

Competition *VENUES*

Chapter 7

Chapter 7 Competition Venues

Introduction

7.1 A total of 31 competition venues will be used to host the events during the Olympic Games. Of these, 22 will be in London and nine outside. The two biggest clusters will be the Olympic Park which will include eight venues and ExCeL, which with its new extension will hold five individual arenas. There will be three venues in Greenwich and four venues in central London. Wimbledon and Wembley Stadium are the two other venues in London.

7.2 Outside London, Buckinghamshire, Hertfordshire, Essex and Dorset each host one competition venue. There are also five cities that will each host a football venue: West Midlands, Cardiff, Glasgow, Manchester and Newcastle.

7.3 The locations of the competition venues are shown in chapter 2. Each competition venue will be used for different time periods for different days. An indicative competition schedule showing the dates of competition at each venue is presented in chapter 2.

7.4 The competition venues were selected by taking a range of criteria into account. The criteria included the requirements and guidelines from each of the International Federations and the IOC, as well as London 2012's philosophy of making the best use of existing facilities and taking into account legacy needs.

7.5 In addition, the venues have been positioned to allow the athletes to compete and train with minimal travel times from the Olympic Village and Paralympic Village.

Venue transport planning

7.6 LOCOG is responsible for all venue transport planning and delivery within the secure perimeter of each competition venue. The ODA is responsible for developing and implementing transport plans for the 'public domain' outside the secure perimeter of each

competition venue. The ODA works closely with LOCOG and other stakeholders to ensure integrated planning and delivery of each venue. Figure 7.1 shows the key inputs into venue transport planning.

7.7 Following discussions with LOCOG, local authorities, venue operators and emergency services, the ODA has developed a Venue Transport Strategy for each competition venue.

7.8 This chapter presents a summary of those plans, which include a preliminary, indicative design for each venue. In time, the plans will be reviewed and developed in more detail. It is likely that significant changes to the venue transport plans may occur between now and 2012. The ODA and LOCOG will continue to work with venue operators and other stakeholders to develop robust venue transport plans.

7.9 The ODA and its delivery partners will deliver the Olympic Route Network (ORN) up to the entrance of each competition venue. LOCOG will operate its Games Family vehicle fleets on the ORN to provide the required level of transport service to the different client groups to and from each venue.

7.10 Most Games Family vehicles will set down and pick up their passengers within the secure perimeter around each venue. Only accredited vehicles will be permitted access inside the venue. All vehicles entering the venue will need to pass through a security check known as a Vehicle Screening Area (VSA) to gain access to the venue. LOCOG will set up temporary VSAs at the vehicle entrance to each venue.

7.11 Some Games Family vehicles may need to set down and pick up passengers on streets adjacent to, but outside, the secure perimeter at some venues. Everyone entering a venue will need to pass through a security check, known as a Pedestrian Screening Area (PSA). LOCOG will set up temporary PSAs at the entrance to each venue.

7.12 A range of temporary measures will be required to meet the objectives for spectator transport. Different measures will be required at different venues. Measures put in place at each venue will include some or all of:

- shuttle bus services from rail stations to the venue;
- park-and-ride operations, including remote car parking, shuttle bus services and load zones at both ends of the services;
- temporary traffic management and parking restrictions on the local street network around venues;
- Blue Badge vehicle parking;
- set-down and pick-up facilities for accessible bus services;
- cycle parking facilities;
- parking for spectator coach services;
- load zones for taxis and private hire vehicles;
- pedestrian access routes, including temporary track way;
- boarding and alighting facilities for river services; and
- temporary signage.

7.13 The ODA will coordinate and manage the interfaces between the different transport stakeholders in the area serving each venue, ensuring that all transport activities are integrated to meet the objectives for all client groups and operate without adversely impacting on any other element of the operation.

7.14 Working with its delivery partners, the ODA will monitor all transport operations outside the secure perimeter of each venue and pass relevant information to all necessary transport stakeholders servicing the venue. The ODA will liaise with the LOCOG venue management team and work with stakeholders to adjust transport operations in the public domain to reflect changing circumstances (for example, an event running late).

Testing programme

7.15 A testing programme will be carried out at venues prior to the Games. These events will test the transport and other operational plans for the venues and determine whether any changes are required.

7.16 Some venues, such as Wimbledon and Wembley, already have tried and tested transport arrangements that will only need minor adjustments to cater for demands during the Games. Other venues will require transport plans to be developed from scratch.

7.17 Detailed plans for the testing programme will be developed closer to the time.

Accessible transport

7.18 The ODA continues to work with delivery partners to ensure that accessible transport is provided to and from each competition venue.

7.19 Each competition has been reviewed in terms of how best to provide accessible transport during the Games. Plans are being developed with stakeholders and delivery partners to provide accessible parking, set-down and pick-up facilities for accessible shuttle buses, enhancements to some rail stations and a range of other measures.

7.20 All new venues will have accessible principles incorporated into the design from the outset. All existing venues will be subject to an accessibility audit during the detailed design of the Games overlay. The results of the audit will feed into the access strategy for the venue and will ensure that, where possible, barriers to accessibility are removed (for example, obstructions to footways and stairs) and that the venues are accessible (for example, that appropriate signage, dropped kerbs and tactile paving are provided).

Crowd movement

7.21 Large numbers of spectators will be travelling to competition venues during the Games. This will create considerable volumes of pedestrian crowd movement at venues, on the transport systems and on the routes to and from venues.

7.22 Careful analysis is being undertaken for competition venues and key transport interchanges to ensure that the predicted levels of crowd movement can be safely accommodated and appropriately managed. Where necessary, detailed simulation modelling of crowd movement is being undertaken to help design venues and develop appropriate Games-time operating plans.

7.23 Experience has been drawn from previous Games and the study of other major events at existing venues in Britain.

7.24 To inform the planning process for the Olympic Park, the Games-time crowd movement implications for this area have been considered in detail. This work is ensuring that the infrastructure plans and designs of the Park are developed with Games operations at their core. The approach for crowd movement assessment of the Olympic Park described here also sets out the principles that will be used to analyse conditions at other venues and locations over the coming months and years.

7.25 A four-stage approach has been adopted to analyse crowd movement:

1. Development of spectator and workforce demand forecasts (as described elsewhere in this document).
2. 'Static' analysis to identify peak times and locations of demand, and to understand the drivers of these peak conditions.
3. 'Dynamic' microsimulation for localised analysis and visualisation of crowding patterns.
4. Sensitivity testing of assumptions and forecasts to inform choice of design or operational configuration.

7.26 The ODA will continue to work with LOCOG to ensure that the impacts of crowd movement strategies and plans are fully communicated and integrated with all other plans for delivering the Games.

Paralympic Games venues

7.27 Further details relating to the Paralympic Games venues are given in chapter 11.

Spectator car parking

7.28 The transport strategy for the Games involves all ticketed spectators arriving at competition venues by walking, cycling and public transport or park-and-ride services (with the exception of disabled people for whom some Blue Badge parking will be made available).

7.29 In order to safeguard the smooth operation of the ORN and ensure that the Games Family, particularly the athletes, can travel to and from the venues quickly and reliably, temporary controls will be put in place to prevent spectators driving or parking their private cars too close to the venues.

7.30 Special parking and access controls will be implemented around each venue. At this early stage of planning it is envisaged that these Games-time parking controls will be similar in nature to the event-day parking schemes that are regularly implemented in the area surrounding Premier League football grounds on match days.

7.31 Each venue will be treated on its own merits and parking controls will be planned in conjunction with the emergency services, TfL, the Highways Agency and the relevant highway authorities. Systems will be put in place to allow only accredited Games Family vehicles and prevent spectator vehicles to enter or park within a designated zone.

7.32 Consultation with local businesses, residents and authorities will be undertaken in the design and delivery of traffic management and parking areas around each venue.

Figure 7.1
Key inputs to venue transport planning

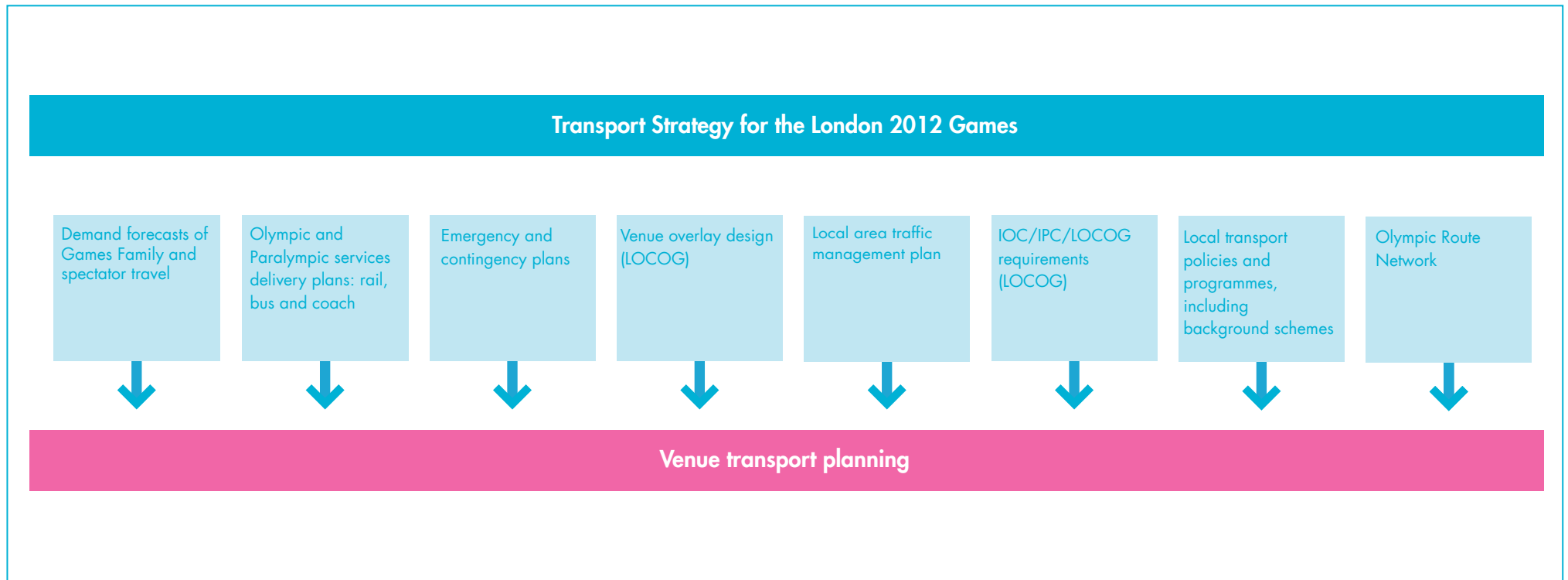


Figure 7.2 Olympic Park

The 2.5 square kilometre site in Stratford is the purpose-built and easily accessible centre stage for the Games, boasting a number of iconic venues including the Aquatics Centre, Velodrome and the Olympic Stadium. The site also hosts the International Broadcast Centre/Main Press Centre and the Olympic Village, home to the athletes during the Games.

Sport	Olympic Games	
	Venue	Activity
	Olympic Stadium	Opening and Closing Ceremonies, Athletics
	Aquatics Centre	Swimming, Synchronised Swimming, Diving, Modern Pentathlon
	Water Polo Venue	Water Polo
	Basketball Arena	Basketball, Handball
	VeloPark	Track Cycling, BMX
	Hockey Centre	Hockey
	Handball Arena	Handball, Modern Pentathlon
	Paralympic Games	
	Venue	Activity
	Olympic Stadium	Opening and Closing Ceremonies, Athletics
	Aquatics Centre	Swimming
	Basketball Arena	Wheelchair Basketball
	VeloPark	Track Cycling
	Hockey Centre	Football Seven-a-side; Football Five-a-side
	Handball Arena	Goalball
	Eton Manor	Wheelchair Tennis

Further details for this venue can be found by visiting <http://www.london2012.com/venues/olympic-stadium.php>

Figure 7.3
Olympic Park

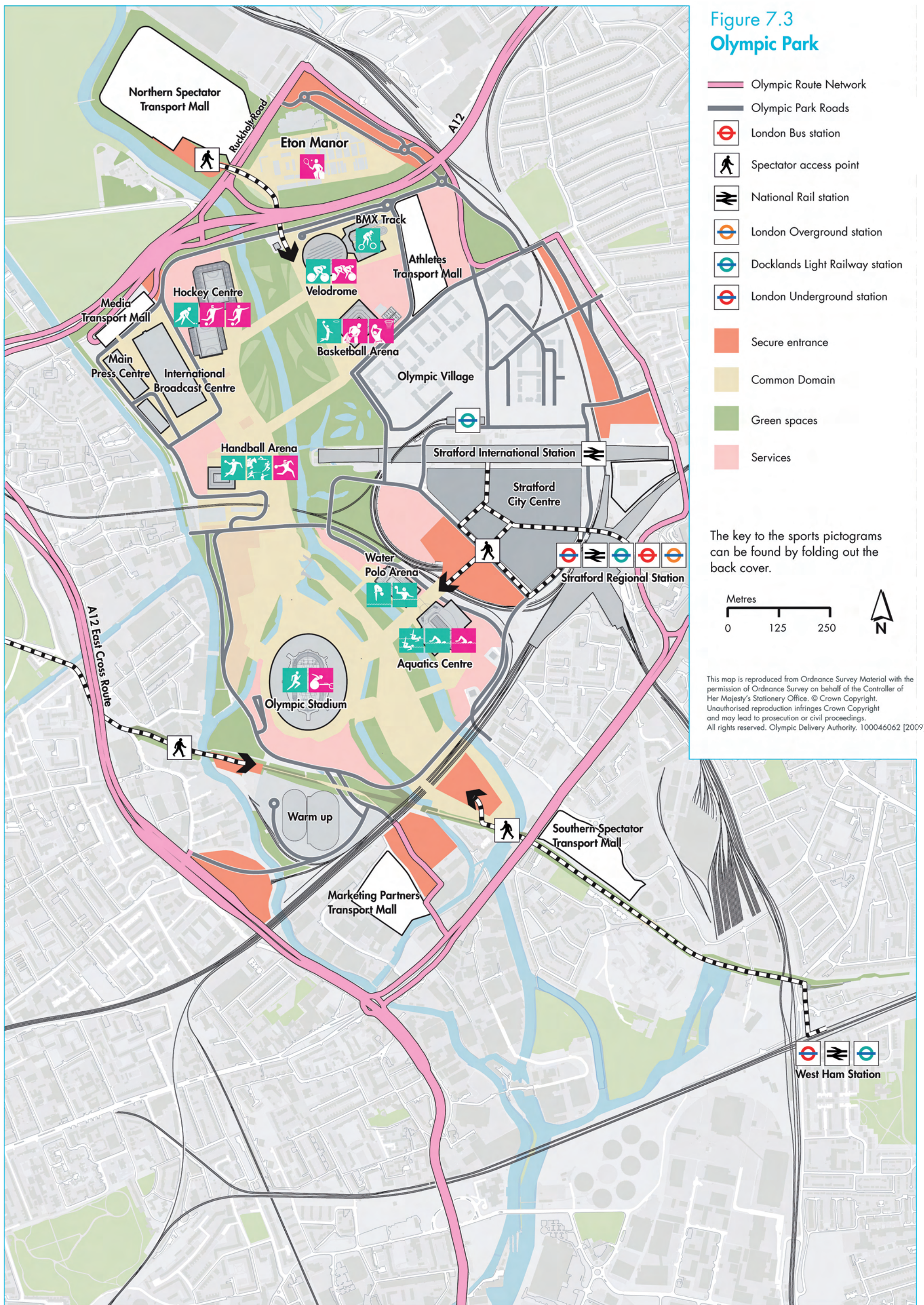


Figure 7.4 Olympic Park – Olympic Games competition schedule
(Indicative only, daily schedule will be finalised in spring 2010)

Venue/Sport		Start Date	End Date	Sessions per day	Earliest session start time	Latest session finish time	Capacity
Olympic Stadium	Opening Ceremony	27/07/2012	27/07/2012				80,000
	Athletics	03/08/2012	11/08/2012	2	10:00	23:00	80,000
	Closing Ceremonony	12/08/2012	12/08/2012				80,000
Aquatics Centre	Swimming	28/07/2012	04/08/2012	2	10:00	21:00	17,500
	Diving	03/08/2012	11/08/2012	2	10:00	22:00	17,500
	Synchronised Swimming	06/08/2012	01/08/2012	1	15:00		17,500
	Modern Pentathlon - Swimming	11/08/2012	12/08/2012				5,000
Water Polo Venue	Water Polo	29/07/2012	12/08/2012	3	9:30	23:15	5,000
Basketball Arena	Basketball	28/07/2012	08/08/2012	3	9:00	00:00	12,000
BMX Circuit	BMX	30/07/2012	31/07/2012	1	11:00	16:00	6,000
Handball Arena	Handball	28/07/2012	08/08/2012	3	09:30	23:10	6,000
	Modern Pentathlon - Fencing	11/08/2012	12/08/2012				7,000
Velodrome	Cycling - Track	04/08/2012	09/08/2012	1	15:00		6,000
Hockey Centre	Hockey	29/07/2012	11/08/2012	3	08:30	22:00	15,000

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

Figure 7.5 Olympic Park – Paralympic Games competition schedule
(Indicative only, daily schedule will be finalised in spring 2010)

Venue/Sport		Start Date	End Date	Sessions per day	Earliest session start time	latest session start time	Capacity
Stadium	Opening Ceremony	29/08/2012					80,000
	Athletics	31/08/2012	08/09/2012	2	10:00	23:00	80,000
	Closing Ceremony	09/09/2012					80,000
Aquatics Centre	Swimming	30/07/2012	07/08/2012	2	9:00	22:20	17,500
Eton Manor	Wheelchair Tennis	31/08/2012	07/09/2012	2	11:00	22:00	10,500
Basketball	Wheelchair Basketball	30/08/2012	03/09/2012	2	10:00	20:00	12,000
	Wheelchair Rugby	04/09/2012	08/09/2012	2	10:00	22:15	12,000
Velodrome	Track Cycling	30/08/2012	02/09/2012	2	9:30	18:00	6,000
Hockey Venue	Seven-a-side Football	31/08/2012	08/09/2012	2	10:00	22:15	15,000
	Five-a-side Football	30/08/2012	07/09/2012	3	10:00	17:00	5,000
Handball	Goalball	30/08/2012	06/09/2012	3	9:00	21:00	6,000

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

Figure 7.6 Initial estimate of mode split for Olympic spectator travel to the Olympic Park

Mode	Mode split for spectator trips	Number of arena spectators per day (based on gross capacity)
Rail	78%	269,490
Direct coach	9%	31,095
Park-and-ride	8%	27,640
Local Bus	3%	10,365
Walk	1%	3,455
Cycle	1%	3,455
Total	100%	345,500

Figure 7.7 Spectator arrival and departure profile (Day 11, includes spectators and workforce)

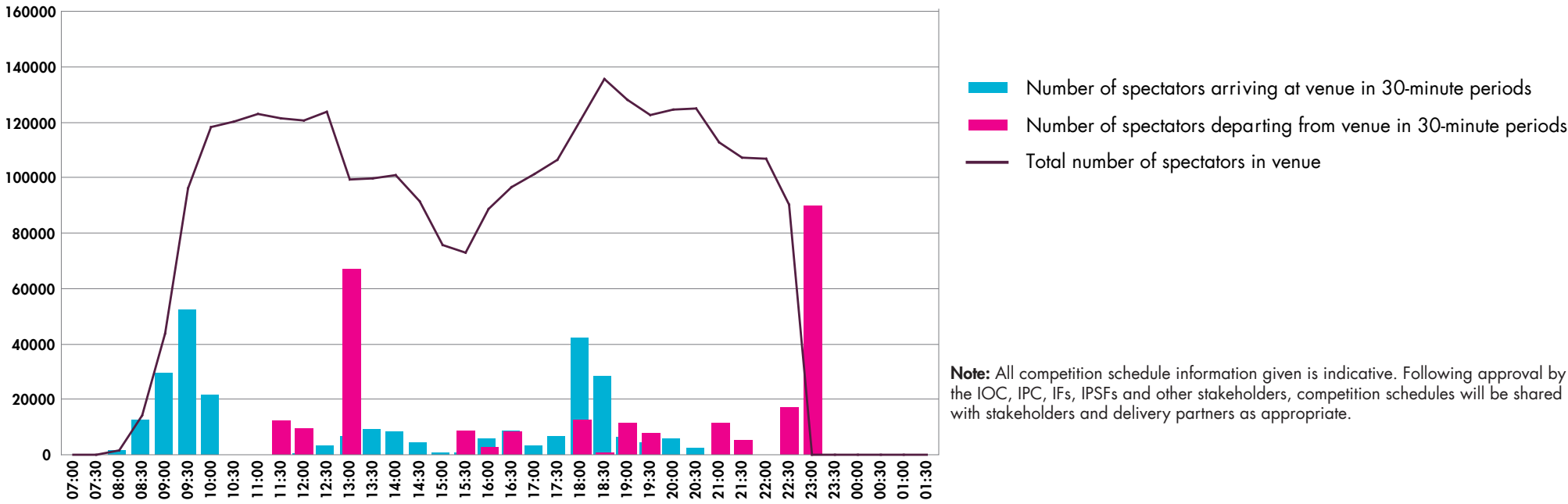


Figure 7.8 Summary of the transport strategy for the Olympic Park

Games transport provision	
Games Family	<p>Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via one of four entry points (as indicated in Figure 7.3): Eton Manor, Marshgate Lane, Bow West and Lea Valley Interchange</p> <p>The vehicles will set down and pick up at the load zones and car parks at each of the venues, with the majority of car parking provided within the Stratford City development and the IBC/MPC multi storey car park.</p> <p>There will be an Athlete bus and coach mall at the Olympic Village, which will act as the hub for Athlete bus service; a Media bus and coach mall on the ground floor of the multi-storey car park will host services to all competition venues and media accommodation; and there will be a coach park for marketing partners at the Pudding Mill Lane entrance.</p>
Spectator access points	<p>There will be four pedestrian access points to the Olympic Park for spectators: (refer to Figure 7.2)</p> <ul style="list-style-type: none"> – Northern Access via the Northern Spectator Transport Mall – Eastern Access via the Stratford City Development – Southern Access via The Greenway – Western Access via The Greenway
Rail	<p>There will be three gateway stations into the Olympic Park. These are:</p> <ul style="list-style-type: none"> – Stratford International Station (including the DLR) – Stratford Regional Station – West Ham Station <p>During the Olympic Games a rail shuttle service will be operated from Kings Cross St. Pancras to Stratford International Station and on to Ebbsfleet. This temporary Games-time service known as the Javelin® will be a key contributor to the Olympic Park spectator transport strategy with up to 12 trains per hour running at peak times.</p>
River	<p>There is no water-borne access to this venue.</p>
Walk/cycle	<p>Cycle parking will be provided at the following locations (see figure 7.2):</p> <ul style="list-style-type: none"> – Northern Spectator Transport Mall (NSTM) (2,000 spaces) – Southern Spectator Transport Mall (SSTM) (200 spaces) – Victoria Park (5,000 spaces) <p>There may also be some potential for cycle parking at Stratford Regional Station although this requires further investigation. Approximately one per cent of spectators are forecasted to walk all of the way to the Olympic Park.</p>
Bus and coach	<p>A direct coach service will bring eight per cent of spectators to the Olympic Park. See chapter 6 of this document for further information regarding direct coach services. The direct coach services will drop off and pick up in the NSTM.</p>
Blue Badge parking	<p>Currently there are two proposed locations for Blue Badge parking to serve the venue.</p> <ul style="list-style-type: none"> – NSTM: 411 spaces – SSTM: 153 spaces
Park-and-ride	<p>A park-and-ride service will bring 10 per cent of spectators to the Olympic Park. Park-and-ride services will drop off and pick up at the SSTM.</p>

Figure 7.8 (continued) **Summary of the transport strategy for the Olympic Park**

Games transport provision	
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Newham Council, TfL, the emergency services, and other stakeholders.
Accessible transport	<p>Both the NSTM and the SSTM have kerbed drop offs to facilitate boarding and alighting coaches for coach passengers with mobility impairments; the route into the Olympic Park via both of these transport malls is accessible.</p> <p>Step-free access is provided at both Stratford Regional Station and to the Javelin® service at Stratford International Station and onwards into the Olympic Park.</p> <p>It is recommended that spectators with mobility impairments utilise services for either Stratford Regional or Stratford International Stations; whilst West Ham station is also step-free, the walk between West Ham Station and the Olympic Park is approximately 15 minutes/one mile.</p>

Figure 7.9 ExCeL

ExCeL is the capital's largest exhibition and conference centre. It hosts events ranging from sporting competitions to international conferences and exhibitions. ExCeL is located in the London Borough of Newham, and is close to London City Airport.	
Sport	Olympic Games Weightlifting, Judo, Fencing, Taekwondo, Table Tennis, Wrestling and Boxing.
	Paralympic Games Table Tennis, Judo, Wheelchair Fencing, Boccia, Powerlifting, Volleyball (Sitting).
Venue location	It is proposed to use the existing 60,000 sq m ExCeL venue as well as a 40,000 sq m extension to the east of the venue.
Venue capacity (gross)	Olympic Games Table Tennis and Taekwondo – 6,000, Judo – 10,000, Fencing – 8,000, Boxing – 10,000, Weightlifting – 6,000 and Wrestling – 10,000
	Paralympic Games Table Tennis – 6,000, Judo – 10,000, Wheelchair Fencing – 10,000, Boccia – 10,000, Powerlifting – 6,000, Volleyball (Sitting) – 6,000
Competition periods/sessions per day (Indicative only, session schedule will be finalised late 2010)	Olympic Games Between one and four sessions per day over Saturday 28 July to Sunday 12 August
	Paralympic Games Between one and three sessions per day over Thursday 30 August to Sunday 9 September
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Olympic Games Earliest session start time: 09:00 Latest session finish time: 23:30
	Paralympic Games Earliest session start time: 09:00 Latest session finish time: 00:00

Further details for this venue can be found by visiting <http://www.london2012.com/venues/excel.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

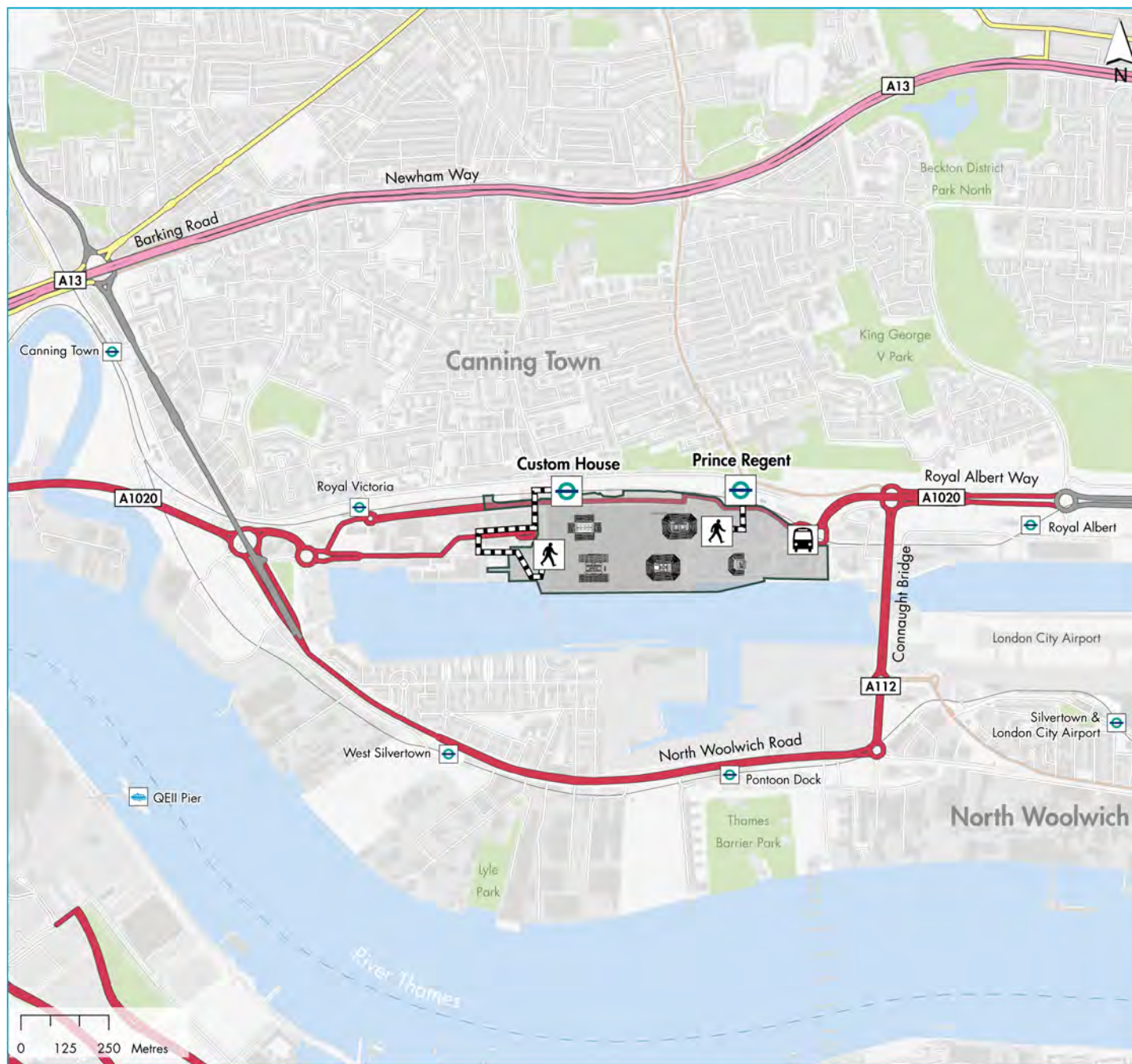


Figure 7.10
ExCel



The key to sports pictograms can be found by folding out the back cover

- Competition venue boundary
- Vehicle access point
- Spectator access point
- National Rail station
- Docklands Light Railway station
- Venue Olympic Route Network
- Core Olympic Route Network
- Alternative Olympic Route Network
- Venue Olympic Route Network
- Pedestrian route for spectators

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Figure 7.11 Initial estimate of mode split for spectator travel to ExCeL

Mode	Mode split for spectator trips	Number of spectators per session (based on gross capacity)
DLR	85 – 90%	34,000
Park-and-ride	5%	2,000
Local bus	3%	1,200
Direct coach services	4%	1,600
Taxi	0.5%	200
Walk	2%	800
Cycle	0.5%	200
Total	100%	40,000 *

*based on the sum of the five venue capacities

Figure 7.12 Indicative spectator arrival and departure profile (Day 2, based on gross capacity)

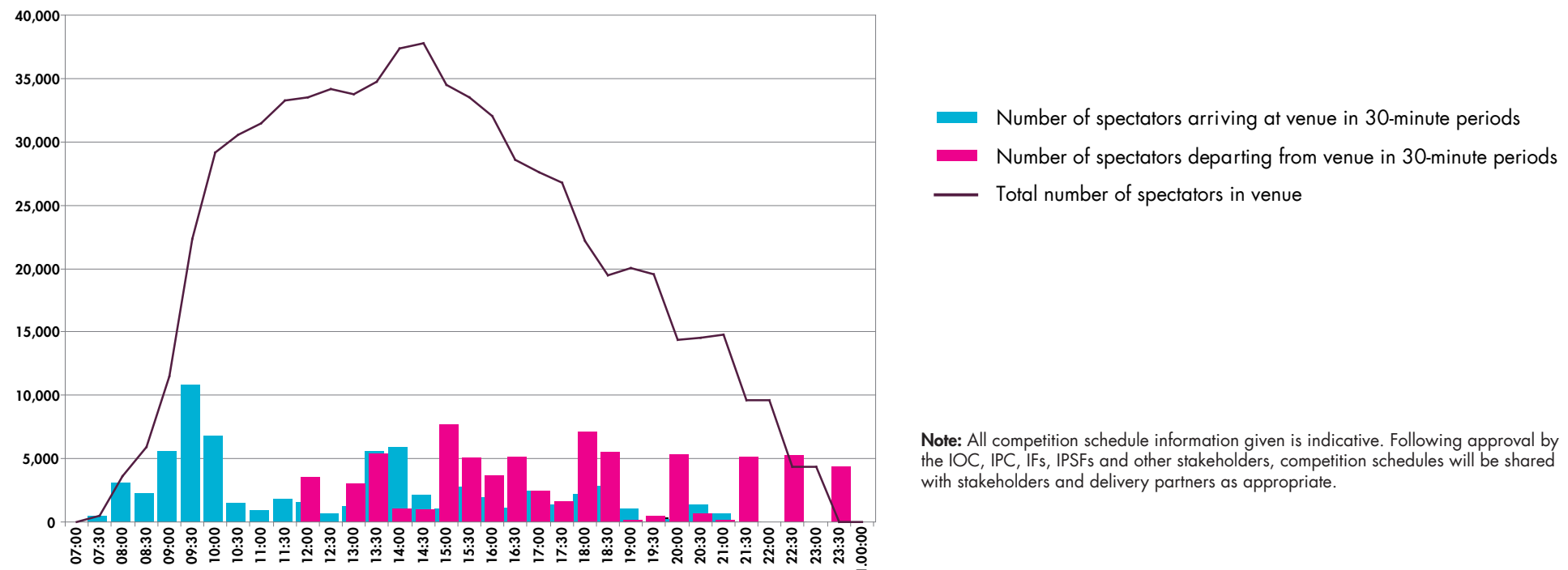


Figure 7.13 Summary of the transport strategy for ExCeL

	Games transport provision
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Lower Lea Crossing, Seagull Lane, North Woolwich Road and Sandstone Lane. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The main spectator access to the ExCeL centre is located in the area to west of the venue utilising the main entrance to the venue. (see Figure 7.10)
Rail	<p>Spectators will be advised to use the following DLR stations:</p> <ul style="list-style-type: none"> – Custom House (entry to the venue); and – Price Regent (exit from the venue): <p>DLR currently operate two-car trains to ExCeL. By 2012 this line will be enhanced to operate three-car trains. The duration of peak service provision will be extended and the frequency of trains increased. The details of this are still being considered. There are a number of rail options that provide connectivity between the DLR and other rail services, such as London Underground at Canning Town Station and National Rail Services at West Ham and Stratford Stations.</p>
River	There is no water-borne direct access to this venue.
Walk/cycle	<p>The venue is connected via Greenway route to Gallions Reach to the east, the Greenwich foot tunnel to the south and the elevated Greenway to the north. South of the venue is also National Cycle Network route 13. TfL Cycling Guides 7 and 8 show provision for cyclists adjacent to Albert Road and North Woolwich Road and north of ExCeL, recommended routes are mapped from Beckton, Plaistow and Canning Town and include some off-highway sections.</p> <p>A minimum of 200 cycle parking spaces will be provided for spectators at the venue.</p> <p>Spectators walking from the south can cross the river using the Woolwich foot tunnel or free ferry then follow the Capital Ring Strategic Walk to join the Greenway route at Gallions Reach. Pedestrians approaching from Silvertown can avoid the busy Connaught Bridge using the adjacent footbridge. From the north, those walking will need to cross the DLR line and can do so via a bridge west of Royal Victoria station or the over-pass at Custom House. Spectators arriving on the Tube will be encouraged to walk to ExCeL through Canning Town.</p>
Bus and coach	<p>Parking for approximately 40 – 50 coaches will be sought close to the venue. Spectators will then access the venue using the existing main entrance to ExCeL.</p> <p>It is likely that a shuttle bus operation will also be put in place from Canning Town station to augment the DLR service and provide resilience.</p> <p>The venue is adequately served by local bus services. Local buses service will be temporarily adjusted to support the Games and maintain local service. Some new bus infrastructure may need to be put in place to support any adjusted services.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be provided close to the venue.

Figure 7.13 (continued) **Summary of the transport strategy for ExCeL**

	Games transport provision
Park-and-ride	ExCeL will be served by strategic park-and-ride facilities (which will also serve the Olympic Park) located around the north east quadrant of the M25. The park-and-ride facility will provide the opportunity for spectators from areas outside the M25 to park their cars and use a shuttle bus service to travel to and from ExCeL.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Newham Council, TfL, the emergency services, and other stakeholders.
Accessible transport	The DLR network is promoted as providing step-free access across the entire network and at stations. The enhancement of the DLR Beckton branch line to a three-car network will include the installation of lifts at each DLR station. Blue Badge parking is a requirement and will be included as the venue design evolves and is finalised.

Figure 7.14 North Greenwich Arena

North Greenwich Arena provides a wide range of facilities, including a 23,000-seat arena. The venue hosts events including exhibitions, high-profile concerts, and the 2009 Artistic Gymnastics World Championships. North Greenwich Arena is located in the London Borough of Greenwich in south east London.	
Sport	Olympic Games Gymnastics (Trampoline and Artistic) and Basketball finals
	Paralympic Games Wheelchair Basketball
Venue capacity (gross)	Olympic Games Gymnastics – 16,500 Basketball – 20,000
	Paralympic Games Wheelchair Basketball – 6,000
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Olympic Games Fourteen days over Saturday 28 July to Saturday 11 August
	Paralympic Games Ten days over Thursday 30 August to Saturday 8 September
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Olympic Games Between two and four sessions
	Paralympic Games Three sessions
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Olympic Games Earliest session start time: 09:00 Latest session finish time: 00:00
	Paralympic Games Earliest session start time: 09:00 Latest session finish time: 00:00

More details for this venue can be found by visiting <http://www.london2012.com/venues/north-greenwich-arena-1.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

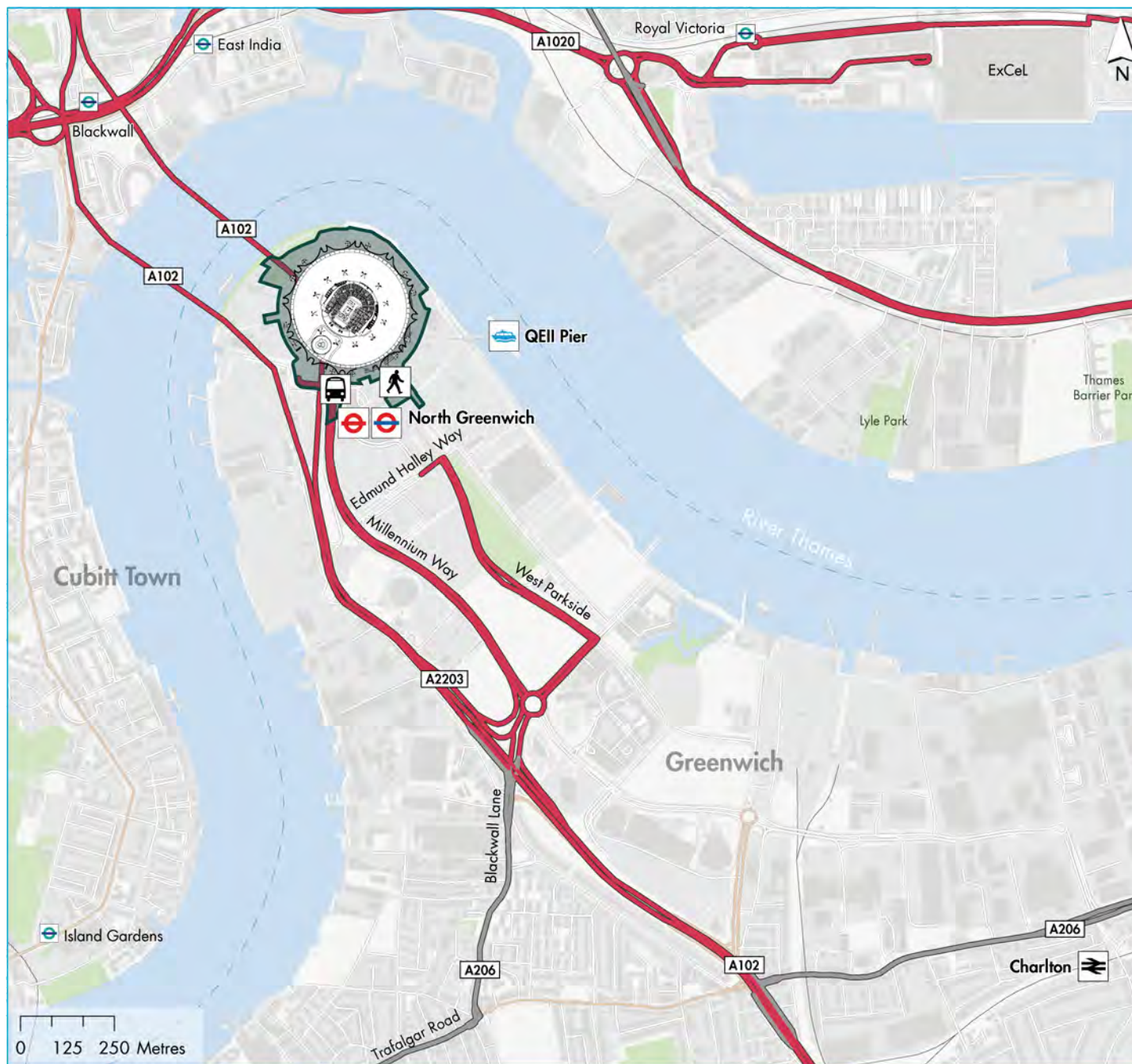
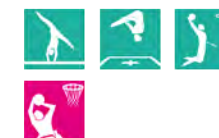


Figure 7.15
North Greenwich Arena



The key to sports pictograms can be found by folding out the back cover

- Competition venue boundary
- Vehicle access point
- Spectator access point
- National Rail station
- Docklands Light Railway station
- London Underground station
- River Services
- Core Olympic Route Network
- Alternative Olympic Route Network

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Figure 7.16 Initial estimate of mode split for spectator travel to North Greenwich Arena

Mode	Mode split for spectator trips	Number of spectators per session (based on gross capacity)
Rail	80%	16,000
Park-and-ride	0	0
Direct coach	5%	1,000
Local bus	8%	1,600
Walk	1%	200
Cycle	1%	200
River	5%	1,000
Total	100%	20,000

Figure 7.17 Indicative spectator arrival and departure profile (Day 2, based on gross capacity)

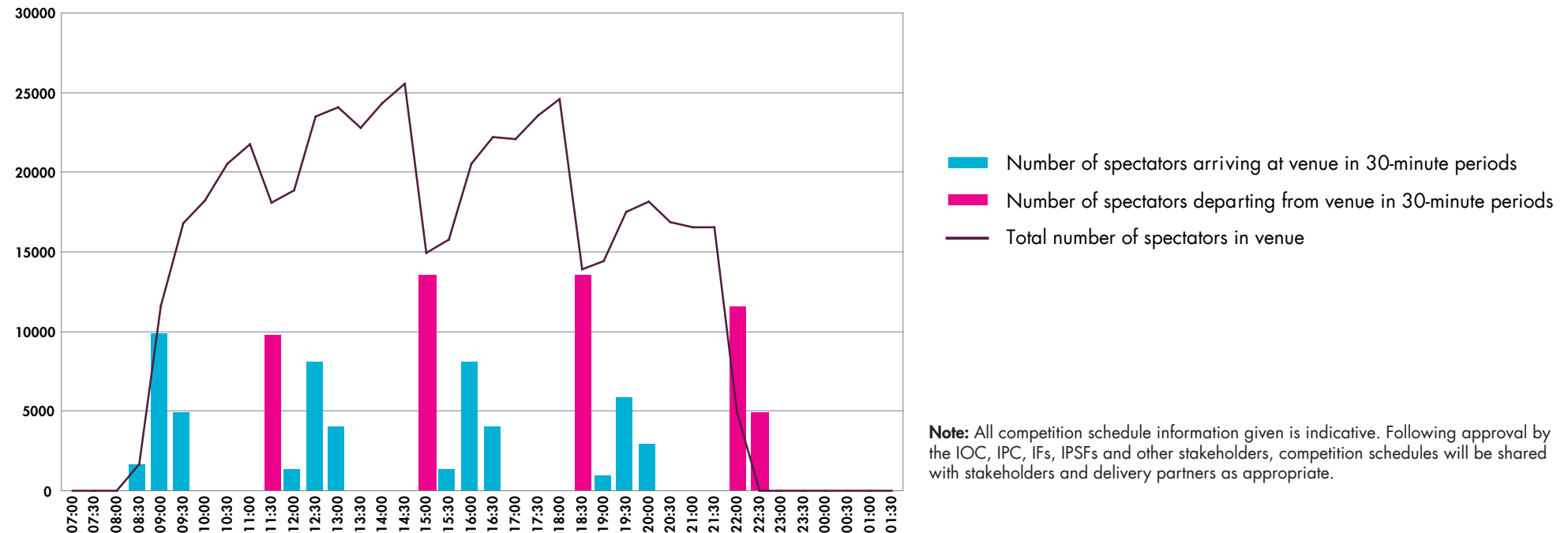


Figure 7.18 Summary of the transport strategy for North Greenwich Arena

	Games transport provision
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via West Parkside and Edmund Halley Way. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The main spectator access point will be via the large hard standing area adjacent to Edmund Halley Way.
Rail	The key rail options will be the Jubilee Line and a high capacity shuttle bus service to Charlton Station. The main mode of access for the majority of spectators will be through the Underground (Jubilee Line). The Jubilee Line provides access to Canary Wharf, London Bridge, Waterloo and Stratford Stations as well as the opportunity to interchange to all of the other London Underground lines. North Greenwich Station also provides good opportunities for interchange with bus services and taxis serving the Greenwich peninsula and beyond. North Greenwich Underground Station has been extensively used by people attending large events (such as concerts in the O2 Arena) since its completion.
River	<p>QEll pier is directly adjacent to North Greenwich Arena. Thames Clippers run a service from Central London (journey time 47 minutes from Waterloo) via Canary Wharf and Greenwich and The O2 Express service direct from Waterloo (30 minutes). A timetable with additional services to reflect the competition schedule is being developed for the Games to supplement existing services. There is also a shuttle service between QEll and Woolwich Piers (7 minutes).</p> <p>North Greenwich Arena frequently hosts events of a similar magnitude to the London 2012 Games and the river services have demonstrated their capability in offering an attractive transport option.</p>
Walk/cycle	<p>The Thames Path National Trail runs north of the venue and connects to the south-east London Green Chain at the Thames Barrier. The Thames path is one of the Greenway routes. Potential severances to walkers accessing the venue are the Thames and the A102. The Greenwich foot tunnel is closest pedestrian crossing point of the river to North Greenwich Arena and there are multiple crossing opportunities both below and over the A102 dual carriageway.</p> <p>Around 200 temporary cycle parking spaces will be provided close to the spectator entrance during the Games.</p>
Bus and coach	<p>North Greenwich bus station is currently served by seven bus routes including the 24-hour services (Routes 108, 472, and 118). Key destinations include Stratford, Charlton, Greenwich, Lewisham, Woolwich, Eltham, North Kent and Central London. A new express bus service between North Greenwich and Eltham was introduced in January 2009 (132). It is anticipated that spectators travelling from within the Borough and other areas to the south will use local buses to travel to the venue.</p> <p>The existing coach park will be used for 'drop off' and loading as this will not interfere with the operation of the bus station. The coach park has capacity for around 70 coaches so has sufficient space to cater for this transport provision.</p> <p>Existing bus stop and bus lane infrastructure will be used for local bus services accessing the venue. Some new infrastructure, such as additional bus stands, may be required to maintain levels of bus services in the area.</p>
Blue Badge parking	Blue Badge parking will be accommodated in existing car parks close to the venue.
Park-and-ride	Park-and-ride facilities are not proposed for this venue.

Figure 7.18 (continued) **Summary of the transport strategy for North Greenwich Arena**

	Games transport provision
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Greenwich Council, TfL, the emergency services, and other stakeholders.
Accessible transport	North Greenwich Station is fully accessible. The Jubilee Line is one of the most accessible lines on the Underground.

Figure 7.19 Greenwich Park

<p>Greenwich Park covers 74 hectares and is part of Maritime Greenwich, a World Heritage site that also includes the National Maritime Museum, the Old Royal Naval College, the Royal Observatory and the Prime Meridian Line. Greenwich Park Arena is intended to have a capacity of 23,000. Located in the London Borough of Greenwich, the venue is 10km from the Olympic Park.</p>	
Sport	<p>Olympic Games Equestrian – Eventing, Dressage, Jumping, Modern Pentathlon</p>
	<p>Paralympic Games Equestrian – Dressage</p>
Venue location	<p>Dressage and jumping will be held in a temporary arena built in the North of Greenwich Park. The Cross Country (one day) and modern pentathlon combined events will be staged in the inner area of Greenwich Park.</p>
Venue capacity (gross)	<p>The Greenwich Park equestrian arena will have a gross seating capacity of approximately 23,000 seats. However, on Cross Country competition day approximately 75,000 spectators are expected. The arena will host some spectators on Cross Country competition day.</p>
<p>Competition periods (Indicative only, daily schedule will be finalised late 2010)</p>	<p>Olympic Games Thirteen days from Sunday 29 July to Sunday 12 August</p>
	<p>Paralympic Games Five days from Friday 31 August to Tuesday 4 September</p>
<p>Number of competitions sessions per day (Indicative only, session schedule will be finalised late 2010)</p>	<p>Olympic Games Between one and two sessions per day</p>
	<p>Paralympic Games Five days over Friday 31 August to Tuesday 4 September, 2 sessions (on all days)</p>
<p>Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)</p>	<p>Olympic Games Earliest session start time: 09:00 Latest session finish time: 18:00</p>
	<p>Paralympic Games Earliest session start time: 10:00 Latest session finish time: 19:30</p>

Further details for this venue can be found by visiting <http://www.london2012.com/venues/greenwich-park.php>









Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.



Figure 7.20
Greenwich Park



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  Docklands Light Railway station
-  River services
-  Core Olympic Route Network
-  Alternative Olympic Route Network

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Figure 7.21 Initial estimate of mode split for spectator travel to Greenwich Park

Mode	Days with arena-only events		Cross Country Day (Day 3)	
	Mode split for spectator trips	Number of arena spectators per day (gross)	Mode split for spectator trips	Number of arena and Cross Country spectators per day (gross)
Rail	80%	16,000	63%	47,000
Direct coach	5%	1,000	10%	7,500
Local buses	8%	1,600	8%	6,000
Walk	1%	200	1%	750
Cycle	1%	200	1%	750
River	5%	1000	7%	5,500
Park-and-ride	0%	0	10%	7,500
Total	100%	20,000	100%	75,000

Figure 7.22 Spectator arrival and departure profile (Day 2, based on gross seated spectator capacity)

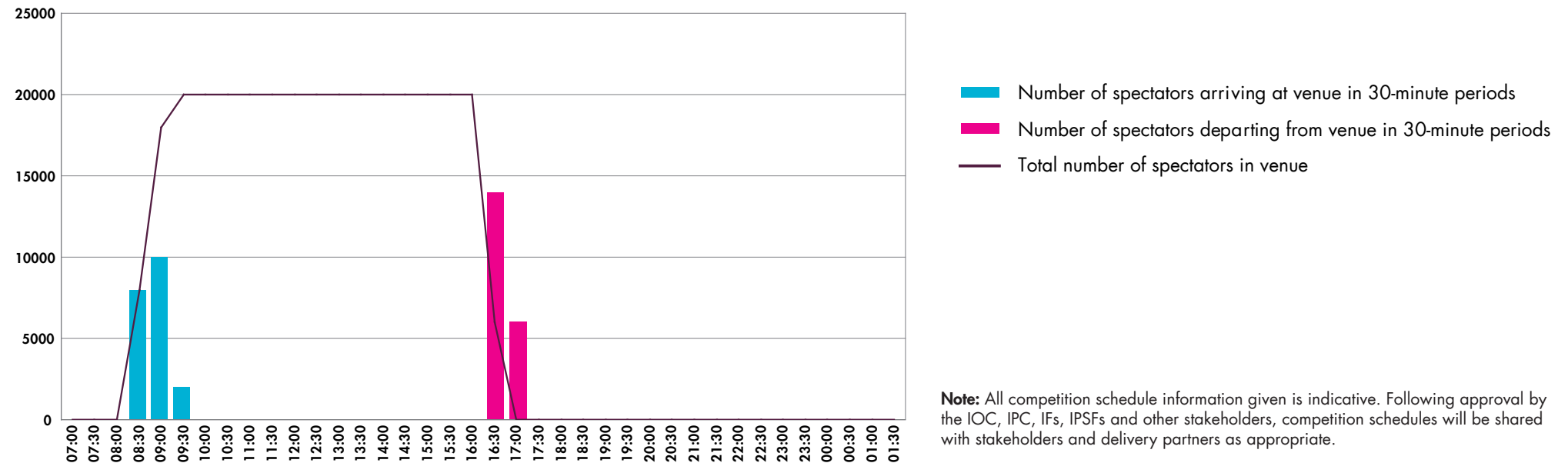


Figure 7.23 Summary of the transport strategy for Greenwich Park

Games time transport provision	
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Shooters Hill Road, Maze Hill, Park Vista and Park Row. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Rail	<p>Spectators will be advised to use the following stations:</p> <ul style="list-style-type: none"> – Greenwich (DLR and National Rail); – Blackheath (National Rail); and – Cutty Sark (DLR) – Maze Hill (National Rail) <p>DLR services currently operate two-car trains to Greenwich. By 2012 this line will be enhanced to operate three-car trains. The duration of peak service provision will be extended and the frequency of trains increased. The details of this are still being considered.</p>
River	Greenwich Pier is less than 500m from the Park and is used by Thames Clippers, City Cruises and Thames River Services therefore offering a range of onward destinations, journey speeds and on-board facilities to spectators.
Walk/cycle	<p>The Greenwich foot tunnel provides a pedestrian connection from the Park to the Docklands and the section of the Thames Path National Trail that runs along the northern bank. South of the river walkers can follow the Thames Path eastwards to Woolwich or west to Tower Bridge, Southwark and beyond.</p> <p>National Cycle Routes 1, 4 and 21 are within an 8-minute cycle of Greenwich Park and TfL London Cycling Guide 7 recommends other roads in the vicinity that are suitable for cycling. It is anticipated that around 500 cycle parking spaces will be required. These will be split over a number of locations with cyclists being encouraged to use existing facilities in the area including at the museums and university. Additional temporary stands will be provided close to the spectator entrances.</p>
Bus and coach	<p>Greenwich Park is currently well served by a number of local bus services. Key destinations include North Greenwich, Plumstead, Woolwich, Catford, Russell Square and Queen Elizabeth Hospital.</p> <p>Parking for spectator coaches will be sought close to the venue. It is currently envisaged that direct coaches for spectators will set down, pick up, and park in designated parking bays along Charlton way. Separate arrangements will be in place on the Cross Country day.</p> <p>Local bus services will be temporarily be adjusted to support the Games, while maintaining the local service. Some new bus infrastructure may be required to maintain the level of bus services in the area and to local destinations, such as North Greenwich Station and the Queen Elizabeth Hospital.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be provided close to the venue.
Park-and-ride	Park-and-ride facilities will not be provided for this venue.

Figure 7.23 (continued) **Summary of the transport strategy for the Greenwich Park**

Games time transport provision	
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Greenwich Council, TfL, the emergency services, and other stakeholders.
Accessible transport	<p>The platform and stations at Greenwich, Cutty Sark and Maze Hill are fully accessible. Further work is necessary to establish the extent of other accessible services, such as Dial-a-Ride and Community Transport services within the Greenwich area.</p> <p>Blue Badge parking is a requirement and will be included as the venue design evolves and is finalised.</p> <p>All buses and buses are low floor. Drop off provision will be made for taxis.</p>

Figure 7.24 Royal Artillery Barracks

The ODA plans to construct a temporary Shooting venue on the edge of Woolwich Common to the south of the existing Royal Artillery Barracks, which is owned and operated by the Ministry of Defence. The venue is in the London Borough of Greenwich.	
Sport	Olympic Games Shooting
	Paralympic Games Archery, Shooting
Venue location	The competition area is located either side of Ha Ha Road on Woolwich Common.
Venue capacity (gross)	Olympic Games 7,500
	Paralympic Games Archery – 2,500 Shooting – 5,000
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Olympic Games Nine days over Saturday 28 July to Sunday 5 August
	Paralympic Games Nine days over Thursday 30 August to Friday 7 September
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Olympic Games One
	Paralympic Games One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Olympic Games Earliest session start time: 10:00 Latest session finish time: 13:40
	Paralympic Games Earliest session start time: tbc Latest session finish time: tbc

More details for this venue can be found by visiting <http://www.london2012.com/venues/the-royal-artillery-barracks.php>











Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.



Figure 7.25
Royal Artillery Barracks



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  River services
-  Docklands Light Railway station
-  Core Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators
-  Shuttle bus route for spectators

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Figure 7.26 Initial estimate of mode split for spectator travel to Royal Artillery Barracks

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	80%	6,000
Park-and-ride	0	0
Direct coach	5%	375
Local Bus	8%	600
Walk	1%	75
Cycle	1%	75
River	5%	375
Total	100%	7,500

Figure 7.27 Indicative spectator arrival and departure profile (Day 3, based on gross capacity)

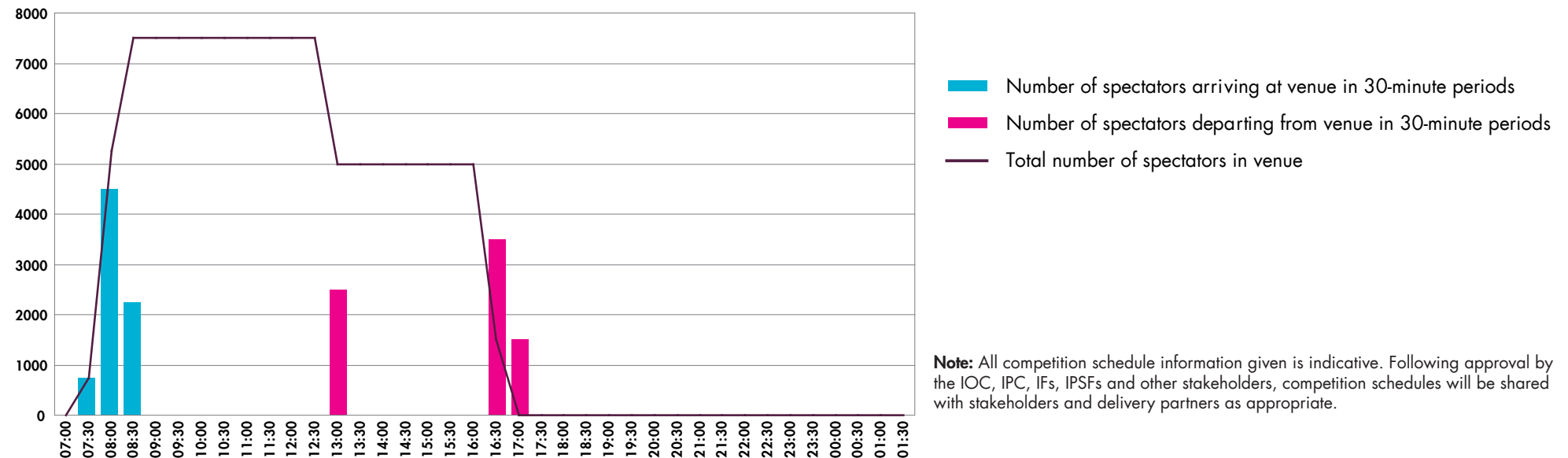


Figure 7.28 Summary of the transport strategy for Royal Artillery Barracks

Games transport provision	
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Charlton Park Road. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The main spectator access point will be on the east side of the venue off the Ha-Ha Road and Grand Depot Road Junction (see Figure 7.25).
Rail	Woolwich Arsenal Station is the main interchange in the vicinity of the Royal Artillery Barracks, including with the 2.6km DLR extension which opened in January 2009 and terminates adjacent to Woolwich Arsenal mainline railway station.
River	<p>Thames Clippers run services between Woolwich Pier (1.7km from the venue) and Greenwich where a connecting service continues to Central London. Royal Artillery Barracks is approximately a 20-minute walk from the Woolwich Pier, alternatively spectators could take the shuttle bus provided.</p> <p>The Woolwich Free Ferry, which facilitates crossing of the Thames between North Woolwich and Woolwich at no cost, including for pedestrians and cyclists, is 1.5km along the A205 from the spectator entrance.</p>
Walk/cycle	<p>Royal Artillery Barracks can be accessed via routes that are part of London's Strategic Walks Network. Sections 4 and 5 of the Green Chain pass south of the venue and the temporary closure of Ha Ha Road as a result of Games operations will require a signed diversion for a short part of section 5. The Capital Ring from Woolwich foot tunnel to Falconwood Station also crosses Woolwich Common south of Royal Artillery Barracks.</p> <p>National Cycle Network route 1 runs alongside the Thames to the north of the venue and London Cycle Network route 75 on the A205 to the east. TfL London cycling guides 7 and 8 indicate a number of roads, suitable for cycling in the vicinity of Royal Artillery Barracks. These recommendations include Circular Way, Ha Ha Road and Repository Road, which will be subject to closures associated with the set-up and running of the Games. East-west and north-south diversions have been identified and will be communicated in advance onsite and online.</p> <p>Around 200 cycle parking spaces are planned on an area of Woolwich Common close to the spectator entrance.</p>
Bus and coach	<p>Parking for approximately 20 spectator coaches will be sought close to the venue.</p> <p>The venue is well served by local bus services. Local bus services will be temporarily adjusted to support the Games whilst maintaining the local service. Some new bus infrastructure may be required to maintain the level of bus services in the area and to local destinations, such as the Queen Elizabeth Hospital.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be planned close to the venue.
Park-and-ride	There are no park-and-ride facilities provided for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Greenwich Council, TfL, the emergency services, and other stakeholders.

Figure 7.28 (continued) **Summary of the transport strategy for Royal Artillery Barracks**

Games transport provision	
Accessible transport	<p>The platforms at Woolwich Arsenal Station and the station itself is fully accessible. Further work is necessary to establish the extent to which services, such as Dial-a-Ride and Community Transport, within the Woolwich area can contribute to the transport strategy for this venue.</p> <p>Blue Badge parking is a requirement and has been included within the venue designs.</p>

Figure 7.29 Earls Court

<p>Earls Court Exhibition Centre is one of the country's largest indoor arena and concert venues. The venue comprises two arenas: Earls Court one has a maximum capacity of 20,260, while Earls Court Two can hold up to 10,000 people. Earls Court Exhibition Centre is located on the boundary of the London Boroughs of Kensington and Chelsea, and Hammersmith and Fulham.</p>	
Sport	Olympic Games Volleyball
Venue location	The events will be held in Earls Court One arena with 'back of house' support located in Earls Court Two. Generally, a one-way circulatory system will operate for both Olympic Family and spectator movements for access and egress.
Venue capacity (gross)	Gross ticket capacity for the Volleyball competitions is 15,000.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Sixteen days over Saturday 28th July to Sunday 12th August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Between one and three
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 09:00 Latest session finish time: 23:00

More details for this venue can be found by visiting <http://www.london2012.com/venues/earls-court.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

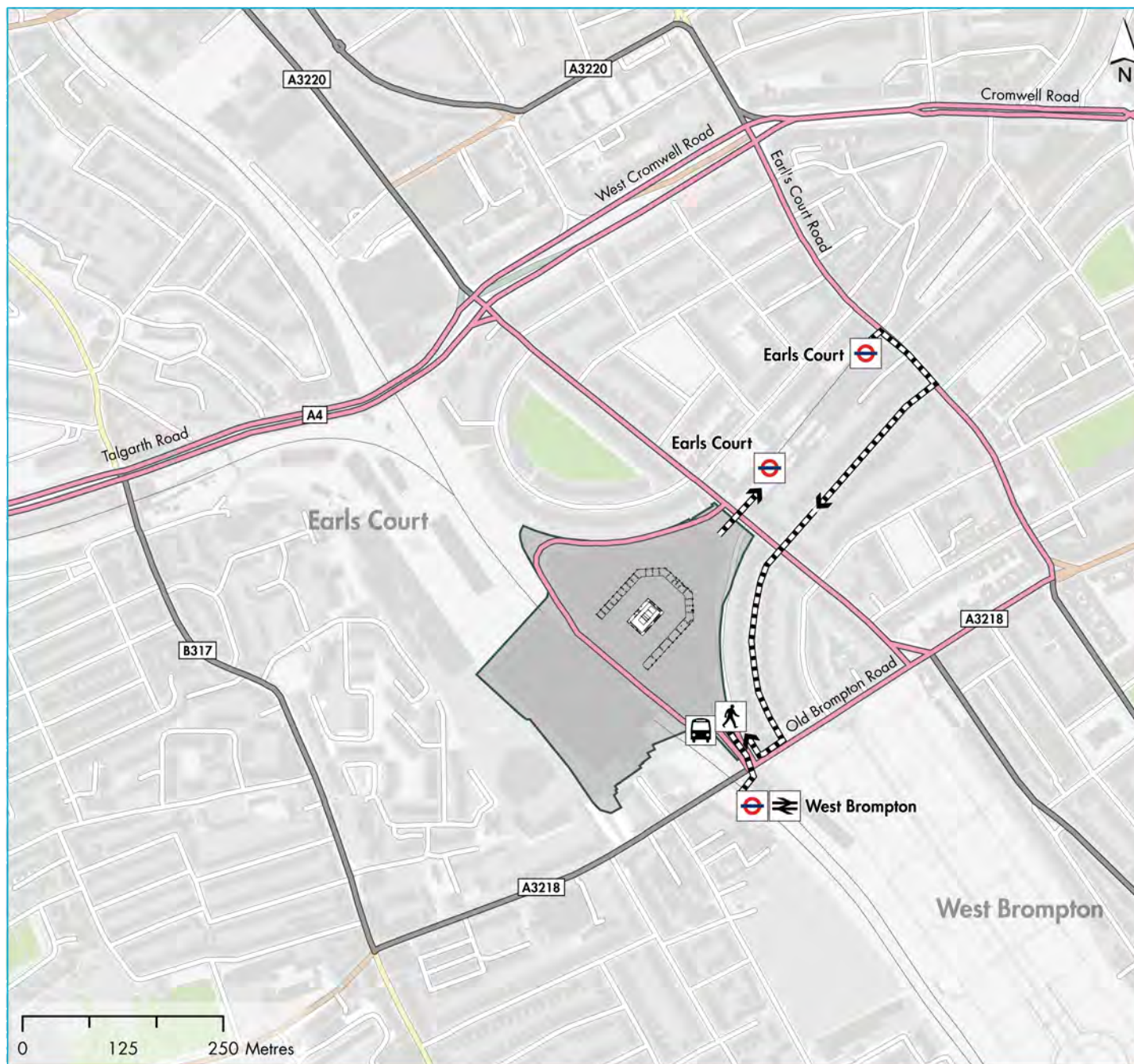










Figure 7.30
Earls Court



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  London Underground station
-  Venue Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators

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Figure 7.31 Initial estimate of mode split for spectator travel to Earls Court

Mode	Mode split for spectator trips	Number of spectators per session (based on gross capacity)
Rail	82%	12,300
Direct coach services	8%	1,200
Local bus	8%	1,200
Walk	1%	150
Cycle	1%	150
River	0%	0
Total	100%	15,000

Figure 7.32 Indicative spectator arrival and departure profile (Day 3, based on gross capacity)

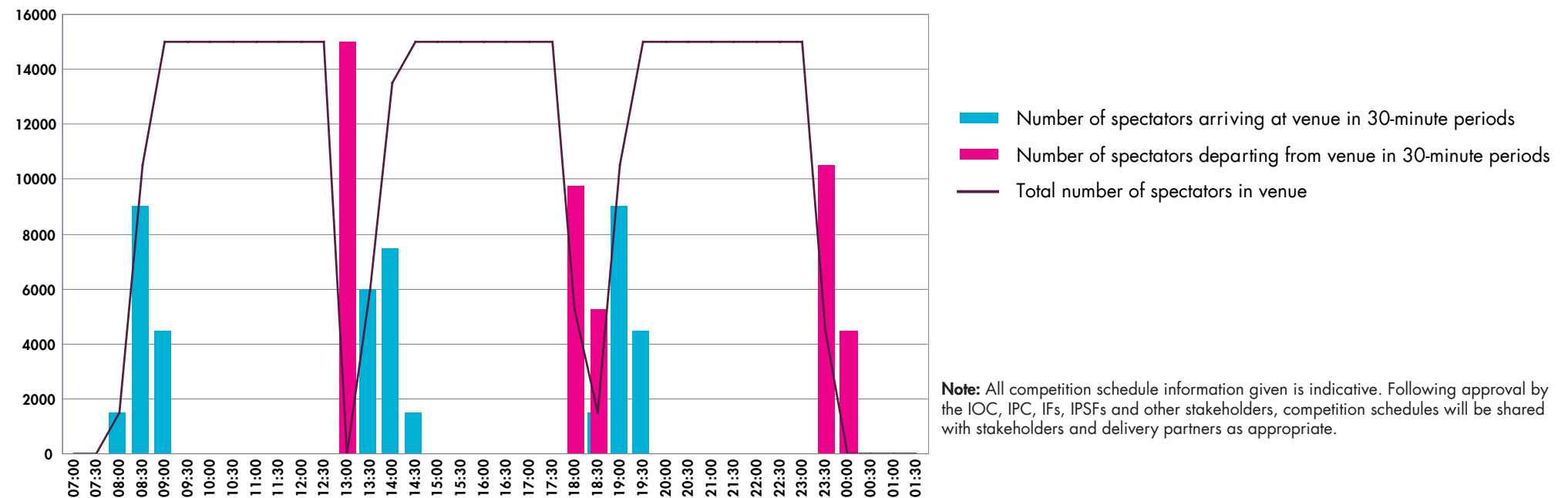


Figure 7.33 Summary of the transport strategy for Earls Court

	Games transport provision
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via Old Brompton Road. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	Spectator access to the venue will be via the Old Brompton Road entrance. Egress will be via the Warwick Road exit towards Earls Court station.
Rail	Earls Court Station will be the designated venue station. West Brompton Station will be the secondary station for National Rail services on the West London Line route. London Underground will operate enhanced services throughout the Olympic period. National Rail services will be strengthened and enhanced where required.
River	There is no water-borne access to this venue.
Walk/cycle	Limited cycle parking currently exists and provision of additional facilities will be explored when the venue configuration has been finalised.
Bus and coach	<p>The venue is well served by local bus routes. Northbound buses serve Warwick Road and southbound buses use Earls Court Road, both part of the Earls Court one-way system and both roads are part of the ORN.</p> <p>There are existing coach set-down and pick-up facilities in the area. There are existing coach facilities in the immediate vicinity of the venue. Exact arrangements will be confirmed when the venue layout is finalised.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be available close to the venue.
Park-and-ride	Park-and-ride facilities are not proposed for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with the Royal Borough of Kensington and Chelsea, the London Borough of Hammersmith and Fulham, TfL, the emergency services, and other stakeholders.
Accessible transport	All London Buses are fully accessible. Earls Court Station is fully step-free and West Brompton Station is step-free to three of the four platforms. The fourth is the platform from the Earls Court direction.

Figure 7.34 Horse Guards Parade

Horse Guards Parade is a large parade ground and is the site for the annual ceremony of Trooping the Colour, as well as other reviews, parades and ceremonies. One temporary competitive court will be installed, with a capacity of 15,000. The venue is located off Whitehall within the City of Westminster.	
Sport	Olympic Games Beach Volleyball
Venue location	The Beach Volleyball arena will be constructed as a temporary venue on the parade ground.
Venue capacity (gross)	15,000
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Twelve days over Saturday 28 July to Wednesday 12 August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	One to three sessions per day
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 09:00 Latest session finish time: 23:50

Further details for this venue can be found by visiting <http://www.london2012.com/venues/horse-guards-parade.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

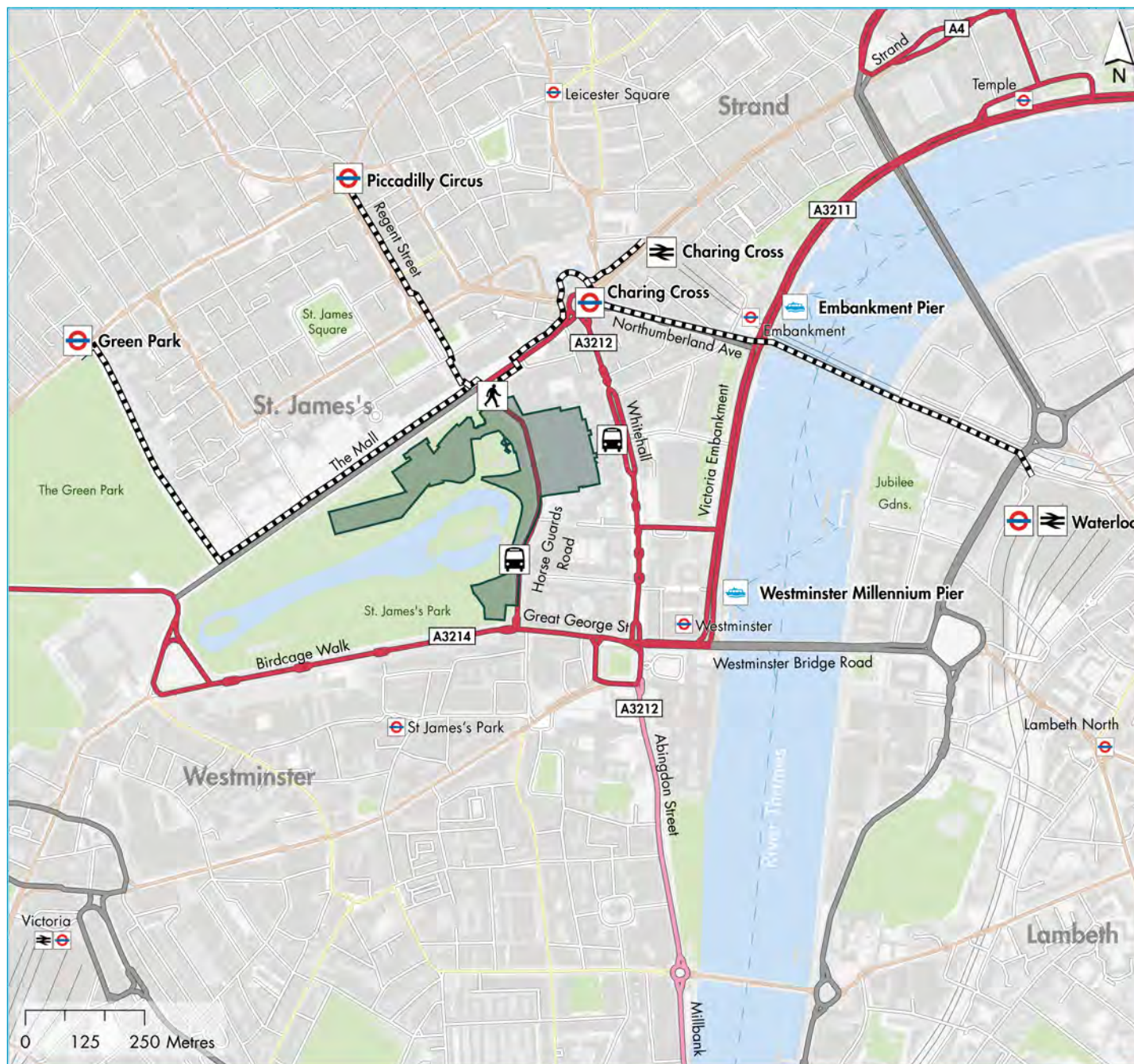












Figure 7.35
Horse Guards Parade



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  London Underground station
-  River Services
-  Core Olympic Route Network
-  Venue Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators

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Figure 7.36 Initial estimate of mode split for spectator travel to Horse Guards Parade

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	82%	12,300
Direct coach services	5%	750
Local bus	5%	750
Walk	3%	450
Cycle	2%	300
Taxi	1%	150
River	2%	300
Total	100%	15,000

Figure 7.37 Indicative spectator arrival and departure profile (Day 3, based on gross capacity)

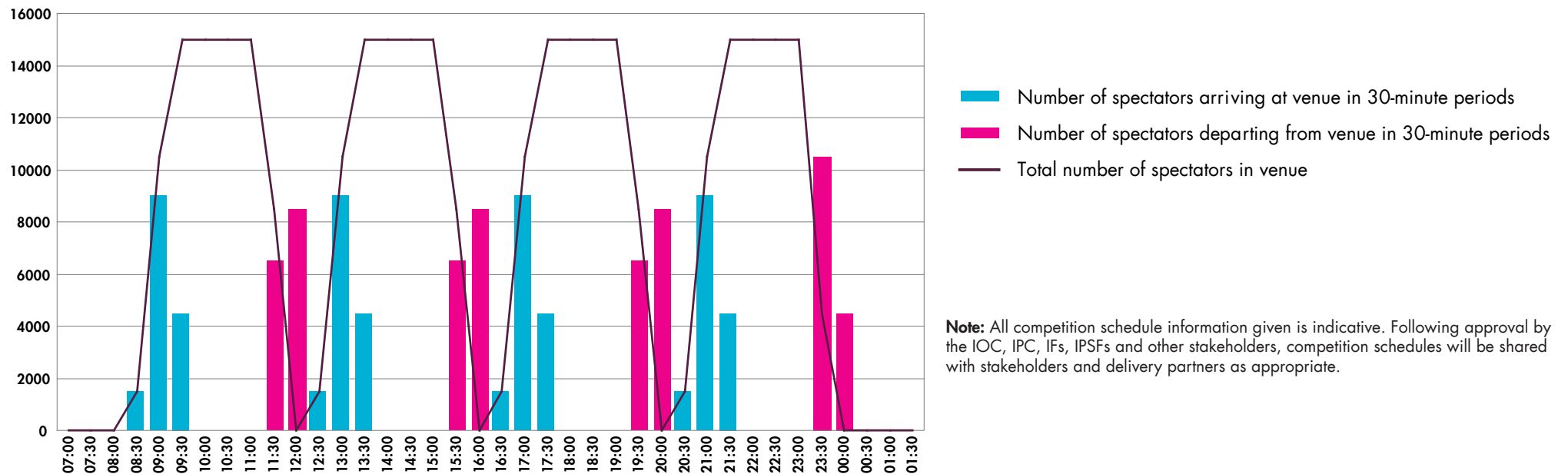


Figure 7.38 Summary of the transport strategy for Horse Guards Parade

Games transport provision	
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via Birdcage Walk, Horse Guards Road, Victoria Embankment and Whitehall. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	Spectators will approach the venue from the north via The Mall.
Rail	<p>The location of the venue offers good accessibility with respect to public transport by Underground. There are 12 stations in the area that are within a 1.5km catchment (approximately 20-minute walk) of the spectator entrance to the venue. These stations are:</p> <ul style="list-style-type: none"> – Charing Cross (0.5km from the venue) – Embankment (0.6km) – Piccadilly Circus (0.7km) – Leicester Square (0.7km) – St. James's Park (1km) – Covent Garden (1km) – Westminster (1.1km) – Green Park (1.2km) – Tottenham Court Road (1.4km) – Oxford Circus (1.4km) – Temple (1.4km) – Victoria (1.5km) <p>The main overground stations for the venue are Charing Cross and Waterloo.</p> <p>It is proposed that the following three London Underground stations are promoted as 'venue stations' for the Olympic Games;</p> <ul style="list-style-type: none"> – Charing Cross – Green Park – Piccadilly Circus <p>These stations are large enough to absorb the demand generated by this venue, although it is likely that additional operational arrangements will be required in response to total Games demand in the central London area.</p>
River	<p>Embankment Pier lies 800m to the northeast of the venue. This pier is operated by TfL London River Services and used by the Thames Clipper fleet and Crown River Cruises.</p> <p>Westminster Millennium Pier lies approximately 1.2km to the southwest of the venue. This pier is operated by TfL London River Services and used by Thames River Services, City Cruises and Crown River Cruises.</p> <p>Both City Cruises and Thames River Service run a service between Westminster Millennium Pier and Greenwich Pier. Crown River Cruises operate a service between Westminster Millennium Pier and St Katherine's Pier.</p>

Figure 7.38 (continued) **Summary of the transport strategy for Horse Guards Parade**

Games transport provision	
Walk/cycle	<p>There is an extensive network of connecting cycle routes around Horse Guards Parade. These routes are both on road and off road. The London Cycle Network (LCN) and LCN+ runs along many strategic roads surrounding the venue including The Mall, Birdcage Walk and Constitution Hill that directly serve the venue.</p> <p>Cycle stands are provided in a number of on street locations surrounding the venue, including Charlton House Terrace, St James's Square, St James's Street and within Hyde Park. Cycle parking is also provided at a number of the surrounding train stations, such as Charing Cross, Victoria, Waterloo and Piccadilly Circus.</p> <p>Temporary cycle parking for approximately 300 cycles will also be provided close to the spectator entrance.</p>
Bus and coach	<p>The venue is well served by TfL bus routes with bus corridors along Whitehall, Parliament Square and Charing Cross all in close proximity to the venue. During peak departure times, it may be necessary to increase the capacity of buses serving the site and possible route alterations to meet operational demands.</p> <p>A number of existing bus routes currently use Whitehall and Parliament Street. It is likely that a number of these services may have to be diverted from Whitehall to other roads depending on the Games Family load zone(s) and security arrangements along this section of road.</p> <p>It is anticipated that direct coach services will play a significant role in transporting spectators to and from this venue. It is likely that direct coaches will be of particular relevance for travel by sports clubs and organisations with an interest in the varying sports to be held at the venue, from towns and cities across the UK and possibly from some parts of mainland Europe.</p> <p>Approximately 12 coaches are expected per session. The planned drop off facility for spectators using Direct Coach services to the venue is Victoria Station, from where spectators would then walk to the venue.</p>
Blue Badge	Blue Badge parking provision of an estimated 75 spaces for the venue is proposed. The Blue Badge parking location is to be confirmed.
Park-and-ride	Park-and-ride facilities are not proposed for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Westminster City Council, TfL, the emergency services, and other stakeholders.
Accessible transport	<p>Charing Cross Underground is not step-free although Charing Cross Overground provides step-free access from street level to platform. Green Park will have three new lifts installed to make it step free by 2012. Piccadilly Circus is not step-free. At Waterloo, the Northern and Jubilee Line platforms are step free, the Waterloo & City interchange only.</p> <p>Some direct coach services arriving at the venue will include mobility impaired persons who are likely to require a connecting accessible service to transfer them to the spectator entrance such a small accessible shuttle. This will need to be incorporated into the detailed transport operations plans for the venue.</p> <p>Blue Badge parking close to the venue is also planned.</p>

Figure 7.39 Hyde Park

Hyde Park stretches over 142 hectares and is used for a wide range of events, from charity fundraisers, to large scale concerts and film shoots. Hyde Park is located in the City of Westminster, in central London.	
Sport	Olympic Games Triathlon, Open Water Swim
Venue location	A temporary venue will be constructed in Hyde Park for the Games, with swimming taking place in The Serpentine.
Venue Capacity (Gross)	3,000 (seated). In addition substantial crowds are expected to line the Triathlon's running and cycling routes. These spectators will be unticketed.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	4 days of competition over Tuesday 7 to Saturday 11 August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 10:00 Latest session finish time: 12:45

Futher details for this venue can be found by visiting <http://www.london2012.com/venues/hyde-park.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

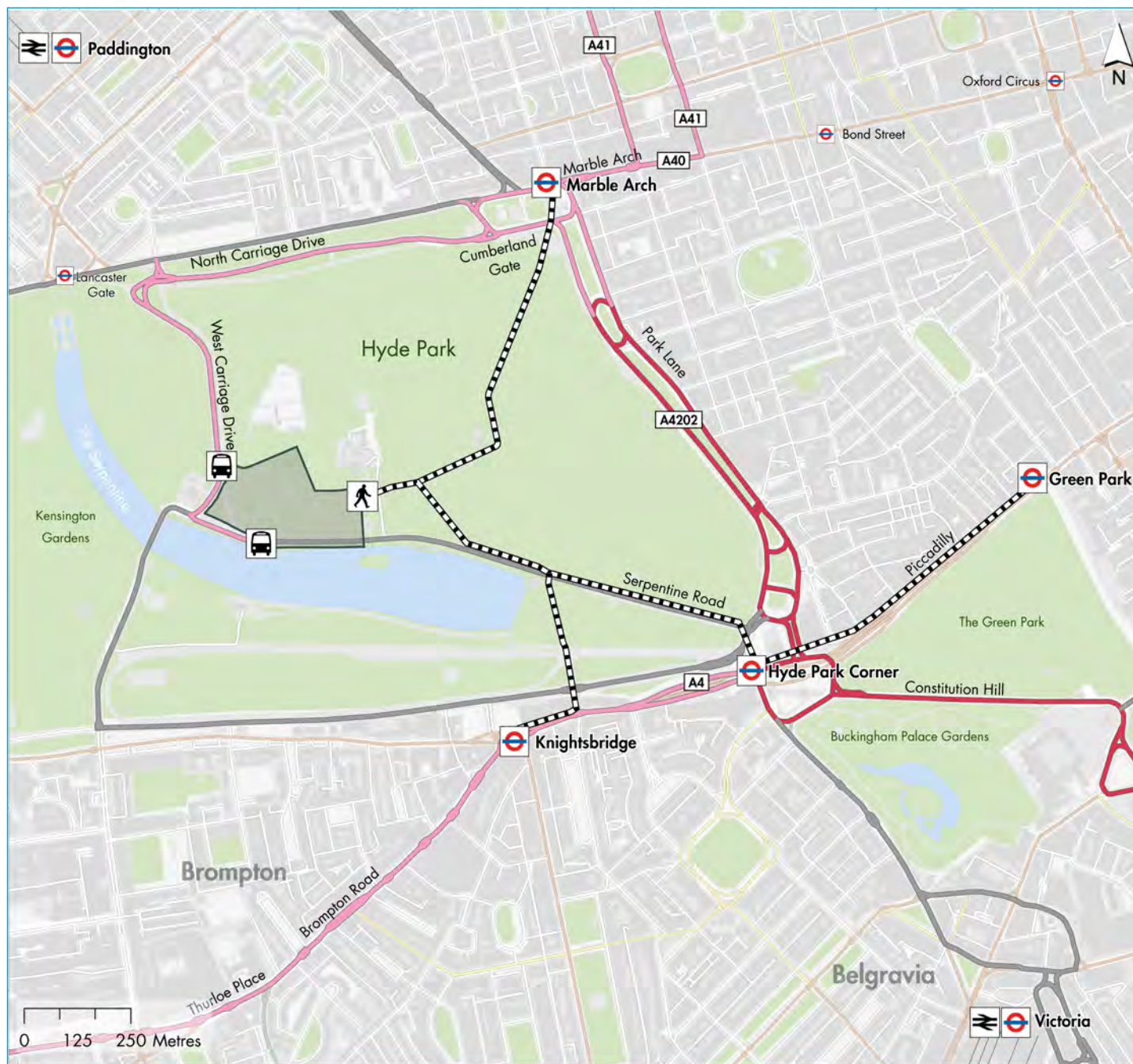











Figure 7.40
Hyde Park



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  London Underground station
-  Venue Olympic Route Network
-  Core Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators

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Figure 7.41 Initial estimate of mode split for spectator travel to Hyde Park

Mode	Mode split for spectator trips	Number of spectators per session (based on gross seating capacity only)
Rail	82%	2,460
Park-and-ride/park-and-walk	0%	0
Direct coach	5%	150
Local bus	5%	150
Walk	3%	90
Cycle	2%	60
River	1%	30
Taxi	2%	60
Total	100%	3,000*

*Substantial numbers of (unticketed) spectators are also expected to line the running and cycle routes for the Triathlon events

Figure 7.42 Indicative spectator arrival and departure profile (Day 11, based on gross seated spectator capacity)

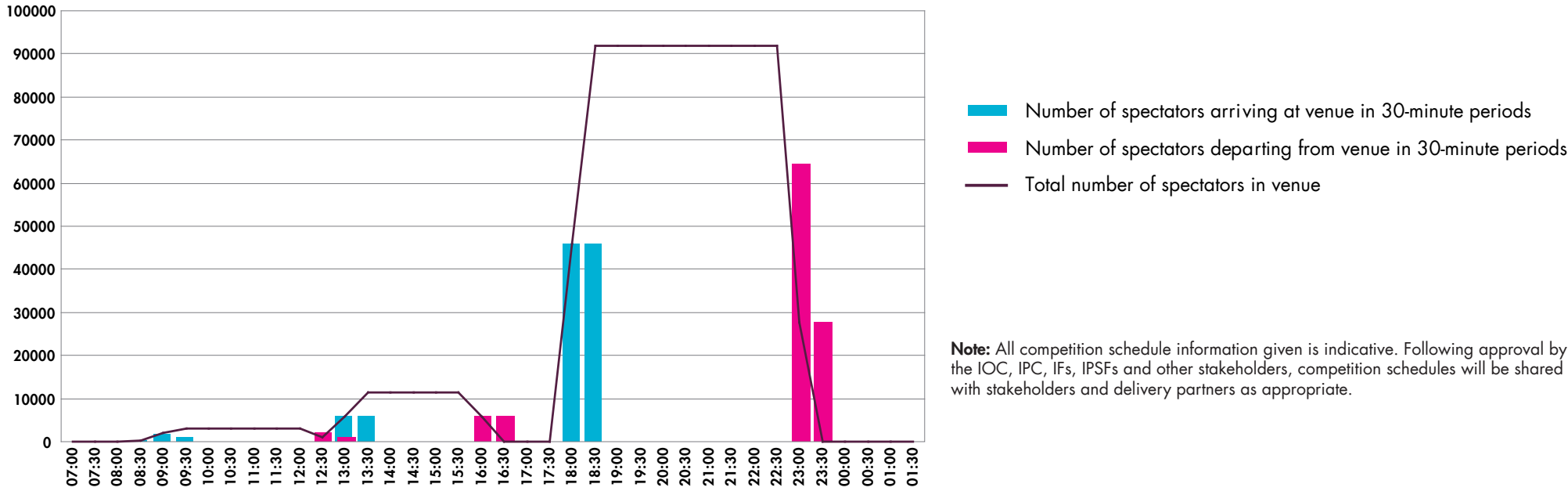


Figure 7.43 Summary of the transport strategy for Hyde Park

Games transport provision	
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Park Lane, North Carriage Drive and West Carriage Drive. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The main spectator access will be to the north of the venue through Hyde Park (see Figure 7.40)
Rail	<p>The following three stations will be the 'venue' stations:</p> <ul style="list-style-type: none"> – Green Park (Underground Station); – Hyde Park Corner (Underground Station) – Marble Arch (Underground Station) <p>Three other stations are in close proximity to the venue:</p> <ul style="list-style-type: none"> – Victoria (Mainline Station) – Paddington (Mainline Station) – Knightsbridge (Underground Station)
River	There is no water-borne access to this venue.
Walk/cycle	<p>There is a fairly extensive provision for cyclists around Hyde Park. The National Cycle Network runs near this venue. There are also a number of London Cycle Network routes in the area. These routes are mostly on road and follow strategic roads in area. The roads within Hyde Park can also be cycled on.</p> <p>Secure temporary cycle parking for approximately 150 cycles will be provided close to the venue.</p>
Bus and coach	<p>A number of existing local bus services run near this venue.</p> <p>Parking will be sought for spectator coaches close to the venue. It is currently envisaged that direct coach services will drop off and set down at Victoria Coach Station. Spectators will then walk to the venue.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be provided close to the venue.
Park-and-ride	Park-and-ride facilities will not be provided for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure local residents and businesses can continue to operate alongside the Games-related activity. These plans will be developed in conjunction with Westminster City Council, TfL, the emergency services and other stakeholders.
Accessible transport	<p>The main accessible venue station for the London Underground service is Green Park. However, given the distance from the venue, it is likely that some type of mobility shuttle service between the station and the venue will be required.</p> <p>Further work is necessary to establish the extent of accessible bus services (Dial-a-Ride, Community Transport Services) within the Westminster area, and the extent to which they are likely to be utilised by local people accessing the venue.</p> <p>The current working assumption is that the Blue Badge parking provision for the venue will be provided within Hyde Park.</p> <p>Some direct coach services arriving at the venue will include disabled people who are likely to require a connecting accessible service to transfer them to the spectator entrance. This shuttle service will be incorporated into the detailed transport operations plans for the venue.</p>

Figure 7.44 Lord's Cricket Ground

Lord's Cricket Ground is the home of Middlesex Cricket Club, the England and Wales Cricket Board and the European Cricket Council. The venue frequently hosts Test matches and one-day internationals. Lord's has a capacity of 32,000 for major cricket matches and is located in St. John's Wood in the City of Westminster.	
Sport	Olympic Games Archery
Venue location	The competition arena will be located on the main playing area and the warm up facilities will be located in the Nursery Ground.
Venue capacity (gross)	Gross venue capacity for the Archery events will be 6,500. This compares to the venue's maximum capacity of 32,000 for major cricket matches.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Seven consecutive days from Monday 30 July to Sunday 5 August.
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Two
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 08:30 Latest session finish time: 18:30

Further details for this venue can be found by visiting <http://www.london2012.com/venues/lord-s-cricket-ground.php>









Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.



Figure 7.45
Lord's Cricket Ground



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  London Underground station
-  Venue Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators

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Figure 7.46 Initial estimate of mode split for spectator travel to Lord's Cricket Ground

Mode	Mode split for spectator trips	Number of spectators per session (based on gross capacity)
Rail	82%	5,330
Direct coach	8%	520
Local bus	8%	520
Walk	1%	65
Cycle	1%	65
River	0%	0
Total	100%	6,500

Figure 7.47 Spectator arrival and departure profile (Day 3, based on gross capacity)

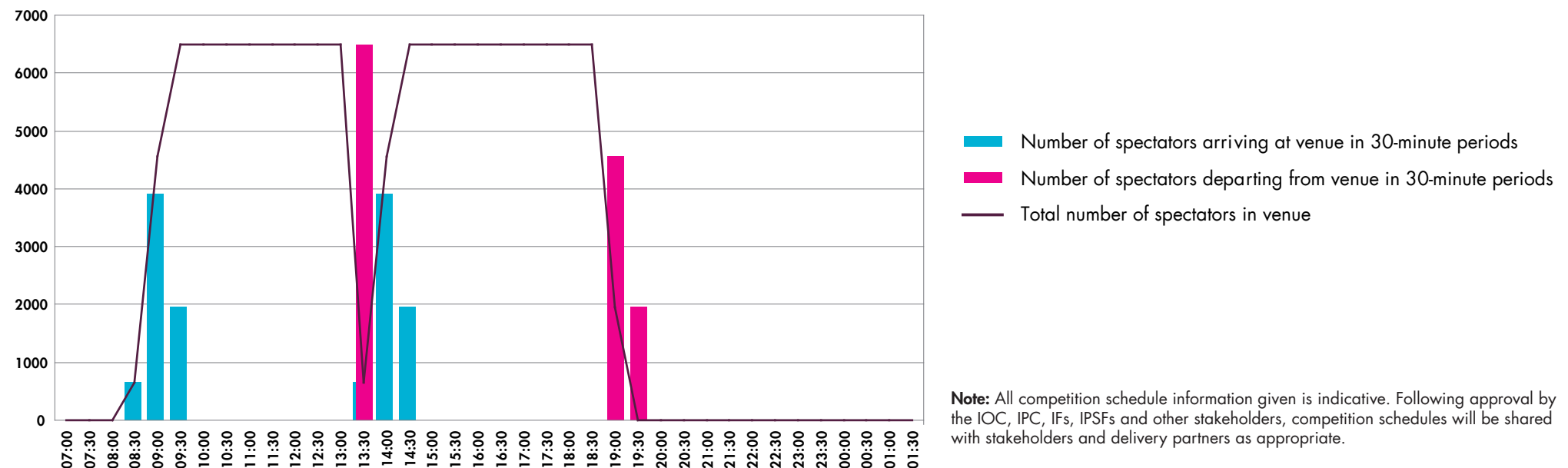


Figure 7.48 Summary of the transport strategy for Lord's Cricket Ground

	Games transport provision
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via St John's Wood Road, Wellington Road and Wellington Place. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	Spectator access will be via Grove End Road.
Rail	London Underground is enhancing services throughout London during the Olympic period. St Johns Wood station will be the main rail access point. Special arrangements will be made for mobility impaired rail users as there are no step free stations in the area.
River	There is no water-borne access to this venue.
Walk/cycle	An estimated one per cent or about 60 spectators are expected to cycle to this venue. Limited cycle parking currently exists and provision of additional temporary facilities will be explored when the venue configuration has been finalised. An estimated one per cent of spectators are anticipated to walk all the way to this venue
Bus and coach	Buses may be subject to traffic restrictions in the area during days of the events. Additional bus capacity is under review with TfL buses. Up to 10 spectator coaches are expected per session. Coach set down bays will be identified near to the venue entrance, though not necessarily in St Johns Wood Road or Grove End Road. Coach parking facilities will be identified, potentially close to London Zoo, about one mile away.
Blue Badge parking	The location of Blue Badge parking for spectators has yet to be confirmed.
Park-and-ride	Park-and-ride facilities will not be provided for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Westminster City and Camden Councils, TfL, the emergency services, and other stakeholders.
Accessible transport	As there are no step-free stations in the immediate vicinity, special arrangements, will be put in place to enhance access to the venue for spectators with mobility difficulties. All London buses and Black Cabs are accessible and the venue is well served by both.

Figure 7.49 Wembley Stadium and Wembley Arena

Wembley Stadium is the home of the England national football team, and as such hosts international football matches. The venue also hosts English domestic cup finals, as well as rugby matches and major concerts. The stadium has a capacity of 90,000. Wembley Stadium is located in the London Borough of Brent, north-west London.

Wembley Arena is London's second largest indoor arena, located opposite Wembley Stadium, in the London Borough of Brent. While indoor sporting events such as boxing, martial arts, darts, basketball and ice hockey have been held at the venue, it is used primarily for music events.

Sport	Olympic Games Football (Wembley Stadium) Badminton, Rhythmic Gymnastics (Wembley Arena*)
Venue capacity (gross)	90,000 (Wembley Stadium) Tbc (Wembley Arena)
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Thirteen days over Saturday 28 July to Sunday 12 August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	One to three sessions per day
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 10:00 Latest session finish time: 23:00 (The finish time from each session of Football will be dependant upon the result of the match after 90 minutes of play. Given that Wembley will be hosting the matches in the final stages of the competition the potential exists for a further 30 minutes of playing time plus a penalty shoot-out competition).

More details for this venue can be found by visiting <http://www.london2012.com/venues/wembley-stadium.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

*Wembley Arena is subject to approval from International Badminton and Rhythmic Gymnastic Federations

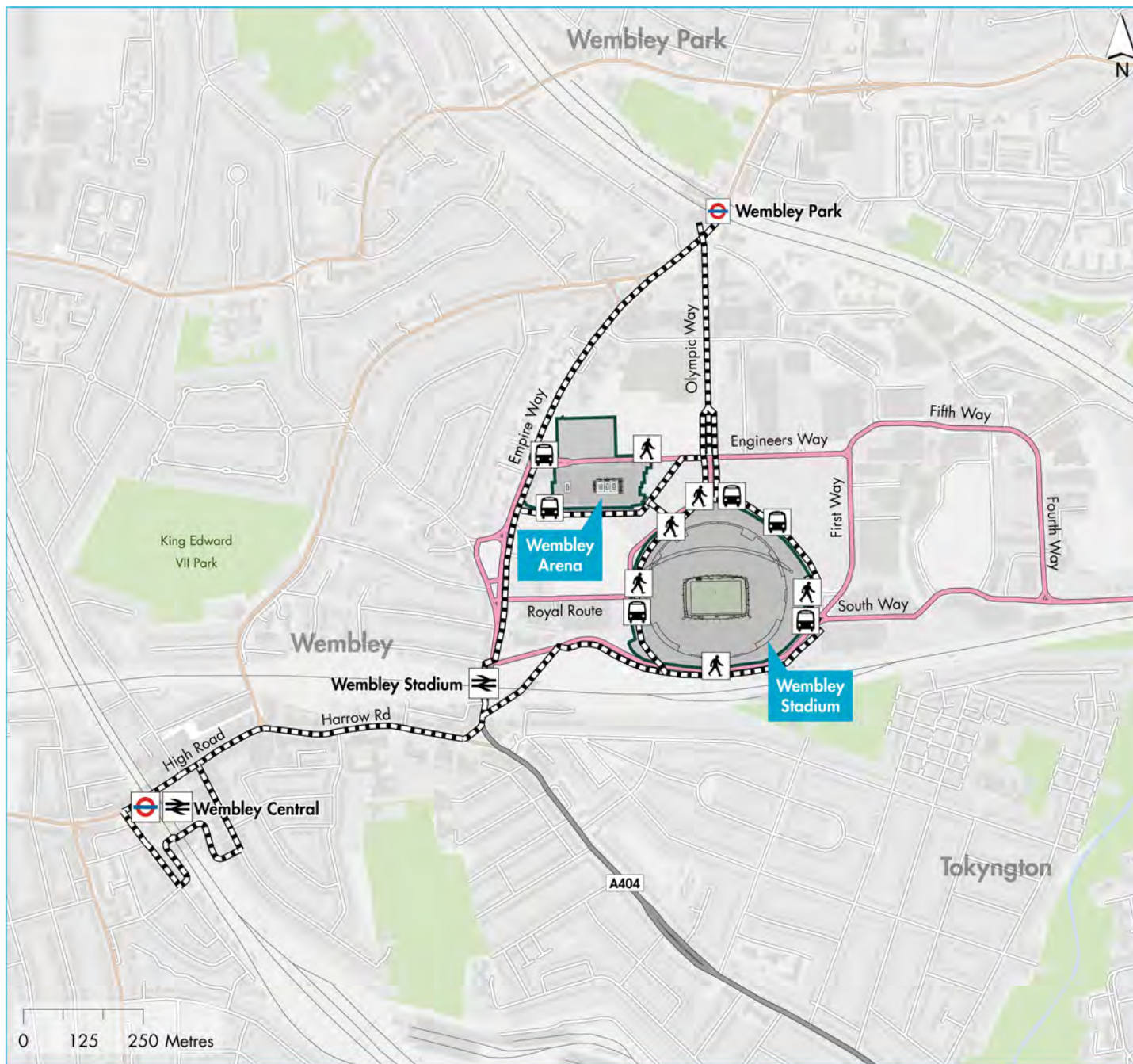


Figure 7.50
Wembley Stadium and Wembley Arena



The key to sports pictograms can be found by folding out the back cover

- Competition venue boundary
- Vehicle access point
- Spectator access point
- National Rail station
- London Underground station
- Venue Olympic Route Network
- Alternative Olympic Route Network
- Pedestrian route for spectators

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Figure 7.51 Initial estimate of mode split for spectator travel to Wembley Stadium

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	75 - 80%	67,500 – 72,000
Direct coach	10 - 15%	9,000 – 13,500
Local bus	2 - 3%	1,800 – 2,700
Walk	2 - 3%	1,800 – 2,700
Cycle	1%	900
Other	<1%	<900
Total	100%	90,000

Figure 7.52 Indicative spectator arrival and departure profile (Day 11, based on gross capacity)

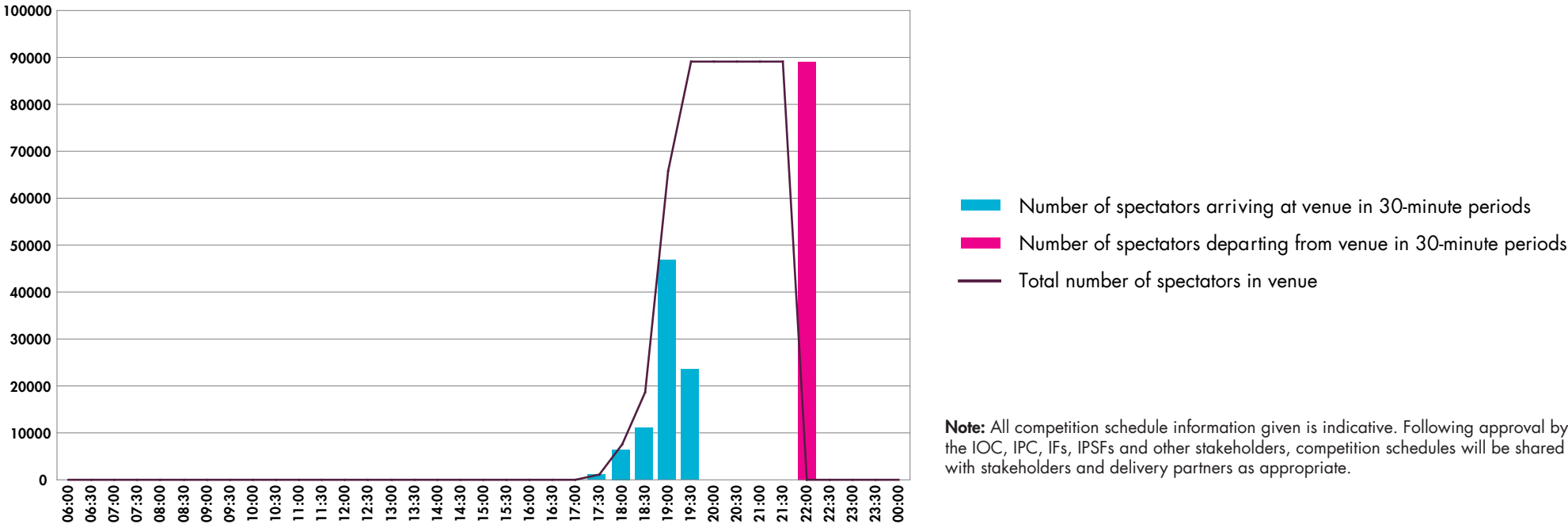


Figure 7.53 Summary of the transport strategy for Wembley Stadium and Wembley Arena

Games transport provision	
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via South Way. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	Spectators will access the stadium from the south via South Way and from the north via Olympic Way leading to the outer concourse surrounding the stadium.
Rail	<p>Public transport provision on event days is based on a three-station strategy, through:</p> <ul style="list-style-type: none"> – Wembley Park (Jubilee Line and Metropolitan Line) – Wembley Stadium (Chiltern Line) – Wembley Central (Bakerloo Line and London Overground) <p>On event days a special timetable is operated that increases the rail capacity provided. The service provision is dependent upon the timings and details of the specific event.</p> <p>It is common practice for additional rail services to be operated on some lines serving Wembley on event days. However, given the later event times during the Games, a number of amendments to the normal event day rail services are sought. It is proposed to enhance the rail services through Wembley Central and Wembley Stadium Stations to enhance capacity and provide later services than would normally be operated on event days. It is proposed to enhance existing services as follows:</p> <ul style="list-style-type: none"> – increase the late night train frequency on the Jubilee, Metropolitan and Bakerloo Lines; – extend the operating hours of the Jubilee, Metropolitan and Bakerloo Lines to approximately 02:30; – run two additional London Overground trains between Watford Junction and Euston via Wembley Central Station; – run three additional Chiltern Line trains in a northbound direction from Wembley Stadium station to High Wycombe (two of which continue on to Aylesbury); and – run six additional Chiltern Line trains in a southbound direction from Wembley Stadium station to London Marylebone. <p>Operating plans will be developed with sufficient flexibility to cater for extra time or penalties, which would delay the end of the event.</p>
River	There is no water-borne access to this venue.
Walk/cycle	Spectators will be directed to park their cycles at one of the designated cycle parking areas. The use of existing cycle parking at the stadium will be monitored during the build up to 2012. If it is considered that additional cycle parking is required during the Games, arrangements will be made to provide appropriate levels of additional space. Some two to three per cent of spectators are envisaged to walk all the way to this venue.

Figure 7.53 (continued) **Summary of the transport strategy for Wembley Stadium and Wembley Arena**

Games transport provision	
Bus and coach	<p>National Express run coach services direct to Wembley Stadium for all major events. The number of coaches that park at the stadium varies widely between different events. Typically, the number of coaches range between 50 and 150, but certain events have attracted over 450 coaches.</p> <p>Parking for up to 450 coaches would be provided at the red car/coach park. Some or all of this space could be used for car and/or coach parking. It should be noted that potential development in the areas surrounding the stadium could mean that the exact location of parking provision may change before 2012.</p> <p>It has previously been estimated that, in contingency, space for approximately 150 additional coaches could be found on-street on the following roads:</p> <ul style="list-style-type: none"> – Empire Way; – Fulton Road; – Great Central Way; – Fourth Way; – Fifth Way; and – Hannah Close. <p>It is important to note, however, that the use of at least some of these roads for coach parking could conflict with security aspirations. The optimum distribution of parking space for all the different client groups will be developed as LOCOG's overlay plans for this venue develop. Given the necessary traffic management measures in the area around the stadium, a number of temporary amendments to TfL Bus services are likely to be implemented before and after events at the stadium during the Olympic Games. Whilst exact details will be developed closer to 2012, the following temporary changes to local bus services are likely:</p> <ul style="list-style-type: none"> – Suspension of services PR2 and R92 for approximately two hours before kick off and for approximately one hour after the event finishes, to avoid vehicle/pedestrian conflict on Fulton Road and Engineers Way; – Diversion of services 92 and 182 from Wembley Hill Road to Park Lane, to avoid Wembley Triangle, for approximately two hours before kick off and for approximately one hour after the event finishes; – Retention of high capacity 'bendy bus' vehicles on route 18 later into the evening to provide additional capacity on this route at peak times after events finish.
Blue Badge parking	Pre-booked parking for Blue Badge holders will be provided close to the venue.
Park-and-ride	No additional park-and-ride services are planned for this venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Brent Council, TfL, the emergency services, and other stakeholders.

Figure 7.53 (continued) **Summary of the transport strategy for Wembley Stadium and Wembley Arena**

Games transport provision	
Accessible Transport	<p>Of the three rail stations serving Wembley Stadium, Wembley Park and Wembley Stadium Stations are step-free. Therefore, these two stations will be promoted as the accessible stations for the venue and Wembley Central Station will not be promoted.</p> <p>The stadium is well served by TfL Bus routes, which provide additional elements of the accessible public transport network serving the venue. Careful consideration will be required of the impacts on mobility impaired travellers of the necessary bus service diversions at peak spectator arrival and departure times.</p> <p>Up to 200 Blue Badge car parking spaces are typically provided for spectators at the stadium car parks on major event days. It is likely that similar numbers will be provided during the Olympic Games. The exact location of the parking will depend upon scale and form of the developments in the area prior to 2012.</p> <p>Brent Community Transport operates an accessible shuttle bus between Wembley Park Station and the stadium on event days, setting down and picking up close to venue entrance points. There is an opportunity to enhance this service and provide spectators with mobility impairments with a high level of service linking the Underground system with the stadium.</p> <p>The pedestrian route along Olympic Way from Wembley Park station to the stadium includes two relatively steep ramps. These could cause difficulty for some people with mobility impairments. This adds to the case for providing an accessible shuttle of some form between the station and the stadium.</p>

Figure 7.54 Wimbledon

The All-England Club is the venue for the annual Wimbledon Championship Grand Slam tennis event. The club currently has 19 tournament courts, and a combined seating capacity for over 35,000 spectators. The venue is located in Wimbledon, in the London Borough of Merton.	
Sport	Olympic Games Tennis
Venue location	All the events will be held on the closed courts within the main complex. Practice and warm up courts are also available.
Venue capacity (gross)	During the Games the gross capacity of the venue will be 30,000 seats.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Eight days from Sunday 29 August to Sunday 5 August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	There is one session on each day though multiple matches will be played.
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 11:00 Latest session finish time: 20:00

Futher details for this venue can be found by visiting <http://www.london2012.com/venues/wimbledon.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

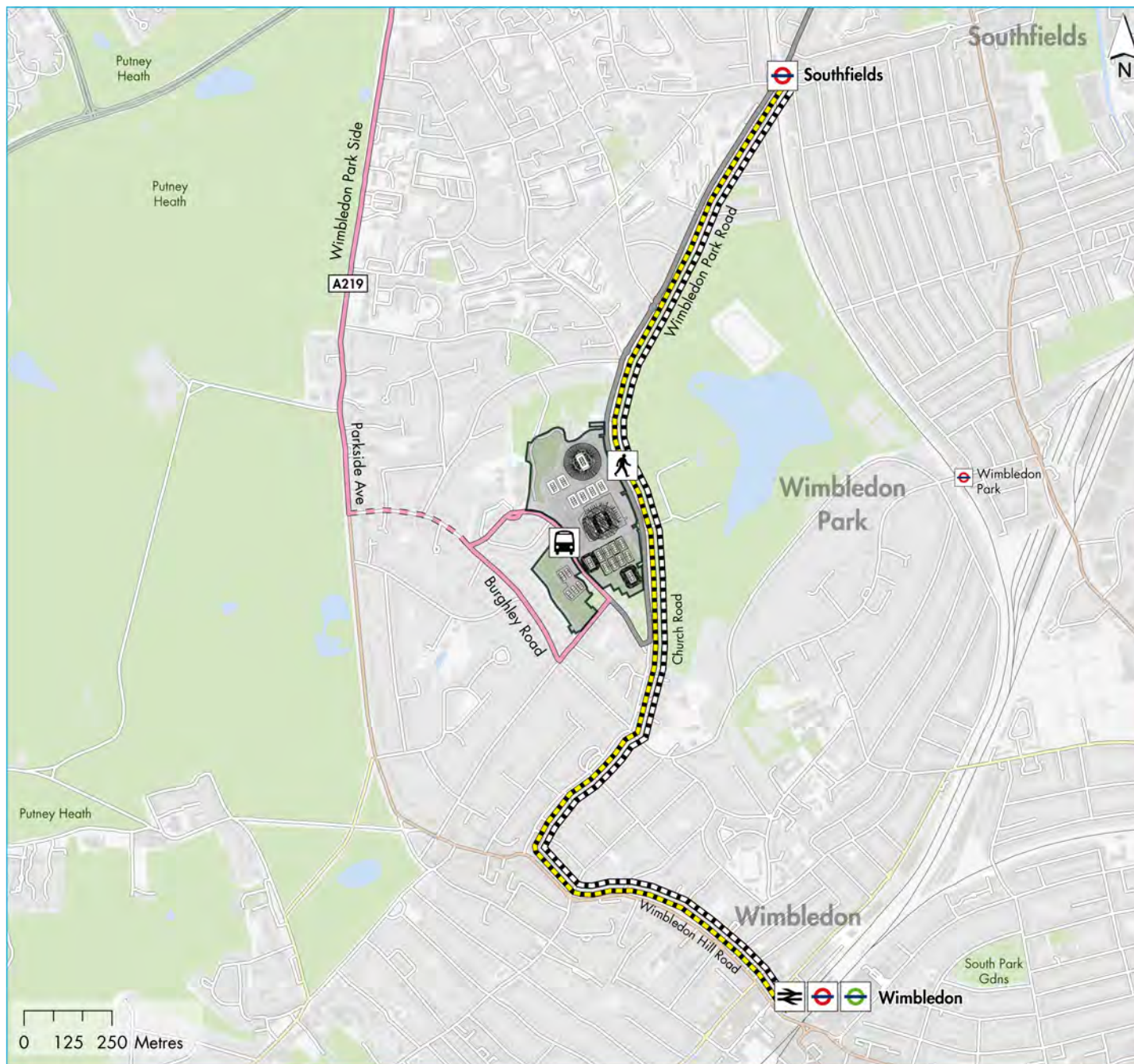











Figure 7.55
Wimbledon



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  London Underground station
-  Tram station
-  Venue Olympic Route Network
-  Olympic Route Network along private road (not designated)
-  Alternative Olympic Route Network

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Figure 7.56 Initial estimate of mode split for spectator travel to Wimbledon

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	82%	24,600
Direct coach	10%	3,000
Local bus	4%	1,200
Walk	2%	600
Cycle	2%	600
River	0%	0
Total	100%	30,000

Figure 7.57 Indicative spectator arrival and departure profile (Day 11, based on gross capacity)

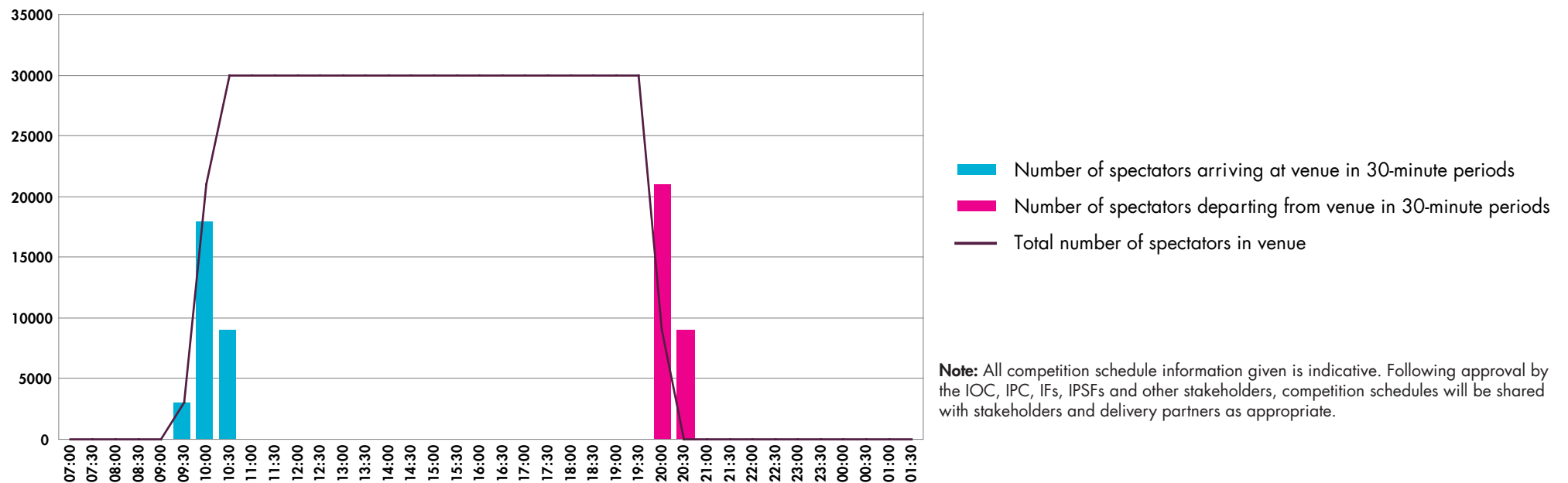


Figure 7.58 Summary of the transport strategy for Wimbledon

Games transport provision	
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via Parkside Avenue, Burghley Road and Somerset Road. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	Spectators will access the venue from Wimbledon Park, subject to confirmation of venue layout. All spectator modes for these events will be directed via the holding and screening areas in the Park to the east of the venue.
Rail	Two railway stations will be designated as venue stations for this venue; Southfields and Wimbledon. Both stations are served by the LU District Line. Wimbledon Station is also served by National Rail services and Croydon Tramlink services. The number of National Rail trains stopping at Wimbledon will be increased during the Games. Additional LU services will be running across London throughout the Games. All LU trains serving Wimbledon terminate at the station. Both stations will be fully step free. Although both are within walking distance, a high-frequency spectator shuttle bus service will operate from both stations to the venue. Accessible vehicles will be specified.
River	There is no water-borne access to this venue.
Walk/cycle	Cycle parking will be made available in Wimbledon Park, as per usual arrangements for Wimbledon AELTC events.
Bus and coach	<p>Details of enhanced bus services if required are yet to be established. Most local routes are medium-frequency low-capacity services, though one high-frequency full size service operates in the vicinity.</p> <p>Coach parking can be made available at or near the venue. Parking for about 20 coaches exists within the venue boundary additional parking can be provided in Wimbledon Park if a hardened surface is provided. About 50 to 60 coaches are expected each session.</p>
Blue Badge parking	A large amount of Blue Badge parking can be made available in Wimbledon Park.
Park-and-ride	Park-and-ride services are not proposed to serve this venue during the Games.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Merton Council, TfL, the emergency services, and other stakeholders.
Accessible transport	Both Southfields and Wimbledon Station will be step free in 2012. All London buses and taxis are fully accessible. Blue Badge parking will be available in Wimbledon Park. An accessible shuttle between the two stations and the venue is also planned.

Figure 7.59 Broxbourne White Water Canoe Centre

Broxbourne White Water Canoe Centre is a new venue, which is being built on an overflow car park for the River Lee Country Park. Temporary seating will be installed around the venue with a gross capacity of 12,000 seats. The venue is located in the Borough of Broxbourne, south east Hertfordshire.

Sport	Olympic Games Canoe Slalom
Venue location	The Canoe Slalom courses will be located within a wider parkland setting on the edge of the 1000-acre River Lee Country Park.
Venue capacity (gross)	12,000
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Four days of competition over Sunday 29 July to Wednesday 1 August
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 10:00 Latest session finish time: 13:30

Further details for this venue can be found by visiting <http://www.london2012.com/venues/broxbourne-white-water-canoe-centre.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

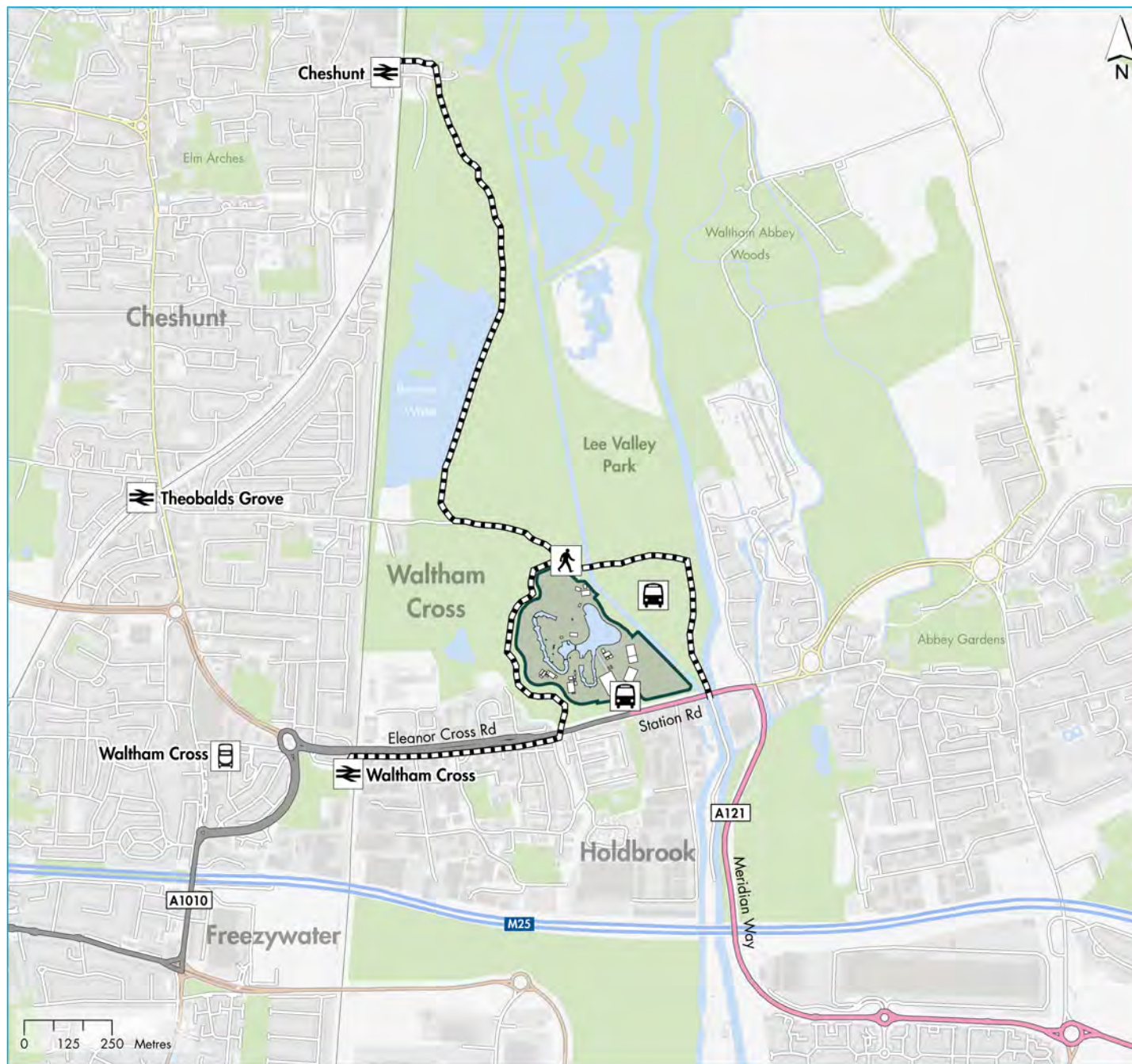


Figure 7.60
Broxbourne



The key to sports pictograms can be found by folding out the back cover

- Competition venue boundary
- Vehicle access point
- Spectator access point
- National Rail station
- Bus station
- Venue Olympic Route Network
- Alternative Olympic Route Network
- Pedestrian route for spectators

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Figure 7.61 Initial estimate of mode split for spectator travel to Broxbourne

Mode	Mode split for spectator trips	Number of spectators per session (based on gross capacity)
Rail	35%	4,200
Park-and-ride	35%	4,200
Direct coach	20%	2,400
Local bus	3%	360
Taxi	4%	480
Walk	1%	120
Cycle	2%	240
River	0%	0
Total	100%	12,000

Figure 7.62 Indicative spectator arrival and departure profile (Day 5, based on gross capacity)

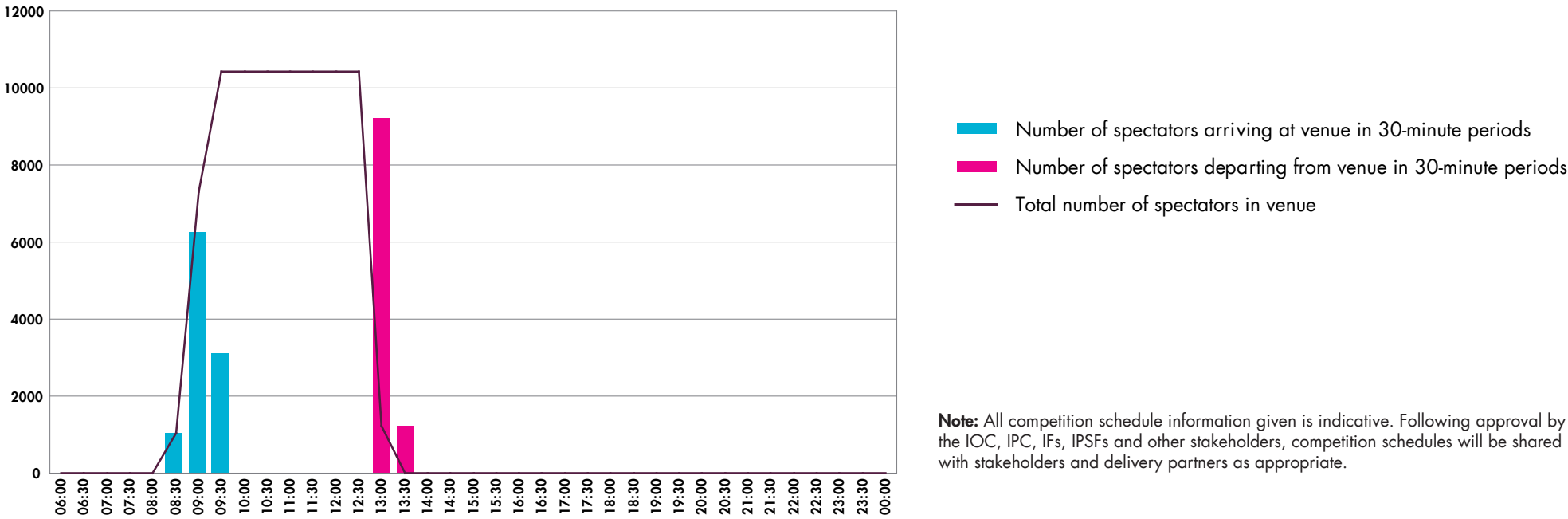


Figure 7.63 Summary of the transport strategy for Broxbourne White Water Canoe Centre

Games transport provision	
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via Meridian Way and Station Road. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The main spectator access point will be to the north of the venue (see Figure 7.60)
Rail	Cheshunt Station will be promoted as the 'venue' station serving the site during the Olympic Games. Some spectators are likely to use Waltham Cross station and make their own way to the venue either on foot or by local bus services. However, it is the intention that spectators are discouraged from doing this to maximise the easy flow of spectators through the northern access point to the venue. Sufficient capacity exists on the train services and at the relevant stations to enable Games-time operations. With the spectator demand likely to occur in the opposite direction to peak commuter travel, the train frequency and service pattern would be more than sufficient to cater for Games demand to the venue.
River	Whilst use of river for spectator transport has not been ruled out, it is not envisaged that river transport will play a major role at this venue.
Walk/cycle	<p>There are a number of off road footpath routes around the venue where cycling is permitted. The Lea Navigation towpath (promoted as the Lea Valley Walk) also provides an important north-south off road walking route through the Lea Valley running just to the east of the venue. The Lea Valley Walk provides an off road pedestrian connection to north and south points of the venue. The existing footpaths through the Lea Valley Park to the north of the venue provide a connection with Cheshunt Station via Windmill Lane, including a level crossing and pedestrian footbridge across the railway to access the Park entrance off Windmill Lane. The off road footpaths to the north of the venue are generally of good quality. Several have recently been re-surfaced. There is an existing footway connection to the south of the venue along the A121 Eleanor Cross Road/Station Road/Highbridge Street. This route provides a footway connection to Waltham Cross station. Part of the footway along Eleanor Cross Road/Station Road has recently been upgraded as an off-carriageway shared use (segregated with a white line) walking and cycling route.</p> <p>The main promoted strategic cycle route serving the venue is National Cycle Network route 1 on the route of the River Lee pathway to the east of the venue. This cycle route runs north-south and to the east of the venue with a cycle connection via a footbridge across the Lea Navigation on the east side of the venue.</p> <p>Temporary cycle parking for spectators will be provided at the venue.</p>
Bus and coach	<p>Bus stops are located approximately 50m to the east of the main vehicular access. Six different bus routes are provided by Regal Busways, Arriva and Trustybus to serve the venue. During peak arrival and departure times for the event it may be necessary to increase the capacity of bus routes serving the venue, and also to introduce possible route alterations to meet operational demands. The optimum location for the bus stops during the Games is currently under review.</p> <p>It is anticipated that direct coach services will play a significant role in transporting spectators to and from this venue. It is likely that direct coaches will be of particular relevance for travel by sports clubs and organisations with an interest in white water canoeing from towns and cities across the UK and possibly from some parts of mainland Europe.</p> <p>Appropriate arrangements for spectator coach set down, pick up and parking will be developed in consultation with the local authorities and Lea Valley Park.</p>
Blue badge parking	It is assumed that there will be a requirement for 60 Blue Badge spaces. Potential locations for Blue Badge parking to serve the venue need further investigation and consultation with stakeholders in the development of venue overlay and design.

Figure 7.63 (continued) **Summary of the transport strategy for Broxbourne White Water Canoe Centre**

Games transport provision	
Park-and-ride	Some form of temporary, bus-based park-and-ride operation will be required to supplement the existing public transport serving the venue during the Olympic Games. The feasibility study has highlighted a number of sites to consider and these are being reviewed by delivery partners
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with the Broxbourne Borough Council, the emergency services, and other stakeholders.
Accessible transport	London Liverpool Street and Cheshunt Station are promoted as providing step-free access across the whole of each station. Cheshunt Station has at grade access to both platforms. There will be a requirement for accessible shuttle buses to be provided to enable mobility impaired persons to travel between Cheshunt Station and the main spectator entrance. A mobility service using electric vehicles will be implemented through the park. Further work is required to assess whether all the local bus services at this venue are accessible. It is likely that some direct coach services arriving at the venue will be carrying mobility impaired spectators who are likely to require a connecting accessible service to transfer them to the spectator entrance.

Figure 7.64 Eton Dorney

<p>The Eton College Rowing Centre at Dorney Lake contains a 2,200m course that meets national and international standards. In 2005 the venue hosted the Rowing World Cup, and the World Rowing Championships were held here in 2006. The existing facilities will be enhanced for the Olympic Games, with a total gross capacity of 30,000 spectators. The venue is located in Buckinghamshire, near the towns of Windsor, Slough and Maidenhead.</p>	
Sport	Olympic Games Rowing, Canoe Sprint
	Paralympic Games Rowing
Venue location	The events will take place on Dorney Lake – a 2,200m, eight lane course with a separate return lane.
Venue capacity (gross)	30,000 spectators, of which 20,000 will be seated and 10,000 will be standing along the north bank of the lake.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Olympic Games Fifteen days over Saturday 28 July to Saturday 11 August
	Paralympic Games Three days from Saturday 1 September to Monday 3 September
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Olympic Games One
	Paralympic Games One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Olympic Games Rowing: Earliest session start time: 09:00. Latest session finish time: 13:40 Canoe Sprint: Earliest session start time: 9:00. Latest session finish time: 12:15 (start and finish times susceptible to change due to adverse weather conditions)
	Paralympic Games Earliest session start time: tbc Latest session finish time: tbc

Futher details for this venue can be found by visiting <http://www.london2012.com/venues/eton-dorney.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

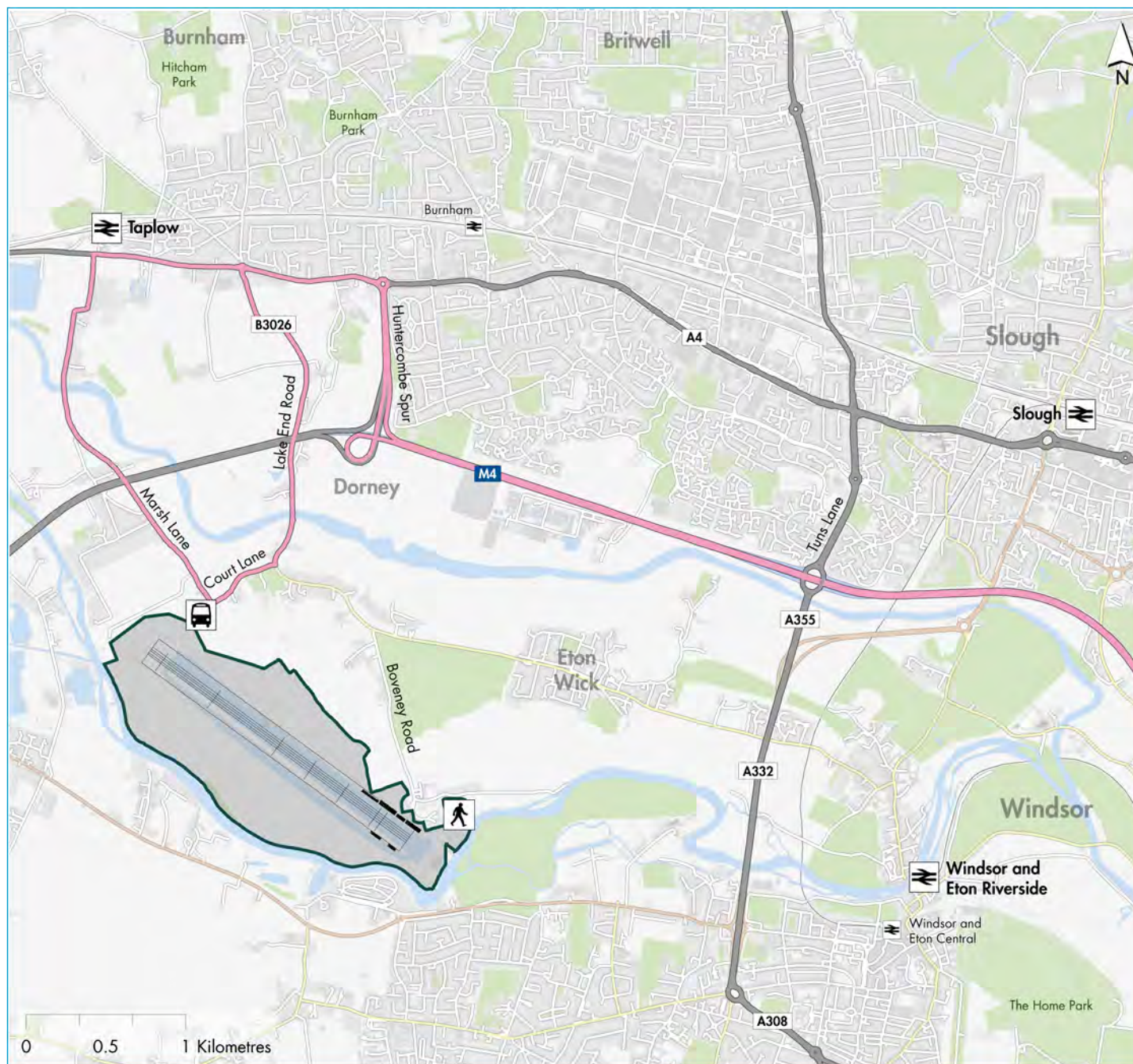








Figure 7.65
Eton Dorney



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  Venue Olympic Route Network
-  Alternative Olympic Route Network

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Figure 7.66 Initial estimate of mode split for spectator travel to Eton Dorney

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	24%	7,200
Park-and-ride	50%	15,000
Direct coach	5%	1,500
Local bus	4%	1,200
Walk	6%	1,800
Cycle	6%	1,800
Other including River, Taxi	5%	1,500
Total	100%	30,000

Figure 7.67 Spectator arrival and departure profile (Day 3, based on gross capacity)

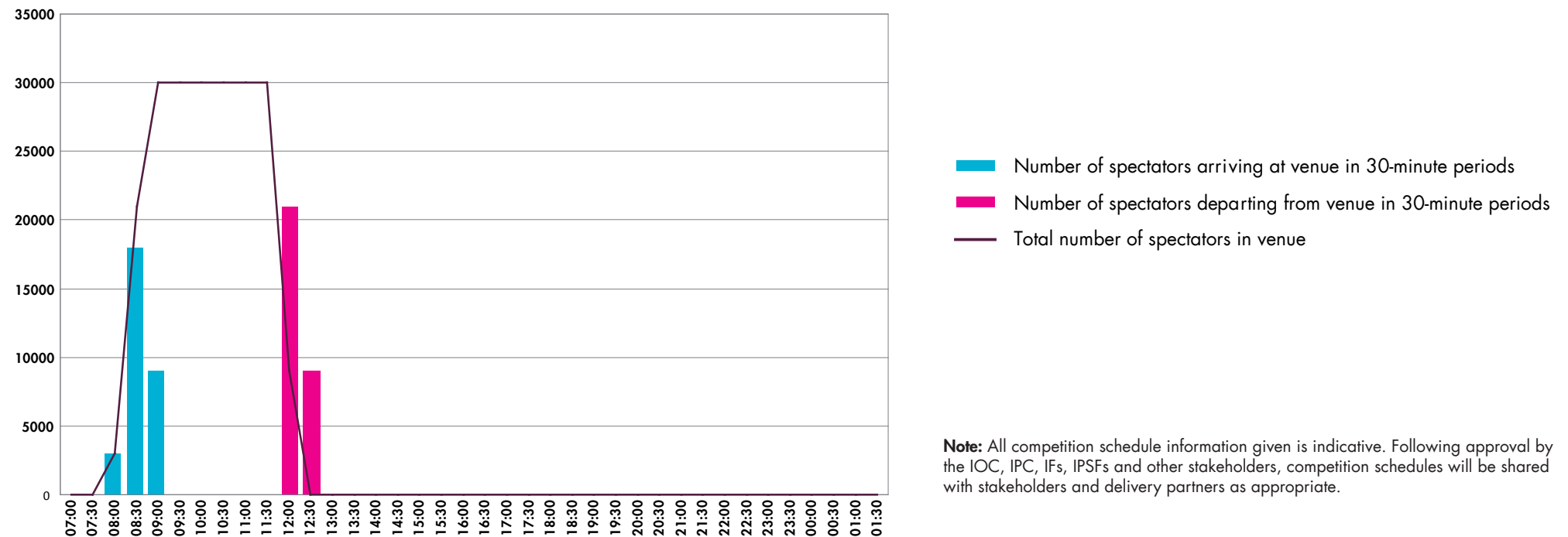


Figure 7.68 Summary of the transport strategy for Eton Dorney

Games transport provision	
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Lake End Road, Court Lane and Marsh Lane. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	The strategy for transporting 30,000 spectators to and from Eton Dorney during the Games is based on maximising the use of existing public transport systems, predominantly rail. To help achieve this, all spectators with a valid ticket for the venue will be able to travel between London designated venue stations free of charge on the day of the event. Shuttle buses will be provided to link these stations with the venue. However, rail travel will not be suitable for spectators travelling from all areas of the country. Therefore, it is proposed to use a number of temporary park-and-ride sites to the north, south, east and west of the venue, where spectators can park their cars before travelling by shuttle bus to the venue. The identification of the most appropriate park-and-ride sites has involved in-depth discussions with all the relevant local councils, highway authorities and the Police. At the time of writing this document (November 2009) the ODA is in discussions with a number of landowners regarding temporary use of their land for spectator transport services. Further details of the proposed transport arrangements will be submitted formally and consulted upon during the planning application process for the venue, which is scheduled for 2010.
Rail	Slough and Windsor & Eton Riverside Stations will be promoted as 'venue stations' to serve this venue. The additional use of Taplow and Maidenhead Stations is also being reviewed. Slough, Taplow and Maidenhead Stations are all on the London Paddington to Reading mainline. Windsor & Eton Riverside is the terminal station on the branch line from Waterloo and therefore offers valuable additional rail capacity to that provided by the rail services on the Paddington to Reading main line. The potential for temporary increases to train frequencies and capacity serving these stations at Games time is being investigated with the train operating companies.
River	It is proposed to make use of river shuttle boat services between Windsor Town Bridge and Boveney Lock.
Walk/cycle	In general the venue is well served by existing walking and cycling routes with a dense network of paths. Of particular relevance is the Thames Path, a National Trail, which runs past the venue along the north bank of the River. National Cycle Network Route 4 runs adjacent to the northern perimeter of the venue. The National Cycle Network Route 61 also runs near the north of the venue along the south bank of the Jubilee River from near Taplow Station in the west to beyond Slough in the east. There are also other traffic free walking and cycle routes and signed cycle routes in the area which provide connections to the venue from Maidenhead and Slough. Secure cycle parking will be provided close to the venue.
Bus and coach	Shuttle buses will serve the venue from the venue rail stations and the temporary park-and-ride sites. Eton Dorney is served by a limited local bus service. Routes 68 and 63 link the 'Dorneys' to Slough and Maidenhead on Tuesdays and Fridays. Three services a day run along this route, which is operated by Redline services. Other routes, the 75 and 76 operated by First Group, run along the A4. These form part of a number of routes which provide frequent services from Slough, Maidenhead, Windsor and Bracknell to Heathrow. There are approximately two services per hour. Parking for direct coaches will be provided close to the venue.

Figure 7.68 (continued) **Summary of the transport strategy for Eton Dorney**

Games transport provision	
Blue Badge	Blue Badge parking will be provided close to the venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Windsor and Maidenhead Royal Borough Council, Buckinghamshire County Council, South Bucks District Council, Slough Borough Council, the emergency services, and other stakeholders.
Accessible transport	Slough and Windsor and Eton Riverside Stations will be promoted as accessible stations. Accessible shuttle buses will be provided from these stations. Drop off provision for taxis will be identified.

Figure 7.69 Hadleigh Farm

Hadleigh Farm is a 550 acre site, owned by the Salvation Army, on a working farm. The woodland, grassland and hilly terrain are ideal for the Mountain Bike event. Temporary seating will be installed for the Games with a capacity of 3,000 seats, and standing room will also be available. The venue is located within Castle Point district in Essex.

Sport	Olympic Games Mountain Bike
Venue location	Spectators will line the race circuit and will also be located in grandstand facilities at the start/finish line.
Venue capacity (gross)	20,000 (of which 3,000 will be seated)
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Two days on Saturday 11 August and Sunday 12 August.
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Earliest session start time: 14:00 Latest session finish time: 17:00

Futher details for this venue can be found by visiting <http://www.london2012.com/venues/hadleigh-farm-essex.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

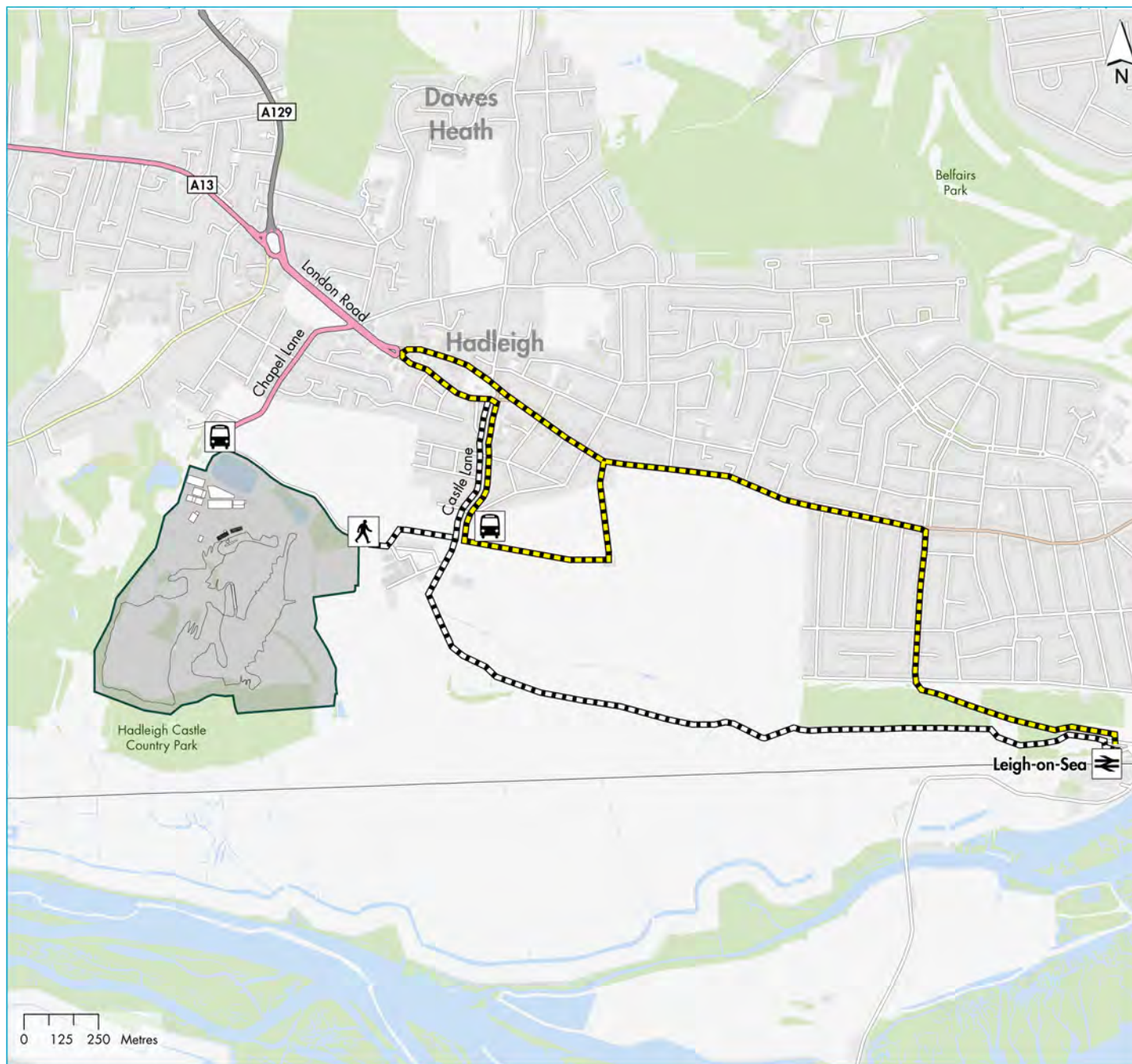










Figure 7.70
Hadleigh Farm



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary
-  Vehicle access point
-  Spectator access point
-  National Rail station
-  Venue Olympic Route Network
-  Alternative Olympic Route Network
-  Pedestrian route for spectators
-  Shuttle bus route for spectators

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Figure 7.71 Initial estimate of mode split for spectator travel to Hadleigh Farm

Mode	Mode split for spectator trips	Number of spectators per day (based on gross capacity)
Rail	50%	10,000
Park-and-ride	36%	7,200
Direct coach	5%	1,000
Cycle	4%	800
Local bus	3%	600
Walk	1%	200
Taxi	1%	200
Total	100%	20,000

Figure 7.72 Indicative spectator arrival and departure profile (Day 15, based on gross capacity)

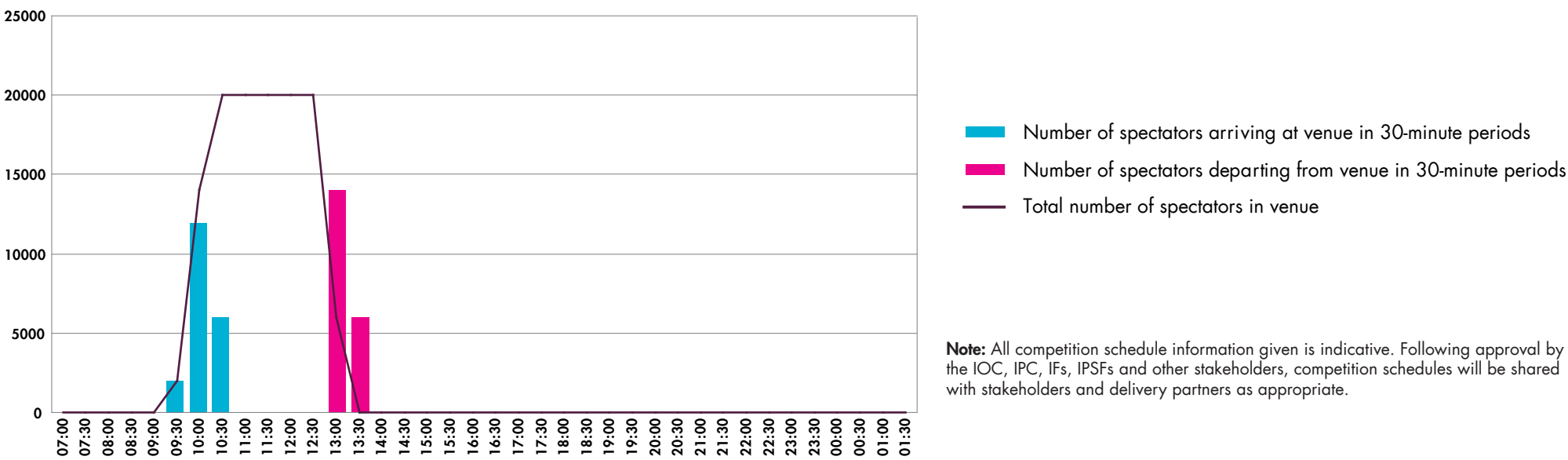


Figure 7.73 Summary of the transport strategy for Hadleigh Farm

Games time transport provision	
Games Family	Games Family vehicles will use the ORN to access the venue. Games Family vehicles will approach the venue via London Road and Chapel Lane. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	One spectator entrance will be provided at this venue. This will be located on the north-eastern corner of the venue off Castle Lane (see Figure 7.70)
Rail	Spectators will be advised to use Leigh-on-Sea station on the c2c line to access the venue. Spectators will then use rail shuttle buses to transport them up to the venue, and will be able to walk up to the venue from Leigh-on-Sea Station. Some use may also be made of Rayleigh Station on the London Liverpool Street and to Southend Victoria Line to serve the venue. For the duration of the event c2c train capacities and frequencies will be enhanced.
River	There is no water-borne access to this venue.
Walk/cycle	Given the event is a mountain bike race, and taking into account observations at previous major mountain bike events it is reasonable to assume a significant number of spectators will cycle to the venue. Provision will be made for both spectators who cycle all the way from their homes or accommodation in the area around the venue, or people driving to an appropriate designated park and cycle site and riding in. Cycle routes into the venue have been identified from the north and from the east. Secure cycle parking will be provided in two locations for at least 1,500 bikes.
Bus and coach	<p>Parking for approximately 20 coaches will be sought in the vicinity of the venue. It is currently envisaged that coaches will set down and pick up either in designated bays on Hadleigh High Street, or in the car park at the top of Castle Lane.</p> <p>Shuttle buses will be provided between Leigh-on-Sea Station and the venue.</p> <p>The venue is well served by local bus services. It is envisaged that a number of the key local bus services may need to be temporarily enhanced to support the Games and maintain a good local service. Local bus services will utilise existing bus stop facilities on Hadleigh High Street.</p>
Blue Badge parking	Pre-booked parking for Blue Badge holders will be provided close to the venue.
Park-and-ride	Park-and-ride facilities will be made available to serve this venue. A small number of appropriate park-and-ride sites will be identified in the area surrounding the venue, and a park-and-ride shuttle service will be provided to set down and pick up spectators close to the venue spectator entrance. The ODA is in discussion with a number of land owners regarding the temporary use of land for park-and-ride operations. The objective of the park-and-ride facility for this venue is to provide a facility for spectator journeys from those origins that are not readily served by rail links. This also supports a package of measures to avoid spectator parking in streets around the venue.
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Castle Point District Council, the emergency services, and other stakeholders.
Accessible transport	<p>Leigh-on-Sea Station is fully accessible. A number of local community and Dial-a-Ride services are available in this part of Essex and these accessible services will be promoted for spectators.</p> <p>Blue Badge parking is a requirement and will finalised in terms of location and scale in due course. Both the rail and park-and-ride shuttle bus operations for this venue will include accessible buses.</p>

Figure 7.74 Weymouth and Portland

The Weymouth and Portland National Sailing Academy has training facilities for all levels of ability and competence, and frequently hosts a variety of National Championships. The Sailing Academy is located at Portland Harbour, in Dorset.	
Sport	Olympic Games Sailing
	Paralympic Games Sailing
Venue location	Weymouth and Portland National Sailing Academy, (WAPNSA) located at Portland Harbour on the south coast of England
Venue capacity (gross)	Current working assumption of 45,000 to 60,000 spectators attending on a typical day. Spectators will not be permitted access to the WAPNSA, however spectator viewing areas around Weymouth and Portland will be available.
Competition periods (Indicative only, daily schedule will be finalised late 2010)	Olympic Games Fourteen days of competition over Saturday 28 July to Saturday 11 August.
	Paralympic Games Six days of competition over Friday 31 August to Wednesday 5 September.
Number of competition sessions per day (Indicative only, session schedule will be finalised late 2010)	Olympic Games One
	Paralympic Games One
Competition session start/finish times (Indicative only, session schedule will be finalised late 2010)	Olympic Games Earliest session start time: 11:00 Latest session finish time: 17:00
	Paralympic Games Earliest session start time: 11:00 Latest session finish time: 17:00

Futher details for this venue can be found by visiting <http://www.london2012.com/venues/weymouth-and-portland.php>

Note: All competition schedule information given is indicative. Following approval by the IOC, IPC, IFs, IPSFs and other stakeholders, competition schedules will be shared with stakeholders and delivery partners as appropriate.

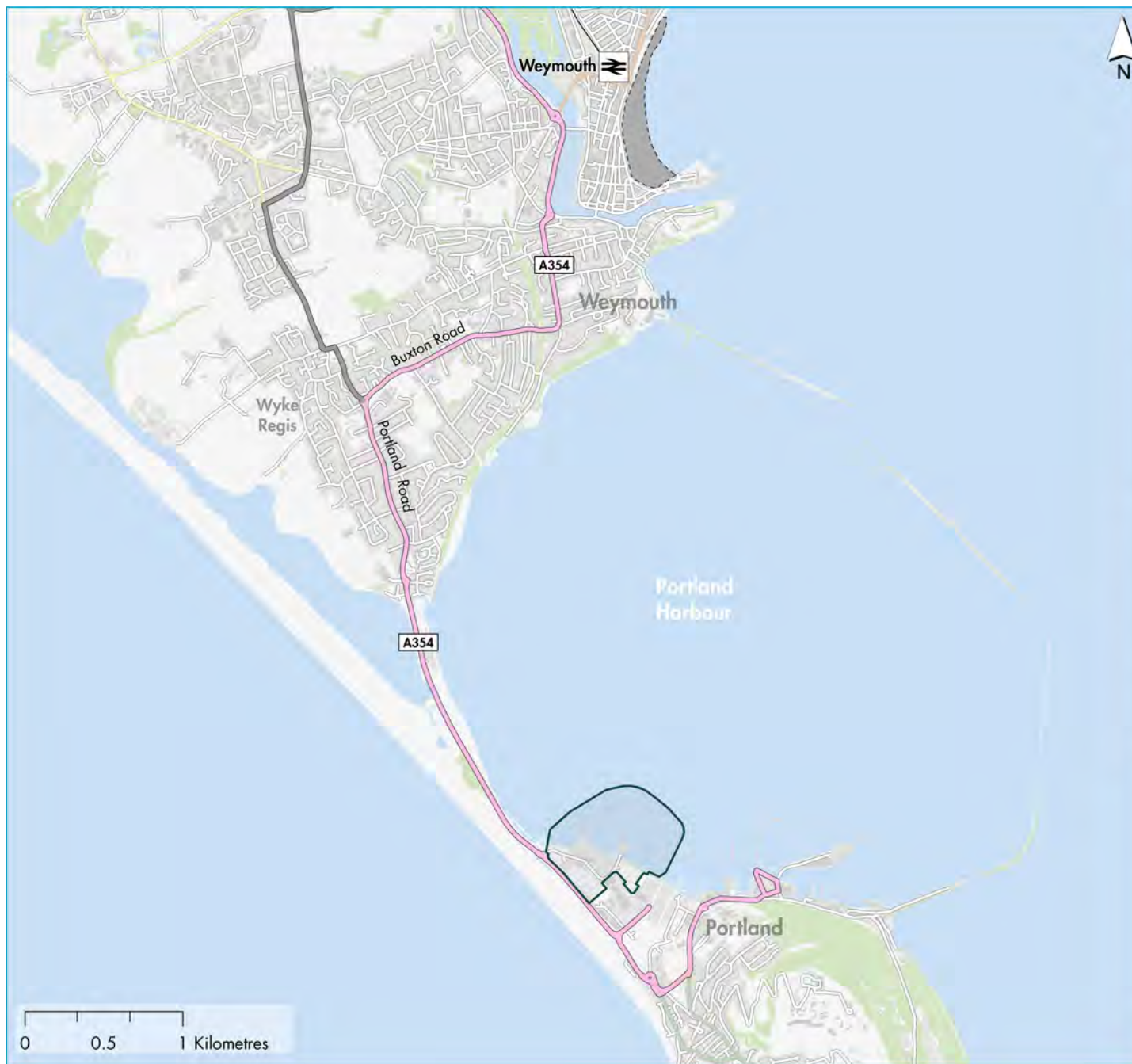








Figure 7.75
Weymouth and Portland



The key to sports pictograms can be found by folding out the back cover

-  Competition venue boundary (excluding Sailing course)
-  Potential spectator viewing area
-  Vehicle access point
-  National Rail station
-  Venue Olympic Route Network
-  Alternative Olympic Route Network

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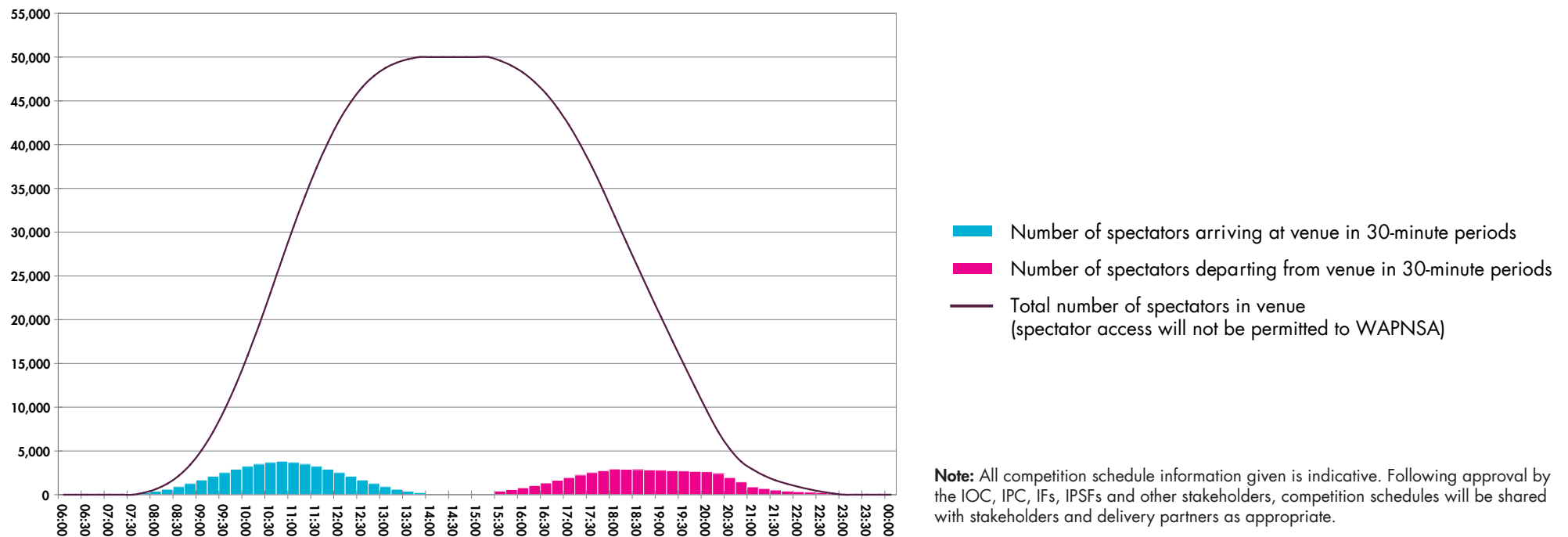


Figure 7.76 Initial estimate of mode split for spectator travel to Weymouth and Portland

Mode	Mode split for spectator trips	Number of spectators per day (current ODA working assumption for a typical day)
Rail	14%	7,000
Park and Ride	34%	17,000
Direct Coach Services	8%	4,000
Local Bus	14%	7,000
Walking / cycling	30%	15,000
Total	100%	50,000*

* Current working assumption of 45,000 to 60,000 spectators attending on a typical day.

Figure 7.77 Indicative spectator arrival and departure profile (Day 11)*



* Current working assumption based on cultural event(s) and live site(s) also taking place in Weymouth.

Figure 7.78 Summary of the transport strategy for Weymouth and Portland

Games transport provision	
Games Family	Games Family vehicles will use the ORN/PRN to access the venue. Games Family vehicles will approach the venue via Portland Road. Games Family access will be assigned by individual client group and subject to confirmation of venue layout.
Spectator access points	To be determined, depending upon which viewing area(s) are chosen.
Rail	<p>Weymouth Station will be promoted as the 'venue station'.</p> <p>The location of the venue offers relatively good accessibility with respect to public transport by rail, being served by two train operating companies. South West Trains operates the London Waterloo to Weymouth service. First Great Western operates the Bristol Temple Meads to Weymouth Service.</p> <p>The rail capacity is limited due to line constraints (particularly the single track section of line between Dorchester and Moreton) and available power supply between Wareham and Weymouth Stations, however the ODA is currently investigating options to increase the rail capacity.</p> <p>The choice for railway access station to the spectator viewing areas is limited to the main station within Weymouth.</p> <p>The railway station is approximately 100 metres from the Esplanade.</p> <p>Improvements to Weymouth Station's forecourt area are being delivered by Dorset County Council's Weymouth Transport Package.</p>
Sea	<p>At present, the space available alongside quay walls is limited. Weymouth Harbour can accommodate a maximum number of visiting vessels of about 120, depending on their size.</p> <p>There are no current visitor moorings in Portland Harbour, but there are a number of swinging/chain and sinker/buoyed moorings in the harbour that belong to local sailing clubs. A new marina with visiting berths is being built adjacent to the Weymouth and Portland National Sailing Academy, the Dean and Readyhoff Portland Marina, but this will be within the secure area of the Venue.</p>
Walk/cycle	<p>Weymouth and Portland Borough Council, together with Dorset County Council and in consultation with Sustrans, has developed a network of walking and cycling routes in Weymouth over recent years.</p> <p>A number of walking and cycling routes are being upgraded in the Weymouth area prior to 2012, some of which will be part-funded by the ODA.</p> <p>Cycle parking will be provided close to the viewing areas when they are confirmed.</p>

Figure 7.78 (continued) **Summary of the transport strategy for Weymouth and Portland**

Games transport provision	
Bus and coach	<p>The Dorchester/Weymouth/Portland corridor is very well served by a network of buses, including local and inter-urban services as well as express coaches.</p> <p>Local services are provided by two operators; First operate the majority, while South West Coaches operates a lesser number of services. The local network is run on an entirely commercial basis, with the exception of certain evening and weekend services. Both bus mode share and user satisfaction are the highest in rural Dorset, and are considered to be quite good for a town of its size.</p> <p>However, the quality in bus services in Weymouth and Portland is brought down by very poor traffic conditions in Weymouth as well as poor quality bus infrastructure. It should be noted that bus services do not currently serve Weymouth Rail Station, and that Weymouth does not have an integrated transport interchange.</p> <p>The local highway authority, Dorset County Council, has identified a package of measures aimed specifically at addressing these shortcomings. This scheme is valued at £20million, and will be funded jointly with the DfT. The scheme will deliver a bus/rail interchange at the station, improved bus infrastructure and improved traffic management on key parts of the road network. This scheme is programmed to be complete by June 2011. There is likewise a limit to the number of direct coach services that will be able to be accommodated.</p> <p>It is anticipated that direct coach services will play a significant role in transporting spectators to and from Weymouth. It is likely that direct coaches will be of particular relevance for travel by sports clubs and organisations with an interest in sailing from towns and cities across the UK and possibly from some parts of mainland Europe. It has currently been assumed that there is a practical limit on how many direct coach vehicles could be accommodated within Weymouth.</p> <p>Although specific arrangements for direct coach set down and staging will be further developed, it is currently proposed to use the existing parking areas within the Weymouth town centre.</p> <p>It is anticipated that local bus services will be used primarily by both local residents and holiday makers during the Games period. These categories of spectators constitute people who will be in Weymouth, possibly irrespectively, of the Games and could be considered as background demand.</p>
Blue Badge parking	Further work is necessary to establish the location of Blue Badge parking, although it is likely that they would be located within the town centre parking areas.
Park-and-ride	A number of potential park-and-ride sites are currently under investigation with spectator shuttle services being provided to spectator viewing area(s).
Temporary traffic management	A number of temporary traffic management measures will be required to ensure that local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with Weymouth and Portland Borough Council, Dorset County Council, the emergency services, and other stakeholders.
Accessible transport	The provision of accessible vehicle parking at park-and-ride sites and at town centre car parks is under review with Dorset County Council and Weymouth and Portland Borough Council.

Road events

Chapter 8

Chapter 8

Road events

Introduction

8.1 The Olympic Games and Paralympic Games will feature road-based competition and non-competition events. Competition road events will be held on public roads within London. However, some non-competition events, notably the Torch Relay, will use roads outside the capital. It will be necessary to close some parts of the public highway for the build up to, and the duration of, road events. A summary of the road events is given in Figure 8.1.

Competition events

8.2 A total of 13 road events will take place during the Games. The Olympic Games competition events include the Marathon, the Road Cycle race, the Road Cycle time trial, the Road Walk and parts of the Triathlon. The Paralympic Games road events include the Marathon and the Road Cycle race.

8.3 Road Events are included in the draft competition schedules which have been given in Chapter Two.

8.4 LOCOG, the International Sports Federations and the IOC are currently reviewing the exact routes of the road events.

8.5 The routes for the Paralympic Games road events (Road Cycling and Marathon) have yet to be defined.

Figure 8.1 Road events

Event	Date
Marathon	Sunday 5 August, Sunday 12 August
Walk	Friday 3 August Monday 6 August Friday 10 August
Cycle	Saturday 28 July Sunday 29 August Thursday 2 August
Triathlon	Tuesday 7 August Wednesday 8 August

Regional football stadia

Chapter 9

Chapter 9

Regional football stadia

9.1 The Football competition for the Olympic Games will be staged at a total of six football stadia in different cities across the UK, including:

- Cardiff, Millennium Stadium;
- Glasgow, Hampden Park;
- London, Wembley Stadium;
- Manchester, Old Trafford; and
- Newcastle, St James' Park.

9.2 In addition, LOCOG is seeking to secure the use of a sixth venue in the West Midlands. Villa Park in Birmingham is no longer planned to be used due to development plans for the ground which could potentially clash with the Olympic Games.

9.3 Each stadium is likely to host a mix of matches made up of men's and women's matches for both the group stages and the final stages. In total, each stadium is likely to host between six and 15 matches.

9.4 The transport arrangements for each stadium will be based on the tried and tested operating plans that are already successfully implemented for major events held at these venues.

9.5 Once LOCOG's plans for the temporary overlay at each venue have been developed, the existing transport plans for each venue will be reviewed in collaboration with the relevant highway authorities, city transport executives and venue operators to agree any changes that may be required to facilitate the Olympic Games.

9.6 The final stages of the Football competition will be held at Wembley Stadium. A summary of the transport arrangements for Wembley has been given in chapter 7.

9.7 Figure 9.1 shows the location, capacity and schedule for the football stadia.

Figure 9.1 Summary of regional football stadia

	Hampden Park	Millennium Stadium	Old Trafford	St James' Park	West Midlands
Location	Glasgow	Cardiff	Manchester	Newcastle	Venue to be determined
Competition period	Wednesday 25 July Thursday 26 July Saturday 28 July Sunday 29 July Tuesday 31 July Wednesday 1 August Friday 3 August Saturday 4 August Monday 6 August	Wednesday 25 July Thursday 26 July Saturday 28 July Sunday 29 July Tuesday 31 July Wednesday 1 August Friday 3 August Saturday 4 August Tuesday 7 August	Saturday 28 July Sunday 29 July Tuesday 31 July Wednesday 1 August Friday 3 August Saturday 4 August	Wednesday 25 July Thursday 26 July Saturday 28 July Sunday 29 July	Wednesday 25 July Thursday 26 July
Venue capacity	52,000	74,500	75,000	52,000	To be determined
Rail spectator transport	Kings Park and Mount Florida Stations	Cardiff Central and Cardiff Queen Street Stations	Old Trafford and Salford Quays Stations	Newcastle Central Station	To be determined
Metro/Underground				St James' Metro Station	To be determined
Coach spectator transport	Parking immediately south-west of stadium and at Prospect Hill		Parking to north-west of stadium	Newcastle Coach Station	To be determined
Bus spectator transport	Aikenhead Road and Carmunnock Road	St. Mary Street	Chester Road		To be determined
Step free stations	Glasgow Central and Queen Street Stations	Cardiff Central and Cardiff Queen Street Stations	Old Trafford/Exchange Quay	Newcastle Central	To be determined
Venue transport plan	<p>To develop a robust venue plan for each venue, the ODA and LOCOG are working in partnership with the following organisations:</p> <ul style="list-style-type: none"> – Venue owners/operators; – Relevant local authorities; – Emergency services; and – Local transport operators. <p>Other organisations and stakeholders will be drawn into the process when appropriate. The venue transport plan will evolve through time and be developed in more detail as the Games approach. Each plan will be tested prior to the Games.</p>				

Paralympic Games

Chapter 10

Chapter 10

Paralympic Games

Introduction

10.1 In broad terms, the Paralympic Games is approximately one-third the scale of the Olympic Games. During the Paralympic Games, it is expected that more than 1.5 million spectators will travel to the two main event zones at the Olympic Park and River Zone to watch the competitions. In 2012 the Paralympic Games will be held over a period of 11 competition days and will open 17 days after the Olympic Games closes. The current, indicative Paralympic Games competition schedule is shown in chapter 2.

10.2 The particular Paralympic Games challenges for London are to:

- supply safe, reliable and accessible transport to more than 16,500 Paralympic Family members each day;
- ensure that Paralympic Family transport services provide for disabled people of all impairments;
- provide appropriate transport for approximately 2,500 Paralympic Family members, including athletes, who use a wheelchair for daily living;
- ensure that adequate transport is available all spectators each day during the Games; and
- provide high-capacity, accessible transport to cater for approximately 15-20 per cent of spectators who are expected to have specific access needs.

10.3 This chapter provides an overview of the Paralympic Games and the proposed transport arrangements.

Paralympic Games timetable

10.4 The Paralympic Games period includes the:

- transition period, including the changeover of venues from Olympic to Paralympic mode;
- opening of the Paralympic Village prior to the Paralympic Games Opening Ceremony;
- 11 days of Paralympic Games competition; and
- departure of the Paralympic Family and the closure of the Paralympic Village.

10.5 The Paralympic Village will open on 22 August. The Opening Ceremony will take place on 29 August, with the Closing Ceremony on 9 September. The Paralympic Village will close on 12 September.

Paralympic venues

10.6 During the Paralympic Games the majority of sports will take place in two clusters, the Olympic Park and the River Zone. Three events will be held outside the two main clusters. The Sailing events will be held at Weymouth and Portland, the Paralympic Rowing will be held at Eton Dorney and the Road Cycling will be held at Regent's Park.

10.7 Figure 10.1 lists the Paralympic Games venues and venue capacities.

Paralympic Games clients

10.8 Transport services will be provided by LOCOG for a broad range of clients during the Paralympic Games. These include, athletes and team officials, technical officials, press, broadcast, Paralympic Family and marketing partners. These groups also include International Paralympic Committee (IPC) members, National Paralympic Committee (NPC) officials, International Paralympic Sports Federation (IPSF) personnel and total approximately 16,500 people.

Accommodation

10.9 All Paralympic Games athletes and team officials (approximately 6,000 people) will be given accommodation in the Paralympic Village. Those athletes competing in the Sailing and Rowing events will also be offered accommodation in Weymouth and Portland and at Royal Holloway respectively.

10.10 The Paralympic Village will also provide accommodation for approximately 1,100 technical officials.

10.11 The 3,000 accredited members of the press and broadcasters covering the Paralympic Games will be accommodated in hotels. A further 1,400 members of the Paralympic Family, including representatives of the IPC and the National Paralympic Committees (NPCs) will be accommodated in hotels.

Paralympic Route Network (PRN)

10.12 Following the Olympic Games, the Olympic Route Network (ORN) will be scaled down and the remainder will be known as the Paralympic Route Network (PRN). The PRN is required to transport the Paralympic clients safely, quickly and reliably between competition venues, accommodation and other non-competition venues. Further details relating to the ORN are given in Chapter 5.

10.13 Different roads on the PRN will be required for different periods depending on their purpose and the demand for them.

10.14 Figure 10.2 illustrates the current proposals for the Paralympic Route Network and Figure 10.3 summarises the main locations that it serves.

10.15 A comprehensive package of traffic management measures is being developed to support the implementation of the Olympic Route Network. It is expected that a similar package of measures will be used during the Paralympic Games albeit reflecting the reduced scale of the network.

Figure 10.1 Paralympic Games venues and venue capacities

Sport	Potential Paralympic venue	Venue capacity
Opening Ceremony	Olympic Stadium	80,000
Closing Ceremony	Olympic Stadium	80,000
Archery	Royal Artillery Barracks	2,000
Athletics – Track and Field	Olympic Stadium	80,000
Athletics – Marathon	To be determined	N/A
Boccia	ExCeL	5,000
Cycling – Road Race and Time Trial	Regent's Park	3,000
Cycling – Track	Olympic Park Velodrome	6,000
Equestrian – Dressage	Greenwich Park	6,000
Football – Seven-a-side	Olympic Park Hockey Centre	15,000
Football – Five-a-side	Olympic Park Hockey Centre	5,000
Goalball	Olympic Park Handball Arena	7,000
Judo	ExCeL	10,000
Powerlifting	ExCeL	6,000
Rowing	Eton Dorney	6,000
Sailing	Weymouth and Portland	17,400
Shooting	Royal Artillery Barracks	5,000
Swimming	Olympic Park Aquatics Centre	17,500
Table Tennis	ExCeL	6,000
Volleyball (Sitting)	ExCeL	6,000
Wheelchair Basketball	North Greenwich Arena/Olympic Park Basketball Arena (for preliminaries)	18,000/10,000
Wheelchair Fencing	ExCeL	10,000
Wheelchair Rugby	Olympic Park Basketball Arena	10,000
Wheelchair Tennis	ExCeL	10,500

Spectator transport

10.16 As for the Olympic Games, the transport strategy for ticketed spectators to the Paralympic Games is founded on the principle that public transport, walking and cycling will be the main modes of transport for spectators. There will be no general spectator car parking available on site. However, as at the Olympic Games, there will be some Blue Badge parking available for disabled spectators and workforce.

10.17 Spectators with a valid event ticket will be entitled to free public transport within the Greater London area on the day of the event.

Ticketing

10.18 The ticketing strategy is currently in development and will be published by LOCOG in 2010.

Daily spectator attendance

10.19 Figure 10.4 shows the estimated total daily spectator attendance at the Paralympic Games with figure 10.5 showing the home locations of UK spectators attending London venues.

Transport between Olympic Park and River Zone venues

10.20 A clearly defined route will be provided for spectators who wish to travel between the Olympic Park and the River Zone venues. This transport will be provided free of charge for spectators with a valid ticket for the day in question.

10.21 The Docklands Light Railway (DLR) provides a convenient link between the two competition zones, operating from Stratford International and Stratford Regional Stations, plus West Ham Station for the Olympic Park. It also connects to numerous River Zone stations, including Custom House and Prince Regent stations for ExCeL, and Woolwich Arsenal for the Royal Artillery Barracks.

10.22 The inter-zone route will be well signed and staffed. A supplementary shuttle bus service will also be in operation if required.

School coaches

10.23 The number of school trips will mean that there could be significantly more direct coach trips than at the Olympic Games.

Figure 10.2
Paralympic Route Network

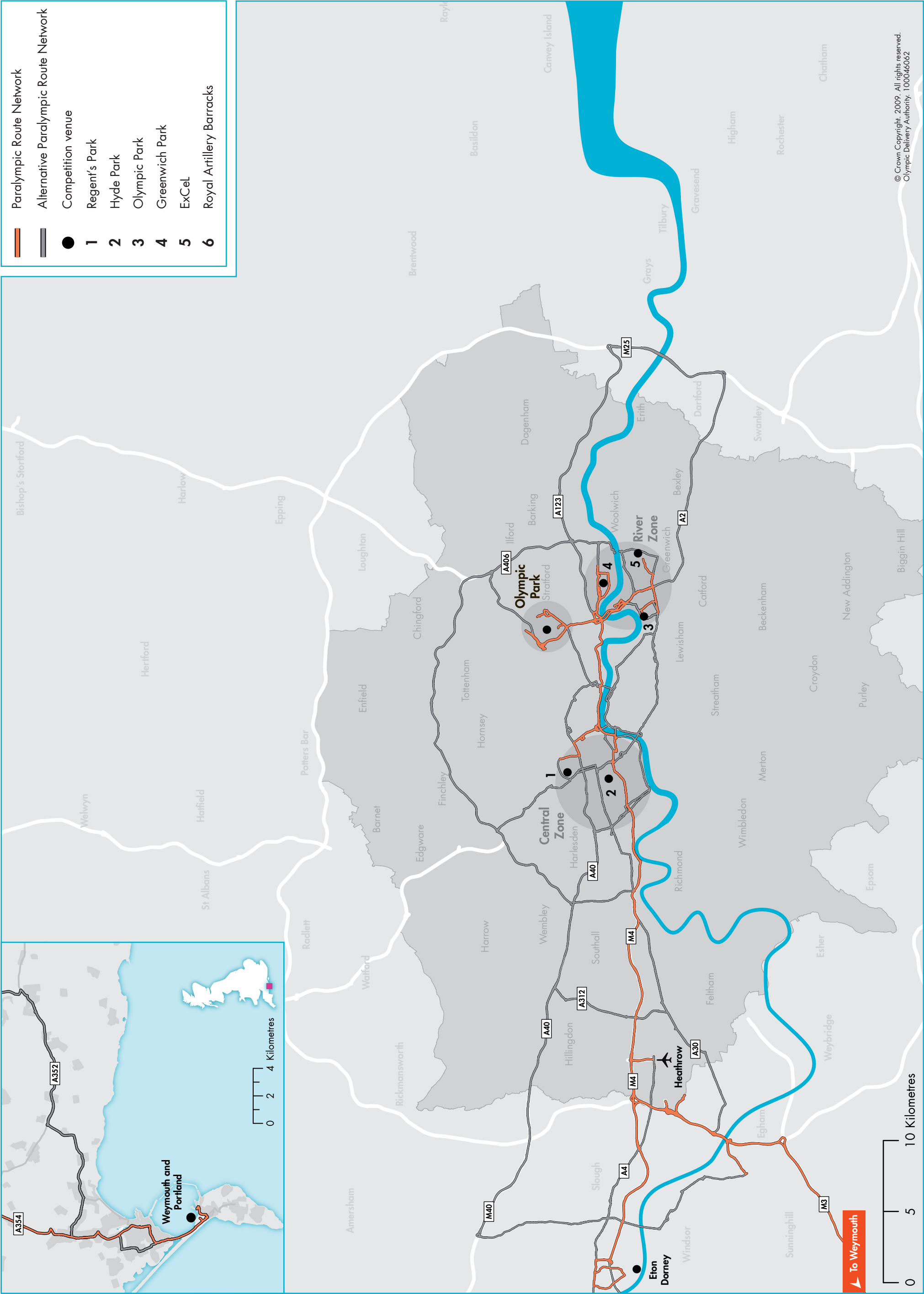
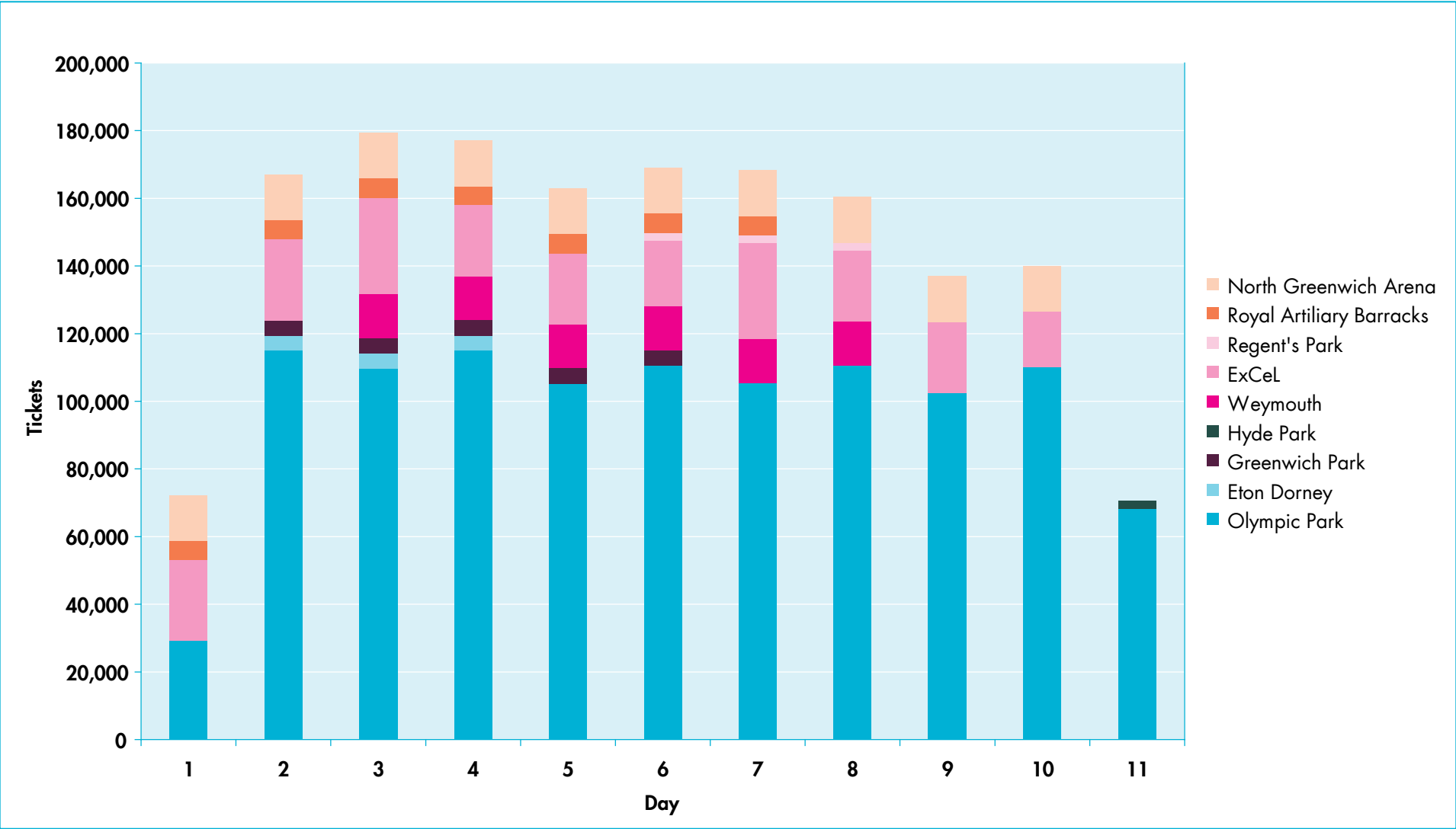


Figure 10.3 Summary of Paralympic Route Network

Origin	Destination	Route
Heathrow Airport	Olympic Park	M4, A4, Victoria Embankment, Upper Thames Street, The Highway, the Limehouse Link, Aspen Way and the A12
Heathrow Airport	Weymouth and Portland	M4, M25, M3, M27, A31, and A35
Olympic Park	Greenwich Park	A12, Blackwall Tunnel, A2203 and A206
Olympic Park	ExCeL	A12, A13 and Lower Lea Crossing
Olympic Park	Royal Artillery Barracks	A12, Blackwall Tunnel, A102 and A207
Royal Holloway and central London venues	Eton Dorney	Egham by-pass A30, M25, M4, Huntercombe Spur (M4), Bath Road A4

Figure 10.4 Paralympic Games total daily spectator attendance (all competition venues)



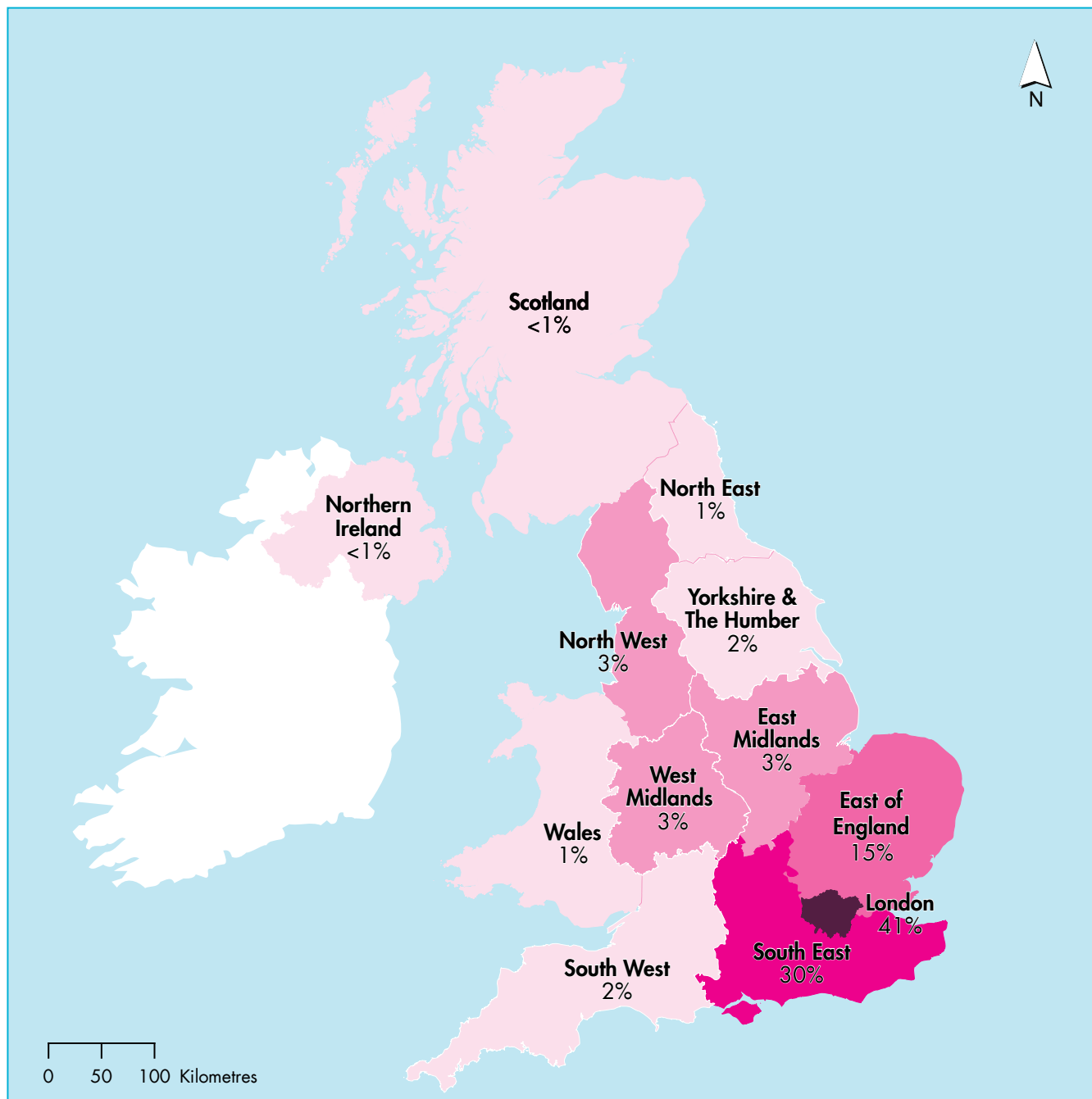


Figure 10.5
Predicted distribution of home
locations of UK spectators
attending London venues
(Day 13)

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Ceremonies and cultural events

Chapter 11

Chapter 11 Ceremonies and cultural events

Introduction

11.1 A series of Games ceremonies and cultural events will take place in London and around the UK. They will be held in the period before and during the Olympic and Paralympic Games.

11.2 The overall responsibility for the planning and delivery of both the ceremonies and cultural events lies with LOCOG. LOCOG is responsible for delivering transport arrangements for the Games Family to the ceremonies. The ODA is responsible for delivering the transport arrangements for the public and workforce.

Ceremonies

11.3 The Opening and Closing Ceremonies of the London 2012 Olympic and Paralympic Games will take place on the following dates:

- Olympic Games Opening Ceremony: 27 July;
- Olympic Games Closing Ceremony: 12 August;
- Paralympic Games Opening Ceremony: 29 August;
- Paralympic Games Closing Ceremony: 9 September.

Cultural programme

11.4 In addition to these ceremonies, a cultural programme is being developed by LOCOG and this is likely to include a range of concerts, outdoor screenings, exhibitions and carnivals. Most of the events will be open to public participation and viewing and they will be based around Olympic Games and Paralympic Games themes.

11.5 The focal point for the large scale events associated with the cultural programme is likely to be in central London. Potential venues in central London include Hyde Park, Trafalgar Square, Covent Garden and riverside promenade sites. In addition to London venues, there will be a series of events and Live Sites across the UK.

11.6 Work to estimate the additional transport demand generated by these events is currently underway. Assumptions have been made relating to the number of people making dedicated public transport trips to attend these events, as opposed to incorporating them into a trip already planned.

11.7 In line with the transport strategy for the Games, attendees will be encouraged to use public transport, walk or cycle to attend these events.

11.8 It is assumed that 90 per cent of people attending cultural events will use National Rail, London Underground or local bus to travel to and from the sites.

11.9 The other cultural events in London are expected to be smaller in scale and are likely to attract people who have travelled to London for other purposes or who live locally.

Opening and Closing Ceremonies

11.10 The Olympic Games and Paralympic Games Opening and Closing Ceremonies will be events held at the Olympic Stadium in the Olympic Park.

Live Sites for Olympic and Paralympic Games

11.11 The term 'Live Site' is used to refer to a public location where facilities (such as large screens) will be put in place to enable people to watch sporting events during the Games live from venues around the UK. It is likely that individual sites will have a maximum capacity of 10,000 spectators.

11.12 Once the cultural events programme has been developed in more detail, further work will be required to forecast the volumes of spectators and the additional demand that this will place on London's public transport network.

11.13 The ODA is working with LOCOG, local authorities and TfL to ensure that the ceremonies and cultural events take place in locations and at times that will minimise the impact on nearby competition venues, the ORN and other transport services supporting the Games.

Freight and servicing

Chapter 12

Chapter 12

Freight and servicing

Introduction

12.1 The Olympic Games and Paralympic Games will require logistics planning of a unique scale and complexity in the run up to, during and after the Games.

12.2 As the scope of LOCOG's Logistics team can be summarised as the Games period, the freight and servicing issues highlighted are focused on the movements associated solely with the staging of the Games. During the construction of the Olympic Park and other new-build venues the ODA acts as the developer. It therefore has a role in the management of construction-related traffic associated with these developments. This subject is covered in detail in the appropriate Transport Assessments. As such, it is only referenced in this document.

Roles and responsibilities

12.3 LOCOG Logistics has responsibility for the planning and organising of the logistics for the London 2012 Games. This includes:

- developing a comprehensive plan for the distribution of the materials required to stage the Games;
- managing the Games Family Freight and Customs clearance – supporting the National Olympic and Paralympic Committees, the IOC and the IPC with the movement into the country of their freight and unaccompanied baggage;
- procuring warehousing space and establishing a warehousing and storage operation for Games materials including sports equipment, technology equipment, furniture, fixtures, materials for the ceremonies, promotional materials, the 'look' of the Games and consumables;

- planning and operating the delivery schedule for distribution to all competition and non-competition venues – managing, controlling and scheduling all deliveries including consolidation;
- managing the in-venue logistics operations at all competition and non-competition venues; and
- the removal of waste from venues during the Games.

12.4 The strategy for delivering the logistics requirements will be outsourced to a third party contractor as the Lead Logistics Supplier. The Lead Logistics Supplier will have responsibility for assisting with the development of a logistics operating plan and for providing the infrastructure and resources for the operational execution of the logistics plan. The logistics plan will be produced in accordance with UK, London and local freight and distribution policy.

Logistics vehicles and the Olympic Route Network

12.5 The responsibility for planning the Olympic Route Network (ORN), and the management of London's traffic during the Games, sits with the ODA and its delivery partners. Although the primary role of the ORN is to accommodate the movement of the Olympic Family and the Paralympic Family, it will also act as a core route for Games-related logistics movements at specified times.

12.6 During the planning and operation of the ORN, the ODA will have an overview of the logistics vehicles that will use this network, the time that journeys will take place, and their origins and destinations. This allows for the integrated management of all Games-related traffic using the ORN, and ensures that the measures that are put in place to facilitate Games Family travel are also used to benefit the efficient operation of the logistics during the Games. The ODA will work with LOCOG in the development of forecasts of logistics movements. Evidence from previous Games is being

used to inform this process. Logistics delivery and vehicle movement patterns for the Games will have a profile that:

- peaks ahead of the competition schedule with materials required to stage the Games moved into venues;
- has a drop off during the Games when activity is restricted to replenishment of food, linen, consumables, small ancillaries and waste removal;
- has a secondary reduced peak for the transition of venues to Paralympic use; and
- has a final peak after the Paralympic Games with the removal of materials for subsequent disposal.

12.7 All competition and non-competition venues will generate different servicing needs, with the freight and waste management activity varying in type and volume during different phases of the Games. However, the logistics movements profile highlighted above indicates that the peaks for logistics are different to the peak transport movements for people that occur during the Games.

Servicing of venues

12.8 LOCOG and the Lead Logistics Supplier will plan the servicing of competition and non-competition venues taking into account:

- the design of access routes and load and dispatch areas within venues will factor in the nature of Games-time servicing requirements;
- the requirement to minimise venue servicing during peak periods;
- the viability of using non-road modes of transport for deliveries or removal of waste will be assessed: for example, use of the waterways in the Olympic Park;
- careful routing, scheduling and load planning will minimise the number of road miles operated by servicing vehicles; and

- safety and security in and around logistics facilities and at each of the venues will be in accordance with IOC guidelines and industry best practice as advised by the Security function.

12.9 Managing the impacts of delivery vehicles during the Games will be undertaken on a venue-by-venue basis, taking into account the configuration of local transport networks and the existing freight management arrangements and the security access requirements.

12.10 This issue will be considered during the venue transport planning process, in consultation with venue operators and local authorities. This will identify areas of concern with the movement of people and goods at these locations, and any specific servicing arrangements that will need to be put in place. These venue-specific servicing plans will form part of the venue transport plans.

London Lorry Control Scheme, Congestion Charging and London Low-Emission Zone

12.11 The movement of goods, particularly by road, is heavily regulated with legal obligations attached to vehicles, drivers and operators. LOCOG's Lead Logistics Supplier will adhere to the appropriate regulations.

12.12 In London, there are additional obligations that will impact upon the design and operation of Games-time logistics.

12.13 The ODA and LOCOG will work with the operators of these schemes to identify how the Games-related logistics strategy and ORN management can reflect the requirements of each. Where necessary, the logistics strategy will set out specific measures on how Games-time freight movements will be managed in the light of these schemes.

The London Lorry Control Scheme

12.14 The London Lorry Control Scheme, enforced by London Councils, minimises the movement of goods vehicles over 18 tonnes at night and at weekends. The objective of this scheme is to reduce noise for Londoners during these times. There are specific exempt routes within Greater London that can be used, but permits are required for all other areas.

The London Congestion Charging Zone

12.15 Transport for London's (TfL's) Congestion Charging Zone operates Monday to Friday 7am–6pm excluding public and bank holidays. All vehicles are required to pay a daily charge to drive within the charging zone. There are a range of exemptions and discounts available to certain categories of vehicles and individuals. A number of Games venues and parts of the ORN fall within the Congestion Charging Zone.

The London Low Emission Zone

12.16 A Low Emission Zone (LEZ) covering most of Greater London has been in operation since 2008. Older diesel vehicles such as lorries, buses and coaches are required to meet the Euro III emission standards for particulate matter or pay a daily charge to drive within the zone. The emission standards are set to become more stringent over time. The LEZ operates 24 hours a day every day.

Business continuity during the Games

12.17 As part of the ongoing commitment to 'Keep London and the rest of the UK moving', the first edition of the Transport Plan recognised the need to ensure that London businesses can continue to operate effectively and efficiently, and be able to rely on their road freight distribution networks during the Games.

12.18 The first edition of the Transport Plan noted that approximately three years before the Games the ODA would start to identify businesses and supply chains that will be directly affected by the transport plans for the Games. This work is now underway.

12.19 The intention to work with TfL Freight Unit, local authorities and the road freight industry is being put into effect through a two-tier, ODA-led stakeholder structure.

12.20 An overarching group, including all of these parties, is sponsoring freight industry sector sub-groups that are initially meeting to understand the aspects of the Transport Plan that most affect them. The sub-groups identify the issues and report back to the main body. Prior to the publication of the second edition of the Transport Plan in 2010, objectives for the sub-groups' ongoing work will be agreed. This will enable more detailed work to take place as development of the ORN and other workstream projects continue in parallel.

12.21 The intention is to amass a comprehensive understanding of the road freight industry's particular access and delivery needs as shown in figure 12.1.

12.22 In addition, the ODA is creating a direct ongoing dialogue with third party businesses – such as retailers and retailers' representative organisations that rely on road freight deliveries – at locations likely to be affected by the more significant changed patterns of movement during the Games.

Figure 12.1 Road freight

Type of location	Solution
On and adjacent to the designated roads of the Olympic Route Network (ORN) and Paralympic Route Network.	The detailed effects and solutions at these locations will be developed and owned by the ORN team within the ODA's Transport team through to 2012.
Within a specified distance of each 2012 Games competition venue (related to existing road approach routes).	Draft Venue Transport Strategies (VTS) will be further developed to take account of road freight access needs.
Where spectator travel movement routes and other transport construction projects are potentially sharing the same spaces and may affect road freight access; where on-street freight deliveries may conflict with other transport movement.	The ODA's Transport team already has an Interface project in operation involving Crossrail, Thameslink and Thames Water's London area investment projects. This project will expand to include assessing freight delivery interface issues and develop solutions.
More broadly and in less detail within the South East of England and near other venues.	The Travel Demand Management project can target road freight operators by type and location to influence operations to reduce any pressures on 2012 Games transport plans.

Rail freight operators

12.23 The Games infrastructure development and construction has presented opportunities for new business for rail freight operators. The adjustments to services during the Games will present some challenges to normal operations in the east London area. There may need to be some re-routing of services in east and north London but not on the scale of the changes that were imposed by the construction work itself. This will ensure that the Games are not disrupted by the local freight movements, but equally the resilience of operations requires that all the freight routes remain available throughout the period.

12.24 The additional late night passenger train services proposed to be run nationally are also being planned so as not to disrupt rail freight movements.

Transport safety

Chapter 13

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Transport safety

Introduction

13.1 To discharge its statutory duties in relation to transport the ODA carries out a range of activities. These include planning, design and delivery of infrastructure projects, setting and agreeing service levels for spectator transport with delivery partners and other transport providers, providing operational capability during the Games and designing and delivering measures for the regulation of traffic on the ORN through the making of TROs.

13.2 The ODA is subject to a range of legal duties in relation to safety. The overriding principle is that the ODA will discharge its obligations by taking all reasonably practicable measure in view of its functions, resources and capacity to ensure that people affected by its undertakings are not exposed to risk to their safety. In the context of transport, the nature of and the output required by these obligations differs depending on the degree of control and influence which the ODA can exert.

13.3 The ODA generally discharges its obligations through existing providers. These operators include Network Rail, train operating companies (TOCs) and subsidiaries of Transport for London (TfL) such as London Underground Limited (LU). In most cases these organisations are statutory undertakers of transport operations in their own right. They have existing, mature, risk-based safety management systems that are constantly reviewed and updated and are certified or authorised by an independent regulator.

13.4 The Games transport system is multimodal and includes river boats, buses and coaches as well as rail modes and highway operations. Different regulatory requirements apply to the different modes and require operators to implement a safety management system. Figure 13.1 provides an overview of the ODA's safety assurance.

13.5 These regulatory requirements are typically enforced by regulatory bodies such as the Office of the Rail Regulator (ORR) Health & Safety Executive (HSE), Port of London Authority (PLA), Marine Coastguard Agency (MCA), Vehicle Operating Standards Agency (VOSA) and the Environment Agency (EA).

13.6 The three primary areas on which the ODA Transport's safety plans are focussed are:

1. The development and implementation of a suitable safety management system covering aspects of occupational health for its staff and others affected by its activities.
2. The development and implementation of suitable risk-based safety arrangements where appropriate safety mechanisms are not already in place.
3. Gathering safety assurance information and data to demonstrate systems risk remain as low as reasonably possible where the ODA is contracting services directly or working with operators to secure additional, temporary services during the Games.

13.7 During 2009 the following tasks have been completed and set out the platform from which the ODA's Transport team's safety goals will be delivered:

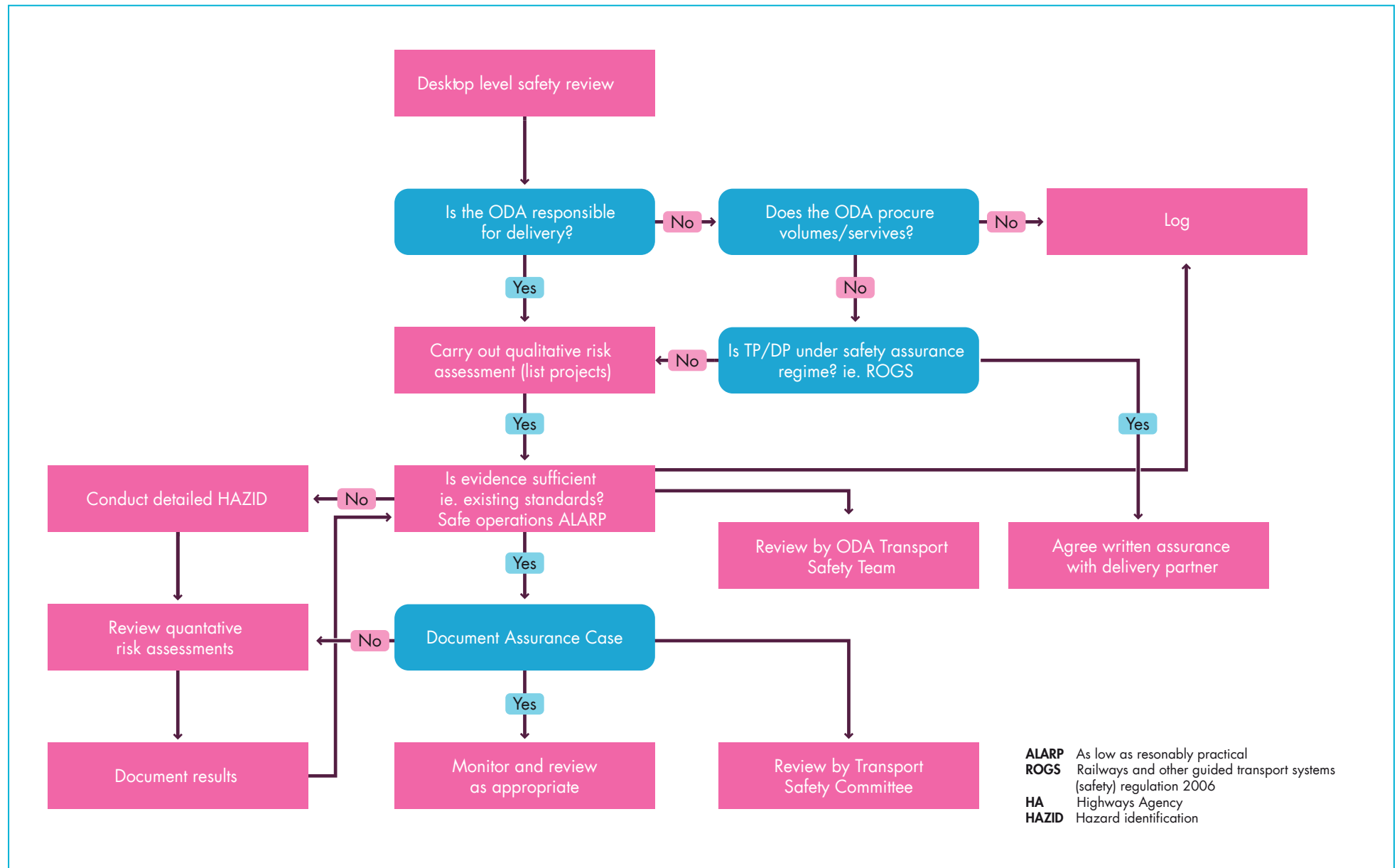
- An independent review of the ODA's Transport team's safety obligations.
- Agreed a set of high-level London 2012 Safety Assurance Principles.
- Developed and procured a supplier of expert support to carry out risk assessments and HazOps for the ODA's areas of obligation.
- Set up a Transport Safety Forum attended by the ODA's delivery partners to communicate the ODA's plans and to coordinate safety activities.
- Set up a dedicated Transport Safety Board within the ODA to assist in managing the transport safety risk profile.

- Developed an Occupational Health and Safety Management System that has been certified to the British and International Standard OHSAS 18001.
- Set up a forum of multi-modal transport regulators to ensure consistency of approach and safety assurance.
- Agreed safety assurance principles with LOCOG.

13.8 Although the ODA's Transport team is focused on the design and delivery of transport during the Games, it has also delivered infrastructure projects through various mechanisms and delivery partners and is therefore responsible for safety management and leadership. One of these flagship projects was rewarded for its commitment to safety by being awarded the British Safety Council's highest safety award of five stars.

13.9 Over the coming months, the existing safety management arrangements will be further refined and developed so that they fit with the migration to Games operations. This will involve further enhancement of staff competency, production of safety communications and engagement with the ODA's delivery partners to collect assurance information and data.

Figure 13.1 Safety assurance



Transport security

Chapter 14

Chapter 14

Transport security

Strategic approach to transport security

14.1 A key objective in the London 2012 Olympic and Paralympic Games Security Strategy is to protect venues, events and supporting transport infrastructure, and those attending and using them.

14.2 There will be 7.7 million tickets on sale for the Olympic Games and 1.5 million for the Paralympic Games. Workforce across both Games is expected to number more than 170,000. Most will travel by public transport, on foot or by cycling. These journeys will be made in addition to the background daily commuting and leisure journeys on the transport networks.

14.3 At a UK Government level, Ministerial and Departmental responsibility for oversight and assurance of Games transport security rests with the Secretary of State for Transport and the Department for Transport (DfT). To meet the security challenge of protecting the road, rail, aviation and maritime networks, the London 2012 transport security operation will require close engagement with and cooperation from industry.

14.4 The existing security regime for the transport sector aims to provide a layered approach to security, appropriate to the national threat level and able to flex to any changes to it. It recognises the differences between transport modes and the role that an efficient and effective transport system plays in supporting the national economy and quality of life.

14.5 Transport security planning for the Games builds upon this existing security regime. It aims to identify specific additional risks over and above 'business as usual', in the light of the changes to transport services and expected travel patterns set out in the Transport Plan, and to develop and implement plans to mitigate them.

Governance arrangements

14.6 The ODA's Transport team has previously established effective working relationships for the transport security with the:

- DfT (DfT);
- Home Office;
- Government Olympic Executive;
- Police – British Transport Police (BTP), Metropolitan Police Service (MPS), Regional Forces); and
- Transport operators.

14.7 From the outset, the ODA's Transport team established the Transport Security Working Group comprising:

- ODA;
- LOCOG;
- Department for Culture Media and Sport;
- DfT;
- Home Office;
- British Transport Police; and
- Metropolitan Police Service;

14.8 These initial working arrangements proved effective in developing a transport security strategy and in taking forward transport security planning. More recently, a National Coordinator for Transport Security has been appointed to continue this work. The DfT (on behalf of its Ministers) has provided strategic level oversight and assurance of transport security within the Olympic and Paralympic Safety and Security Programme. This programme is led by the Home Office and has been restructured to be closely coordinated to its national counter-terrorism strategy CONTEST which sets out a comprehensive plan for dealing with the terrorist threat throughout the UK.

14.9 The Olympic and Paralympic Security Directorate (OSD) has been established to deliver a safe and secure Games. The five key actions needed to meet this aim are to:

- Protect Games venues, events and supporting infrastructure, and those attending and using them;
- Prepare for events that may significantly disrupt the safety and security of the Games and ensure capabilities are in place to mitigate their impact;
- Identify and disrupt threats to the safety and security of the Games;
- Command, control, plan and resource the safety and security operation; and
- Engage with international and domestic partners and communities to enhance security and ensure success of the strategy.

14.10 The OSD will manage the security programme and ensure delivery by commissioning work to lead agencies.

National Coordinator for cross-modal transport security

14.11 The National Coordinator for Cross-Modal Olympic Transport Security sits within the 'Protect' element of the OSD strategy. The role is responsible for coordinating road, rail, aviation and maritime security within the overall Olympic Security Programme, leading the OSD Transport Security Project, chairing the Transport Security Working Group (TSWG), initiating transport security planning, and ensuring its delivery.

14.12 The National Coordinator reports to the Transport Security Steering Group (TSSG) which is chaired by the DfT. This reflects DfT's role in representing transport security on the Olympic Security Board, as well as the Secretary of State for Transport's overall policy responsibility for transport security.

Progress

14.13 Work on transport security started during the bid phase and since 2007 there has been a dedicated ODA Transport Security team. This team has been proactively leading the development of an effective and efficient approach to delivering transport security. To communicate the transport security vision and deliver its implementation this team has produced a number of key documents:

- Transport Security Strategy – sets out the vision and goals for transport security for the London 2012 Games and integrates the transport planning with transport security;
- Risk Register – a document that is constantly updated with the threats and vulnerability associated with the Games transport and acts as a tool to assist in making informed decisions regarding transport security. The risk register provides an indication of the transport security costs for the Games; and
- Transport Security Management Plan – which details the management framework, roles and responsibilities and processes to deliver a practicable Transport Security capability.

14.14 Delivering transport security during the Games is challenging and complex due to the large number of stakeholders within the transport sector. To address this challenge, and ensure success, the ODA's Transport team, DfT and the National Coordinator for Transport Security have established a Project Coordination Office (PCO) to co-ordinate transport security and manage the interfaces with the OSD Programme.

14.15 The PCO has developed a transport delivery framework which consists of modal groups and venue delivery teams. Modal working groups have been established for:

- rail;
- aviation;
- road; and
- maritime and ports.

14.16 Each group is led by a senior police officer and comprises of representatives of the ODA's Transport team, LOCOG, DfT, transport industry members, and security advisers. The modal working groups will continue to monitor risks and ensure that mode-based risks are treated in accordance with DfT security procedures.

14.17 Regional Venue Delivery Teams will plan the implementation of transport security overlay plans for Olympic venues, and will be established for:

- Dorset (Weymouth and Portland, Sailing);
- Essex (Hadleigh Farm, Mountain Biking);
- Hertfordshire (Broxbourne, Canoe Slalom);
- London;
- Thames Valley (Eton Dorney, Rowing and Canoe Sprint);
- Other venues if/when identified;
- Regional Football (Cardiff, Manchester, Newcastle, Glasgow); and
- At some non-competition venues

Forward work programme

14.18 Future work will focus on continuing to deliver a comprehensive and robust transport security capability. This will involve ensuring full integration with stakeholders and aiming to achieve the most efficient and effective delivery approach.

14.19 The work will require a number of activities to be undertaken including:

- working with stakeholders and industry to implement the extensive strategic and planning work that has been undertaken;
- refining the transport security risk register and acting upon information from security services to ensure the optimal capability will be in place for the Games;
- undertaking extensive detailed risk assessments of security threats to the transport systems as the ODA transport plans and LOCOG venue plans are implemented; and
- implementing assurance and cost control processes to ensure that the ODA Transport team's and government expectations are being delivered and value for money is driven through decisions made on transport security.

Transport Coordination Centre (TCC)

14.20 The role of the Transport Coordination Centre (TCC) is to ensure a seamless integration of transport and security agencies with transport operations for the Games.

14.21 The TCC was formerly known as the Olympic Transport Operations Centre (OTOC). It has been renamed to better reflect its roles and responsibilities.

14.22 Since the last edition of the Transport Plan the ODA, in partnership with TfL, has been working with stakeholders to understand the command and control functions of transport and security agencies and their interdependencies. This understanding has helped to define the role of the TCC during the Games.

14.23 The TCC mission statement is:

‘To provide effective coordination of all partners involved in the delivery of transport during London 2012 Olympic and Paralympic Games on a nationwide basis in order to promote the provision of safe, secure, reliable and timely transport services to all client groups of the Olympic and Paralympic Games while minimising the impact to the travelling public’.

14.24 To achieve this overarching mission two key objectives have been identified to:

- coordinate the management of the Olympic Route Network (ORN) in real time to support Games Family vehicle journey times while enabling London and the rest of the UK to keep moving; and

- provide a hub for actively sharing information between representatives from multi-modal transport agencies, the Games organisers and existing control centres to enable London and the UK to be kept free flowing.

14.25 A Concept of Operations (CONOPs) for the TCC has been developed. This CONOPs recognises that the transport and security command and control functions will remain with the existing stakeholder organisations and that the TCC will not assume this responsibility.

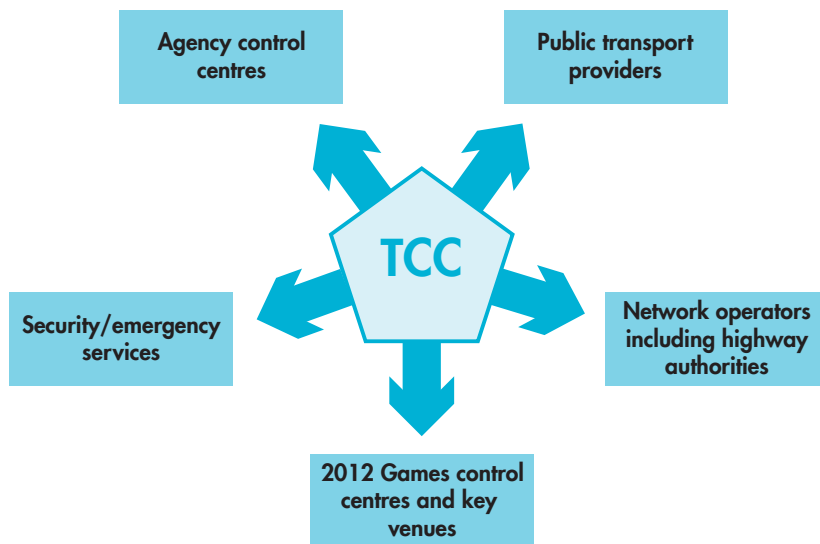
14.26 Stakeholder organisations will either have representation in or will have a communication link to the TCC. This will enable the TCC to facilitate an unprecedented level of integrated multi-modal transport coordination and communication through a single location during the Games. See Figure 14.1.

14.27 The principle underpinning the TCC CONOPs is that organisations will continue the delivery of their day-to-day operations, while network performance information will be available to their representatives in the TCC. In the event of an incident occurring on the network, the TCC representative will be in a position to take a view as to how the incident will impact on the timely delivery of Games-related transport, and therefore help inform an appropriate response. As the most up-to-date information will be made available to the TCC representatives, information will be cascaded as required. A number of pre-identified contingencies will be identified to facilitate the response to any incident.

14.28 The TCC will have a key role in the overarching command, coordination and communication (C3) strategy of London and the UK during the Games. It will have with links to the appropriate C3 hierarchies including security, national government, and LOCOG’s main operations will be further defined in the next stage of the C3 strategy development.

14.29 TCC enabling works and a supporting technology requirements study have been taken forward in parallel to the development of the TCC CONOPs. The purpose of these works is to deliver the appropriate infrastructure, management and supporting services for the TCC in conjunction with the delivery of other co-located control elements. This workstream provides the space allocated to the TCC, fitted out with office furniture, service infrastructure and the environment for the TCC (heating, power, lighting, standby services) to operate in.

Figure 14.1 Transport Coordination Centre



14.30 The next stage of the development of the TCC includes operational set-up, facility fit out, provision of services, testing and commissioning. This stage will provide the technology and communication links for the TCC, and the necessary operational plans. This stage will also fit out the facility as determined by the plan, including testing, evaluation and commissioning of the TCC facility.

14.31 The TCC will begin testing and training by the end of 2010.

Contingency planning and testing

Chapter 15

Chapter 15

Contingency planning and testing

Introduction

15.1 During the continuing development of the transport strategy for the Games, extensive analysis has been completed to ensure that the core strategies adopted are robust and will deliver transport during the Games. This includes simulation of both individual and multiple events, together with scenario tests. In addition, resilience has been integrated into the transport network supporting the Games. The ODA made some contributions to delivery partner programmes enabling accelerated upgrades and renewals, in addition to improving transport infrastructure and capacity.

15.2 As the Games approach, it will be essential to incorporate contingency into the operational planning process to ensure the successful delivery of transport operations. The London Olympic Games and Paralympic Games Act 2006 also requires the Transport Plan to make provision for contingency plans.

15.3 Currently, it is envisaged that a family of contingency plans will be produced to cover all transport modes, including public transport and road-based transport. The plans will be developed using an integrated approach so that cross-mode solutions can be properly designed and implemented.

15.4 The ODA works closely with its delivery partners to develop the plans. Many of these organisations already have a great deal of experience in contingency planning and have tried and tested plans in operation. It is proposed that these proven existing plans are used as a base from which the Games-time contingency plans will be developed to take account of the unique nature of the Games. These new plans will be tested and improved where required. A staff training programme will be undertaken to enable a rapid response when necessary.

15.5 In addition, the ODA's Transport team will work with other functional areas across LOCOG and the ODA to make certain that the transport contingency plans are not developed in isolation, but reflect the involvement of the full range of functions.

15.6 The plans will be developed to enable a response to a wide variety of potential incidents, for example:

- infrastructure failures;
- passenger actions;
- road traffic accidents;
- building/structure collapse;
- extreme weather conditions; and
- security issues.

15.7 A risk-based approach will be used to assist in the development of the plans. This approach will ensure that the plans include measures appropriate for the level of risk at the time. The integration of resilience and contingency into the planning process forms a part of the rail services delivery plans for the Games.

15.8 The dissemination of information will be critical during any implementation of a contingency plan. For example, it will be necessary to make certain that those people who may be affected by an incident are given relevant information on alternative travel arrangements.

15.9 The issue of contingency will also be considered during the venue transport planning process. The ODA will continue to consult with its delivery partners, including transport operators, local authorities, the emergency services and venue operators during this process.

15.10 The implementation of the transport contingency plans will be managed through the Transport Coordination Centre (TCC). Further details on this centre is given in chapter 14.

Testing

15.11 The ODA and its partners are putting in place plans to test transport operations. These tests will ensure that items work individually and when combined together with others. Tests will also establish whether the organisations, people and processes associated with operations work properly. It is therefore important to simulate as closely as possible the Games situation to create a learning experience and gain familiarity with the issues.

15.12 Four elements of transport will be tested:

1. Volumes – Transport systems or locations that are subject to significantly increased loads from the norm during the Games, for example, at the Olympic Park and ExCeL.
2. New arrangements – Venue and spectator transport interfaces where there are significant differences or 'new' operations being created for the Games, for example, bus shuttles at Hadleigh Farm.
3. Games specific – Games specific services, equipment or processes that do not currently exist in any form, for example, the ORN, interface protocols and the TCC and its operation.
4. Paralympic Games variations – on the items above together with any special or new Paralympic-specific elements.

15.13 Testing in this context is the 'live', physical testing of the operations, equipment and processes. Many of the processes will require working relationships between and across organisations that need integration in a way that a single organisation cannot test on its own. Integrated testing is therefore required to cement these arrangements, methods and relationships.

15.14 Integrated testing will be the culmination of a process that is likely to have included simulations, scenarios, desktops, Failure Mode, Effects, and Criticality Analysis (FMECA) and Factory Acceptance Tests (FATs) both within organisations and in a multi-organisation context.

15.15 Physical test events will be appropriate at three levels:

- Individual – Location, venue or system derived tests that physically test individual elements of the transport system, for example, strategic park-and-ride services, West Ham Station operations, and the direct coach network using small events.
- Full venue load – Events for individual venues using sports, cultural or free events to acquire a representative load. These will need to be coordinated with, and may use, the venue licensing schedules. From a transport perspective they do not necessarily need to be sport- or Games-related events.
- Mega events – The adoption or creation of mega events to test large loads across a number of locations on the systems at the same time to replicate Games conditions as far as reasonably practicable. These are likely to be a combination of sport, cultural or free events. They may not necessarily exist or arise without proactive encouragement. This is where the organisational interfaces and working will be under most scrutiny and genuine integrated volume testing can take place.

15.16 In addition, a programme of desktop exercises and simulations will be run either as precursors or as standalone tests. These desktop exercises and simulations will also be used to understand the risks and generate contingency plans.

15.17 The combination of desktop, simulation, planning, venue testing and contingency planning will all contribute to operational readiness. Testing of this readiness with the physical tests will create confidence in the operation.

Sustainable transport

Chapter 16

Chapter 16

Sustainable transport

Introduction

16.1 London's bid to host the 2012 Games included a vision of how the Games would contribute to the sustainable revitalisation and regeneration of east London. The importance of providing a high-quality, low-carbon and accessible transport system was also recognised as an intrinsic element of this vision during and after the Games. Therefore, delivery of the Games specific transport infrastructure and operations is a significant component of the sustainability vision for the Games and beyond.

16.2 The London bid for the 2012 Games presented the concept of 'Towards a One Planet Olympics'. This was derived from the WWF/BioRegional concept of One Planet Living¹, which encapsulates the world's environmental challenges in stark terms: if everybody in the world lived the same lifestyle as the average person in the UK, three planets' worth of resources would be needed to support this lifestyle. The Games present an opportunity to demonstrate how lifestyle changes can lessen the demand on available resources.

16.3 The London 2012 Sustainability Policy was published in July 2006. It set out five key themes to realise the sustainability vision. These were:

- Climate change
- Waste
- Biodiversity
- Inclusion
- Healthy Living

16.4 The London 2012 Sustainability Plan, Towards a One Planet 2012 (published in November 2007), provides the strategic framework and commitments to deliver sustainability under each of these main themes. A revised Plan was published in December 2009.

¹ To find out more visit www.oneplanetliving.org

16.5 With respect to the planning and delivery of transport infrastructure and operations, London 2012 has developed its approach to sustainability by focusing on key aspects where transport might have a significant impact and thus allocating funds in the most effective and efficient manner. These themes are:

- climate change (CO₂) and other greenhouse gas (GHG) emissions;
- accessibility and inclusion; and
- healthy living.

Climate change and transport

16.6 In the context of Games transport and reduction in CO₂ and GHGs, London 2012 seeks to:

- encourage 100 per cent of spectators and workforce to travel to London venues by the most sustainable modes, namely public transport, walking or cycling;
- minimise the carbon emissions generated by the transport arrangements; and
- leave a transport legacy after the Games in terms of behaviours and practices.

Sustainability principles

16.7 During the planning of Games transport the following sustainability principles have been adopted.

16.8 London 2012 will make best use of existing transport infrastructure. New infrastructure will only be built where it is absolutely necessary, provides a legacy benefit, or where it was already planned to be built. Temporary arrangements will be used where there is no obvious legacy benefit from permanent infrastructure.

16.9 The transport strategy for the Games includes a commitment to maximise the use of public transport travel modes for spectators and workforce. There will be no public car parking at any competition venue except for some Blue Badge

parking. Ticket holders will be entitled to free travel within the Greater London area on the day of their ticket.

16.10 London 2012 is also promoting walking and cycling as key parts of the transport strategy. Encouraging and enabling spectators and workforce to walk or cycle to certain events for some or all of their trip will:

- help to reduce the carbon impact of transport provision;
- provide a healthy journey option;
- create an additional sustainability experience for Games visitors; and
- assist in reducing demand for public transport in peak periods.

16.11 The ODA is making investment in walking and cycling infrastructure and will provide information to promote these transport modes during the Games.

16.12 The ODA and its partners have also invested heavily in other infrastructure projects which are expected to contribute to longer term reduction in carbon emissions through potential mode shift. The investments fall into three main categories:

1. Enhancing transport projects such as co-funding part of the new fleet of trains for the Docklands Light Railway.
2. Enabling projects to be started and finished before 2012 that would not otherwise materialise until after the Games.
3. Directly managing and delivering transport projects, such as the Stratford Regional Station upgrade, now more than 60 per cent complete.

16.13 Throughout this publication there are numerous examples of programmes and projects that London 2012 has initiated or contributed to that in some way will complement the ODA's approach to carbon reduction and active lifestyles. For example, incorporating carbon reduction principles in further variations of transport planning and certification of its management system to the new sustainable event standard BS 8901.

Strategic Environmental Assessment

16.14 As part of the development of the first edition of the Transport Plan, the ODA undertook a Strategic Environmental Assessment (SEA). The purpose of the SEA was to ensure that environmental impacts were taken into consideration at the earliest opportunity. In particular it covered areas such as climate change, air quality, and noise related to the Transport Plan. This SEA will be formally reviewed, updated and published alongside the second edition of the Transport Plan.

16.15 The ODA has also commissioned a review of the transport approach to sustainable development. It concluded that the activities undertaken were in line with commitments and obligations made during the bid process. The review recommended a further assessment of the health impacts associated with the delivery of the Transport Plan. This assessment was undertaken in 2008 and the recommendations adopted are currently in the process of being implemented.

Transport Sustainability Forum

16.16 The ODA's Transport team has set up a Transport Sustainability Forum to share information and knowledge about developments with its delivery partners and key stakeholders. Generally the Forum meets on a quarterly basis and includes representation from delivery partners, the Commission for a Sustainable London 2012 and LOCOG.

Climate change

16.17 One of the key focus areas for the ODA's Transport team has been to use the emerging science of carbon footprinting to understand how and where its activities have a potential impact on GHG emissions so that it can prioritise its reduction efforts in the most economic and beneficial manner.

16.18 As part of the ODA's commitment to sustainability, the carbon emissions for transport projects are being measured and carbon reduction strategies developed and implemented.

16.19 The ODA's Transport team uses different funding and delivery mechanisms to implement its programme, with varying degrees of control and influence. The ODA has adopted internationally accepted accounting standards that apportion the CO₂ to those who have produced it at source. As the ODA uses a variety of delivery mechanisms for new transport infrastructure, it is therefore not accountable for the total CO₂ emission.

16.20 Figure 16.1 illustrates the relationship between those emissions owned and shared. These terms can be defined as:

- Owned – wholly-funded core activities where the entire associated carbon footprint is allocated to London 2012 (for example, office utility use, venue construction).
- Shared – the footprint associated with the partner contributions to jointly-funded activities.

16.21 Figure 16.2 shows the relationship between the different owned and shared categories and the degree of influence and control associated with these.

16.22 A 'best in class' approach to carbon dioxide reduction has been adopted. Where responsibility for projects is shared, each project has been individually assessed for impact and degrees of influence, and control, and a suitable carbon dioxide reduction approach adopted.

16.23 Stratford Regional Station is an example of this approach. It is owned and managed by Network Rail and London Underground, but the ODA has contributed funds for works to increase its capacity and accessibility. As the degree of ODA control is limited, the ODA has funded a programme to identify opportunities across the station to reduce carbon emissions.

16.24 The Stratford Regional Station upgrade is now part of London Underground's sustainable stations initiative, which includes trials of new and innovative carbon reduction technologies. Using TfL's 'Climate Change' funding, the ODA is exploring the installation of automatic metering and building energy management systems.

Orient Way

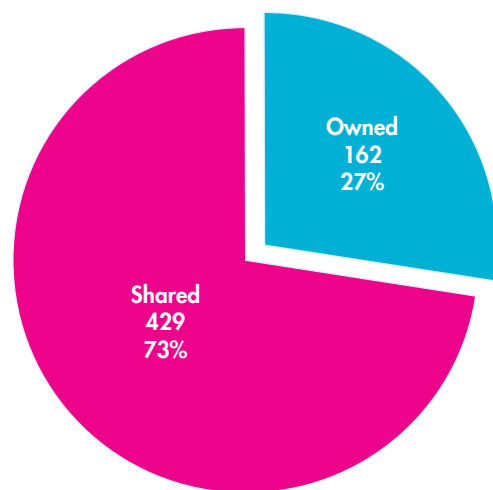
16.25 An example of how the ODA has built carbon emission reduction into its programme is illustrated by the Orient Way project. The project involved relocating a rail siding facility from the centre of the Olympic Park to a new sidings and depot that could be used to stable rolling stock during non-peak periods. All possible options for building carbon reduction into the project were validated for compliance with rail safety and asset standards before any agreements were made.

16.26 The following principles were developed and used:

- adopt a systematic and process-based approach;
- understand the high impact areas at the earliest stage;
- build carbon emission reduction into the design process;
- reuse materials where safe and practicable;
- minimise waste and maximise recycling; and
- influence attitudes and behaviours.

16.27 A Civil Engineering, Environmental Quality standard (CEEQUAL) process was adopted as a starting point assessment and award. Further work was carried out to better understand where carbon was being emitted and how best to reduce it.

Figure 16.1 Owned versus shared carbon



16.28 The review found that the largest carbon savings could be made through the reuse of materials which included steel from the track (rail), sleepers (wooden and concrete) and ballast. As a result, high recycling targets were set – for example, the aim to reuse all the existing track where it was possible to do so safely.

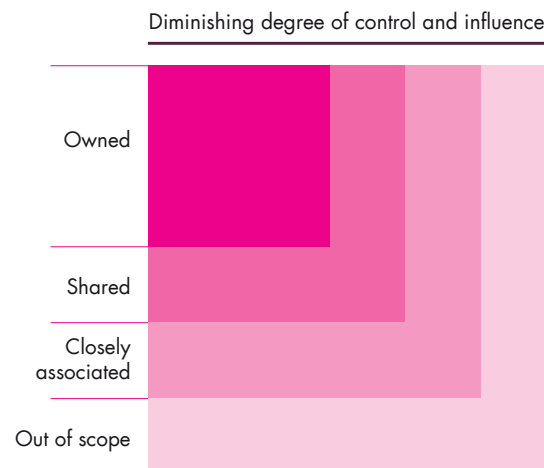
16.29 During the project, approximately 99 per cent of the demolition and site clearance waste was recycled including:

- 4,000 tonnes of crushed concrete – 1,000 tonnes reused on site, 3,000 tonnes reused off site;
- 620 tonnes of tarmac; and
- 180 tonnes of steel.

16.30 In addition, all track was reused including the switches, 14 of which were reused at Orient Way and nine were made available for reuse at other sites. Around 20,000 tonnes of site ballast was screened and reused. General construction waste was sent to a material recycling facility. The amount was equivalent to 30 per cent of the total volume recycled rate. In all, only two general construction waste skips were generated during the whole construction project.

16.31 Overall it was possible to achieve a 40 per cent reduction in the volume of carbon emitted against usual construction methods.

Figure 16.2 Degree of influence between owned and shared



Transport legacy

Chapter 17

Chapter 17

Transport legacy

Introduction

17.1 A key objective for the ODA, set out in the first edition of the Transport plan, is to, in effect, lead the regeneration of east London through massive permanent investment in public transport. At the same time the ODA is sponsoring and specifying step changes in other ways of travelling by raising the profile of the UK coach industry and integrating transport ticket-purchasing and travel communications with customers on a significant scale. The delivery of the Transport Plan during the 2012 Games will showcase the integration of hard and soft transport technologies on an unprecedented scale.

17.2 Legacy continues to be an important factor in all of the ODA's decisions as the Transport Plan is being implemented. The London 2012 transport infrastructure enhancements will be delivered and used before the Games and will remain long after 2012 to provide a lasting benefit.

17.3 At some locations, in particular to serve some venues, temporary facilities will be put in place to assist in the delivery of transport services during part of the summer of 2012. These facilities will be used where they represent better value for money than permanent facilities.

17.4 The ODA is providing physical infrastructure legacy benefits in three ways. Firstly, it is enhancing some transport projects such as co-funding part of a new fleet of trains for the Docklands Light Railway. Secondly, it is enabling some projects to be started and finished before 2012 that would not otherwise materialise until some time after that date, for example, the Lee Valley Line capacity enhancement. Thirdly, it is directly managing and delivering transport projects, such as the Stratford Regional Station upgrade project.

Contributions to transport legacy

17.5 Projects with a lasting legacy benefit to London into which the ODA is contributing include:

- Stratford Regional Station capacity and access enhancements including capacity improvement on the Great Eastern and Lee Valley Line;
- conversion to Docklands Light Railway (DLR) operation of the former North London Line between Stratford and Canning Town (with an extension to Stratford International Station);
- DLR infrastructure works for three-train operation between Poplar and Canning Town;
- DLR extension under the River Thames to Woolwich Arsenal, now open;
- co-funding part of the new DLR train fleet;
- general infrastructure and capacity upgrade of the North London Line;
- relocation from Thornton's Field to Orient Way of mainline train stabling facilities, completed;
- the Transport Coordination Centre and other legacy benefits derived from the operation of the Olympic Route Network; and
- designing and implementing walking and cycling routes.

National Rail

17.6 National Rail Games-funded schemes include the upgrade of the the North London Line. This project includes the purchase of a new train fleet together with capacity enhancements and station upgrades as part of its rebranding as London Overground. This corridor provides a significant and useful link between west London, north London and Stratford. The new platforms for the service are already in use at Stratford Regional Station.

17.7 The further investment in the Channel Tunnel Rail Link corridor to carry domestic commuter services from Ebbsfleet in Kent into Kings Cross/St Pancras International Station reinforces the legacy benefits.

Docklands Light Railway

17.8 The overall capacity of the Docklands Light Railway (DLR) will increase by 50 per cent by 2011 due to the extension from two-car to three-car operation through procurement of 55 new vehicles. The Woolwich Arsenal extension to south east London opened in early 2009 and offers a new and much-needed link between south-east London and north-east London, as well as access to the City of London. It also is helping to regenerate the area immediately south of London City Airport. Once the DLR service from this area is operating to Stratford International Station, further employment and leisure opportunities will be opened up to residents living south of the River Thames.

17.9 Other enhancement schemes currently being developed by the DLR, with permanent benefits, are detailed in chapter 6.

London Underground

17.10 London Underground's ongoing investment in the Jubilee, Northern and Central lines was part of the bid offer. These projects provide a mix of permanent capacity increases, faster journeys, improved reliability and improved access to specific localities.

Background schemes

17.11 Background schemes have been described in chapter 6 of this plan. These projects are being planned, funded and delivered by Government or other transport bodies outside of Games-specific funding. They have, however, been included in the guarantees to the IOC. The East London Line project, now well on the way to delivery, and the new train fleet for the Victoria Line, are examples of such projects.

Cycling and walking

17.12 Upgraded walking and cycling corridors are an integral part of the overall spectator transport offer for the Games. Although there are inevitably

upper limits in terms of distance and journey time to such projects, the ODA is fully committed to leaving long-term walking and cycling benefits by working with London local authorities and TfL's programmes such as the London Cycle Network+, Greenways programme and Strategic Walks.

Accessible transport

17.13 The ODA launched its Accessible Transport Strategy in May 2008, which included details of the deliverable hard (infrastructure) and soft (customer communications) project programme.

17.14 In summary, London Underground has brought forward step-free access works at Southfields and Green Park. TfL's London Buses offer step-free access, as does the Docklands Light Railway and Jubilee Line between Green Park and Stratford.

17.15 The ODA is also working with the taxi and licensed private hire industries to establish ways that vehicles can be used to improve access for disabled spectators.

Transport Coordination Centre (TCC)

17.16 The Transport Coordination Centre (TCC) will bring together teams from London 2012, delivery partners, and transport operators from all modes across the UK. TfL's surface transport team has already moved into the centre.

17.17 It will be the first time a coordinated transport effort has been produced on this scale to improve journey times and information. The TCC will leave physical assets through new equipment and systems which will be invaluable when delivering transport for large-scale events in the future.

Behavioural change

17.18 In addition to the delivery of physical infrastructure, London 2012 also wants to change people's attitudes to travel. London 2012 is encouraging as many spectators as possible to use sustainable and active transport, such as walking

and cycling, to get to the Games. It hopes that more people continue to choose these modes of travel after the Games.

17.19 The road-based bus and coach industries are going to have much to offer both during the Games and in legacy through the ODA-led development of a national coach network.

17.20 Creating a network of direct coach services will raise the profile of this travel mode with targeted segments of the travelling public and could lead to reduction in the use of cars to travel to future major events.

Cross-modal working

17.21 London 2012 needs transport providers from all modes across London and the UK to work together to help deliver successful Games. The experience of multiple operators and stakeholders working together will be extremely valuable when future major events are held in London and the UK.

Economic legacy

17.22 The Games are already acting as a substantial catalyst in regenerating a large area of east London, with permanent transport improvements, such as the new DLR extension to Woolwich Arsenal coming into use. The provision of improved, faster and more easily accessible transport networks will help to reduce social exclusion by improving mobility in some areas of the capital.

17.23 The transport legacy of the 2012 Games will serve as a role model in the UK for future integration of transport modes and customer communications.

Programme and operational assurance

Chapter 18

Chapter 18

Programme and operational assurance

Introduction

18.1 The ODA's transport programme describes all the activities identified to successfully deliver the transport infrastructure, including the Olympic Route Network (ORN) and spectator transport operations for the Games. It continues to be developed in close consultation with the ODA's stakeholders and transport delivery partners, building on initial cooperation prior to London winning the right to host the Games.

Baseline programme development

18.2 To ensure the ODA's transport programme is robust, it has been developed through a process of base-lining normally carried out at the end of each year.

18.3 The Baseline 5 programme captures all the infrastructure activities and deliverables that will increase capacity on the network both during the Games and in legacy. A high-level summary of the programme is shown in Figure 18.1.

18.4 The programme incorporates activities and milestones for infrastructure works and operations planning, and includes input from the transport delivery partners' programmes. It is monitored and updated monthly with the latest live delivery information.

18.5 The latest transport programme development was presented to the Olympic and Paralympic Transport Board in February 2009, the Joint Borough Forum in February 2009, and the Department of Transport Steering Group in April 2009.

Deliverables

18.6 The ODA's programme brings together three specific aspects of the works needed to successfully support the operations of all modes of transport during the Games. A set of high-level milestones for key deliverables owned by the ODA and its transport delivery partners has been identified. These ensure the programme is proactively monitored and reviewed by senior management.

Key soft issues milestones

18.7 The programme also includes soft issues that the ODA will need to have completed to deliver the proposed output during the Games.

Key interfaces and milestones for the Games

18.8 The programme captures key interfaces and milestones from the different delivery partners and organisations that must be completed to deliver a successful Games.

Interfaces

18.9 As part of the programme development process, the ODA has managed the impacts of various interface issues. Dependency workshops and planning forums have been convened with transport delivery partners' planning managers to help each other understand works and interfaces.

18.10 The ODA has also worked closely with LOCOG to ensure that the specific programme implications for individual venues and LOCOG's master planning schedule are captured.

18.11 The ODA has led reviews of programmes for other large projects, such as Crossrail and Thameslink, due to be constructed during the period leading up to and during the Games. The purpose of the reviews is to understand and, wherever possible, mitigate the impacts of any interface issues. This has included utilities, enabling works, infrastructure and operations.

18.12 Other large projects that have been kept under review include:

- Interfaces with the Thames Tideway relief sewer project;
- Thames Water's Victorian sewer replacement project across London; and
- Shard of Glass development and its possible impact on passenger flows at London Bridge Station.

Programme change control

18.13 By actively monitoring and measuring against an agreed baseline programme any challenging delivery areas have been quickly identified. Agreed changes are captured and reported through a formal change control process.

Transport risk management

18.14 Within the ODA, risk management is a key, formal aspect of governance and is integrated into all of its activities. All risks and opportunities relevant to the transport programme are effectively identified, assessed and prioritised. The management of risks is an active process and risks are assigned to owners who are constructively challenged on the progress of mitigation actions.

18.15 The ODA's Transport team has structured risk registers against monthly reviews conducted and relevant risk reports produced for the ODA and funders. These are fed into the different high-level decision-making boards.

18.16 Quantified risk assessments are also carried out on a regular basis and proportionate to the level of risk exposure to keep funders informed of contingency requirements.

18.17 Risk management is used as an active decision-making tool with an escalation process based on the need for Board Management action, overall impact and dependencies with other programmes. Figure 18.2 illustrates the active risk management process.

Figure 18.1 Key Milestones

Transport operations assurance

18.18 ODA's Transport team has an operations assurance framework which is proportionate, risk-based and ensures that success is achieved by defining clear objectives and relevant measures of success through the programme lifecycle.

18.19 The operations assurance framework complements the corporate ODA assurance framework and is consistent with the ODA's Transport team's quality policy and ISO 9001 certification. The framework includes pulse checks at key points and annually in February, as shown in figure 18.3.

18.20 The pulse checks will review the ODA's Transport team's programme to provide progressive confidence that the programme will succeed and realise the transport objectives as set out in this Transport Plan. Pulse checks will assess confidence levels as well as consistency and integration of key areas at a programme level with stakeholders and transport delivery partners.

Resource planning

18.21 London 2012 recognises that to successfully deliver transport during the Games, it needs to build a team of highly capable people with a sharp operational focus. This team will be built in collaboration with its stakeholders, many of which already have experience in delivering transport in complex environments. Furthermore, the team will be resilient to changes in its role, and will have flexibility to respond to the challenges, as and when they occur.

18.22 The ODA's Transport team, in consultation with the wider ODA, LOCOG, transport delivery partners and supporting agencies, has carried out a review of its resource requirements and its organisation design.

Figure 18.2 Active risk management process

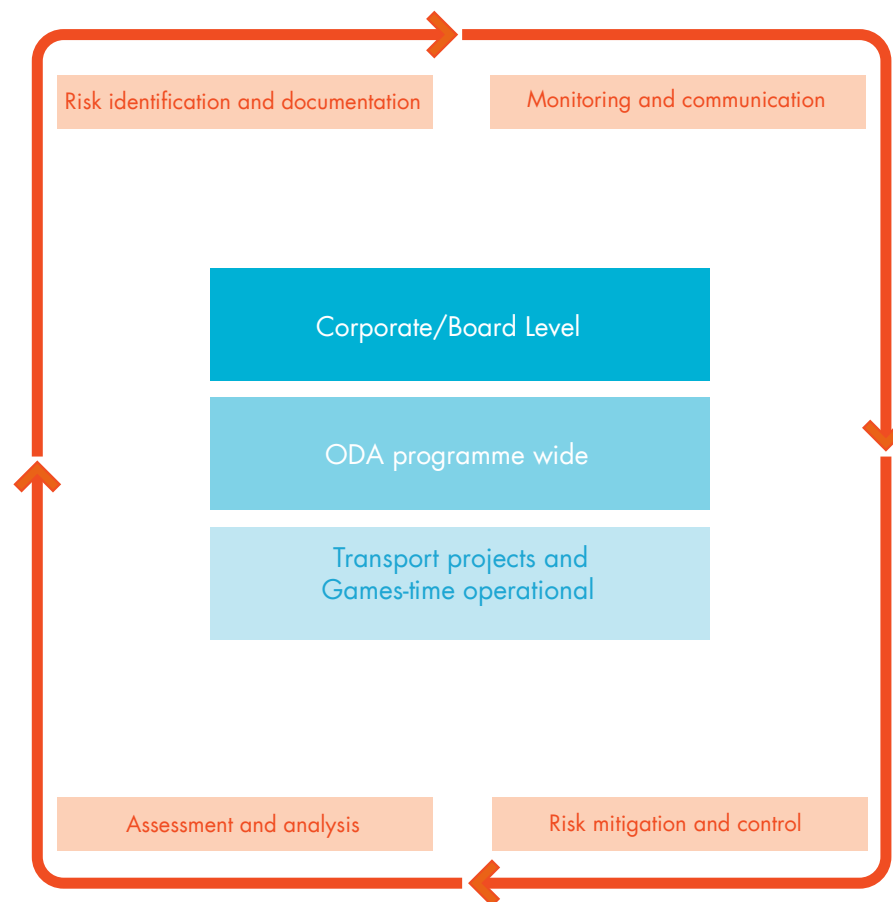
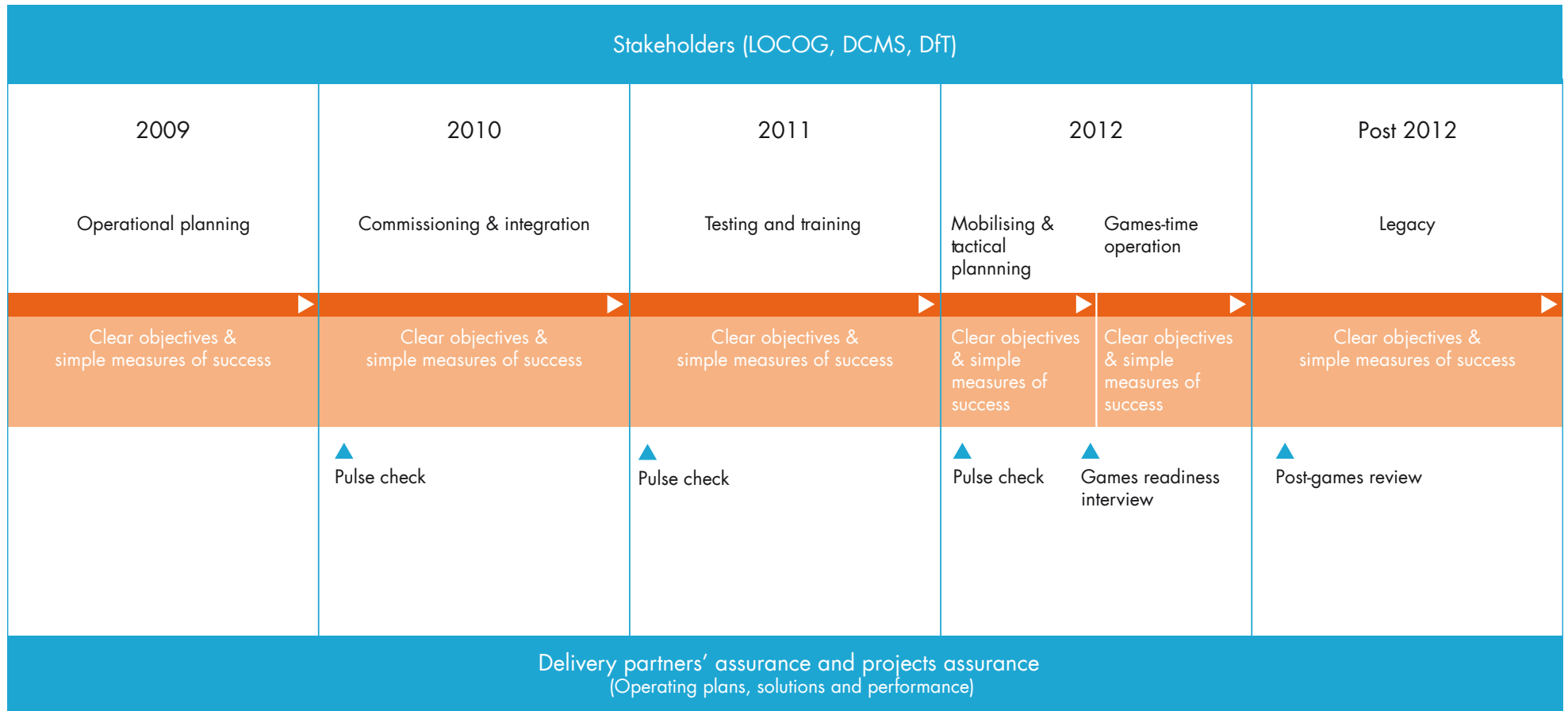


Figure 18.3 Pulse checks at key points



18.23 To develop the resource plans further and to ensure they remain robust, the ODA's Transport team continues to review its resource requirements and organisational design, in conjunction with its operational planning activities.

18.24 In 2011, the ODA's Transport team will embark on a robust testing and training programme, to ensure operational readiness, by providing core training for its operational staff. There will also be a large training programme provided for 'field staff' prior to the Games.

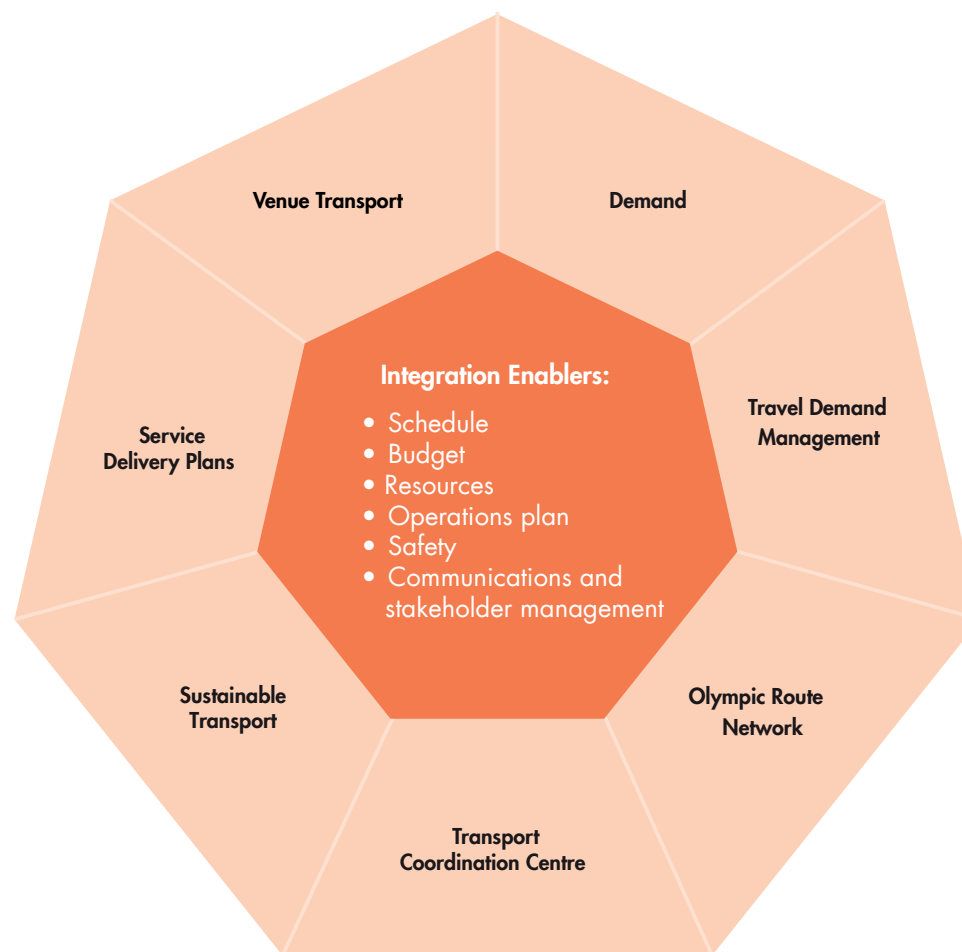
Operational planning

18.25 The ODA's Transport team is responsible for planning, coordinating, integrating and facilitating the provision of transport services for the Games. With these responsibilities in mind, it is transforming from a planning and projects delivery focused organisation into an operational entity.

18.26 In support of this transition, a robust operations plan is being developed. The plan will be a comprehensive, readily useable and integrated document, detailing how all elements of its remit and operational responsibilities will be discharged. The operations plan will be supported by a programme of activities detailing the critical operational activities and milestones leading up to the Games. Moreover, this plan will be completely integrated with the operations plans of LOCOG as well as those of transport delivery partners and stakeholders.

18.27 The operations plan will develop progressively and iteratively before the Games as the ODA's Transport team works with its stakeholders and transport delivery partners.

Figure 18.4 Key elements for operational planning and integration



18.28 The operational planning work complements and interfaces with the operations assurance framework ensuring that the London 2012 transport objectives are successfully delivered. It also interfaces with the resource planning activities to ensure the ODA's Transport team has the appropriate skills and resources to implement the plan effectively.

18.29 Figure 18.4 identifies the key elements for the ODA's Transport team's programme and shows the interdependencies and integrating enablers. The key elements include:

- demand;
- travel demand management;
- Olympic Route Network;
- Transport Coordination Centre;
- sustainable transport;
- service delivery plans; and
- venue transport.

18.30 Integration enablers for all of these elements are the:

- baseline schedule (meeting the time);
- budget (having sufficient funds);
- resource plan (having the right people);
- operations plan (active role and delivery method);
- safety;
- communications; and
- stakeholder management.

18.31 All of these elements must be coordinated to ensure that the ODA's Transport team functions in a multi-dimensional way, for example, by mode, venue and function. The coherency of these elements is a fundamental part of gaining confidence that the London 2012 transport objectives will be achieved.

Appendices

Appendix A Section 10(2) of the London Olympic Games and Paralympic Games Act 2006

'The plan shall, in particular, make provision for:

- (a) the construction of systems of, or facilities for transport;
- (b) the provision of transport:
 - (i) to and from London Olympic events, and
 - (ii) for other purposes connected with the London Olympic Games;
- (c) the creation and maintenance of the Olympic Route Network;
- (d) control of traffic during the London Olympic period;
- (e) control of facilities for transport during the London Olympic period;
- (f) road closures or restrictions during the London Olympic period;
- (g) the monitoring of traffic and facilities for transport during the London Olympic period;
- (h) contingency plans;
- (i) co-operation between the Authority and other persons; and
- (j) guidance from the Authority to local authorities in England in relation to implementation of the plan.'

Appendix B Code of Practice on Consultation

The Cabinet office – Code of Practice on Consultation – The Six Consultation Criteria

- 1.1 Consult widely throughout the process, allowing a minimum of 12 weeks for written consultation at least once during the development of the policy.
- 1.2 Be clear about what your proposals are, who may be affected, what questions are being asked and the timescale for responses.
- 1.3 Ensure that your consultation is clear, concise and widely accessible.
- 1.4 Give feedback regarding the responses received and how the consultation process influenced the policy.
- 1.5 Monitor your department's effectiveness at consultation, including through the use of a designated consultation co-ordinator.
- 1.6 Ensure your consultation follows better regulation best practice, including carrying out a Regulatory Impact Assessment if appropriate.

Appendix C Template franchise wording for the Olympic Games Clause and definition of Olympic services delivery plans

2012 Olympic Games (Clause 7.1)

1. Acknowledgement

The parties acknowledge that:

- (a) a successful bid was submitted by the UK Government to the Olympic Committee for London to host the Olympic Games in 2012 (the Games); and
- (b) as a key provider of public transport services into and out of London and the surrounding area, the Franchisee will have an important role to play during the Franchise Term in helping to make the staging of the Games successful.

2. Franchisee Co-operation

The Franchisee shall, at its own cost, co-operate and consult as reasonably required with the London 2012 Bid Team, the Secretary of State, Transport for London, Network Rail, the British Transport Police and any other relevant party in connection with any arrangements directly or indirectly connected with the Games, including:

- (a) the provision of additional and/or specific railway passenger services;
- (b) the carrying out of necessary works to the network;
- (c) the provision of additional and/or specific security arrangements at stations at which the Passenger Services call and on the Passenger Services;
- (d) the provision of specific integrated ticketing in relation to the Passenger Services; and
- (e) advertising and marketing of the Games in relation to the Franchise Services.

3. Entry into the Olympic Services Delivery Plan

- 3.1 During the Franchise Term the Secretary of State shall give the Franchisee reasonable notice of:
 - (a) his intention to enter into a plan for the implementation of:
 - (i) any or all of the matters referred to in paragraph 2; and
 - (ii) any other matter relevant to the award, planning or staging of the Games, (the Olympic Services Delivery Plan); and
 - (b) the terms of the Olympic Services Delivery Plan he wishes to enter into.
 - 3.2 The Franchisee may make representations to the Secretary of State in respect of the Secretary of State's proposed terms of the Olympic Services Delivery Plan.
 - 3.3 If the Secretary of State and the Franchisee cannot agree on the terms of the Olympic Services Delivery Plan the Secretary of State shall reasonably determine such terms.
 - 3.4 At a date to be notified to the Franchisee by the Secretary of State, the Secretary of State and the Franchisee shall enter into the Olympic Services Delivery Plan.
- #### 4. Financial Effects of the Olympic Services Delivery Plan
- For the purpose of paragraph (g) of the definition of Change, the cost and revenue effects of the Franchisee's implementation of the Olympic Services Delivery Plan shall be a Change.

5. Implementation of the Olympic Services Delivery Plan

The Franchisee shall implement the Olympic Services Delivery Plan in accordance with its terms.

Appendix D ORN Engagement Programme

Table 1 Developing traffic measures for the ORN

Time period	Design activity	Engagement activity
June 2009	Initial ORN defined in Statutory Instrument. Launch of next stage of ORN development.	Share forward plans and programme with all parties at start of this stage of ORN development through direct communications to stakeholders and all who responded to consultation. Use London 2012 website for ongoing information including ODA transport e-newsletter 'Move'.
June 2009 – April 2010	Collating information on ORN features and constraints. Reviewing work done to date. Developing initial designs for ORN measures.	Workshops with local authority officers (planners and engineers) for joint assessment of ORN and initial measures. Information and meetings for local residents' and business groups. Discussions with emergency services, bus operators and other organisations affected. Up to date ORN development position published in draft second edition for consultation of the Transport Plan in December 2009.
	Modelling measures, assessing impacts, taking account of the effect in reducing background traffic. Refining designs. Identifying mitigation measures.	Detailed discussion in meetings, workshops, etc with local authority officers on model results and assessment of impacts. Presentations to members on measures and mitigation. Discussions with local residents and businesses in small or large groups, as appropriate, on potential impact of measures. Exploring possible alternative arrangements with residents/businesses where they are affected. Exhibitions, leaflets, letter drops as appropriate.
April 2010 – July 2010	Finalising proposed design of ORN measures and mitigation, assessing impacts. Resolving any remaining problems with measures. Preparing detail design ready for implementation, including consideration of impact of implementation itself. Drafting Traffic Regulation Orders (TROs).	Discussions/meetings with relevant stakeholders to resolve remaining issues. Discussions/meetings with local authorities and police as necessary regarding implementation issues. Ongoing communication with all parties through regular forums or one-off meetings, as required, and through London 2012 website and 'Move' e-newsletter. Updating plans, programme and progress.
July 2010 – 2011	Formal consultation on TROs for measures	Formal consultation with all parties on TROs with publication of notices, plans and explanations available locally and on London 2012 website. Updating plans, programme and progress through webpage and e-newsletter and contained within the second edition of the Transport Plan in autumn/winter 2010.

Time period	Design activity	Engagement activity
2011 Test events (see Note 1)	Preparation for and carrying out any testing of ORN measures that may be required	Discussions with local authorities, local residents and businesses, and organisations likely to be affected by Test Events through meetings and regular forums, media, leaflets, letter drops. Updating plans and programme through London 2012 website and ODA Transport e-newsletter 'Move'.
Jan 2011 – June 2012	Rolling implementation programme. Planning and coordination of works to minimise disruption. Publication of temporary TROs where required. Raising public awareness about the ORN and measures.	Discussions with local authorities, police about works to implement measures. Information to local residents and businesses and others likely to be affected through regular forums, local media, leaflets, letter drops. Updating plans and programme through London 2012 website and ODA transport e-newsletter 'Move'. Information for general public through media.
Games time	Measures in operation	Ongoing communications through website and e-newsletter. Engagement with local authorities, emergency services, residents, businesses and others, collectively or one to one, if necessary, to resolve unforeseen problems.
August 2012 onwards (see Note 2)	Decommission ORN measures once they are no longer needed	Ongoing communications through London 2012 website and ODA transport e-newsletter 'Move'. Information to local residents and businesses, and others likely to be affected, through regular forums, media, leaflets, letter drops. Engagement with parties as required to resolve any problems that arise.

Note 1: An official Testing Programme will be carried out for the Games, beginning in the summer of 2011. Parts of the ORN may be involved in this. There may also be some separate testing of some ORN measures themselves. No decisions have yet been taken on either form of testing, so the need or otherwise for tests is as yet unknown.

Note 2: Once venues are no longer being used, decommissioning can begin on those sections of the ORN that are not required for any other venues. The earliest venue to finish on current plans will be Broxbourne, so it is possible that decommissioning could start on some parts of the ORN from 2 August 2012 onwards, subject to confirmation once more details are known.

Glossary

Glossary

Term	Explanation
ATAG	Active Travel Advisory Group – The main stakeholder group set up to provide advice and scrutiny on walking and cycling issues for the Games.
BAA	British Airports Authority – The major airport company that owns and operates seven UK airports (Aberdeen, Edinburgh, Glasgow, London Heathrow, London Gatwick, London Stansted, and Southampton).
BOA	British Olympic Association – Britain’s National Olympic Committee, whose mission is to maximise the potential of Team GB athletes while developing the Olympic Movement in the UK.
CAS	Court of Arbitration for Sport – An arbitration body set up to settle disputes related to sports.
DCMS	Department for Culture Media and Sport – The Government department responsible for Government policy on the arts, sport, the National Lottery, tourism, libraries, museums and galleries, broadcasting, creative industries including film and the music industry, press freedom and regulation, licensing, gambling and the historic environment. Lead Government department for the delivery of the Games.
DfT	Department for Transport – The Government department responsible for the delivery of a reliable, safe and secure national transport system.
DLR	Docklands Light Railway – The light rail public transport network serving the redeveloped Docklands area of east London operated by Transport for London.
ExCeL	Exhibition Centre for London – Exhibition and conference centre at Royal Victoria Dock, east London.
GLA	Greater London Authority – Citywide government for London, headed by the Mayor of London and the elected London Assembly.
GOE	Government Olympic Executive – part of DCMS – the lead government department making sure that the Games bring the widest possible benefit to the whole of the UK.
HA	Highways Agency – An Executive Agency of the Department for Transport (DfT), responsible for operating, maintaining and improving the strategic road network in England.
HS1	High Speed 1 – Formerly known as the Channel Tunnel Rail Link (CTRL) – The high speed rail line between London St. Pancras International Station and the Channel Tunnel.
IBC	International Broadcast Centre – The radio and television broadcasting centre for the Games, which receives and distributes the television signals generated at the venues.
IF	International Federations – The international governing bodies for individual sports, for example, FIFA for football.
IOC	International Olympic Committee – An international non-governmental, non-profit organisation whose mission is to lead the Olympic Movement and promote the notion of Olympism.
IPC	International Paralympic Committee – The international governing body of sports for athletes with a disability.

Term	Explanation
LB	London Borough – A local government district, 32 of which, along with the City of London, make up Greater London.
LCR	London & Continental Railways – The company selected by the Government to build and operate the High Speed 1, and to own and operate the UK arm of the Eurostar international train service.
LEZ	Low Emission Zone – A Low Emission Zone aims to reduce air pollution by discouraging the most polluting vehicles from driving into it.
LOCOG	The London Organising Committee of the Olympic Games and Paralympic Games – Responsible for preparing and staging the 2012 Games.
London 2012	An umbrella name for the London 2012 Organising Committee and the Olympic Delivery Authority.
London 2012 Ltd	The company set up to bid for the Games.
London Councils	A think-tank and lobbying organisation that promotes the interests of London's 33 Councils. It also runs a number of pan-London services.
LRS	London River Services Ltd – The agency that licenses passenger services using Transport for London's eight piers.
LTCC	London Traffic Control Centre – A central control point, staffed by the Metropolitan Police and Transport for London, to monitor and manage the highway network conditions in London.
LTGDC	London Thames Gateway Development Corporation – The key government agency responsible for delivering social and economic growth to transform the London Thames Gateway, part of Europe's largest regeneration project.
LUL (LU)	London Underground Ltd – The company that runs the London Underground network, a subsidiary of Transport for London.
MOC	Main Operations Centre – The central Command, Control and Communications Centre to direct Games operations. It provides a centralised information, coordination, reporting and decision-making system to enable the effective conduct of the Games.
MPC	Main Press Centre – The central workplace for the accredited written and photographic press at the Games, providing 24-hour support and facilities.
NDPB	Non-Departmental Public Body.
NOC	National Olympic Committee – The IOC-recognised organisations which develop and protect the Olympic Movement in their respective countries in accordance with the Olympic Charter.
NPC	National Paralympic Committee – The IPC-recognised national coordinating or umbrella organisations of sport for athletes with disabilities, which propagate the development and safeguarding of the Paralympic Movement and sports for disabled people.
NR	Network Rail - The company that owns and operates Britain's rail infrastructure, including tracks, signalling, bridges, tunnels, level crossings, viaducts and 17 key stations.

Term	Explanation
OBS	Olympic Broadcasting Services – Host broadcaster for the Games, responsible for providing coverage of every competition to international television and radio rights holders.
ODA	Olympic Delivery Authority – The public body charged with delivering the construction of the key venues, facilities and infrastructure to stage the London 2012 Games.
Olympic Board	Comprises the Olympics Minister, the Mayor of London and the Chairs of LOCOG and the British Olympic Association.
Olympic Family	Comprises athletes and team officials, technical officials, press, broadcast and marketing partners.
ORN	Olympic Route Network – A network of roads linking competition venues and key non-competition venues, such as accommodation and gateway arrival points into the UK.
ORR	Office of Rail Regulation – Economic and Health and Safety regulator for the British railway industry.
OSD	Olympic Security Directorate – Multi-agency body, led by the Metropolitan Police Service responsible for coordinating all security, safety and resilience activities across the UK in relation to the London 2012 Games.
Paralympic Family	Comprises athletes and team officials, technical officials, press, broadcast and marketing partners.
PSA	A Pedestrian Screening Area (PSA) is the point at which all personnel entering into the secure perimeter of a venue are screened. Personnel will pass through an airport-style security check where both the person and any bags or equipment they are carrying will be checked.
PPP	Public Private Partnership – A system in which a Government service or private business venture is funded and operated through a partnership of Government and one or more private sector companies.
RSSB	The Rail Safety and Standards Board – A not-for-profit company operating as a centre of excellence for all matters relating to railway safety.
SCD	Stratford City development – A major new town centre development centred on the Stratford Rail Lands in Newham, east London, and adjacent to the Olympic Park. It will comprise the creation of thousands of new jobs, as well as 4,500 new homes and the new Stratford International Station.
TA	Transport Assessment – A document prepared for submission with a planning application for a development which is likely to have significant transport implications.
TCC	Transport Coordination Centre – The operations centre to be established within the London Traffic Control Centre, which will have critical links to all functions involved in the delivery of Games transport.
TfL	Transport for London – A functional body of the Greater London Authority responsible for the capital's transport system.
TLRN	Transport for London Road Network – The main roads within Greater London that are managed by Transport for London.

Term	Explanation
TOCs	Train Operating Companies – The companies that run rail passenger services.
TRANSEC	TRANSEC is the DfT's Transport Security and Contingencies Directorate. TRANSEC sits within the department but operates independently from the transport policy directorates.
TWA	Transport and Works Act – The Transport and Works Act 1992 can give powers to construct and operate railways, tramways and other guided transport schemes, and works which interfere with navigational rights.
VPC	Vehicle Permit Check Points – the entry and approval point for permitted vehicles to enter a Games venue.
VSA	A Vehicle Screening Area is the point at which Security screen a vehicle and its contents prior to its entry into the secure perimeter of the venue to ensure that both the vehicle and its contents are safe.
WADA	World Anti-Doping Agency – Promotes, coordinates and monitors the international fight against doping in sports.



department for
**culture, media
and sport**

MAYOR OF LONDON

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