National Assembly for Wales
Enterprise and Business Committee

Transport Planning and Management during Rugby World Cup Matches in Cardiff

Submission by Great Western Railway (GWR)
This document should be read in conjunction with any written responses submitted to the Committee from Arriva Trains Wales, Arriva CrossCountry and Network Rail.

Mae Great Western Railway (GWR) yn falch o gael gwahoddiad i gyfrannu i'r ymchwiliad byr hwn ar ddarpariaethau trafnidiaeth i gemau Clwb Rygbi'r Byd yng Nghaerdydd Medi-Hydref 2015, gan Bwyllgor Menter a Busnes Cynulliad Cenedlaethol Cymru.

Mae GWR yn rhan o FirstGroup, un o gwmniau trafnidaeth mwyaf y byd, sydd yn darparu gwasnaethau trenau a bysus drwy Brydain. Mae gweithgaredd y cwmni yng Nghymru yn cynnwys gwasnaethau trenau GWR a hefyd gwasanaethau bysus FirstCymru, yn Abertawe a Gorllewin Cymru. Mae GWR yn darparu 127 o wasanaethau bob diwrnod gwaith i mewn ac allan o Gymru, yn cynnwys gwasnaethau i Lundain a Bryste.

Nid does unrhyw wrthwynebiad gennym i'r ddogfen hon fod yn gyhoeddus, ac oes bydd angen unrhyw wybodaeth neu eglurhad pellach, byddem yn falch o helpu.

Great Western Railway (GWR) is pleased to be invited to contribute to this short inquiry on transport provision for the Rugby World Cup games in Cardiff during September and October 2015, by the National Assembly for Wales Enterprise and Business Committee.

GWR is a part of FirstGroup, one of the largest public transport operators in the world, providing rail and bus services across the UK. In Wales, the Group's activity includes GWR train services and also FirstCymru bus services in Swansea and west Wales. GWR operates 127 services every weekday in and out of Wales, including services to London and Bristol.

We have no objection to placing this submission in the public domain, and we would be happy to help if any further details or any clarification are required.

Introduction:

The Rugby World Cup was the biggest series of events we have ever seen on the Great Western Railway (GWR) network.

To put this in context the busiest day at Cardiff for the Rugby World Cup was almost 50% higher than the busiest day for travel to the Millennium Stadium during the Olympics.

Careful planning and monitoring of the Rugby World Cup's Travel Demand forecasting in the months before the start of the tournament meant we were able to react to changes in predicted passenger numbers quickly.

However, it is clear that the rail industry faced some challenges and we're sorry for the impact on customers and stakeholders.

Although we had enough trains for fans, customer travel times were significantly different to other events such as the Olympics and the Six Nations. This appears to have been driven in part by the unique mix of customers attending the games, and initial messaging which didn't cover the full service available to fans.

Thus, earlier services that were essential to providing the required space for fans were, initially, significantly underused; as were later trains leaving Cardiff.

The industry responded quickly to concerns. GWR retimed trains to more closely tie in with the revised peak time travel predictions, and our partners also made changes.

We particularly pay tribute to RWC, NR, freight operators, City of Cardiff Council and ATW who worked to free up track space, engaged more coaches for the east and amended the queuing system at Cardiff to move people and trains in and out of the station more quickly.

Our Response to the Questions Posed:

The planning process for Rugby World Cup in Cardiff and how transport providers were involved:

The Rugby World Cup was the biggest series of events that have ever been seen on the Great Western Railway (GWR) network. During the course of the tournament, we carried more fans into Cardiff Station than would normally travel across the whole of the GWR network in a single day.

In total fans made more than 200,000 journeys to and from games at the Millennium Stadium. Of the 47 games played, 24 were hosted at stadiums served by the Great Western Network. This posed the challenge of working with industry partners to provide capacity for matches across a wide geographical area, while maintaining scheduled services for non-match goers. This challenge was amplified on 19 September when three matches were scheduled on our network and 11 October, when three games were scheduled on different parts of our network in the same day.

Planning on a joint industry, RWC 2015, national and local government partnership approach began in 2013, when Rugby World Cup's Travel Demand Management operation was set up. Without match ticket sales to forecast demand early discussions focused on logistics and agreeing protocols and responsibilities.

These included:

- Protecting scheduled services for non-rugby passengers
- No major Network Rail engineering work planned before or after key games during the tournament
- RWC to take the lead on Travel Advice communications direct-to-matchgoers through their website and travel app, and that all Train Operating Company (TOC) communications would refer fans to this tool in their own advertising

GWR took an active participation at a senior level at each of these meetings, which were well attended by Welsh Government, Arriva Trains Wales, Network Rail, City of Cardiff Council and the British Transport Police.

This process included a series of site visits by RWC and partners to test arrangements at high capacity events, including the Wales v England Six Nations game. This raised a number of issues that were dealt with by the planning group; waiting time for fans after the game was not raised as an issue.

How Train Operating Companies responded to anticipated increased demand and how arrangements were communicated to the public and other stakeholders:

Pre-tournament planning
The responsibility for overall travel demand management across all transport modes sat with Rugby World Cup (RWC), who employed a transport demand model (TRACME) to forecast how fans would travel to matches. This TRACME model was based on the system used during the Olympics, and generated expected journey details by noting the postcodes of those buying tickets for rugby games, and surveying them to predict increased demand at each game.

The first cut of the TRACME data was available in September 2014, which allowed planning for transport arrangements to begin in earnest.

Match ticket sales for the tournament continued to be sold up to and, to a lesser extent, during the tournament. This in turn meant that RWC's monthly TRACME travel demand forecasts also continued to change, revealing an increasing percentage of customers were likely to travel by rail.

The rail industry responded to these changes at every stage. Forecasts, produced monthly by the RWC, were compared to planned capacity and timetables were updated to provide additional carriages or trains to meet the capacity needed. GWR worked closely with RWC and three additional charter trains were procured on top of our own trains to support travel to and from matches at the Millennium Stadium.

GWR has a limited HST fleet which is well used, other Train Operating Companies (TOCs) have little spare capacity and the number of locomotive hauled charter trains is limited. We were however able to develop a train plan that met predicted travel numbers.

The perception has developed that not enough trains were provided. This is not the case. Predicted numbers were generally accurate and allowed accurate capacity planning for additional scheduled trains and standby trains on match days.

After every single match at Cardiff, we had capacity for more people to travel. Due to the scale of the event, trains leaving immediately after matches were at capacity. Later trains from Cardiff however were lightly loaded, as were early trains to the City. GWR, with industry partners and RWC, used social media to keep customers informed and provide information about last trains to help reduce demand on earlier services

By the start of the tournament, we had planned a 300% increase over our usual timetable after the busiest games, and, on Sunday 11 October, half of GWR's entire High Speed Train fleet for England and Wales was serving the Millennium Stadium at some point during their day.

Overall we ran 162 extra services, adding over 1,200 extra carriages.

Changes after reports of crowding and long waiting times:

Despite sound planning, there were challenges around the capacity available in the period arriving very close to kick off, and immediately post the game.

Services to Cardiff

While we had enough trains for fans overall, travel times were significantly different to other major sporting events such as the Olympics and the Six Nations. Initially, RWC customers tended to travel in order to arrive close to the kick off time, in contrast to Six Nations supporters who historically have tended to set out early to enjoy time in Cardiff ahead of the game.

This change in peak demand times for travel into Cardiff was driven largely by the different customer mix; additionally in the first weekend the RWC Travel app and website did not include details of early trains on its travel advice.

For future games RWC changed the configuration of its advice page to show all trains to the venue, helping to spread loading to the additional trains that were travelling earlier. We also retimed trains to more closely tie in with the revised peak predictions and supported this with direct communications with all customers who had bought train tickets to Cardiff on all matchdays.

Trains were affected by a fatality for the Wales v Fiji match on 1st October at Hullavington which affected services to the game; around 40 fans on the very last train into Cardiff just before kick off arrived too late for the start of the game. They were compensated with complimentary rail tickets and complimentary tickets for the RWC quarter finals. This group of fans were the only fans

carried by GWR throughout the tournament who did not arrive on time for the game and we were able to take everyone back who arrived in time for the last train.

Services from Cardiff
It is clear that many customers were unhappy with the time taken to leave the station over the first weekend, with some reporting significant queuing times following the match. The industry and partners in RWC and England 2015 responded quickly to problems identified and put in place a number of changes:

- NR, ATW and City of Cardiff Council amended the queuing system at Cardiff to provide more space for queuing and to move people in and out of the station more quickly
- Freight operators agreed to amend their service schedule so that they avoided Cardiff in the critical post match period to allow greater movement of passenger services
- The RWC provided coaches for travel to Bristol Parkway, alleviating some of the pressure on the two eastbound platforms
- A revised GWR train plan was introduced, after consultation with partners, which put moving rugby fans ahead of protecting non rugby services. This focused on adding more capacity in the train plan to shortly after final whistle so that we could transport much larger flows in the first 30 minutes after the match. To do so a number of trains were cancelled from Newport and travelled as empty services to Cardiff, passing through the centre of the station without stopping. This allowed platform 4 at Cardiff to be used for eastbound departures but at the cost of disrupting westbound customers, and was necessary due to the confines of the current Cardiff station track layout
- As there is very limited space to hold trains outside the station ready to depart to the east trains had to sit as far back as Swansea waiting for platforms to clear so they could be brought forward. To achieve this cancellations and delays for services from Swansea to Cardiff had to be introduced, this particularly affected customers travelling west from Newport, and from Swansea to Cardiff. A total of 18 services, on top of those already changed, were affected.
- Changes were also made to be able to bring more trains to Cardiff in the narrow band of time that customers were choosing to travel prior to the matches

The changes increased platform space at the station for east-bound trains to allow around 3,000 fans to travel within 30 minutes of the final whistle. Customers on average queued for much shorter periods and queues were cleared very quickly so that, after the initial wave of supporters, queueing was minimal for trains leaving the station.

We also reviewed communication, extending our travel advice advertising campaign to give prominence to all games accessed from our network, using national and regional print and radio advertising with a total campaign reach of around 5.6 million people.

An example is included in the attached appendix and a copy of the radio broadcast has been submitted; the campaign focused on:

- Key tips for fans travelling
- Highlighting ticketing easements to allow travel on earlier trains
- Giving early warning that trains will be busy and there will be queues for trains on the way back

Social media content

During match days the social media team was seconded to the Communications team - and was co-located in Control with a member of the communications team to ensure better management, responses and messaging during the day. Examples of broadcast tweets are included in the Appendix.

Staff at stations

GWR staff presence at stations was increased to offer assistance, with GWR staff, stewards and security teams supporting ATW, NR and City of Cardiff staff to guide customers safely through the queues onto the platforms and trains.

Any issues with the wider delivery of the event (bus and taxi services and infrastructure, event communication, crowd management and facilities etc:

RWC asked GWR to assist in procuring a number of trains for additional services from a private operator. Six sets of loco hauled stock were requested by RWC however only three trains were available within the industry. Across the UK there is a limited supply of diesel stock to hire and there was pressure on this resource from private charters and other operators during the event. To secure additional trains GWR gave access to our train depot in London for servicing and timetable support. The negotiations with the rolling stock operator were more difficult than expected, hence RWC's request for GWR help, and the contracts were not finally signed until the day the tournament began.

Having all the six trains specified would have eased the pressure on our own fleet to deliver the level of service required for the customer flows during the RWC. However, we compensated making changes to our normal timetable to supply the necessary capacity. Shortage of rolling stock was not therefore the cause of time spent waiting in queues, or travelling on busy trains.

The limitations of Cardiff Station design and track layout were the real barrier to moving customers more quickly without impacting scheduled trains for non-rugby customers.

Any lessons for future events of this type:

Cardiff Station

Cardiff needs a rail station that befits a capital city. Sufficient rail capacity to cope with demand can be, and was delivered, however the timeframe at which trains for travel to the east can be provided post event is severely restricted by the current infrastructure and design of the station. This was something that the rail industry raised at the time the stadium was built.

A track diagram is attached in the Appendix. The ability to run trains in quick succession to reduce current queueing times is limited. Platforms 0, 1 and 2 are normal departure platforms for the east but Platform 0 is too short for our long trains serving destinations to the east. In addition, trains from all three platforms go through a single set of points so only one route can be set at a time. Extending the length of Platform 0, as anticipated in the current Cardiff Station Masterplan will assist but does not resolve the single point of departure from the station.

In addition, while platform 4 can be used eastbound, it is available only if westbound trains are terminated early at Newport and do not call at Cardiff. Additionally trains from this platform cross inbound routes on departure and ultimately share the same lines as those from Platforms 1 & 2. There are also few places to recess trains on the approaches to Cardiff whilst waiting for platform space.

To deliver a step change in passenger movement from the station post event significant changes need to be made to the station to improve passenger flows and to the track to allow more frequent departures. This is particularly pressing given the expected growth in modal shift to rail following electrification of the Great Western mainline with faster journey times. Passenger numbers are due to rise from 13m to 22m by 2023 and the improvements to the service, coupled to increasing delays on the road network into Wales, will encourage more people to travel by train for events in Cardiff; particularly as the City, and South Wales, continues to attract world class events.

Rail has demonstrated its ability to move large crowds, long distances quickly, effectively and safely. It does so for many large stadiums with dedicated stations, examples of which are set out in the Appendix.

Changing the layout of Cardiff Central, or building a new station dedicated to the stadium and only used on match days, would transform the experience of fans and visitors to Cardiff, as well as protecting Cardiff's commuters and business travellers.

This is a time of great change for the rail network. GWRM and Valley lines electrification will bring significant speed and capacity upgrades for Cardiff services. This improved offer will further increase rail passenger numbers on match days, helping relieve stress on the Cardiff's other transport links. The current consultation on Cardiff Central Master Plan is an ideal opportunity to bring a world class station to Cardiff to deliver the step change in passenger management and consign the issues seen on 19th September to history.

Longer Trains

As part of the electrification programme GWR will operate Super Express Trains, which can run in 9 or 10 car formations. Each carriage is also longer than our current High Speed Train fleet and this will increase the number of customers than can be carried per service. In addition, GWR is proposing to use its new fleet of four car Class 387 electric trains provided for the London Thames Valley to provide capacity relief to our new Super Express trains during major events.

These Class 387 trains can run in 12 car formations and seat 675 passengers in a 2+2 seating layout with scope for many more to stand for shorter distances. GWR has sought to ensure that these trains will have route clearance to Cardiff and, once the line is electrified, we can bring these trains to the City on match days providing a further significant uplift in available capacity using resources that may not be fully deployed at the London end of the business, and showing the wider benefit of GWR holding a portfolio of routes which can support each other.

Summary:

The Rugby World Cup 2015 (RWC) saw record numbers of event goers travelling to Cardiff; often on peak time services already busy with commuters, business and leisure travellers on journeys wholly unconnected with the RWC.

In comparison with other major rugby events in Cardiff, such as the Six Nations, customers travelling for most RWC matches predominantly came from the east (London, Bristol, the Midlands), with a much reduced percentage travelling from West Wales.

Cardiff Central station has a track layout dating from the 1960s that only allows for two platforms to be used for full length Intercity trains heading east; a third platform can be made available but using this causes considerable disruption to terminating services and those travelling through the station to the west. There is also very limited space for holding trains near the station preventing the rapid dispersal of fans. This is exacerbated by the extremely close proximity of the stadium to the station meaning that long queues form immediately after the game.

We recognise that Cardiff is a world class city, with a world class stadium; we believe it needs a world class station to match, so the City can continue to offer the biggest and best sports and entertainment events.

Support

GWR would welcome Welsh Government support to ensure the opportunity afforded by the Cardiff Station Masterplan development is taken to deliver improved passenger flows around the station along with improved infrastructure to allow more trains to arrive/ depart from the station in short order to maximise passenger flows to/ from the station for events in the city.

Appendix

Travel Advice Media Advert ***- Also supplied 30 second radio broadcast.***

With over 400,000 more people travelling with us to Rugby World Cup matches across the West, please bear in mind that Great Western Railway services will be very busy throughout the tournament.

To help you on your journey, we've teamed up with Network Rail and Rugby World Cup organisers to put hundreds of extra trains and carriages on the lines across our network, as well as extra staff at key stations. We've even relaxed ticket restrictions so you can travel earlier to the matches.

Here are some tips to help make your journey smoother.

Travel Tips

- Travel to the Rugby matches as early as possible
- Make sure you plan your journey in advance at GWR.com/rugby
- On match days, tickets can be used on earlier trains than booked
- Soak up the post-match atmosphere at the official Rugby World Cup 2015 Fanzones while train station queues disperse
- Get 24/7 travel updates via our GWR Twitter team @GWRHelp

Thank you for your understanding and patience as our teams work hard to get you to and from the Rugby.

For further travel advice and tips, please visit our dedicated World Cup Travel page GWR.com/rugby or download the official Rugby World Cup app.

GWR

PR06368_GWR_RWC DELAYS_WEEK2_340x270_MA3.indd 1 30/09/2015 10:35

Examples of Broadcast Social Media Tweets

19/09/2015
Sorry rugby trains busy today, extra services running tonight. Queues likely, if you can, please stagger your return journeys #RWC2015

19/09/2015
Severe overcrowding and delays to services in the Cardiff area due to #RWC2015 Queuing is anticipated at Cardiff and destination stations.

19/09/2015
Returning from #WALvURU? Stations busy but lots of trains to get you home. Last train for London - 2055, BristolTM - 2200, BristolPW – 2055

20/09/2015
#RWC2015 Trains from Cardiff to London are at: 1700, 1715, 1752, 1800, 1820, 1850, 1900, 1933, 1950, 2000, 2030 & 2055.

20/09/2015
Going to #AUSTRALIAvFIJI for #RWC2015 tomorrow? Travel early as trains will be busy. First Off-Peak train to Cardiff leaves London at 0815

Message Sent by GWR to Customers who bought tickets to Cardiff during Match days

Plan ahead to make sure your journey goes smoothly.
If you can't see this email, you can **view it in your browser**.

GWR

Rugby World Cup

Millennium Stadium, Cardiff

Wednesday 23 September

16:45 - 18:30

Dear Miss XXXX,
If you're lucky enough to have tickets to the rugby, here are a few tips that will help your journey to and from Cardiff tomorrow go as smoothly as possible:

- start your journey early to avoid the busiest trains. The closer to kick-off, the busier the trains are likely to be
- give yourself plenty of time to get your train after the game. There will be a queuing system in place at Cardiff Central
- trains will be running immediately after the match and throughout the evening, with last trains leaving Cardiff Central at the following times:
  - Bath Spa 21:00
  - Bristol Parkway 23:15
  - Bristol Temple Meads 23:27
  - Cheltenham Spa 21:50
  - Gloucester 23:20
  - London Paddington 22:18
  - Swansea 23:17

If you're not going to the rugby, we advise avoiding peak services arriving at Cardiff Central between 09:00 and 14:30, and departing between 16:15 and 22:00.

Special advice for customers with Super Off-Peak tickets: if you're travelling to Cardiff from London Paddington or Reading you may use Super Off-Peak tickets for earlier services. These will be valid on services from 08:15 (departing London Paddington) and 08:41 (departing Reading) and all later morning departures.

If you do change to an earlier service, please note your seat reservation is non-transferable. For more information, visit the dedicated Rugby World Cup travel section of our website. Or tweet us @GWRHelp

Table of Services showing extra capacity

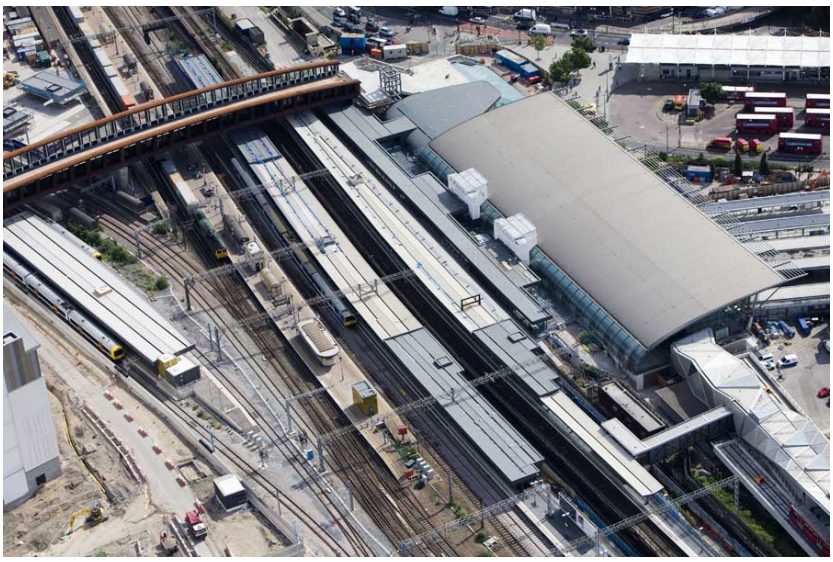
Match	Extra GWR long distance services provided for (Out and Return)	GWR Strengthened local services Over WTT Service (Post-Event)	GWR Post Match Capacity	% Extra capacity	Non-Event GWR Services Affected
19th September: Ireland v. Canada K/O: 14:30	7 HST & 3 LHCS 8 HST & 3 LHCS	LS - 28/42 (carriages)	9,150 extra capacity 15,450 Capacity in total	59%	Some High speed services running non-stop Bristol-Cardiff 1x train divert to Cardiff via Cheltenham
20th September: Wales v. Uruguay K/O: 14:30	6 HST & 3 LHCS 9 HST & 3 LHCS	LS-21/33 (carriages)	7,650 extra capacity 14,100 capacity in total	54%	Some High speed services running non-stop Bristol-Cardiff Severn beach resources used for Cardiff
23rd September: Australia v. Fiji K/O: 16:45	2 HST & 3 LHCS 6 HST & 3 LHCS	LS-32/37 (carriages)	8,700 extra capacity 12,700 capacity in total	69%	Some High speed services running non-stop Bristol-Cardiff
1st October: Wales v. Fiji K/O: 16:45	2 HST & 3 LHCS 8 HST & 3 LHCS	LS-32/41 (carriages)	11,750 extra capacity 15,750 capacity in total	75%	Some High speed services running non-stop Bristol-Cardiff
2nd October: New Zealand v. Georgia K/O: 20:00	3 HST & 3 LHCS 16 HST & 3 LHCS	LS-9/15 (carriages)	16,300 extra capacity 16,900 capacity in total	96%	Some High speed services running non-stop Bristol-Cardiff
11th October: France v. Ireland K/O: 16:45	8 HST & 3 LHCS 10 HST & 4 LHCS	LS-9/22 (carriages)	14,000 extra capacity 17,750 capacity in total	79%	Some High speed services running non-stop Bristol-Cardiff
17th October: New Zealand v. France K/O:20:00	11 HST & 3 LHCS 16 HST & 3 LHCS	LS-3/10 (carriages)	14,350 extra capacity 14,850 capacity in total.	97%	Some High speed services running non-stop Bristol-Cardiff
18th October: Ireland v. Argentina K/O 13:00	11 HST & 3 LHCS 10 HST & 4 LHCS	LS-27/57 (carriages)	13,600 extra capacity 22,150 capacity in total	61%	Some High speed services running non-stop Bristol-Cardiff

Key:
WTT – Working TimeTable – the standard timetable for the normal service pattern.
HST – Intercity 125 high speed express trains (formed of 8 coaches)
LHCS – Loco hauled coaching stock (11 coach charter rakes)
LS – Local passenger services, diesel multiple unit rakes, more easily formed into longer trains when resources allow.

Examples of Stations designed to manage high levels of passengers from major stadiums

1 Bijlmer Arena Station concourse and platforms Source: www.jaaphuisman.nl

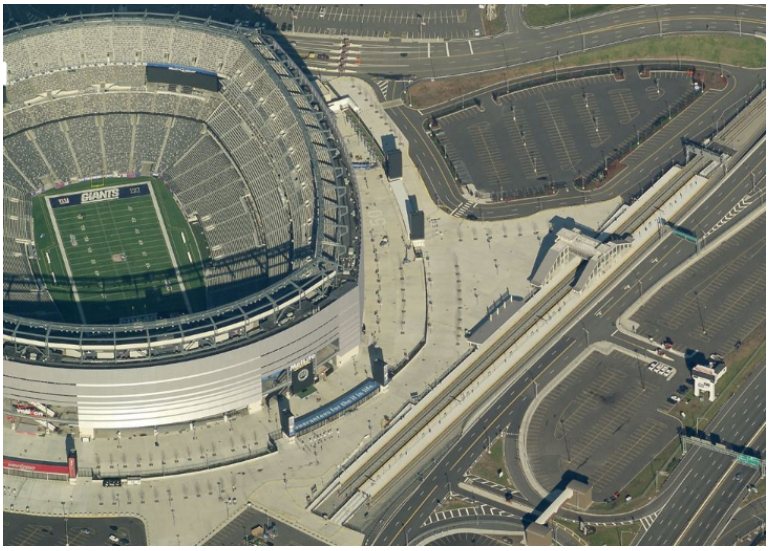
Bijlmer Arena Station - Amsterdam - new station specifically designed to improve the through flow through the station, architects designed in a wide pedestrian connection through the station. Important transport interchange, with match day crowds being transported by the rail, metro and local bus services. A total of 8 platforms in use across the station providing wide areas for large crowds. Next to a stadium with a capacity of 60,000.The station has a large footprint, 6500m^2, featuring a 70m wide ground level concourse, 8 platforms (2 for metro, 6 for rail). It typically handles 8 trains and 12 metro services per hour, but has the flexibility to increase the number of services during busy times. 4x 340m platforms allow the station to handle NS's high capacity double deck suburban stock working in multiple formation.



2 Stratford Station Source: ODA

Stratford Station- Used for 26 million journeys a year, has 17 platforms, which can be served by over 100 services in an hour. Multi-modal transport interchange with national rail services across London and beyond working alongside the Dockland Light Railway and London Underground network, as a result of the high frequency of service the station can effectively and quickly

dissipate large crowds into the rail network. Services from Stratford also predominantly use high capacity urban/suburban rolling stock that allows for reduced station dwell times. Stations features structures specifically designed to handle large events crowds, including the footbridge pictured above.



3 Aerial View of Meadowlands Station - Source Bing.com/maps

Meadowlands Stadium Complex Stadium Station, New York - Used when events of 50,000+ are being held at the Meadowlands sporting venues, has a comparatively low footfall due to the infrequent usage of 195,000 per annum. 3 Platforms of 290m, capable of holding 8+ car rakes, located just outside the stadium, allowing customers to get on trains quickly. The station is also a terminus station, so the trains do not impact normal running. The platforms and overbridge specifically designed to carry high volumes of passengers during the match days.

4. Haymarket Concourse - Source www.idparchitects.co.uk-

Haymarket Station – Edinburgh's second station which serves a large commuter base as well as Murrayfield crowds. Used for over 2 million passenger journeys a year and provides an important transport interchange with local bus and tram services away from the city centre. As a result of repeated overcrowding problems the station was totally rebuilt by 2013, to provide significantly wider areas for handling high crowd volumes including an under croft parking area, which is utilised on match day as additional space for queueing. Rugby crowds of 10,000+ can be served by 20+ timetabled services an hour as well as extra services running from through the platform 0, a bay platform which provides ability to start special services at Haymarket to alleviate pressure quickly during the peak demand. The nearby Haymarket depot provides a close site for any extra services to be stabled before use.

Cardiff Station Track Map