – 6.2.11) The OD and other stakeholders are developing a capacity enhancement scheme for Stratford Regional Station for Legacy and temporary Games passenger use (13a – 6.2.12). Proposals for West ham include new public transport links and spectator access through the Greenway to the Park (13a – 6.2.13).

Eurostar services will operate from St, Pancras International station when Stratford international opens. During the Games the Javelin rail shuttle will be operated between St Pancras and Ebbsfleet via Stratford. The service will be 7 minutes with up to 10 trains per hour; it will deliver some 25,000 people per hour to Stratford International. (13a – 6.2.14/15)

Local Bus and Coaches

The additional demand for local bus travel associated with the Olympics will be accommodated through the utilisation of spare capacity on existing services and temporary frequency enhancements to existing services (13a – 6.2.20)

Olympic Trips

Day 7 of the Games is anticipated to be the highest demand in attendance to the Park. The following mode splits have been forecast, these do not include the western pedestrian/cycle access and the Olympic family:

Mode	**Spectators**	**Workforce**	**Entry/Exit Point**		
			Northern	**Eastern**	**Southern**
Rail	78%	81%	0%	83.5%	16.5%
Bus	3%	6%	0%	100%	0%
Park and Ride	10%	8%	70%	0%	30%
Coach	8%	0%	70%	0%	30%
Walk/cycle	1%	5%	33%	34%	33%
Total	**100%**	**100%**			

(13a – 6.2.33 – table 6.2)

Assessment of Public Transport Effects

It is anticipated that Pudding Mill Lane station will be closed for the duration of the Games and that demand management and ticketing measures will seek to ensure that Hackney Wick Station is not used for access to the Park (13a – 6.9.2).

Seasonal adjustments were made to the assessments along with a further adjustment by an Olympic downturn factor of 8% taken into account (13a – 6.9.5).

There are large increases in flow eastbound passenger travel in the morning peak in the order of 97,000 passengers, for both spectator and workforce trips. Large increases are also forecast on National Rail 'one' services from Liverpool Street (13a – 6.9.8).

The evening peak shows increases that are smaller and more balanced, but the westbound flows are set to increase by 45% (13a – 6.9.10).

Crowding levels on rail services appear to be not significantly affected, with the exception of counter-peak flows from Mile end to Stratford and the Jubilee Line between London Bridge and North Greenwich. (13a – 6.9.15)

The DLR between Bank and Poplar will experience an increase in an appreciable level of crowding (13a – 6.9.46).

In the evening peak sections of the DLR network between Bow Church and Poplar become very crowded (13a – 6.9.18). The closure of Pudding Mill Lane station is accommodated by the use of Bow Church as an alternative (13a – 6.9.19).

Bus Demand

Local Bus services will cater for 3% of spectators and 6% of workforce travel, accounting for 7,500 spectators and 4,650 workforce trips. In the AM peak this will represent some 2,500 passengers and in the PM peak 2,700 trips (13a – 6.9.20).

Public Transport Measures Envisaged

Rail

There are a wide range of public transport projects either being delivered or funded by organisations other than the ODA or are 'Olympic' Schemes funded partly or wholly by the ODA (13a – 6.10.1).

Station/rail upgrade works are proposed for:

- *Stratford Regional Station*
- *West Ham Station*
- *The North London Line Conversion to DLR between Stratford and Canning Town*
- *Increasing frequency from Stratford to Highbury and Islington up to 8 trains per hour*
- *LUL line, capacity and station upgrades as part of the PPP improvements*
- *The Javelin rail shuttle service*

(13a – 6.10.2-5)

Some DLR services are considered to be operating at severe overcrowding levels during the Games. DLR and Serco are undertaking detailed analysis of potential service enhancements, in particular 3 car extensions (13a – 6.10.6).

Bus Measures Envisaged

London Buses intends to undertake detailed planning of the Games bus network during 2008/9 once more is known of the distribution of spectators and workforce, taking into account progress in implementing ongoing modifications to the bus network and bus priority in East London. London Buses have agreed design principles as follows:

- *Local bus services to provide access to the eastern, southern and northern entrances; with ticketing strategies reserving the western access for pedestrian and public transport.*
- *New regional bus station at Stratford*
- *Existing capacity will be utilised with temporary frequency enhancements implemented on certain routes*
- *Temporary extensions to bus routes and new dedicated bus routes will be considered*
- *Route extensions on the west side of the Park which may be needed to serve the northern entrance – in particular routes 26, 30, 236, 399 and 388.*
- *A reserve fleet of buses may be used to cater for peak demand and highly tidal demand.*
- *Planning for Games phase services assuming 90% occupancy.*
- *Temporary traffic management measure on bus routes*

There is concern that longer distance bus routes to Stratford have sufficient capacity to accommodate all demand. In particular, the number 25 should not reach overcrowding with spectators before reaching Tower Hamlets. This will prevent the local population from accessing this service for daily needs. It has been suggested that there are direct/express services with minimal stops, supplemented by services on the same route that serve all stops or inter-stop services during Games time.

With West Ham as a destination station for the Olympic there is concern that the Jubilee Line will not be able to serve both the Olympics and Canary Wharf. There appears to be no mention of working with the Canary Wharf business to promote flexible working over the Olympic and Paralympic Games period.

Far more detail is needed on crowd dispersal measures that are planned for Stratford stations and West Ham, and ensuring that they do not compromise local and commuter traffic not linked to the Games.

There is concern about the increases on the Central Line at Mile End, the North London Line at Hackney Wick and the Jubilee Line. Will passenger increases on these lines prevent access on to the services at non-Olympic destination stations, causing station overcrowding and passengers, not related to the Olympics, being unable to access services. Further
Research and details of crowd management and service accessibility is needed at these stations and on these routes.

Similar studies need to be carried out on the DLR and associated stations; particularly at Poplar, which is an interchange station. With Pudding Mill Lane station

closed for the Olympics there may be an increase in traffic at Bow Church DLR, this needs to be assessed and management measures agreed and implemented.

DLR potential service patterns greatly enhance the capacity of the Woolwich Arsenal branch, but reduces capacity on the Stratford branch; this leads to overcrowding North of Poplar. Research and mitigation measures need to be implemented

The Bus network lacks detail and is awaiting further details promised in 2008/09. There is no mention of bus crowding. The 25, 108, 276, D8 and S2 all pass within 200m of the southern entrance and spectators may choose to alight here rather than continue to Stratford. Measures need to be in place to deal with this eventuality.

The 26, 339 and 388 currently terminate on the western side of the park; these should be extended to Homerton Road to serve the northern entrance.

In view of train overcrowding the introduction of the D5 service between Canary Wharf and Liverpool Street would help to relieve the demand experienced and could provide wider legacy benefits.

Walking and Cycling

Promoting sustainability is at the heart of the transport strategy. Walking and cycling play and important role in supporting this objective, The 'Active Spectator Programme' will ensure that spectators are encouraged to walk and cycle to venues.

Three main spectator demand groups have been identified, each with different distribution characteristics:

- *Greater London residents (32%)*
- *Overseas spectators (33%)*
- *UK regional spectators (35%)*

(13a – 6.15.3)

It is anticipated that the majority of visitors walking and cycling trips will be generated from the Greater London residents (13a – 6.15.4).

<u>Routes and Entrances</u>

There is scant mention of the most important access route from Victoria Park along the Greenway to the western access. This route will require significant upgrading and measures to facilitate the volume of pedestrian traffic anticipated. These improvements need to be permanent and remain as a Legacy.

<u>Cycle Parking Locations</u>

There have been 2,000 temporary spaces provided in Victoria Park for cycle parking (13a – 6.15.11). It has been anticipated that 2% of all visitors to the park will use the western entrance 13a – 6.15.13).

<u>Cycle Parking Design</u>

Criteria for good cycle parking facilities include:

- *Located as closely as possible to the Park entrances*
- *Well signed and easy to find, enter and leave*
- *Secure entry/exit system*
- *Free of Charge*
- *Additional attractions e.g. bike maintenance, demonstrations and information.*

(13a – 6.15.17)

Provision will be made to allow mobility impaired cyclists to park their machines as close to entrances where possible, this to be increased during the Paralympics (13a – 6.15.18).

Walk Cycle Measures Envisaged

During the Games the Greenway from Stratford High Street across the Park and sections of the Lea navigation towpath will be closed, the preferred alternative being along Stratford High Street (13a – 6.16.1). This is dependent on appropriate cycle and pedestrian facilities along Stratford High Street Bow Interchange and those necessary portions of the Lea Navigational towpath (13a – 6.16.2).

Improvements to the primary pedestrian and cycle routes to access the northern, southern and western entrances include:

- *Appropriate direction signage and road markings*
- *Environmental enhancements to the streetscape, lighting, paving*
- *Appropriate management of cycle routes along waterways due to capacity issues*
- *Environmental enhancements along A11 and to pedestrian/cycle crossings at Bow Interchange*

(13a – 6.16.5)

More detail needs to be supplied on the operational and management arrangements for the secure parking facilities. It is unclear as to the effect of cycle parking locations, Victoria Park may be considered too far for some users and additional facilities may be needed to meet needs.

Is there provision for informing cyclist when facilities are full and where additional facilities may be located, will there be overspill arrangements? This needs to be considered and planned for by the ODA in plenty of time and in locations that are equally as accessible.

A route audit needs to be commissioned similar to Cycle Route Implementation and Stakeholder Plan (CRISP) methodology.

There are seven stations within walking distance of the site, whilst passengers will be directed to use the 3 main hub stations of Stratford International, regional and West Ham, many passenger s who are London based may choose to alight at other stations, based on local knowledge, to access the Park. Walking audits need to be implemented to ensure these routes are accessible and safe, plus appropriate measures put in place.

Olympic and Legacy Facilities Transformation

The Legacy Transformation of the Park is based on the fact that 18 -24 months after the Games the temporary facilities in the Park will be dismantled and removed and the remaining venues will have been transformed to Legacy use. In the intervening periods the Park will be re-opened in phases, with limited access. It is anticipated that the venues will be operational in 2013/14 (13a 7.1.1).

Highways

The dismantling of the temporary facilities will require some heavy goods vehicle activity, but this will be less in number than the enabling and construction phase, but with higher numbers of specialist contractor and service vehicles. However numbers are due to be less than in the peak in construction phase, making the impact less significant (13a – 7.1.2).

There is an aspiration to manage construction traffic during inter-peak and off peak periods. There will be limited car parking on site although travel by public transport is to remain an important mode for many construction workers.

The reduction in HGV traffic is welcomed, the increases in service and smaller vehicles will be of some concern, as it will generally be more difficult to route manage their entrance and exit routing from the park. Managing traffic at inter and off peak times should be a fundamental guiding principal of the delivery of the Legacy Transformation. The use of public transport by construction workforce should not just be an "important" mode, it should be the primary mode and target figures should be established to enable the Travel Plan Group to have figures that can be monitored.

<u>Legacy Venue Demands</u>

The assessment of venue travel demands have been considered in conjunction with the reduction in capacity of the venues left in Legacy (13a – 7.3.2).

Looking at event calendars similar to the venues that are considered trip generation is likely to occur at weekends and late/afternoon and evenings weekdays. This also illustrates that there is more dependency on car travel to venues on a weekend compared to a weekday, which is predominately public transport use. Travel plan strategies can reduce car dependencies (13a – 7.3.10)

It is of major concern that an assumption has been so car-centric. Whilst there is an understanding that there may be car demand for the venues in legacy, the applicants should have begun with a premise of zero car activity to access the venues and worked from that starting point back to design of the legacy venues. There is much discussion of the improvements to the public transport networks as a result of the Games, this should be capitalised upon for legacy venue operations. Travel plan strategies would be far more effective should car travel be considered as zero.

<u>Legacy Venue Car Parking</u>

Car parking requirements have been calculated for each venue in legacy based on daily requirements and event demand and listed below (13a – 7.3.12/13):

Venue	**Capacity**	**Daily Parking Demand (staff +**	**Event Parking Demand**

		visitors)	
Aquatics	3,500	65	140
Main stadium	25,000	45	960
Handball Arena	10,000	190	960
Handball Arena (concerts)	11,500	n/a	1,180
Hockey	5,000	135	600
Tennis	n/a	110	n/a
Velodrome	3,000	285	360
BMX Track	n/a	55	n/a
Totals		**885**	**4,200**

There will be regulation of car trips by spectators and a reduction in the space given over to car parking; consideration of this will be enacted with a travel plan framework for legacy venues:

- *Use of other car parking spaces within the Park*
- *Use of park and ride and local car parks*
- *Temporary on-street parking measures outside CPZ*
- *Ticket sales including public transport advanced tickets*
- *Parking charges to dissuade car use*
- *Disabled parking to be advertised with assisted transfers*

(13a – 7.3.15)

The retention of the IBC/MPC multi-storey car park is identified, which will house 1,300 spaces. This is within walking distance to all venues (13a – 7.3.17).

Whilst a zero car assumption would be ideal for the venues, it is acceptable that some parking will be required, particularly for event contributors and workforce needing transport outside of public transport hours. It is welcomed that the venues are looking to rationalise as much parking in the IBC/MPC car park, a statement of operation of this car park needs to agreed, to ensure that there is sufficient space allocated for venue parking, and that parking isn't allocated to the businesses that take over the IBC/MPC building in Legacy.

With the exception of the Hockey venue, all event figures are within 10% of capacity. A full understanding of the need for the Hockey venue to have nearly 40% parking during the event needs to be submitted and agreed. A standard of less than 10% should be applicable across the whole site.

<u>Legacy Venue Coach Parking</u>

A base coach provision of 2 to 5 spaces at each venue is considered appropriate for drop off and pick up for daily demand and could be utilised for events as well (13a – 7.3.19/20).

The IBC/MPC provides space for 30 coaches to park. This should be more than enough to accommodate most events at the Park; however the main stadium hosting an event may need up to 105 coach spaces. These could be accommodated in the following way (13a – 7.3.22/23)

- *On site at each venue including the use of the IBC/MPC car park*
- *An off site and nearby temporary facility*

- *Shared coach parking provisions at other nearby off-site venues*

The use of coach services is preferable to car parking and efforts should be made to transform more of the car parking spaces in the IBC/MPC to accommodate coaches. The Travel Plan must include detailed management and control of coach traffic, including scheduled pick up and drop off times and locations, to ensure queuing does not occur on the public highway.

Legacy Transformation Highway Network

The highway networks constructed and used internally in the Park during the Games will be returned to the Highway Network gradually over the transformation period, they will be delivered according to the following timetable (13a – 7.4):

End of Games plus one month

The opening of a loop road around the IBC/MPC using Waterden Road and the Lea Interchange. A new junction will be required on Carpenters road and Stratford High Street to facilitate east-west traffic.

A temporary junction at White Post Lane and the Loop Road to facilitate transformation traffic.

End of Games plus 6 months

The Western Access route to Stratford City will be completed and the remaining parts of Waterden Road.

The use of bridges adjacent to Carpenters Road and the railway line will enable a two-way route from Waterden Road and Carpenters Road/White Post Lane Junction enabling access to Legacy venues and enabling the Legacy bus routes to begin.

A highway link between the Stratford City Southern Access Road and the Loop Road to enable greater connectivity between Carpenters Road, Stratford High Street and Stratford City.

End of Games plus 12/18 Months

The road network is envisaged to be completed in 12 -18 months, dependent on the final scope of the transformation works.

The junction with the Loop Road and White Post Lane would still be required as part of the 2013/14 network to facilitate access to the main stadium, and until such time as development occurs in Zone 4 and the permanent internal road connections and highway bridge to Monier Road are made.

Western Bridges

Connection to the surrounding network will initially be via the existing bridge at White Post Lane. Provision is being made for the western bridges linking Wallis Road, Monier Road and Stour Road to be provided as the project develops.

The opening of the highway network in 18 months is welcomed and should alleviate any congestion issues that have been in place since the site was closed for construct.

Extreme concern surrounds the bridges on the western side of the park; it appears that there is no guarantee that these bridges will be constructed as permanent bridges in legacy. The construction and Games bridges are only identified as temporary bridges and it appears form the comments in the application that these bridges will become permanent dependent ion development in Zones 3, 4 and 5.

These bridges are essential to the regeneration of Fish Island and the accessibility of the Western areas of Tower Hamlets to the Park and Stratford from Tregedar Road. These bridges must be constructed as permanent bridges in the Legacy Transformation. It would be preferable that they be constructed as permanent structures during construction.

Road Hierarchy

A number of design considerations have been taken into account for Legacy roads including (13a – 7.4.22):

- *Widened footways on streets that will form main pedestrian routes to event venues*
- *Accessible bus stops*
- *Appropriate kerb spaces or designated areas for coach/bus parking for district or local distributors where they are located near event venues in order to accommodate vehicles*
- *Ensuring pedestrian/cycle routes use appropriate streets where they can be visible to all other users*
- *Pedestrian and cycle routes should be barrier free where possible and not segregated*
- *Emergency vehicle access to development and venues*
- *Waste/servicing access and bays on/off street considered during design*

The strategy provides a number of opportunities for improving pedestrian, cycle and vehicle connections across the Park. The issues considered include (13a – 7.4.23:

- *Designing roads fronting parkland as local access streets where possible to minimise severance to the Olympic Park from existing and proposed residential areas*
- *Locating and designing roads adjacent to proposed Legacy Venues with the view to minimise effects of events on future residents and neighbouring residential communities.*
- *Keeping any through traffic on appropriate roads*
- *Improved pedestrian/Cycling connections across the River Lea*
- *Improved pedestrian/cycling connections from the Greenway to Victoria Park*
- *Proposed high profile cycle and pedestrian links via Wallis Road to/from the west*
- *Improved pedestrian/cycle connections north-south across the site*
- *Possible future connections from Hackney Wick Station to the site*
- *Improved pedestrian/cycle crossing of Stratford High Street for the Greenway*
- *Potential new bus connections to Hackney Wick*

These design statements are welcomed and will do much to provide a more accessible and permeable route through the site.

More emphasis should be placed on connecting existing communities, such as Fish Island and Bow with the site and through to Stratford. This would bring about significant benefits to the regeneration of these areas; thereby providing greater residential and commercial opportunities.

Highway Network Assessment

The 2013/14 traffic flow assessments are considered with the Legacy venues as transformed and a partially operating IBC/MPC. In addition changes in population and employment are consistent with the Opportunity Area Framework (13a – 7.10.1).

The scenarios generally show small increases in traffic flows, limited and localised around the Park (13a – 7.10.2). Flow increases on the perimeter of the Park are seen as minor, whilst internal Park flows are larger, associated with increases in population and employment (13a – 7.10.3). The East Cross Route is seen to demonstrate a reduction in traffic flows of around 1%.

Junction Assessments

A12 Bow Interchange – General traffic management and signal optimisation will be required to ensure the junction operates satisfactorily during legacy operations and additional event traffic, particularly with respect to monitoring/controlling internal queuing (13a – 7.10.14).

B142 Tredegar Road/East Cross Route – general management as well as the signalisation of this junction is proposed for legacy operations. The temporary signals were proposed in the Games phase, it is proposed to introduce a pedestrian phase across the Northern side. Signalisation will bring a reduction from 105% saturation to around 57% during AM peaks, with PM peaks remaining below 85% saturation (13a – 7.10.15).

These proposals are welcomed.

Highway Measures Envisaged

General transport management measures envisaged are:

- *Appropriate signage for pedestrians and cyclists to use alternative/diverted routes*
- *Appropriate highway and kerbside signage for diverted bus routes and temporary bus stops as well as notification to all users*
- *Improved lighting and security measures in order to increase usage of routes by pedestrians, cyclist and workforce*
- *Improved streetscaping, surface treatments and landscaping on routes and diversionary routes to communicate to vehicle users to respect the existing community they are passing through*
- *Monitoring and maintenance of road/line markings, lighting, signage, and general street cleaning and sweeping*
- *Improved streetscaping, surface treatments and landscaping or disabled people.*

(13a – 7.11.1)

There will be a need for a number of off-site junctions that will experience saturations above 85% in legacy. The management and monitoring of these junctions will be considered along with TfL and the boroughs. These include (13a – 7.11.6):

- *Tredegar Road/ St Stephens Road*
- *A11 Whitechapel Road/ Osborn Street*
- *A1209 Bethnal Green Road/ Vallance Road*
- *B118 Old Ford Road/ Globe Road*
- *South Colonnade Canary Wharf*
- *A11 Bow Road/ Fairfield Road*

Mitigation/Improvement measures should be considered by the boroughs, particularly where there is little scope for any significant physical changes to improve traffic flow or for introducing bus priority measures. It is also noted, by the applicant, that there are developments currently under construction or proposed which may introduce further changes to their operation or improvements which by 2013/14 will need to be taken into account by the local authority.

These comments about the above junctions and putting the responsibility on the Local Authority appears to be a wilful discharge of the ODA's responsibility to mitigate the impacts of their development on the wider area. It introduces a Park-centric view of their responsibilities in Legacy and does not further the regeneration of the wider area.

These junctions will require designing in conjunction with the wider network, which will be severely affected by the Legacy proposals. It is, therefore, essential that these junctions be taken under the proposed OPTEMS system of delivering highway improvements and mitigation.

The section of Wick Lane from the junction by the bridge to Monier junction is a serious concern in view of the relocation of the bus depot, the new links from Monier Road across the river and the Greenway emphasis. To provide safe access to the western access, as well as deal with all these changes, this site needs new a major highway scheme to improve safety and traffic flows before the Games - not afterwards as currently suggested.

<u>Parking and Loading Measures.</u>

Enforcement of loading restrictions to facilitate better pedestrian, cyclist, public transport and construction workforce and vehicles will be needed, in particular Bow (13a – 7.11.9).

During Transformation phase, particularly during events, the continuation of the Games CPZs should be made in order to discourage event traffic. This is particularly pertinent to Bow and Bromley areas (13a – 7.11.10). These measures will need to have funding secured against the event venues and should be included in all travel plan requirements in perpetuity of the venue operations.

Any traffic calming measures introduced for the Games will need to be reviewed, it is likely that these will remain and refined to maximise environmental benefits.

These measures are all welcomed and the OPTEMS route seems the best avenue to deliver these operations with contributions from the Park.

Legacy Parking Standards

These will be delivered in accordance with the London Plan and will be as follows (13a 7.12.1):

Land Use	Rate
Residential	2-1.5 spaces detached & Semi detached 1.5-1 spaces: Terrace/Flat 1 or less space: mostly flats
Retail	PTAL type dependent
Employment	1 space/ 600-1000 sqm
Education	Individual basis
Community/Leisure	Individual basis

There are proposals for the uptake of car clubs as part of the travel plan (13a – 7.12.2). No proposals are in place for motorcycle parking and will be considered in conjunction with the relevant borough and TfL (13a – 7.2.3).

No public parking will be provided close to railway stations (13a - 7.12.4) Cycle parking will be provided to comply with the relevant standards (13a – 7.12.5).

These parking standards are to be considered as both lazy and extremely poor, in both their proposals and in the potential to reduce car travel. The residential figures are far in excess of Tower Hamlets standards that currently exist in the LDF. These are proposals for 7 years in the future when it is anticipated that both Tower Hamlets and the GLA's plans will be far more stringent in reducing car dependency.

As a minimum all residential parking standards should be set at a maximum of 0.5 spaces per unit, only in areas with a PTAL rating below 3 and the rest of the site should be car free.

These standards, as proposed, do nothing to promote a sustainable legacy; they will mean that the aspiration to have the most sustainable Games will be balanced with the least sustainable legacy.

The non-inclusion of motorcycle and cycle parking standards is again lazy and extremely poor. The Legacy site should be aiming to be a world leader in providing cycle facilities, parking and a severe reduction in car dependency.

Public Transport

Trip generation for the Legacy venues illustrates that most weekday trip demand will be in the late afternoon/early evening peaks as well as demands over weekends (13a – 7.3.10).

Public Transport Trips

Without event traffic there is an increase in Public Transport use of around 12% in both AM and PM peaks (13a – 7.5.4).

Assessment of the Public Transport Effects

The assessment includes partial operations at the IBC/MPC facility, with general increases in the population and employment in the area and the effect of Legacy venue operations (13a – 7.6.1).

There appear only minor increases on the North London Line and Central Line during AM peak (13a – 7.6.4). There will be small increases on Public transport due to the effect of the legacy venues themselves and the partial uptake of the IBC/MPC (13a – 7.8.3).

There could be small increases on the Jubilee line due to increases in population access in the network for employment opportunities (13a – 7.8.4). The effects are more pronounced in the PM peak due to the event operations. There is a possibility of people bound for the Main Stadium interchanging at Mile end for bus services. It is anticipated that the crowds at the rail termini would be managed similar to the Games management plans (13a – 7.8.5).

The enhancements to transport put in place for the Games will provide a major benefit in Legacy (13a – 7.8.6).

Bus Network

The enhancement of bus provision is likely to be aligned with the level of development and will ramp-up as new development comes on-line (13a – 7.13.1).

The 2013/14 network is based on the indicative 2021 bus network with some modifications to reflect the highway infrastructure and level and location of development in place by 2013/14. It comprises of the following elements:

- *Diversion of routes 276, 308, D8 into Stratford City*
- *Service frequencies will have to be changed due to Stratford City*
- *Route extensions and diversions are as close as possible to the planned routes for 2021*

(13a – 7.13.2)

Analysis indicates that there is sufficient capacity on buses on each corridor in 2013/14, on both weekdays and Saturdays. London Buses intends to refine the indicative bus network over time as the development progresses. (13a – 7.13.6)

Bus Priority

TfL have identified a number of bus priority measures in the area comprising of Selective Vehicle Detection to provide bus priority at certain junctions, in Tower Hamlets these include:

- *A11 Bow Road – westbound bus lane from the exit of the Bow Roundabout towards Campbell Road*
- *A12 bus lanes between Bow Interchange and Wick Lane*

(13a – 7.13.9)

Public Transport Measures Envisaged

The public transport network with event management is expected to be able to absorb demand in Legacy Transformation when an event is taking place. (13a – 7.9.2)

Walking and Cycling

End of Games plus 1 month

Re-opening of the NCN 1 on the Lea Navigation towpath, the improved elevated Greenway and a series of new pathways running north-south through the Park and east-west to connect Stratford City. There will also maximum permeability, as practicably possible, through the Park. Carpenters Road will be opened with a temporary connection to the Loop Road (13a – 7.15.3-5).

Plus 6 months

All dedicated strategic cycling and walking routes will be completed and fully accessible (13a – 7.15.6)

12/18 months

The A12 underpass at Temple Mills will be opened. (13a – 7.15.7)

Cycle Parking Provisions and Standards

All locations will have cycle parking that meets or exceeds the TfL design standards.

Venue	**Capacity**	**Minimum Parking Level**
Aquatics	3,500	200
Main stadium	25,000	140
Handball Arena	10,000	140
Handball Arena (concerts)	11,500	
Hockey	5,000	100
Tennis	n/a	
Velodrome	3,000	200
BMX Track	n/a	
IBC/MPC		500
Totals		**885**

(13a – 7.5.13 – table 7.24)

Walking and Cycling Measures

The cycle and pedestrian measures are intended to be designed to the highest standards available. Ongoing monitoring of cycle provision for residents, visitors and event spectators at the Legacy Park should be undertaken to ensure sufficient supply and appropriate located facilities (13a – 7.16.1/2).

There needs to be clearly identified monitoring standards and guidelines for monitoring need and provision; this will enable effective improvements to be commissioned. Ownership of the monitoring process has not been identified. It is suggested that the monitoring is handled by the Olympic Park Travel Plan Group, who should commission regular surveys by independent specialists such as Sustrans or the London Cycling Campaign.

Olympic and Legacy Facilities Operational (2021)

Highways

This phase sees the completion of the transformation phase, the Legacy venues are fully operational and increases in the population and employment in the Lower Lea Valley are largely realised. (13a – 8.1.1) It is noted that the Legacy venues traffic and trip demand will be the same as figures discussed in the Transformation phase, but the IBC/MPC facility will be fully operational (13a – 8.2.1). The highway network will be in full operation as stated in the Transformation stage with added connections facilitated by the Bridges to Monier Road, Wallis Road and Stour Road (13a – 8.3.1).

Monier Road Connection

This will provide a direct route towards Monier Road/ Wick Road and Dace Road junctions and towards the A12 on/off slips via Wick Lane. This junction suffers poor visibility due to bridge alignment and is likely to require environmental and junction improvements (13a – 8.3.3). Monier Road is proposed to function as a district distributor in Legacy 2021 (13a - 8.3.4).

This bridge access and junction improvement at Wick Lane is welcomed and should be part of the deliverables under the OPTEMS system.

Stour Road Connection

Stour Road will provide a primarily pedestrian and cycling connection from the west (13a – 8.3.5). The junction with the Loop Road and White Post Lane will be downgraded with a new junction created to the east for vehicles connecting with Carpenters Road from Waterden Road. The section of the Loop Road from White Post Lane towards the Monier Road Bridge will be downgraded to facilitate access to developments and to provide for future cycle and pedestrian use (13a – 8.3.7).

The establishment of Stour Road bridge as a pedestrian and cycle link is welcomed and the pedestrian/cycle prioritisation measures will be a benefit to sustainable communities both within the Park and to the West in Fish Island and Bow.

Assessment of Cumulative Highway Effects

The cumulative effect of additional housing and employment in 2021has significant effect on traffic flows; in particular there are anticipated increases on the East Cross Route by 3%. This will be significant on an already high demand route.

These increases will come from both new residential and employment in the Park site. These can be reduced by a more responsible and stringent approach to parking standards and travel plans in the Park. It should be the responsibility of the Olympic Park Travel Plan group to implement measures to reduce car dependency.

Junction Impacts

A12 Bow Interchange – Marginal effects are anticipated, management and signal optimisation, particularly during events should be implemented.

B142 Tredegar Road/ A12 East Cross Route – General traffic management and monitoring of junction operations will need to be implemented to ensure that the

junction operates at an acceptable level. Funding through the OPTEMS system should be secured for the long term monitoring in Legacy.

Cumulative Highway Measures Envisaged

General transport management measures envisaged are:

- *Appropriate signage for pedestrians and cyclists to use alternative/diverted routes*
- *Appropriate highway and kerbside signage for diverted bus routes and temporary bus stops as well as notification to all users*
- *Improved lighting and security measures in order to increase usage of routes by pedestrians, cyclist and workforce*
- *Improved streetscaping, surface treatments and landscaping on routes and diversionary routes to communicate to vehicle users to respect the existing community they are passing through*
- *Monitoring and maintenance of road/line markings, lighting, signage, and general street cleaning and sweeping*
- *Improved streetscaping, surface treatments and landscaping or disabled people.*

(13a – 8.10.1)

General monitoring, maintenance and management of the surrounding network is proposed to react to the evolving road hierarchy (13a – 8.10.2).

The A12, A11 and Bow Interchange will experience greater flows; this will be in part due to the overall regeneration effects of the Lower Lea Valley (13a – 8.10.5). The Lower Lea Valley Transport Investment Group should work with the Olympic Park Travel Plan Group, the ODA, LDA and developers as sites progress through planning to ensure that parking is kept to a minimum in commercial and residential developments. This will ease pressure on the road network. It should be highlighted that the lead and best practice examples must be set by the Park. These are not evident in this application.

On going management of off site junctions will need constant management and maintenance (13a – 8.10.9). Funding should be reserved through OPTEMS to maintain this during Legacy.

Parking and Loading

These remain the same as the Legacy Transformation comments stated earlier.

Public Transport

Public Transport Assessment

General

The largest increases in passenger flows in 2021 are in the AM peak and on National Rail with around 2,000 additional Passengers, LUL services increase by around 1,250 primarily on the Central Line with minor increases on DLR and buses. In the evening peak the picture to eastbound flow increases (13a – 8.7.3).

Bus Network

The 2021 proposals incorporate all of the Stratford City bus route extensions and frequency enhancements, with some modifications to routings to serve the development within the Olympic Park; these will include: (13a – 8.11.2)

- *Diversions to bus routes 278, 308 and D8 into Stratford City*
- *Bus routes serving the Stratford International Station (services 8, 30, 97, 145, 262, 388, 339, D8, W14)*
- *Bus routes to serve Stratford Regional station (services 8, 30. 97, 145, 276, 308, 339, 388, D8, W14)*
- *Enhanced frequencies for bus services 25, 97, 104, 308, 339, D8, W14*

Public Transport Measures Envisaged

Analysis of the public transport loadings and crowding levels associated with the 2021 scheme indicates that proposed level of service and infrastructure should be sufficient to cater for the forecast demand (13a – 8.8.1).

A number of bus priority measures have been identified by the London boroughs. The prioritisation and timescale for implementation of these measures as the level of development increases is a matter of further investigation and discussion. (8.11.8)

Bus route enhancements and priority measures to support the 2021 Legacy development, together with enhancements, will be undertaken through consultations between the boroughs and London Buses (13a - 8.12.1).

On-going enforcement and management of on-street parking and loading, particularly on approaches to and from bus stops in order to minimise delays (13a – 8.12.2).

The overcrowding of Mile End station as visitors interchange with the bus network to access the main stadium is of great concern. Provision for crowd management at this station and physical measures need to put in permanently to accommodate this regular occurrence.

In addition there is a need to understand the real effects of this, or would passengers really continue on to Stratford?

Bus priority should include a westbound bus lane from the exit of the Bow Roundabout towards Campbell Road and the A12, with bus lanes between Bow Interchange and Wick Lane.

Walking and Cycling

Walk and Cycling Measures Envisaged

Bridge connections to the west of the Park to Hackney Wick and Bow will bring further enhancements to Legacy Networks. On-going monitoring and maintenance of the network and the use of these new links will ensure on-going attractiveness and increased usage (13a – 8.14.1)

Ongoing monitoring of cycle parking provisions for residents, visitors and event spectators will be undertaken to ensure efficient supply and appropriate location of facilities (13a – 8.14.2).

There needs to be clearly identified monitoring standards and guidelines for monitoring need and provision; this will enable effective improvements to be commissioned. Ownership of the monitoring process has not been identified. It is suggested that the monitoring is handled by the Olympic Park Travel Plan Group, who should commission regular surveys by independent specialists such as Sustrans or the London Cycling Campaign

Bridge improvements must be guaranteed and should be funded by the ODA through the OPTEMS system to ensure they are built in a timely and appropriate method, and so that they are not waiting for speculative development to fund them. This should be seen as an essential regeneration tool to attract development, not as a mitigation measure from future development.

More details are needed as to how the bridge will link in with existing cycle networks and who will be responsible for maintenance and development in Legacy.

A clear plan needs to be undertaken to ascertain the level of enhancement necessary for Legacy walking and cycling.

Links out of the park, the greenway beyond the Park to Victoria Park, the access routes across the A12 all need to be considered in legacy. It appears at present that the improvements and development is Park-centric. There is a need to ensure links are accessible, attractive and safe which service the Park beyond its boundaries. Otherwise the new links will rapidly become redundant, unused and unsafe.

Travel Plan Framework

This is an acceptable framework to begin to design a Travel Plan for all phases of the site from Construction to Legacy 2021. However it needs to be refined and developed to become a world class travel plan. At present it does not shine above existing travel plans currently in operation in many London developments. More innovation and exciting new strategies need to be included.

This should be the remit of the Olympic Park Travel Plan Group to develop for each of the phases of development. There is substantial scope for improvement.

Construction Phase

This will be discussed under the Code of Construction Practice
Olympic Games and Paralympic Games Travel Plan.

The details of this should be enshrined in the Olympic Travel Plan, the revisions that are due after Beijing should be informed by the Olympic Travel Plan Group and should seek to be innovative and Stringent in reducing carbon emissions and delivering a pioneering attitude to sustainable transport. This was significantly lacking in the original transport plan.

There is no mention of internal transport during the Games; all internal transport should be facilitated by a fleet of electric and carbon neutral vehicles. The provision of recharging stations and top up points would be a lasting legacy during transformation and the infrastructure to provide this would be better supplied during construction.

Legacy Travel Plan

The legacy Travel Plan is in far more detail.

Car Parking/Car Clubs (13a – 9.6.4/9.6.7/9.6.17/9.6.18) – this does not reflect an appropriate and responsible attitude for reducing car dependency. There needs to be strict standards in place and a commitment to being the largest car free development in Europe, if not the world. The introduction of car clubs are welcomed. However many new developments are actively promoting these through benefits to members, price reductions and positioning spaces in priority spaces.

Cycle Parking (13a – 9.6.6/9.6.9/9.6.15) - These policy goes no further than many older aspirations in developments that have been in operation in the borough for many years. There should be more emphasis in providing more than 1:1 cycle parking, imaginative, accessible and well located cycle parks for residential, commercial, venues and business. There should be a minimum level of support on site, through changing and shower facilities, lockers, repair and maintenance areas, plus the commitment to provide a cycle retail hub. The Legacy should be the best in the world, not a provision at 2004 levels. However the free transport home in the event of an emergency shows a step in the right direction.

Public Transport (13a – 9.6.12) – Personalised travel information is a great step towards providing transport information and is welcomed. This is supported by a season ticket loan scheme.

Motorcycling (13a – 9.6.16) – This basic policy could be enhanced with provision for electric two wheeled alternatives.

Servicing and deliveries (9.6.20) – These policies are only promotion and encouragement policies. There is scope for more direct means, the site would be ideal for a consolidation hub for deliveries, where deliveries could be then distributed around the site with carbon neutral vehicles. Businesses could be tied by their applications and lease agreements into more sustainable measures.
Workplace practices and policies (13a – 9.6.21) – This again is an encouragement policy, there needs to be more emphasis on delivering some building standards, lease obligations or other enforcement measures.

Optimising Fiscal Initiatives (13a – 9.6.22) – These measures are more exciting and are welcomed

Retail Uses (13a – 9.6.24) – These measures are welcomed, but possibly could go further with retail consolidation schemes for deliveries, requiring food retailers to sourcing food locally, delivery consolidation hubs.

Education (9.6.25) – The measures identified are welcomed but do not include teacher travel. All schools should be established as being car zero. In addition if the site becomes a world leader in sustainable transport and the travel plan becomes a best practice example it could be of educational benefit to the rest of the UK, this would be a true legacy.

Event Management (13a 9.7) – Park and ride is an acceptable measure and should be extended to remove more private parking. It would be good to see parking reduced to just disabled visitors and event personnel either competing or performing, where no other alternative can be made. Ticketing initiatives are welcomed.

Summary

It seems a shame that the Park that is being delivered for the Olympic Games in Legacy does not recognise the potential it has to be a world leader. The impetus for change has come from sport, but the Legacy seems quick to revert back to lazy travel options. More emphasis should be put on healthy transport; encouraging visitors to burn calories not fossil fuels.

This Travel Plan framework falls far short of being a world class example of best practice for delivering sustainability into the future.

Bridge Design and Construction

This section covers the physical structures themselves and their design from an engineering structure; the location and value of the bridges are discussed in the main text. The bridges examined are only those that affect Tower Hamlets.

The plans submitted have shown the bridge structures Temporary Bridges only; these are considered to reasonable and orthodox in design. As they will not form part of the public highway, as they are only temporary they are not the responsibility of this Highway Authority.

It is disappointing that these structures have not been designed to be permanent, particularly as they appear in legacy. It would have been far more preferable to deliver these as permanent structures for the Games and the legacy benefits would have been in place from immediately the Games has finished.

Any permanent structure that replaces these temporary bridges will require technical and highways approval by Tower Hamlets.

Code of Construction Practice (CoCP)

The CoCP supports the planning application for site preparation works, venue and infrastructure construction. Similar principles will be adopted for Legacy Transformation (15- 1.1.1). The document submitted is considered to be Part A – which sets out the general objectives and measures to achieve them for all construction works for the ODA. Part B will set out the specific standards and measures that will be used for each delivery zone or venue construction package; to be prepared in consultation with relevant local authorities prior to construction 15 – 1.1.5).

Concern is raised at this point that the Part B construction practice documents will be delivered by the contractors and will not be inclusive enough of all the effects. By diluting the CoCP by a number of contractors, the effects of construction will be worsened and become less able to be monitored and enforced.

The ODA needs to take ownership of the delivery of the CoCP at all levels and provide a dedicated body of independent monitoring and enforcement personnel, and provide real enforcement powers in the case of a breach of the CoCP.

The CoCP is split into a number of Environmental Management Plans covering a range of topics. Transportation and Highways will examine the following, where they relate to transport:

- General site operations
- Transport Management Plan
- Noise and vibration
- Dust, odour and vehicle emissions

<u>General Site Operations</u>

<u>Working Hours (15 – 3.3)</u>

The working hours of the site will be:

Monday – Friday	07:00 – 18:00
Saturday	07:00 – 14:00
Maintenance and repair	
Saturday	14:00 – 16:00
Sunday	08:00 – 16:00

In addition one hour start up and shut down period will be in operation and not include any noisy activities. Bank Holidays will operate as Saturdays. Operations that are seasonal or affected by public transport delivery may occur outside of these hours; to include overnight working, weekends and Bank holiday timings.

Road, Rail and Water deliveries will be 24 hours a day, 7 days a week to reduce the amount of deliveries affecting peak flows. Road deliveries to site will be managed and controlled through a delivery booking system.

The delivery booking system should be robust enough to accommodate early and late arrivals due to road and highway delays; this will prevent vehicles stacking on

the highway, parked in unsuitable areas and congesting the road network outside the park.

Temporary Living Accommodation

Where this is provided on site, it should comply with Local Authority Standards and be licensed accordingly. Whilst the provision of on-site accommodation will reduce workforce transport trips to the site, it should be noted that car parking for residents of this accommodation should be set at zero.

Public Access and Transport Management

The objectives of the CoCP for transport cover the following (15 – 4.1.1):

- The removal of public access from the site
- The ODA will endeavour to carry out works limiting the effect of traffic flows and disruption on the highways; including the optimisation of rail and water where reasonably practicable

The removal of public access is understood and the Transport Assessment covers alternative routing. The statement to use rail and water for deliveries is welcomed, but more emphasis and targets need to be included.

General Provisions (15 – 4.2)

- The ODA will require the stopping up of highways.
- Site access points for construction traffic, construction personnel and emergency access will be identified for vehicles, pedestrians and cyclists.
- The ODA will consider options for reducing the quantities of construction materials requiring transfer by public roads so far as reasonably practical.
- Construction transport routes will be identified and discussed as necessary with the relevant local authorities

It is alarming that the site access points have yet to be identified and the routing of traffic immediately around the site has not been provided. This is unacceptable and provides no assurance for Tower Hamlets or their residents and business as to the potential impacts of the construction. More detail needs to be submitted at a global level rather than based purely on the Planning Delivery Zone method of notification. A general condition for the whole site needs to include these details.

Transport Management Plan

The details set out in section 4.3 of the CoCP cover a wide range of measures; however the details are not set out beyond basic aspirations and protocols. There is not firm commitment to the actual measures that will be implemented. There is no comfort in this plan.

More precise details on how these measures will be implemented will need to be agreed and approved prior to any construction. Construction contracts based on this plan will result in vague and confused delivery. These criteria need to be more precise to allow for effective monitoring and enforcement.

There is no mention in the plan how the measures will be monitored and enforced. These are essential to protect the neighbourhood surrounding the park and the impacts on the highway.

Temporary and Permanent Road Closures (4.4)

- Ensure Public Notices are issued
- Provide and maintain signs and barriers
- Should be implemented for as shorter time as possible
- Discussions with known affected parties before implementation
- The site will become enclosed during construction, the Games and Transformation phases.

These issues are understood and details of mitigation measures are discussed in the Transport Assessment.

Diverted Rights of Way (15 – 4.5)

The ODA will ensure as far as reasonably practical that diverted rights of way will be provided and maintained to a similar standard to those that they replace.

This commitment should go further and provide diverted rights of way to a condition acceptable to current local authority or national standards, improvements should be made where necessary to satisfy safety, accessibility and attractiveness.

Road Cleanliness (15 – 4.6)

- Hard standing at access points cleaned regularly
- Vehicle clean down points
- Correct loading weight and sheeting of HGVs
- Mechanical road sweepers and water sprays for the suppression of dust and to clean hardstandings, roads and footpaths in the vicinity
- Flushing of gullies
- Sheeting Loads

These points are all welcomed. However there is no mention of how these will be monitored and enforced

Highway Reinstatement (15 – 4.7)

- Where temporary alterations are made the highway will be restored to the reasonable satisfaction of the Highway Authority
- The condition of the relevant parts of the highway will be recorded prior to the commencement and after completion of the ODA's works, in consultation with the Highway Authority. The Local Authority may send a representative if they wish. Remedial works will be undertaken to the reasonable satisfaction of the relevant highway authority
- Surplus materials will be removed leaving it clean and tidy.

These comments are welcomed

Large Vehicle Controls (15 – 4.8)

- As part of the Transport Management Plan, routes for large construction vehicles will be identified. These routes will primarily be major roads – A roads and Motorways, except for immediate access points to the Park. Local routes for large construction vehicles will be sought from the relevant authorities
- Deliveries will be 24 hours a day 7 days a week to alleviate pressure on the highway network. Deliveries to site will be managed and controlled through a delivery booking system with marshalling points to hold vehicles until required on site
- No parking of large vehicles on the highway in the vicinity of any work site except in specifically designed holding areas. Delivery vehicles will be required to turn off their engines when waiting within or near the park.
- Appropriate control system implemented for the dispatch of vehicles containing excavated material.
- Control requirements will be put in the contract documents for each contractor. The ODA will monitor and audit compliance, and employ enforcement measures in accordance with the enforcement protocol to ensure, as far as reasonably practicable, compliance
- Signs will be displayed in a prominent position on large goods vehicles using public highways which are dedicated to the ODA's project
- Weighbridges will be installed in suitable locations

These points are welcomed; however the enforcement and monitoring measures are incredibly vague and have no detail or substance to them. As an aspiration they are fine, but as a practical measure that can be assessed they are useless. More detail and exact procedures need to be designed and approved before any construction traffic begins to access the site.

Access for People with Reduced Mobility (15 – 4.9)

- Where reasonably practical the ODA will conform to the DDA 1995 concerning access to buildings and services outside the Park where there is disruption caused by their operations
- Where normal routes have been blocked off, alternative safe routes will be identified
- There will be a site by site account for mobility impaired access

These items are welcomed. However liaison groups should be set up specifically to deal with mobility impaired access and transport during construction.

Noise and Vibration (15 – 5)

Noise and vibration by transport will be controlled by routing measures (15 – 5.4.1).

This is welcomed but without routing details then it is impossible to determine the impact.

Dust, Odour and Exhaust Emissions (15 – 6)

- All engines of all vehicles and plant on site are not left running unnecessarily
- Use of low emission vehicles and plant fitted with catalysts, diesel particulate filters and similar devices
- Plant equipment will be well maintained and serviced, with records kept
- All project vehicles, including off road, will hold current MOT certificates

- Locating long haul routes and operating plant away from potential receptors such as houses, schools and hospitals
- Maximising energy efficiency (this may include using alternative modes of transport, maximising vehicle utilisation by ensuring full loading and efficient routing
- Commercial road vehicles must meet European Emission Standards

In addition Construction Traffic will be required to adhere to the following:

- Switch off engines
- Vehicle cleaning and fixed wheel washing on leaving the site, plus damping down of haul routes
- All loads entering and leaving the site to be covered
- No site run-off of water or mud
- On-road vehicles to comply with set emission standards
- On road vehicles to comply with future standards of a possible Low Emission Zone
- Minimise movement of traffic around the site
- Hard surfacing and effective cleaning of haul routes and appropriate speed limit around the site.

These measures are welcomed; however there should be a commitment to use electric and alternative fuelled vehicles with in the site, where practicable.

Summary

Many of the points and aspirations in the CoCP are welcomed and will do much to reduce the impact of construction in the locality. However there is a lack of detail in many cases, in addition the points and statements are nothing more that aspirations or proposals. Without more detail it is impossible to assess the full impact that this Code will deliver and how it will mitigate any nuisance.

Most importantly neither this document nor the Transport Assessment identifies the entrance and exit points for construction traffic and the routes that are proposed. This is essential to understanding the impacts of construction traffic on the local population. This detail needs to be submitted before construction commences.