

Chapter 8

Competition venues

Introduction

8.1 A total of 34 competition venues will be used to host the events during the Olympic Games. Of these, 24 will be in London and ten outside. The two biggest clusters of venues will be the Olympic Park, with eight venues, and ExCeL, that, with its new extension, will hold five individual arenas. There will be three venues in Greenwich (North Greenwich Arena, Greenwich Park and The Royal Artillery Barracks), four venues in central London (Horse Guards Parade, The Mall, Hyde Park and Lord's Cricket Ground) and four venues in west London (Earls Court, Wimbledon, Wembley Stadium and Wembley Arena). Details relating to the Paralympic Games events are incorporated into this chapter.

8.2 Outside London, Buckinghamshire, Hertfordshire, Essex and Dorset will each host one competition venue. Five regional UK cities will also host a football venue for Olympic Football events: Coventry, Cardiff, Glasgow, Manchester and Newcastle.

8.3 A total of 17 venues will be used to host events during the Paralympic Games. Of these, 15 will be in London and two outside.

8.4 The locations of the competition venues are shown in chapter 2. Each competition venue will be used for different time periods and on different days. The draft Olympic and Paralympic competition schedules showing the dates of competition at each venue is presented in chapter 2.

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

8.6 In addition, the venues have been positioned to allow the athletes to compete and train with minimal travel times from the Athletes' Village.

8.7 Those venues hosting Paralympic events will undergo a transition phase upon the completion of the Olympic Games. Those venues not hosting Paralympic events will be decommissioned at this time.

Venue transport planning

8.8 LOCOG is responsible for the planning of transport to serve all the client groups attending competition venues. LOCOG has responsibility for delivery of all transport operations inside the secure perimeter of venues and for coordinating transport operations with delivery partners outside the secure perimeter of venues.

8.9 LOCOG has been developing a Venue Transport Operations Plan for each competition venue, following discussions with local authorities, venue operators and emergency services.

8.10 This chapter presents a summary of those plans, which include an indicative design for each venue. These plans will continue to be reviewed and developed in more detail between now and 2012. For example, outline access routes are shown to/from venues but may be subject to further changes as plans are finalised. LOCOG will continue to work with venue operators and other stakeholders to develop robust venue transport plans.

8.11 Outside of London, the ODA and its delivery partners will deliver the ORN and PRN up to the entrance of each competition venue. Within London, TfL will be responsible for the delivery of the ORN and PRN. LOCOG Venue Transport will operate its Games Family vehicle fleets on the ORN and PRN to provide the required level of transport service to the different client groups to and from each venue. For each venue in this chapter where the ORN or PRN applies, the outline route network is shown for information only.

8.12 Most Games Family vehicles will drop off and pick up their passengers within the secure perimeter of 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.

8.13 Some Games Family vehicles may need to drop off 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.

8.14 A range of temporary measures will be required to meet the objectives for spectator transport for the Olympic and Paralympic Games. Different measures will be required at different venues. Measures put in place at each venue will include:

- 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;
- pre-booked accessible car parking for disabled spectators;
- drop-off and pick-up facilities for accessible bus services;
- cycle parking facilities;
- load zones and 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.

8.15 London 2012 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.

8.16 Working closely with its delivery partners and stakeholders, LOCOG will monitor all transport operations outside the secure perimeter of each venue and pass relevant information to all necessary transport stakeholders servicing the venue. LOCOG's transport team will liaise with the 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).

Games Readiness programme

8.17 A Games Readiness programme will be carried out at venues prior to the Games. These events will confirm the readiness of venue transport and identify improvements, while validating people, process and infrastructure. This will require assessments of venue transport itself, and its interface with outside organisations.

8.18 Some existing venues, such as Wimbledon and Wembley Stadium, already have tried-and-tested transport arrangements that will only require minor adjustments to cater for Games-specific demands. New venues will require transport plans to be developed.

8.19 Detailed Games Readiness programmes are being developed for each venue. Chapter 15 provides an overview of the overall approach to Games Readiness.

Accessible transport

8.20 LOCOG and the ODA continue to work with delivery partners to ensure that accessible transport is provided to and from each competition venue.

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

8.22 Limited accessible parking will be provided for spectators who hold a valid Blue Badge or national equivalent and have pre-booked through the spectator journey planner ticketing pages.

Crowd movement

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

8.24 Careful analysis has been 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.

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

8.26 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.

8.27 London 2012 will continue to ensure that the impacts of crowd movement strategies and plans are fully communicated and integrated with all other plans for delivering the Games.

Spectator car parking

8.28 The transport strategy for the Olympic and Paralympic Games involves all ticketed spectators arriving at competition venues by walking, cycling and public transport or park-and-ride services. In addition, there will be some limited pre-booked accessible parking at venues for disabled spectators.

8.29 In order to safeguard the smooth operation of the ORN and PRN 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, and encourage use of the public transport services provided.

8.30 Local Area Traffic Management and Parking (LATM&P) plans, which include special parking and access controls, will be implemented around each venue for the Olympic and Paralympic Games. These Games-time access and 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. In congested, urban areas, some road closures and diversions may need to be implemented to maintain free-flowing traffic on the ORN and PRN and facilitate pedestrian movements around venues.

8.31 Each venue will be treated on its own merits and parking controls will be planned by LOCOG 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 to enter or park within a designated zone.

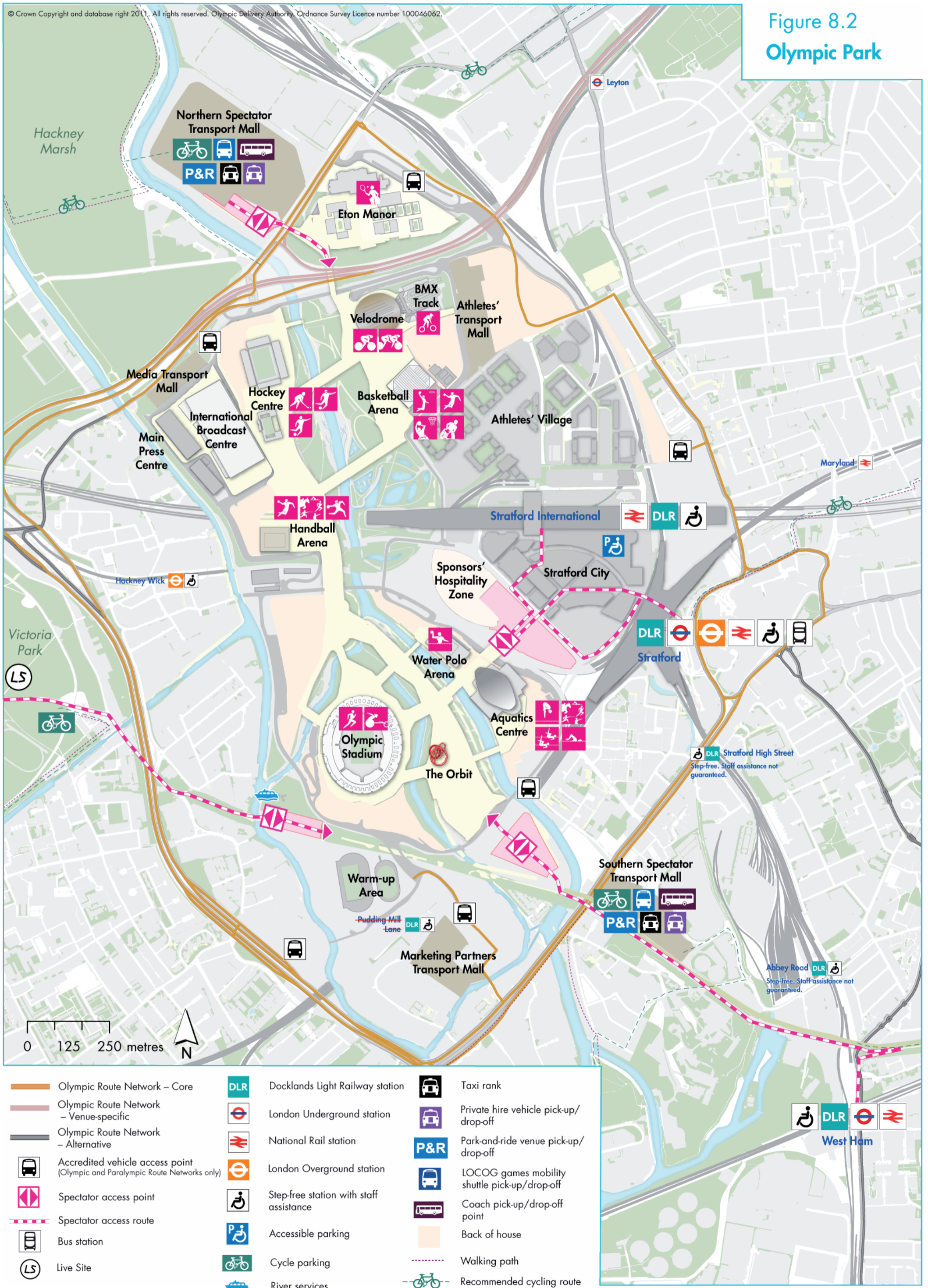
8.32 Engagement with local businesses, residents and authorities is being and will continue to be undertaken in the design and delivery of traffic management and parking areas around each venue.

Figure 8.1 Olympic Park

The 2.5 sq km 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 Athletes' Village, home to the athletes during the Games.

<p>Olympic sports</p>	<p>Venue Olympic Stadium Aquatics Centre Water Polo Arena Basketball Arena Velodrome BMX Track Hockey Centre Handball Arena</p>	<p>Activity Opening and Closing Ceremonies, Athletics Swimming, Synchronised Swimming, Diving, Modern Pentathlon (Swimming) Water Polo Basketball, Handball Cycling – Track Cycling – BMX Hockey Handball, Modern Pentathlon (Fencing)</p>
<p>Paralympic sports</p>	<p>Venue Olympic Stadium Aquatics Centre Basketball Arena Velodrome Hockey Centre Handball Arena Eton Manor</p>	<p>Activity Opening and Closing Ceremonies, Athletics Swimming Wheelchair Basketball, Wheelchair Rugby Cycling – Track 7-a-side Football; 5-a-side Football Goalball Wheelchair Tennis</p>

Figure 8.2
Olympic Park



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|--|---|---|
| Olympic Route Network – Core | Docklands Light Railway station | Taxi rank |
| Olympic Route Network – Venue-specific | London Underground station | Private hire vehicle pick-up/drop-off |
| Olympic Route Network – Alternative | National Rail station | Park-and-ride venue pick-up/drop-off |
| Accredited vehicle access point (Olympic and Paralympic Route Networks only) | London Overground station | LOCOG games mobility shuttle pick-up/drop-off |
| Spectator access point | Step-free station with staff assistance | Coach pick-up/drop-off point |
| Spectator access route | Accessible parking | Back of house |
| Bus station | Cycle parking | Walking path |
| Live Site | River services | Recommended cycling route |

Figure 8.3 Olympic Park – Olympic Games draft competition schedule

Venue	Sport	Start date	End date	Sessions per day	Earliest session start time	Latest session finish time	Capacity
Olympic Stadium	Opening Ceremony	27 July 2012	27 July 2012		19.30	22.30	80,000
	Athletics	3 August 2012	11 August 2012	2	09.00	22.10	80,000
	Closing Ceremony	12 August 2012	12 August 2012		19.30	22.30	80,000
Aquatics Centre	Swimming	28 July 2012	4 August 2012	2	10.00	21.35	17,500
	Diving	29 July 2012	11 August 2012	2	10.00	22.45	17,500
	Synchronised Swimming	5 August 2012	10 August 2012	1	15.00	17.10	17,500
	Modern Pentathlon (Swimming)	11 August 2012	12 August 2012		12.15	13.50	5,000
	Water Polo	29 July 2012	12 August 2012	3	10.00	21.50	5,000
Basketball Arena	Basketball	28 July 2012	7 August 2012	3	09.00	00.00	12,000
	Handball	8 August 2012	12 August 2012	4	11.00	23.30	12,000
BMX Track	Cycling – BMX	8 August 2012	10 August 2012	1	15.00	17.20	6,000
Handball Arena	Handball	28 July 2012	7 August 2012	3	09.30	22.45	6,000
	Modern Pentathlon (Fencing)	11 August 2012	12 August 2012		08.00	11.50	7,000
Velodrome	Cycling – Track	2 August 2012	7 August 2012	1	10.00	19.05	6,000
Hockey Centre	Hockey	29 July 2012	11 August 2012	3	08.30	22.45	15,000

Figure 8.4 Olympic Park – Paralympic Games draft competition schedule

Venue	Sport	Start date	End date	Sessions per day	Earliest session start time	Latest session finish time	Capacity
Olympic Stadium	Opening Ceremony	29 August 2012	29 August 2012		19.30	22.30	80,000
	Athletics	31 August 2012	8 September 2012	2	10.00	23.00	80,000
	Closing Ceremony	9 September 2012	9 September 2012		19.30	22.30	80,000
Aquatics Centre	Swimming	30 August 2012	8 September 2012	2	09.30	21.10	17,500
Eton Manor	Wheelchair Tennis	1 September 2012	8 September 2012	1	11.00	20.00	10,115
Basketball Arena	Wheelchair Basketball	30 August 2012	3 September 2012	2	11.00	22.30	12,000
	Wheelchair Rugby	5 September 2012	9 September 2012	2	10.00	22.15	12,000
Velodrome	Cycling – Track	30 August 2012	2 September 2012	2	09.30	17.50	6,000
Hockey Centre	7-a-side Football	1 September 2012	9 September 2012	2	08.30	18.00	16,000
	5-a-side Football	31 August 2012	8 September 2012	2	09.00	17.00	3,000
Handball Arena	Goalball	30 August 2012	7 September 2012	3	09.00	22.00	6,000

Figure 8.5 Initial estimate of mode split for spectator travel to the Olympic Park

Mode	Mode split for spectator trips: Olympic Games	Number of arena spectators per day: Olympic Games (based on gross capacity)	Mode split for Paralympic Games spectator trips: Paralympic Games (based on gross capacity)	Number of arena spectators per day: Paralympic Games (based on gross capacity)
Rail (including National Rail, London Underground, DLR, rail shuttles)	78%	269,490	70%	212,916
Direct coach	7%	24,185	14%	42,583
Local buses	2%	6,910	2%	6,083
Walk	2%	6,910	2%	6,083
Cycle	2%	6,910	2%	6,083
River	1%	3,455	1%	3,042
Park-and-ride/ Park-and-walk	7%	24,185	7%	21,292
Taxi	1%	3,455	2%	6,083
Total	100%	345,500	100%	304,166

Figure 8.6 Spectator arrival and departure profile – Olympic Games

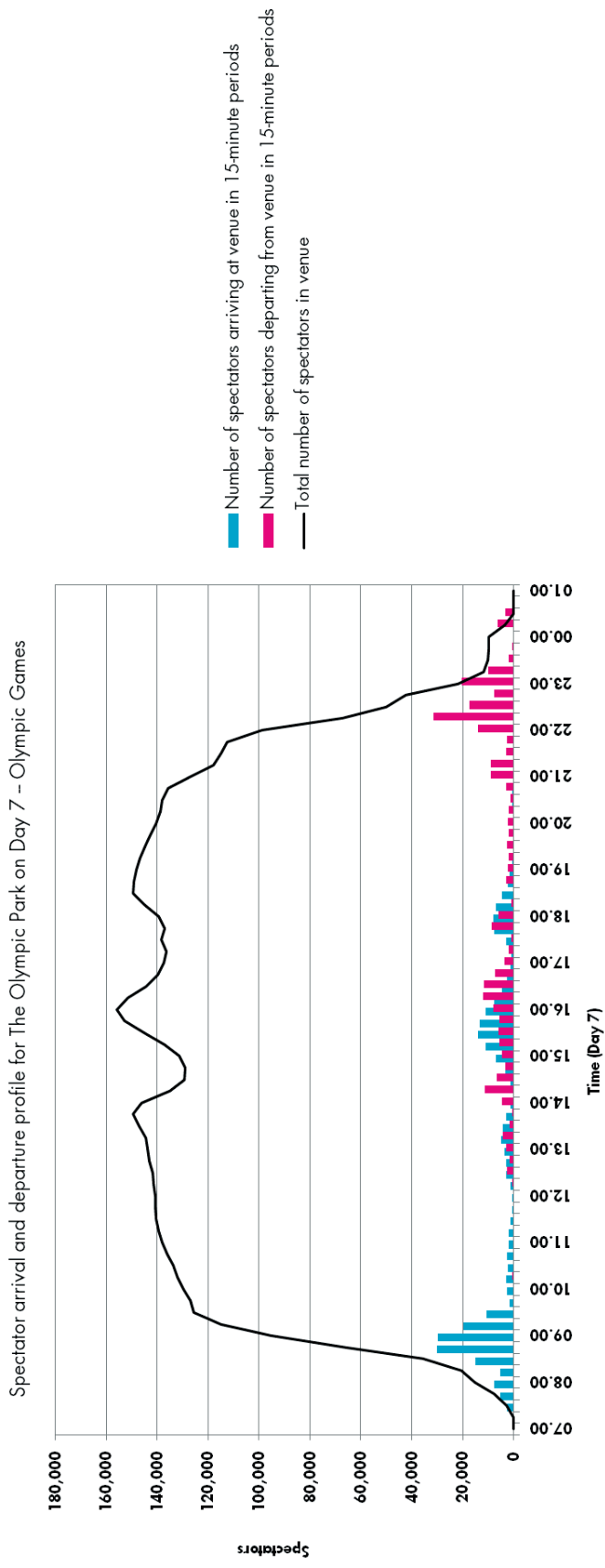
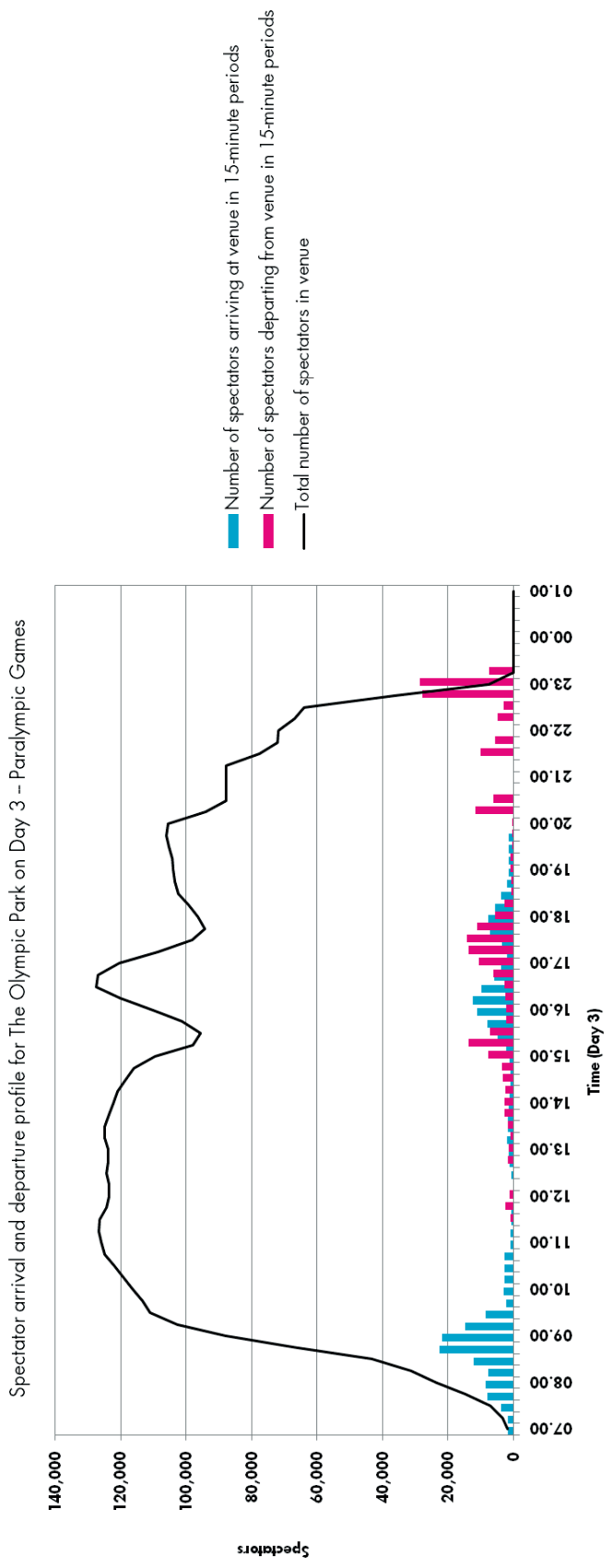


Figure 8.7 Spectator arrival and departure profile – Paralympic Games



Subject to change when final competition schedule is released

Figure 8.8 Summary of the transport strategy for the Olympic Park

Games transport provision	
Games Family	<p>Games Family vehicles will use the ORN and PRN to access the Olympic Park venue. Games Family vehicles will approach the venue from one of five entry points (as indicated in Figure 8.2). The A12, Ruckholt Road, High Street and Angel Lane will be the primary roads supporting Games Family movements to and from the venue.</p> <p>Vehicles will typically drop-off 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 Athletes' Village, which will act as the hub for athlete bus services; 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> <p>There will be four pedestrian access points to the Olympic Park for spectators (refer to Figure 8.2). Northern access will be via the Northern Spectator Transport Mall (NSTM), eastern access will be via the Stratford City development, and southern and western access will be via The Greenway.</p>
Spectator access points	
Rail	<p>There will be three recommended stations for the Olympic Park for the Olympic and Paralympic Games. These are Stratford International station (including the DLR), Stratford station and West Ham station.</p> <p>The Olympic Park is served by four Underground lines, the District and Hammersmith & City Lines at West Ham station and the Central and Jubilee Lines at Stratford. At peak times around 70 trains per hour will be provided to Central London, as well as links to many other venues.</p> <p>The DLR provides services throughout East London and links to local areas including Canary Wharf and the Excel venue.</p> <p>The London Overground provides links to North, South and West London.</p> <p>National rail services (East Anglia franchisee and Essex Thameside franchisee) provide links to London and East of England.</p> <p>During the Olympic Games, a rail shuttle service will operate from St. Pancras International to Stratford International station and on to Ebbfleet International station. This temporary Games 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. The normal high-speed rail service from St. Pancras International to Stratford International station and on to Ebbfleet International station will operate during the Paralympic Games.</p> <p>Stratford, Stratford International and West Ham stations are all step-free with staff assistance available. It is recommended that disabled spectators use services for either Stratford or Stratford International stations, as West Ham is approximately one mile away from the Olympic Park.</p>
River	<p>The ODA is working on a proposal from British Waterways and a boat operator for a passenger canal shuttle service operating between Limehouse Basin and the Olympic Park. The mooring point would be located below Old Ford Lock on the Lea Navigation with a journey time of approximately 50 minutes. See chapter 7 of this document for further details.</p>

Games transport provision	
Mode	
Walk and cycle	Cycle parking will be provided at the NSTM (2,000 spaces), the Southern Spectator Transport Mall (SSTM) (700 spaces) and Victoria Park (3,000 spaces) for the Olympic and Paralympic Games (see Figure 8.2). There may also be some potential for cycle parking at Stratford station, although this requires further investigation. Approximately two per cent of spectators are forecast to walk all of the way to the Olympic Park. There are a number of walking routes to and from the venue that will guide spectators to the access points.
Bus and coach	2012 Games coach services will transport spectators to the Olympic Park for both the Olympic and Paralympic Games. See chapter 7 of this document for further information regarding 2012 Games coach services. The 2012 Games coach services will drop-off and pick-up in the NSTM and SSTM. Wheelchair spaces can be pre-booked on direct coach services and step-free walking routes from transport malls to venues will be available. There are approximately 15 local bus services that operate within the vicinity of the venue with a principal bus station (Stratford bus station) located adjacent to Stratford station. Local London buses have low floors and provide audio and visual information. There is one wheelchair space per bus.
Park-and-ride	Park-and-ride services will transport a significant proportion of spectators to the Olympic Park. Park-and-ride services operating from Hertfordshire County Showground and Lakeside Shopping Centre will drop-off and pick-up at the NSTM and SSTM depending on origin. There is also the option for spectators to park-and-rail from Ebbfleet International station. Wheelchair spaces can be pre-booked on park-and-ride coaches and there are step-free walking routes from transport malls to venues. These measures will be in place for both the Olympic and Paralympic Games.
Taxi and private hire vehicles	Taxis are an important means of transportation for disabled spectators and it is therefore important that a taxi rank is located as close as possible to the venue spectator entry and exit points. Pick-up and drop-off facilities plus holding bays are being provided at the NSTM and SSTM for taxis and private hire vehicles. These measures will be in place for both the Olympic and Paralympic Games.
Pre-booked accessible parking for disabled spectators	For the Olympic and Paralympic Games, a limited number of pre-booked parking spaces will be provided to ticket holders who have a valid Blue Badge, or a recognised national disability parking permit. Parking will be valid for the day of the event only and may be subject to time restrictions. All accessible spaces will need to be pre-booked and spectators will be asked to provide evidence of their accredited parking permit. It will not be possible to gain entry to a venue's accessible parking site without evidence of pre-booking. Pre-booked accessible parking at the Olympic Park is currently scoped to be located within the multi-storey car park at the Stratford City development.
Local area traffic management and parking plans	A number of temporary traffic management and parking control measures will be required to ensure that venue transport operations can work effectively, to deter spectator parking in the vicinity of the venue and to ensure local residents and local businesses can continue to operate alongside Games-related activity. These plans will be developed in conjunction with the four host boroughs (Hackney, Newham, Tower Hamlets and Waltham Forest), TfL, the emergency services, and other stakeholders.

Figure 8.9 ExCeL

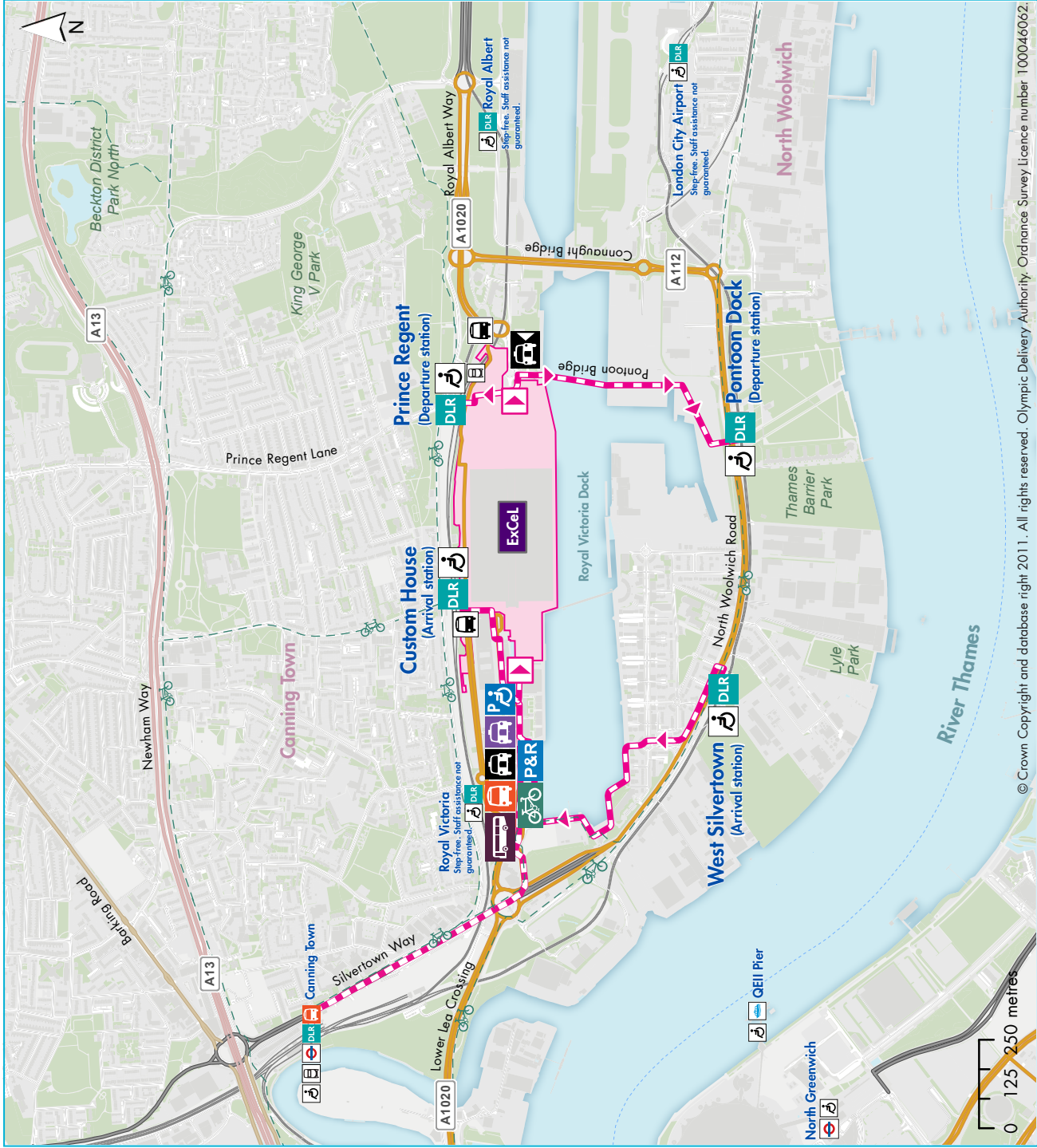
<p>ExCeL is the capital's largest exhibition and conference centre. It hosts events ranging from sporting competitions to international conferences and exhibitions. ExCeL is located in the London Borough of Newham, and is close to London City Airport.</p>	
Olympic competitions	Weightlifting, Judo, Fencing, Taekwondo, Table Tennis, Wrestling, Boxing
Paralympic competitions	Wheelchair Table Tennis, Judo, Wheelchair Fencing, Boccia, Powerlifting, Volleyball (Sitting)
Venue location	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)	<p>Olympic Games Table Tennis and Taekwondo – 6,000; Judo – 10,000; Fencing – 8,000; Boxing – 10,000; Weightlifting – 6,000; Wrestling – 10,000</p> <p>Paralympic Games Wheelchair Table Tennis – 5,420; Judo – 10,000; Wheelchair Fencing – 10,000; Boccia – 5,500; Powerlifting – 6,000; Volleyball (Sitting) – 10,000</p>
Competition periods/sessions per day (indicative only, subject to change)	<p>Olympic Games Between one and four sessions per day from Saturday 28 July to Sunday 12 August</p> <p>Paralympic Games Between one and three sessions per day from Thursday 30 August to Sunday 9 September</p>
Competition session start/finish times (indicative only, subject to change)	<p>Olympic Games Earliest session start time: 09.00 Latest session finish time: 23.30</p> <p>Paralympic Games Earliest session start time: 08.00 Latest session finish time: 22.30</p>

Figure 8.10
ExCel



The key to sports pictograms can be found in Appendix E

- Event area
- Accredited vehicle access point (Olympic and Paralympic Route Networks only)
- Spectator access point
- Indicative spectator access route
- Taxi rank
- Spectator shuttle (all users) pick-up/drop-off
- Private hire vehicle pick-up/drop-off
- Coach pick-up/drop-off
- Park-and-ride venue pick-up/drop-off
- Docklands Light Railway station
- London Underground station
- River services
- Bus station
- Step-free station/pier with staff assistance
- Pre-booked accessible parking
- Cycle parking
- Recommended cycling route
- Olympic Route Network - Core
- Olympic Route Network - Venue-specific
- Olympic Route Network - Alternative
- Olympic Route Network - Training



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Locations of park-and-ride car parks to be confirmed.

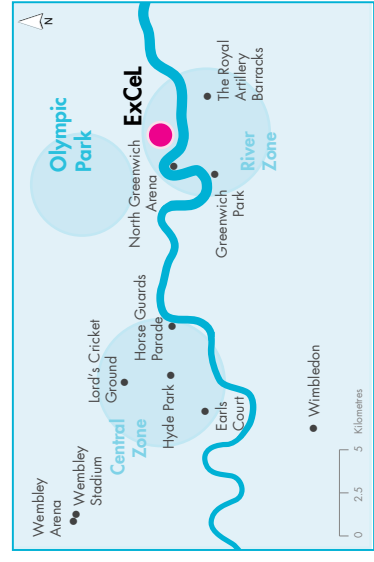


Figure 8.11 Initial estimate of mode split for spectator travel to ExCel

Mode	Mode split for spectator trips: Olympic Games	Number of arena spectators per day: Olympic Games (based on gross capacity)	Mode split for spectator trips: Paralympic Games	Number of arena spectators per day: Paralympic Games (based on gross capacity)
Rail (including National Rail, London Underground, DLR, rail shuttles)	85%	34,000	73%	29,200
Direct coach	4%	1,600	15%	6,000
Local buses	2%	800	2%	800
Walk	2%	800	2%	800
Cycle	2%	800	2%	800
River	0%	0	0%	0
Park-and-ride/ Park-and-walk	4%	1,600	3%	1,200
Taxi	1%	400	3%	1,200
Total	100%	40,000	100%	40,000

Figure 8.12 Spectator arrival and departure profile – Olympic Games

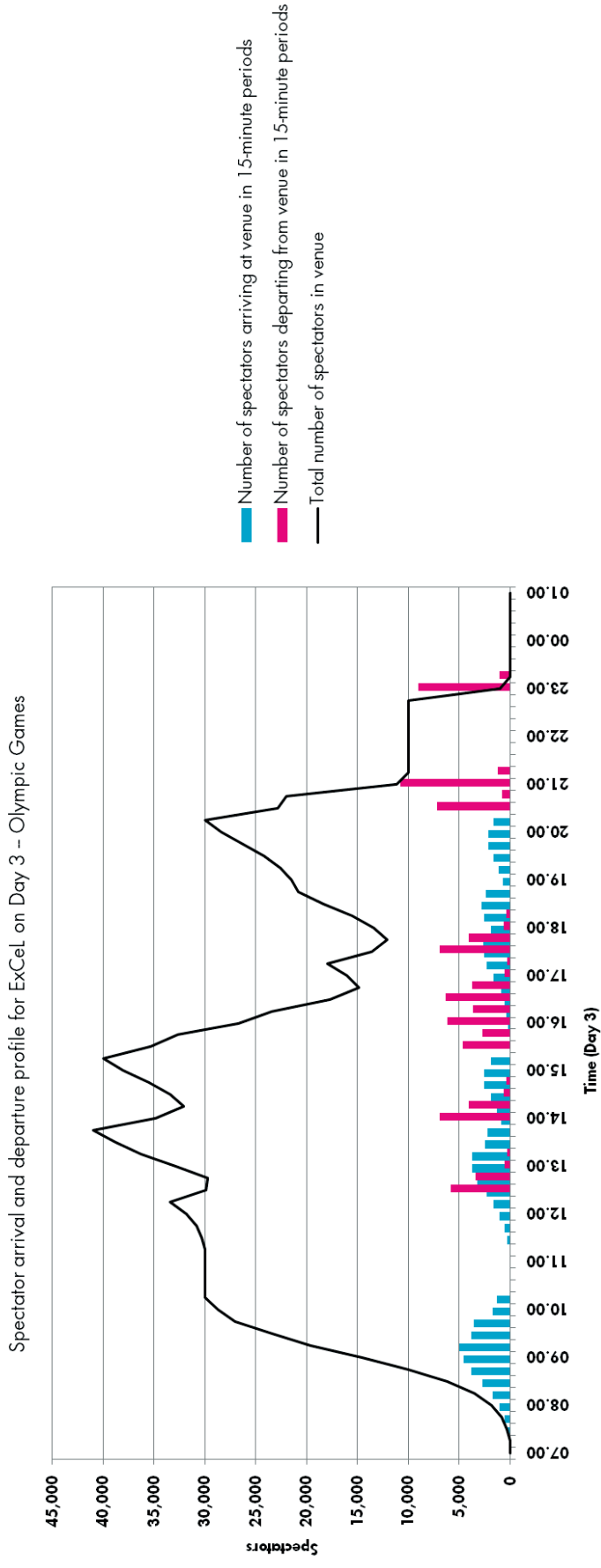


Figure 8.13 Spectator arrival and departure profile – Paralympic Games

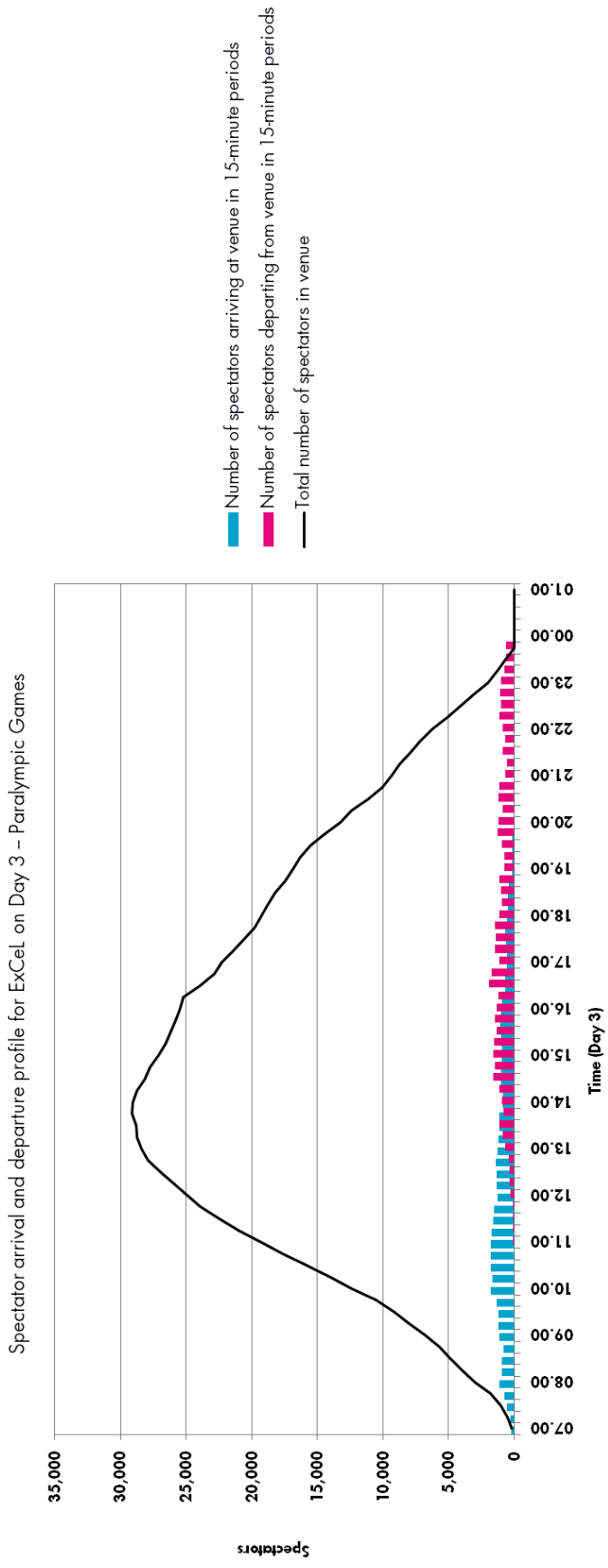


Figure 8.14 Summary of the transport strategy for ExCel

Games transport provision	
Games Family	Games Family vehicles will use the ORN and 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 use both the west and east entrance to the venue.
Spectator access points	The main spectator access to the ExCel centre is located in the area to west of the venue using the main entrance to the venue. (See Figure 8.10). These arrangements will be in place for both the Olympic and Paralympic Games.
Rail	<p>Spectators will be advised to use Custom House and West Silvertown Docklands Light Railway (DLR) stations for entry to the venue and Prince Regent and Pontoon Dock DLR stations after exiting the venue.</p> <p>The enhancement of the DLR Beckton branch line to a three-car network includes the installation of an additional 17-person electric lift at both Custom House and Prince Regent stations. The existing hydraulic lift at Prince Regent station will be upgraded to electric and the east end stairs at Custom House station will be replaced by two escalators. The duration of peak service provision will be extended and the frequency of trains increased.</p> <p>There are a number of rail options that provide connectivity between the DLR and other rail services, such as London Underground at Canning Town, West Ham and Stratford stations, National Rail services at West Ham, Woolwich Arsenal and Stratford stations and Javelin® services at Stratford International.</p> <p>Custom House and Prince Regent will be recommended for accessible spectator arrival and departure respectively. Both stations have step-free access from station entrance to train and assistance available. These arrangements will be in place for both the Olympic and Paralympic Games.</p>
River	There is no waterborne direct access to this venue.
Walk and cycle	<p>The venue is connected via The Greenway route to Gallions Reach to the east, the Greenwich foot tunnel to the south and the elevated Greenway to the north. National Cycle Network route 13 runs to the south of the venue. 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 by heading west on North Woolwich Road to Britannia Gate and north following the signed and stewarded spectator route around Royal Victoria Dock. 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 overpass at Custom House. These arrangements will be in place for both the Olympic and Paralympic Games.</p>

Games transport provision	
Mode	
Bus and coach	Coach pick-up and drop-off will be located at the west side of the venue off Seagull Lane. Park-and-ride, 2012 Games coach services and private coaches will all use these facilities. Spectators will access the venue using the controlled pedestrian walkway to the existing main entrance of ExCel. The walking route from the coach parking to the venue is step-free. The venue is adequately served by local bus services. Local London buses have low floors and provide audio and visual information. There is one wheelchair space per bus. These arrangements will be in place for both the Olympic and Paralympic Games.
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 at Lakeside and use a shuttle bus service to travel to and from ExCel. Wheelchair spaces can be pre-booked on park-and-ride coaches. There is a step-free walking route from the coach parking to the venue. These arrangements will be in place for both the Olympic and Paralympic Games.
Taxi and private hire vehicles	There will be a taxi and private hire vehicle pick-up and drop-off location at the west side of the venue. An additional location on the east side of the venue is under review. Taxis are an important means of transportation for disabled spectators and it is understood that a taxi rank must be located as close as possible to the venue spectator entry and exit points
Pre-booked accessible parking for disabled spectators	For the Olympic and Paralympic Games, a limited number of pre-booked parking spaces will be provided to ticket holders who have a valid Blue Badge, or a recognised national disability parking permit. Parking will be valid for the day of the event only and may be subject to time restrictions. All accessible spaces will need to be pre-booked and spectators will be asked to provide evidence of their accredited parking permit. It will not be possible to gain entry to a venue's accessible parking site without evidence of pre-booking. There will be a step-free walkway to the spectator entry. These arrangements will be in place for both the Olympic and Paralympic Games.
Local area traffic management and parking plans	A number of temporary traffic management and parking control measures will be required to ensure that venue transport operations can work effectively, to deter spectator parking in the vicinity of the venue and to ensure 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. These arrangements will be in place for both the Olympic and Paralympic Games.

Figure 8.15 North Greenwich Arena

North Greenwich Arena provides a wide range of facilities, including a 23,000-seat arena. The venue hosts events including exhibitions and high-profile concerts, and hosted the 2009 Artistic Gymnastics World Championships. North Greenwich Arena is located in the London Borough of Greenwich in south-east London.

Olympic competitions	Gymnastics – Trampoline, Artistic Basketball – finals
Paralympic competitions	Wheelchair Basketball
Venue location	The existing North Greenwich Area will be used as the Games venue.
Venue capacity (gross)	The gross capacity of the venue is 16,500 for Gymnastics events and 20,000 for the Olympic Basketball finals. The gross capacity of the venue is 18,000 for Paralympic Games events.
Competition periods (indicative only, subject to change)	Olympic Games Gymnastics events over 11 days between 28 July and 7 August. Basketball finals over 5 days from 8 August until 12 August. Paralympic Games Ten days from 30 August to 10 September
Number of competition sessions per day (indicative only, subject to change)	Olympic Games One to three sessions per day Paralympic Games Two sessions per day
Competition session start/finish times (Indicative only, subject to change)	Olympic Games Earliest session start time: 09.30 Latest session finish time: 00.00 Paralympic Games Earliest session start time: 11.00 Latest session finish time: 00.00

Figure 8.16 North Greenwich Arena



The key to sports pictograms can be found in Appendix E

- Event area
- Accredited vehicle access point (Olympic and Paralympic Route Networks only)
- Spectator access point
- Indicative spectator access route
- Taxi rank
- Shuttle bus (for all users) pick-up/drop-off
- Shuttle bus (for all users) route
- Coach pick-up/drop-off
- National Rail station
- Docklands Light Railway station
- London Underground station
- River services
- Bus station
- Step-free station/pier with staff assistance
- Pre-booked accessible parking
- Cycle parking
- Olympic Route Network - Core
- Olympic Route Network - Alternative
- Walking path
- Recommended cycling route

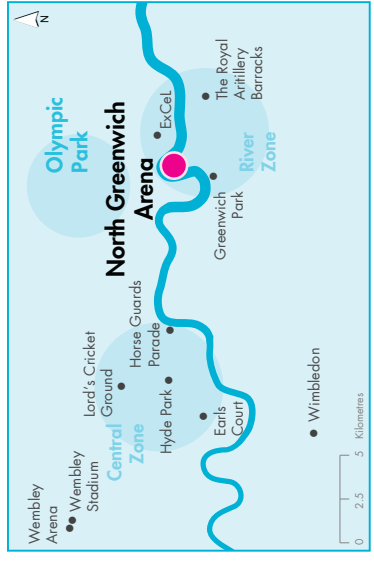
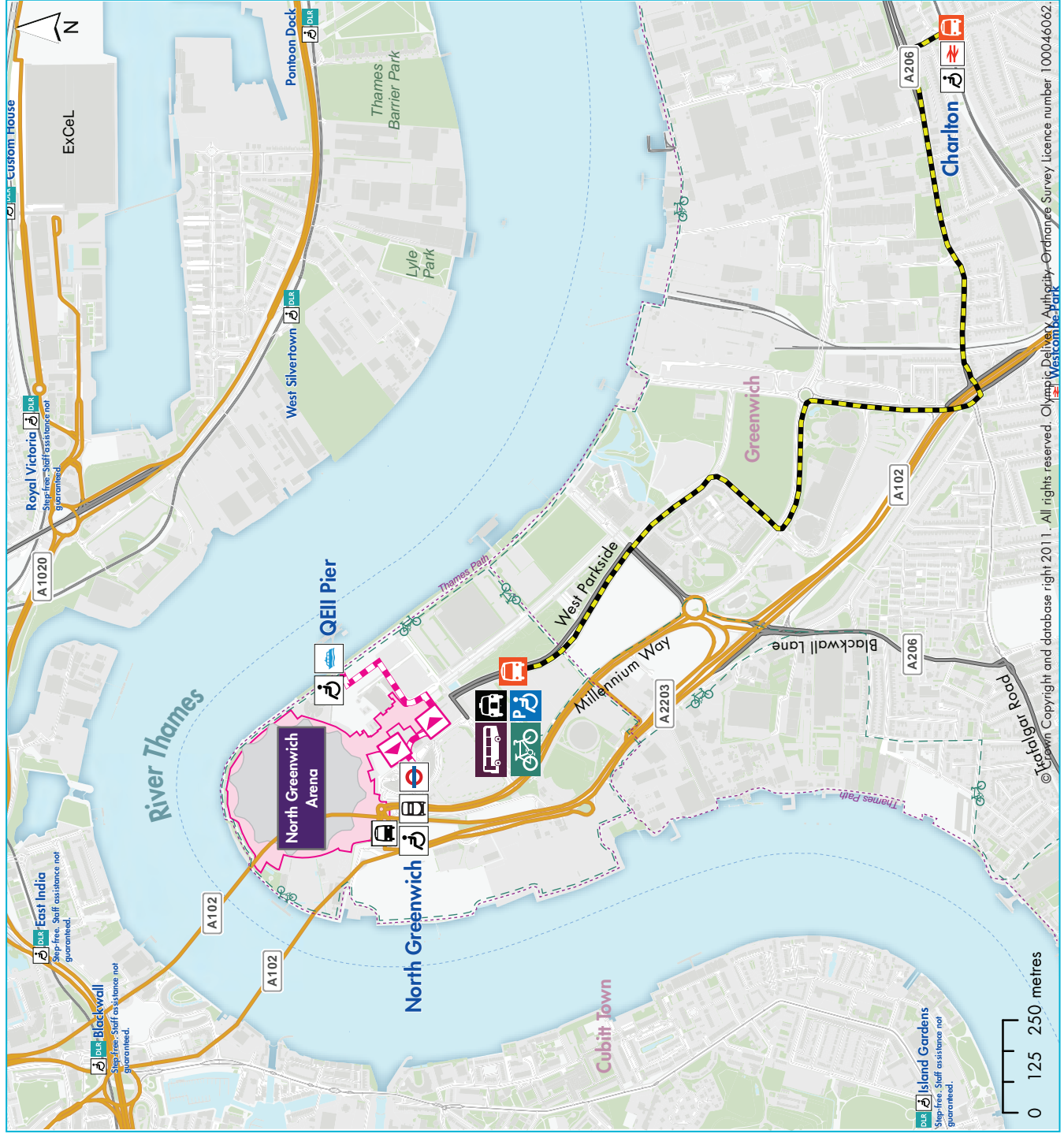


Figure 8.17 Initial estimate of mode split for spectator travel to North Greenwich Arena

Mode	Mode split for spectator trips: Olympic Games	Number of arena spectators per Gymnastics session: Olympic Games (based on gross capacity)	Number of arena spectators per Basketball session: Olympic Games (based on gross capacity)	Mode split for spectator trips: Paralympic Games	Number of arena spectators per Wheelchair Basketball session: Paralympics (based on gross capacity)
Rail (inc. National Rail, London Underground, DLR, rail shuttles)	80%	13,200	16,000	70%	12,600
Direct coach	4%	660	800	12%	2,160
Local buses	4%	660	800	6%	1,080
Walk	2%	330	400	2%	360
Cycle	2%	330	400	2%	360
River	5%	825	1,000	5%	900
Park-and-ride/park-and-walk	0%	0	0	0%	0
Taxi	3%	495	600	3%	540
Total	100%	16,500	20,000	100%	18,000

Figure 8.18 Spectator arrival and departure profile – Olympic Games

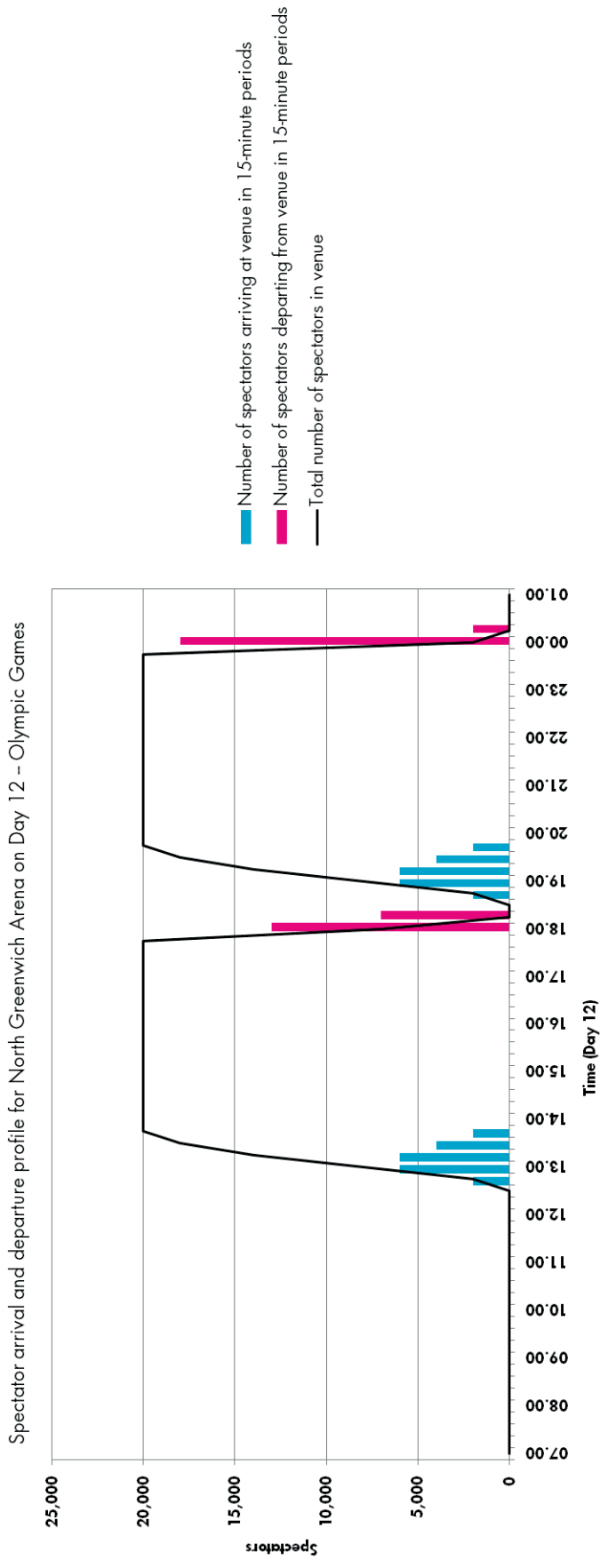


Figure 8.19 Spectator arrival and departure profile – Paralympic Games

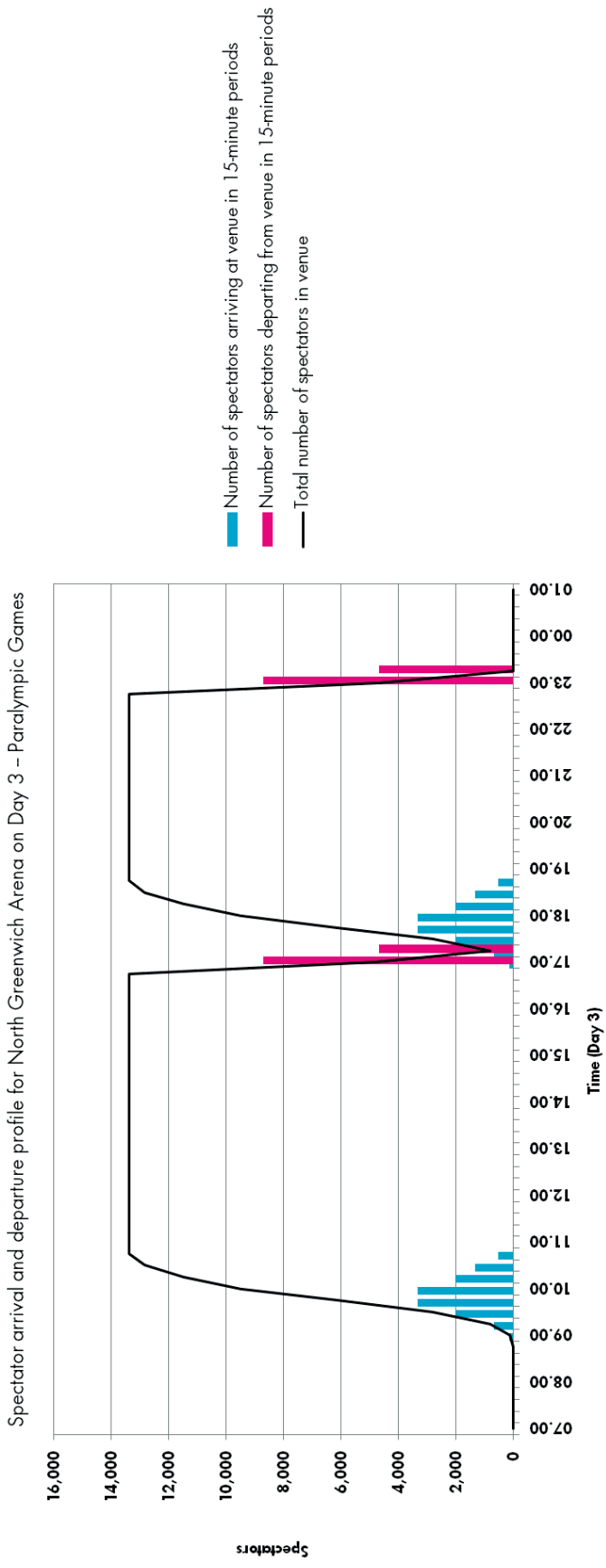


Figure 8.20 Summary of the transport strategy for North Greenwich Arena

Mode	Games transport provision
Games Family	For both the Olympic and Paralympic Games, Games Family vehicles will use the ORN and PRN to access the venue. Games Family vehicles will travel along the A102 Blackwall Tunnel to access North Greenwich Arena from the Olympic Park and central London. Olympic Family vehicles will then use the A102, Boord Street and Millennium Way.
Spectator access points	There is one spectator access point for North Greenwich Arena. Spectators arriving from North Greenwich station will join spectators arriving via coach, shuttle bus, taxi or pre-booked accessible parking and pass through the main entrance of the arena.
Rail	North Greenwich (Jubilee line) and Charlton (National Rail) stations are the two recommended stations for North Greenwich Arena. A high-capacity accessible shuttle bus service will operate between Charlton station and the venue. North Greenwich London Underground station has been extensively used by people attending large events since its completion and will be promoted as one of the key transport interchanges for spectators attending events at the North Greenwich Arena during the Olympic and Paralympic Games. Both North Greenwich station and Charlton station are step-free with staff assistance available.
River	The North Greenwich (Queen Elizabeth II) Pier is located on the Greenwich Peninsula to the east of the 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 has been developed for the Games to supplement existing services. There is also a shuttle service between Queen Elizabeth II and Woolwich Piers (7 minutes). The pier and the Thames Clipper boats are suitable for people with a range of accessible needs, including wheelchair users; however, pier gradients may be affected by tides. River services will be used throughout the Olympic and Paralympic Games.
Walk and cycle	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. The Greenwich foot tunnel is the 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. Around 170 temporary cycle parking spaces will be provided close to the spectator entrance during the Games. It is likely that the preferred cycle route to and from the Games will be via the Thames Path which is part of National Cycle Route 1. Walking and cycling facilities will be available for the duration of the Olympic and Paralympic Games.
Bus and coach	North Greenwich bus station will be promoted as a key transport interchange for spectators attending the North Greenwich Arena for both the Olympic and Paralympic Games. It is currently served by seven bus routes including 24-hour services. 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. There are two bus stops on Millennium Way, which will be suspended for the duration of the Games, with the services being diverted into the bus station. The proposed operation during the Games will include additional bus services and will have little impact on the existing services. Local London buses have low floors and provide audio and visual information. There is one wheelchair space per bus. Coach parking will be available at the North Greenwich Arena public transport hub during the Olympic and Paralympic Games.
Park-and-ride	Park-and-ride facilities are not proposed for this venue for the Olympic or Paralympic Games.

Games transport provision	
Mode Taxi and private hire vehicles	<p>Taxis are an important means of transportation for disabled spectators and it is understood that a taxi rank must be located as close as possible to the venue spectator entry and exit points. Taxi ranks and pre-booked pick-up points will be available close to the venue throughout the Olympic and Paralympic Games to provide an accessible alternative for spectators.</p> <p>The existing taxi rank at North Greenwich London Underground and bus station will be suspended to become a Games Family pick-up and drop-off zone.</p> <p>The proposed transport hub located in car park 1 will provide a taxi and private hire vehicle pick-up and drop-off area for the duration of the Olympic and Paralympic Games. Taxis and private hire vehicles will enter the transport hub via Millennium Way. Specific load zone locations are yet to be determined.</p>
Pre-booked accessible parking for disabled spectators	<p>For the Olympic and Paralympic Games, a limited number of pre-booked parking spaces will be provided to ticket holders who have a valid Blue Badge, or a recognised national disability parking permit. Parking will be valid for the day of the event only and may be subject to time restrictions. All accessible spaces will need to be pre-booked and spectators will be asked to provide evidence of their accredited parking permit. It will not be possible to gain entry to a venue's accessible parking site without evidence of pre-booking.</p> <p>Pre-booked accessible parking for North Greenwich Arena will be located within the transport hub, where 134 pre-booked bays will be available.</p>
Local area traffic management and parking plans	<p>A number of temporary traffic management and parking control measures will be required to ensure that venue transport operations can work effectively, to deter spectator parking in the vicinity of the venue and to ensure local residents and local businesses can continue to operate alongside Games-related activity. These plans are being developed in conjunction with Greenwich Council, TfL, the emergency services, and other stakeholders.</p>


Figure 8.21 Greenwich Park

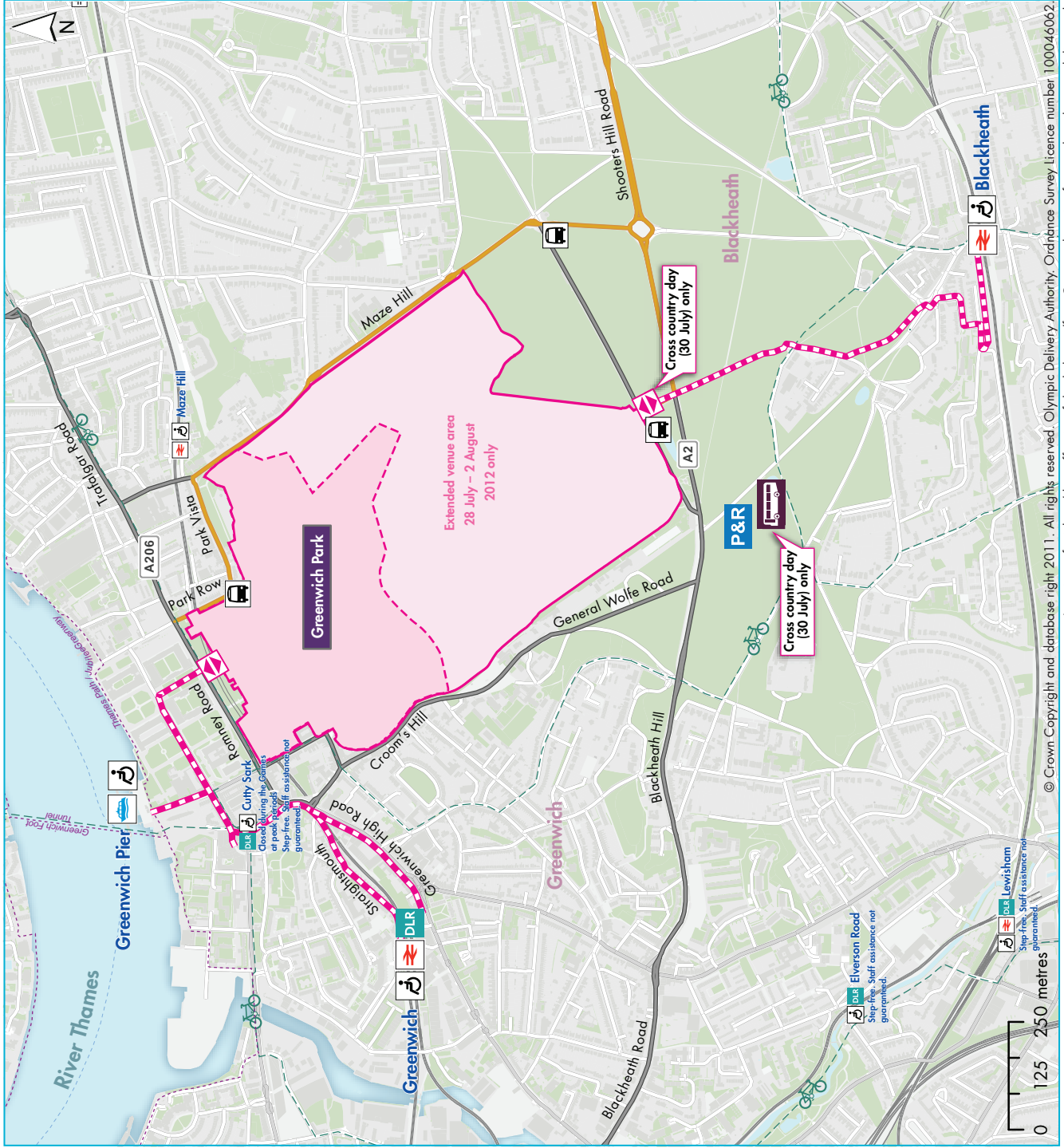
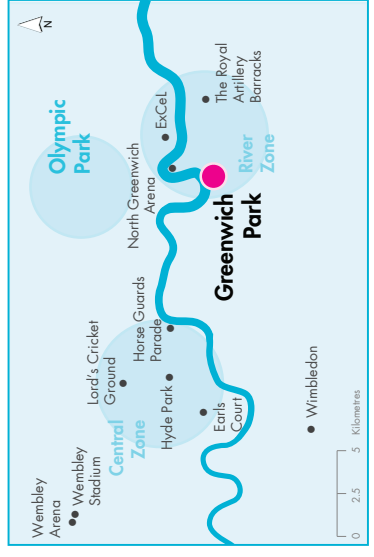
<p>Greenwich Park covers 74 hectares and is part of Maritime Greenwich, a World Heritage site that also includes the National Maritime Museum, the Old Royal Naval College, the Royal Observatory and the Prime Meridian Line. Greenwich Park arena has a proposed capacity of 23,000. Located in the London Borough of Greenwich, the venue is 10km from the Olympic Park.</p>	
Olympic competitions	Equestrian – Eventing, Dressage, Jumping Modern Pentathlon – Riding, combined event
Paralympic competitions	Equestrian – Dressage
Venue location	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 Riding combined event will be staged in the inner area of Greenwich Park.
Venue capacity (gross)	The gross capacity of the venue is 23,000 on arena days and 75,000 on Cross Country day. The gross capacity of the venue is 21,000 for Paralympic events.
Competition periods (indicative only, subject to change)	Olympic Games Equestrian – Saturday 28 July to Thursday 9 August (except Wednesday 1 August); Cross Country day – Monday 30 July; Modern Pentathlon – 11 and 12 August Paralympic Games Thursday 30 August to Tuesday 4 September
Number of competitions sessions per day (indicative only, subject to change)	Olympic Games One session per day Paralympic Games Two sessions per day
Competition session start/finish times (Indicative only, subject to change)	Olympic Games Earliest session start time: 10.00 Latest session finish time: Equestrian – 16.30 Modern Pentathlon (final two days) – 19.10 Paralympic Games Earliest session start time: 09.00 Latest session finish time: 19.15

Figure 8.22
Greenwich Park



The key to sports pictograms can be found in Appendix E

-  Event area
-  Accredited vehicle access point (Olympic and Paralympic Route Networks only)
-  Spectator access point
-  Indicative spectator access route
-  National Rail station
-  London Underground station
-  Docklands Light Railway station
-  River services
-  Step-free station/pier with staff assistance
-  Coach pick-up/drop-off
-  Park-and-ride venue pick-up/drop-off
-  Olympic Route Network – Core
-  Olympic Route Network – Alternative
-  Walking path
-  Recommended cycling route



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Figure 8.23 Initial estimate of mode split for spectator travel to Greenwich Park

Mode	Days with arena-only events				Cross Country day (Day 3): Olympic Games		
	Mode split for spectator trips: Olympic Games	Number of arena spectators per day: Olympic Games (gross)	Mode split for spectator trips: Paralympic Games	Number of arena spectators per day: Paralympic Games (gross)	Mode split for spectator trips: Cross Country day 3	Number of arena and Cross Country spectators per day (gross)	
Rail (inc. National Rail, London Underground, DLR, rail shuttles)	80%	18,400	70%	16,100	69%	51,750	
Coach	5%	1,150	10%	2,300	4%	3,000	
Local buses	5%	1,150	8%	1,840	7%	5,250	
Walk	2%	460	3%	690	2%	1,500	
Cycle	2%	460	2%	460	1%	750	
River	5%	1,150	5%	1,150	7%	5,250	
Park-and-ride/park-and-walk	0%	0	0%	0	9%	6,750	
Taxi	1%	230	2%	460	1%	750	
Total	100%	23,000	100%	23,000	100%	75,000	

Figure 8.24 Spectator arrival and departure profile – Olympic Games

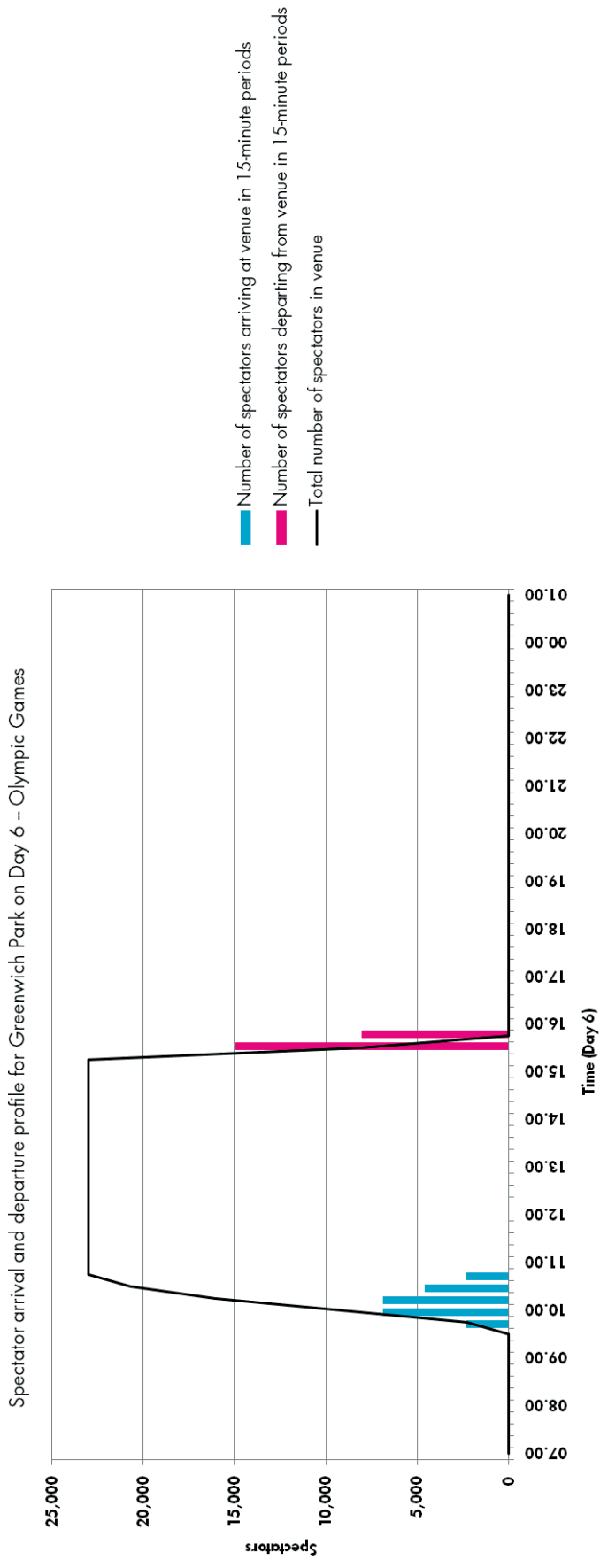


Figure 8.25 Spectator arrival and departure profile – Paralympic Games

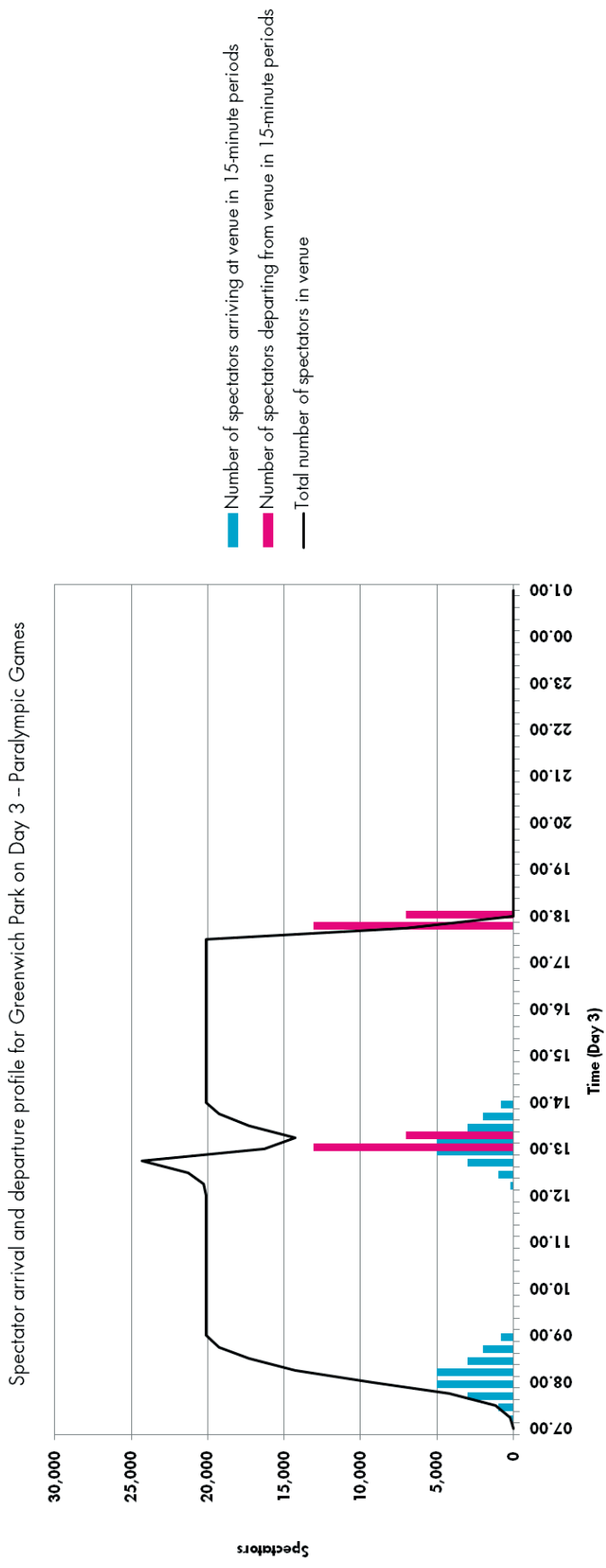


Figure 8.26 Summary of the transport strategy for Greenwich Park

Mode	Games transport provision
Games Family	<p>For both the Olympic and Paralympic Games, Games Family vehicles will use the ORN and PRN to access the venue. Games Family cars will use the A102, A2 Shooters Hill, Prince Charles Road, Maze Hill and Park Vista to reach the northern and southern access points of Greenwich Park. Games Family coaches will use the A102, A2 Shooters Hill and Duke Humphrey Road to enter the park for drop-off.</p>
Spectator access points	<p>There will be two spectator access points to the venue for the Olympic and Paralympic Games, one to the north on Romney Road via the Old Naval College, and one to the south on Charlton Way (Blackheath Gate), which will be used on Cross Country day only (30 July).</p>
Rail	<p>For the Olympic and Paralympic Games, the two recommended stations are Greenwich (DLR and National Rail) and Blackheath (National Rail).</p> <p>During the Olympic and Paralympic Games, the DLR is expected to have a frequency of 24 trains every hour carrying approximately 660 spectators each.</p> <p>During the Olympic and Paralympic Games, it is likely that the National Rail service frequency will be six trains every hour carrying approximately 1,000 spectators each.</p> <p>The platforms at Greenwich station are step-free with staff assistance available. Construction work commenced at Blackheath station during October 2010 to provide passengers with step-free access between the station entrance and the platforms.</p>
River	<p>Greenwich Pier is less than 500m from the Park and is used by Thames Clippers, City Cruises and Thames River services which offer a range of onward destinations, journey speeds and on-board facilities to spectators. A 'Ramp Rider' is available at the pier to improve access for wheelchair users. Ramp Riders are mechanical horizontal lifts from the boarding pontoon to the river edge, which will help when the tide produces steep gradients. The average journey time from central London is 40 minutes. River services will be used throughout the Olympic and Paralympic Games.</p>
Walk and 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 eight-minute cycle of Greenwich Park and TfL London Cycling Guide 7 recommends other roads in the vicinity that are suitable for cycling. Secure cycle parking for spectators visiting Greenwich Park will be provided at two locations: Talbot Place within Blackheath, and close to the Northern PSA in Greenwich (to be shared with workforce cycle parking).</p> <p>Cycling facilities will be available for the duration of the Olympic and Paralympic Games.</p>