

#### National Assembly for Wales Enterprise and Business Committee

Arriva Trains Wales are pleased to be invited to discuss the Rugby World Cup events hosted in Cardiff as related to the rail transport arrangements.

#### **Background**

The Rugby World Cup (RWC) events in Cardiff, 8 matches hosted between 19<sup>th</sup> September and 18<sup>th</sup> October 2015, are the latest in a long line of major events hosted in the Millennium Stadium since its opening in 1999.

Since 1999 the demand for rail travel following Stadium events has grown considerably. To illustrate this, in 1999 rail took back circa 10,000 spectators after each match. We then saw a significant uplift when the FA Cup came to the Millennium Stadium (between 2001 and 2005) with numbers increasing to around 15,000 per event. The trend of rising passenger numbers has continued with Cardiff Central averaging around 30,000 for Autumn Internationals/Six Nations from 2010 with the current norm for 2014 being around 35,000 with a peak of circa +45,000. These are return numbers with inward travel for events exceeding these numbers, typically by more than 10,000.

Although Platform 0 at Central was built for the 1999 opening (a narrow 5-car single direction platform) no further development of the station to assist capacity has occurred, although the new platform 8 for Valley Lines (funded by Welsh Government) is expected to be commissioned by Network Rail in early 2017.

Cardiff Central station is owned by Network Rail. They are funded through the 5-yearly Regulatory periodic reviews to maintain and update the infrastructure (including stations) based on current and future requirements. The station is operated by Arriva Trains Wales and managed under a lease arrangement co-terminus with the Franchise Agreement.

It should also be noted that in marked contrast with similar stadiums in the UK the distance and time taken between the Millennium stadium and Central station is very short. This has the effect of little if any dispersal time, a very congested station approach and an exaggerated perceived station queuing time (as there is no time between the stadium and being in the station queue).

#### **Planning**

The rail planning process for the RWC started on 12<sup>th</sup> December 2013 when ATW were invited to the second RWC rail meeting.

Since December 2013 ATW have provided senior level representation at all subsequent RWC meetings and have fully participated in the process. As part of the pre-event arrangements RWC representatives have attended Cardiff to view rail arrangements for 6 Nations matches, including late evening (2000 hours) kick off events, and RWC warm up games. The consistent concern that has been raised by RWC as a result of their observations and from their ticket sales data has been the potential shortfall of train capacity post match in the eastwards (Bristol/London) direction. As far as we are aware neither the time queuing or indeed requirement for maximum queuing time was raised or requested.



The main rail operator for eastward journeys, Great Western Railway (formerly First Great Western), therefore, together with ATW and CrossCountry on other routes, concentrated their planning efforts on providing sufficient capacity together with the important assumption (as per for example a 6 Nations match), that the normal level of service for non-event rail passengers was to be protected.

However, following 2 of the first 3 matches there were both passenger and RWC concerns raised in respect of the length of time passengers eastbound queued to return with circa 2 hours being cited. However, sufficient capacity had been provided and the timetable for non-event passengers protected.

#### **Communications**

#### 1. Rugby World Cup Organisers Official Customer Travel Advice.

Prior to and throughout the event, Rugby World Cup (RWC) tournament organisers implemented a variety of travel advice communications direct to all of their customers (match day ticket holders) and also public facing campaigns in host cities. In addition, their instructions to all partner transport providers was that RWC information sources must be the primary source of travel advice for their match ticket holding customers. ATW consistently reminded RWC of the need to include realistic customer information on queuing arrangements and queuing times within that travel guidance.

After the first three events, a review highlighted that this effort may have been ineffective on a number of occasions in influencing RWC customers to make appropriate transport arrangements to and from events in Cardiff and other locations. As an example only the last 4 hours GWR's timetable from London was displayed on their website with the unintended consequence of encouraging later and hence more concentrated travel. As a result, planned supporting public communication activity implemented by transport providers (including GWR and Arriva Train Wales) was revised after the first weekend of the tournament to accommodate this shortfall.

#### 2. Arriva Trains Wales planned pre-event travel advice targeting public audiences.

ATW collaborated in full with RWC in the provision of travel information for them to distribute directly to their customers. ATW did not have direct communications access to RWC customers.

Pre-planned ATW communication activity targeting the general public and rail users featured the following activity:

#### **ATW Travel Advice specific campaigns:**

Campaign 1. Objective: Demand management, to encourage rail travel before/after match day

Audience: Volume over 2.5 million.

**Timing:** 10 weeks prior to the tournament.





Campaign 2. Objective: General match day travel advice.

Audience: Volume over 2.3 million.

**Timing:** 4 weeks prior to the tournament.



**Campaign 3**. Objective: travel advice for specific matches. **Audience**: Volume c. 1 million, plus PR/news media coverage **Timing/duration:** 1 week prior to each specific match.





**ATW PR campaign**: a few days prior to all matches proactive PR effort was used to communicate specific travel advice via TV/radio (BBC, ITV) and relevant newspapers/media websites. Significant news media coverage was achieved throughout the entire ATW operational area.

#### 2.1. General/supporting information items (pre-tournament):

A new customer information video explaining event day arrangements at rail stations (safety queue plan, wear appropriate clothing, etc) was specially produced & launched via ATW website, social media, mass emails and RWC managed channels.

See https://www.youtube.com/watch?v=cxEUquimdiY&feature=player embedded

### 3. ATW enhanced travel information launched after the first weekend of the tournament.

Following public reaction to the first Cardiff events the ATW communication effort was scaled up as follows:

**ATW PR:** staff and contractors supporting ATW PR activity was increased from one to three, enabling a better quality of more detailed travel advice to be proactively 'sold in' to key news media channels.

ATW website: more prominent messaging was deployed on home page. Example below;



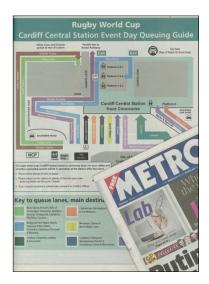


#### Audience c. 150, 000.

**Targeted eMails**: Since the start of the tournament, over 16,000 targeted emails were issued to actual ATW train ticket holders travelling to all impacted rail stations, offering specific travel advice.



**Metro newspaper**: full page, colour adverts communicating the Cardiff Central station queuing arrangement were published in the South Wales edition and South West England edition of Metro newspaper supporting the two week-day matches. **Audience: 100,000** 



GWR carried out a similar activity providing advice on general event day travel arrangements.

**Improved public signage**: A concern was raised in respect of difficulties in getting from the Millennium Stadium to Cardiff Central Station via Wood Street. This was partly due to the building site screening/hoarding surrounding the redundant bus station obscuring line of sight to the rail station. To overcome this 15 large posters (3m w x 2m h) of the Cardiff Central Station queuing plan map were produced by ATW and secured along the entire span of the bus station hoarding. See picture 1 below.

Picture 1





In addition, 20 head height placards featuring the queuing plan were displayed by volunteers positioned by exits to the Millennium Stadium at the end of each match.

**Improved customer information leafleting**: the usual 6 Nations 20,000 leaflets featuring the Cardiff Central Station queue plan map was increased to 60,000 (one for almost every fan in the Stadium). The content and design were improved as were the number of volunteers distributing them, before and after the matches. In addition, supplies of these leaflets were given to GWR and CrossCountry Trains for distribution at key journey start points i.e. London Paddington, Birmingham New Street and on board trains.

**Social Media**: Since the start of the tournament an audience of over 1,700,000 users have seen ATW tweets relating to match day information. In addition, over 2,000,000 Twitter users have seen RWC travel advice issued by ATW on non-event days.

#### Other activities:

RWC organisers were responsible for issuing match day travel messages to their customers via the massive digital screens in both the Millennium Stadium and Cardiff Arms Park Official Fan Zone. This was supported with real-time information input from ATW.

#### Queuing

The length of time passengers queue at the station is a factor of :

- 1. Capacity number and formation (number of carriages) of trains per hour,
- 2. Speed at which passengers can be safely loaded.
- 3. Capabilities of the infrastructure i.e. signalling / track and points system
- 4. The lack of dispersal time between the stadium and Central station i.e. the time spent at the station is exaggerated by the short distance

To illustrate the first bullet point, the typical post match capacity of a GWR High Speed Train is circa 700 people and loco and coaches around 900. Thus for example on the first match (see Table 1 below) circa 3,000 passengers were capable of being moved per hour. With an average of over 12,100 people in the London and Bristol queue, it therefore took circa 3 to 4 hours to clear the queue. Note this doesn't necessarily mean everyone in the queue waited 3 hours as many don't join the queues immediately rather first enjoy the bars, pubs etc.

To illustrate point 2 and to show the station constraints a short video has been prepared for the Committee to aid understanding. In summary, the station frontage has a limited number of openings by which to feed the queues through – this slows the loading time. Queues have to be loaded individually due to the concourse and subway constraints unless the east subway is used which itself results in delay in loading. The staircases are narrow and there is only 1 per platform (in reality both staircases are normally used to load 1 platform). However this hinders passengers wishing to exit from terminating services. The platforms are also constricted and we are thus unable to load 2 HSTs simultaneously on either platforms 1 and 2 or 3 and 4, as the risk to passenger safety of people falling on the track would be too high. Platform 0 is so narrow for example, that only 200 can be loaded at a time even though train capacity for the platform is 500. The station west subway is also constrained and we are unable to load platforms 1 and 2 together with platforms 3 and 4. Hence we have to use the narrower east (lift) subway to load platforms 3 and 4. This subway was further narrowed and divided to accommodate the bus service to Bristol Parkway during the RWC events.



In respect of point 3 the current track and signalling layout has a number of constraints that severely hinders event management, particularly when, as with the RWC, passenger flow is mainly one directional (in this case towards London and Bristol). For example:

- Lack of layout flexibility e.g. trains arriving from the east unable to access platforms 1 and 2 rather have to go through the station, out to the west (affecting trains from Swansea) and then back in
- Signalling capability and functionality e.g. trains can be signalled through the east of the station with a minimum of every 4 minutes between them
- Track capacity for example, trains from platforms 0, 1 and 2 converge into a single piece of track for circa 3.5 miles before 2 tracks become available.

These physical infrastructure constraints are exacerbated by freight movements during the post match period and by 3<sup>rd</sup> party Charter trains. Freight operators have contractual rights to run their services and specified times which Network Rail are obliged to honour. For Charter operators, while these certainly fill a market niche, they can be difficult to accommodate in train planning terms and often use scarce track capacity for relatively few passengers. For example the Northern Belle charter on 18<sup>th</sup> October only carried 86 customers.

For point 4 and the lack of dispersal time is illustrated below. These are a series of 5 minute time lapse photos from the station frontage CCTV camera for the Ireland v. France match on 11<sup>th</sup> October.



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Image 1: taken at 18:35 with the match still underway. The London and Bristol queues (top left) are already beginning to fill.



Image 2: taken at 18:40 with the match having finished 2 minutes earlier at 18:38. London and Bristol queues within the station area are now already full.

Images 3,4 and 5: taken at 18:45, 18:50 and 18:55 respectively and illustrate the north bound queues (Crewe and North Wales) beginning to fill.

Image 6: taken at 19:00, 22 minutes after the match shows all front of station queues now full.

A queuing plan is shown in Appendix 1 to assist orientation.



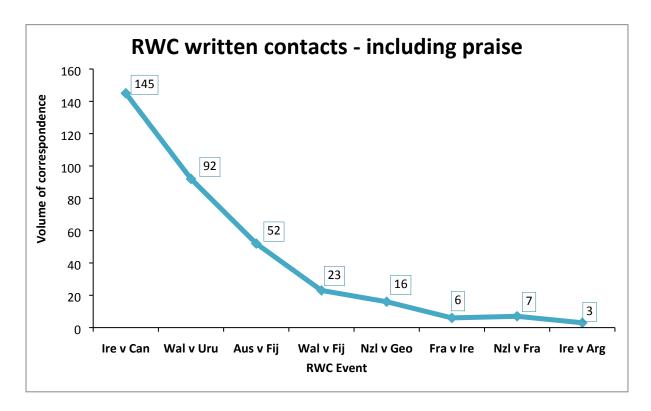
#### **Changes following feedback**

As a result of customer concerns about the time eastbound passengers queued for the first 3 matches, a number of changes were quickly made to the event plan for subsequent games. A brief summary:

- GWR revised its train plan to provide circa 6 HSTs per hour with the plan being front end loaded for capacity (see table 1 below).
- RWC offered and then introduced a Bristol Parkway dedicated coach service thereby also reducing London queuing times. ATW revised the queuing plan to accommodate this (see appendix 1)
- ATW revised its queuing system to create more space closer to the station for passengers queuing for London and Bristol Temple Meads trains. This reduced the length of queues on Wood Street but we could no longer as a consequence accommodate the canopy and unfortunately this had to be taken down. In addition, platform 3 and 4 were used (in part) for eastward departures providing additional platform capacity. The Saunders Road and Riverside car parks were also closed to allow the changes to the queuing system, regrettably inconveniencing many regular customers.
- Network Rail restricted/prohibited freight movements through Cardiff Central station during the post match period freeing up much needed passenger train capacity.
- Cardiff Council provided formal queuing arrangements for London and Bristol Temple Meads passengers on Wood Street creating a more structured arrangement feeding into the station queues (see picture 1 above)

As a result of these changes and the changed communications outlined above, queuing times reduced and the level of contacts from event passengers also fell.





The nature of the written contact changed through the events. From 2% of contacts being praised at the start to 50% for the latter games.

Similar trends were seen through social media, albeit one observation was local media would focus on 1 or 2 negative tweets rather than the large number of positive comments and hence give a particular negative perception. Some examples of the tweets we and customers made for the France vs. Ireland game are shown in appendix 2.

However, the changes made to provide more capacity quicker (i.e. more and longer trains immediately after the match finished) inevitably had consequences for non-event customers. For example, GWR only running an hourly service back to London prior to the matches to keep HSTs back for post event, rather than the usual half hourly service. Also, ATW closing two station car parks to create additional queuing space and taking train capacity from West, North Wales and Manchester to provide it in the South.

These new customer issues would likely not have arisen under the original event plan as agreed before the event with RWC, as one of the objectives had been to minimise the effect on non-event customers.



Table 1 below shows the additional GWR / ATW trains post match. It also highlights the effect of the change in policy on ATW services (only) to no longer protect regular scheduled services:

Match	ATW extra services	GWR Eastbound HST/LHCS Average Per Hour	ATW Strengthened Over WTT Service (Post- Event	% extra capacity	ATW Post- Match Capacity	Non-Event ATW Services Affected
19th September: Ireland v. Canada K/O: 14:30	7 pre (ML) 11 post (ML)	3 HSTs & 1 LHCS	ML - 6/34 VL - 21/104	27/138 trains =20%	9,600 extra seats 42,000 seats	None
20th September: Wales v. Uruguay K/O: 14:30	19 pre (12 ML /7 VL) 21 post (13 ML / 8 VL)	3 HSTs & 2 LHCS (with 1 in the other hour)	ML - 9/15 VL - 31/31	40/46 trains =87%	13,700 extra seats 23,700 seats in total	None
23rd September: Australia v. Fiji K/O: 16:45	5 pre (all ML)  11 post (9 ML / 2 VL)	2 HSTs & 2 LHCS (with 1 in the other hour)	ML - 10/22 VL - 20/55	30/77 trains = 39%	9,200 extra seats 27,500 seats in total	None
1st October: Wales v. Fiji K/O: 16:45	5 pre (all ML) 14 post (11 ML / 3 VL)	3 HSTs & 2 LHCS (with 1 in the other hour)	ML - 13/22 VL - 20/55	33/77 trains =43%	11,000 extra seats 29,000 seats in total	9 services terminated/originated short & 9 services cancelled
2nd October: New Zealand v. Georgia K/O: 20:00	3 pre (all ML)  24 post (14  ML / 10 VL)	6 HSTs & 2 LHCS (with 1 in the other hour)	ML - 6/8 VL - 5/18	11/26 trains =42%	8,300 extra seats 15,300 seats in total	3 services terminated short & 3 services had calling patterns amended
11th October: France v. Ireland K/O: 16:45	12 pre (9 ML / 3 VL) 14 post (13 ML / 1 VL)	5 HSTs & 1 LHCS	ML - 6/11 VL - 16/16	22/27 trains =81%	10,500 extra seats 15,300 seats in total	3 Ebbw Vale services cancelled
17 <sup>th</sup> October: New Zealand v. France K/O:20:00	6 pre (all ML)  19 post (15 MI / 4 VL)	6 HSTs and 2 LHCS (with 1 in the other hour)	ML – 3/4 VL 7/16	=50%	9,200 extra seats 13,900 seats in total	1 service terminated short
18 <sup>th</sup> October: Ireland v. Argentina K/O 13:00	10 pre (9 ML / 1 VL) 12 post (10 ML / 2 VL)	5 HSTs and 1 LHCS	ML 5/18 VL 35/35	40/53 trains = 75%	12,200 extra seats 25,700 seats in total	None

From this it can be seen the significant levels of additional seating that were provided by the train operators more than catering for the expected and actual demand.

In respect of the passenger volumes actually transported, Table 2 at Appendix 3, records the number of passengers arriving by train and those returning including direction for travel. From this, with over 250,000 people returned over the 8 matches, the significant numbers and percentage of the total travelling eastwards (London, Bristol Temple Meads and Parkway) can be seen with some 38.2% returning in this direction.



This Appendix also illustrates more typical event passenger data from the six nations tournament and the WC warm-up matches where the flows eastward are circa 20%.



#### Lessons for the future

Cardiff as a city has a number of fantastic stadia such as the Millennium Stadium, Motorpoint Arena, SWALEC stadium and Cardiff City stadium, all easily accessible from Central station, itself centrally located within the heart of the city.

While investment has been made in such venue facilities, the rail transport network has not been similarly considered. We believe that the ability to access public transport for travel to and from the venue should be an important part of the experience. We would therefore like to be able to meet passenger and other stakeholder expectations on queuing times, train capacity, queuing facilities etc. while importantly, protecting the journey experience for non-event customers.

As the operator of Cardiff Central station (ownership lies with Network Rail), ATW would like to assist the City / Government with its promotion of Cardiff as a premium event venue and to meet passenger and stakeholder expectations both now and for the future. However, to do this a number of the current constraints and methods of working will, we suggest, need to be addressed. We would therefore kindly ask the Committee to consider recommending the following suggested improvements:

- 1. Cardiff Central station to consider as part of Network Rail's current draft master plan for the station:
- the track (e.g. improved capacity with double track) and signalling functionality (for example the minimum of 4 minutes wait between trains heading east),
- platforms number and width (e.g. number Bristol Temple Meads has 15 platforms, Cardiff Central 7 and platform 0 for instance can only take a 5-car train and platforms 1 and 2 are not wide enough to load 2 HSTs of 1,400 people),
- space for crowd queuing with suitable poor weather cover (as part of the redevelopment of Central Square)
- the Grade 2\* listed nature of the station has hindered development suggestions previously. With the urgent need for infrastructure development to provide a fit for purpose event station the listing issue will we believe needs to be addressed.
- 2. For events where passenger numbers are expected to be in a single direction to retain the high number of large capacity trains front end loaded together with the revised queuing arrangements. We would also note the success of the Bristol Parkway shuttle bus service which reduced loadings on the London queue and that this would need to be considered for future similar events.
- 3. Network Rail to work with the freight operators to continue the practice adopted during the RWC, of prohibiting freight traffic through Central station post an event.
- 4. Retain the communications structures and event management protocols of the last 5 games with event organisers located in both the rail and City control centres.
- 5. Additional rolling stock availability for all the operators serving Central station (ATW, GWR and Cross Country) to support these infrequent but high profile events while



maintaining other scheduled non-event services e.g. for ATW train maintenance is suspended and all ATW trains are in service for a major event - however, as a consequence medium and long term train reliability may be adversely impacted.

- 6. Central Square to urgently consider the future queuing needs of rail passengers in the property led redevelopment currently underway and to provide (temporary or permanent) canopy structures to improve the experience especially in the advent of poor weather.
- 7. Wood Street queuing arrangements As the bus station will no longer be an option following redevelopment; the Council to continue to provide Wood street over spill queuing arrangements for future large scale stadium events (e.g. 6 Nations, pop concerts etc.). This allows safer and more structured management of the crowd and improved communication to those waiting.

#### Other suggestions for future events:

- 8. Licencing of events in Cardiff Although not a factor in Cardiff for the RWC, consideration should be given for the future for limiting the number of simultaneous large scale events held in the City on the same day. Our understanding is the current arrangements consider the impact on transport (including road). There have been numerous occasions when simultaneous event staging has resulted in significant and obvious strain on the transport system, sometimes to the experience detriment of those attending the event(s). Also there appears no obligations on large scale event organisers to notify transport providers of their events within the city a recent example being the evening spectacular in Cardiff Bay.
- 9. Late event finishes (e.g. circa 2200 hours) we would like to see the stadium and other venues in Cardiff have a responsibility to consider how event goers can access events via public transport. While working relationships with the Stadium are good, we believe they and other venues appear agnostic to pre/post event travel arrangements. This area is particularly important if the public and stakeholder expectation is that the next day's train service is to be unaffected by the previous night's late finish albeit additional rolling stock and improved infrastructure would provide alternative solutions to this problem (see points 1 and 3 above). Early advice of planned events to the transport industry is also key in securing a delivery plan.
- 10. While intra industry cooperation has not been an issue during the RWC, we suggest the Department for Transport should consider, for the future Great Western and CrossCountry rail franchises, specific obligations in respect of train service provision for special events at Cardiff. We consider such are potentially even more important post devolution when it may be helpful to codify the current goodwill arrangements.

Finally, in the context of constraints, we would kindly also draw the Committee's attention to the recent press article by the highly respected and independent transport expert Professor Stuart Cole. Professor Cole published an article in the Western Mail on 6<sup>th</sup> October that highlights a number of these issues and the unrealistic expectations of the tournament organisers with reference to the current rail & road infrastructure capabilities in the Cardiff area.

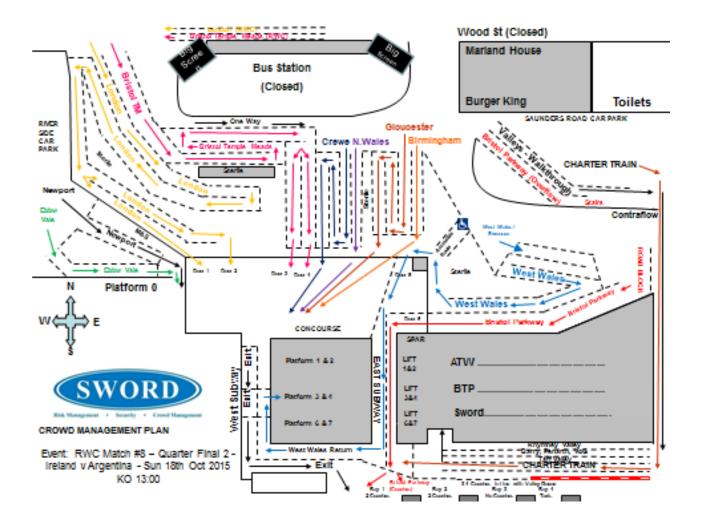


 $See: \underline{http://www.walesonline.co.uk/business/business-opinion/despite-critics-cardiff-central-\underline{train-10203065}$ 

Submission from Arriva Trains Wales to the Enterprise and Business Committee 26 October 2015



#### Appendix 1





#### Appendix 2

#### Twitter Overview FRANCE v IRELAND 11/10/15 Cardiff

Proactive travel advice tweets







Arriva Trains Wales @ArrivaTW · 18 hrs

The queues for London and West Wales are currently empty just over an hour after the final whistle #IRE 
v #FRA







Arriva Trains Wales @ArrivaTW · 18 hrs

#RWC2015 - queues for all destinations quiet, now would be a good time to head back to Cardiff Central if you're travelling home by train.

RETWEETS FAVOURITES 8 2



8:01 p.m. - 11 Oct 2015 · Details





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Arriva Trains Wales @ArrivaTW · 18 hrs

If you're travelling home by train after #FRA 
v #IRE 
make your way to Cardiff Central and join correct queue



7:41 p.m. - 11 Oct 2015 · Details



Gvena ....

Arriva Trains Wales @ArrivaTW · 19 hrs

Staff in the Crowd Management Centre at Cardiff Central station working hard to get you all home as safely #FRAvIRE

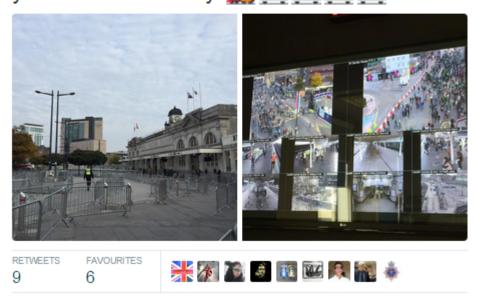




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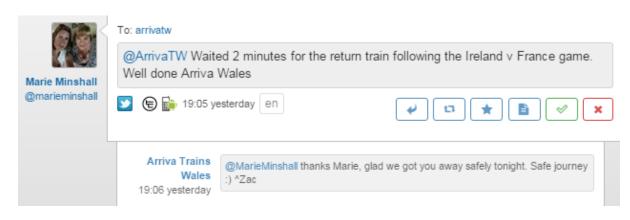
Arriva Trains Wales @ArrivaTW · 21 hrs

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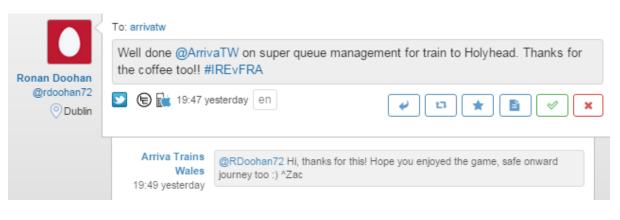
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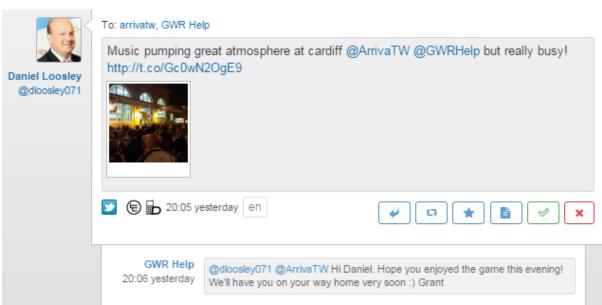






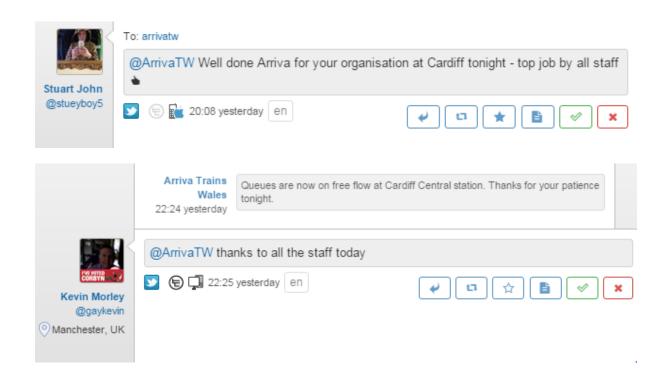
# Lots of staff on hand making sure I was OK amongst the chaos! Thank you @ArrivaTW





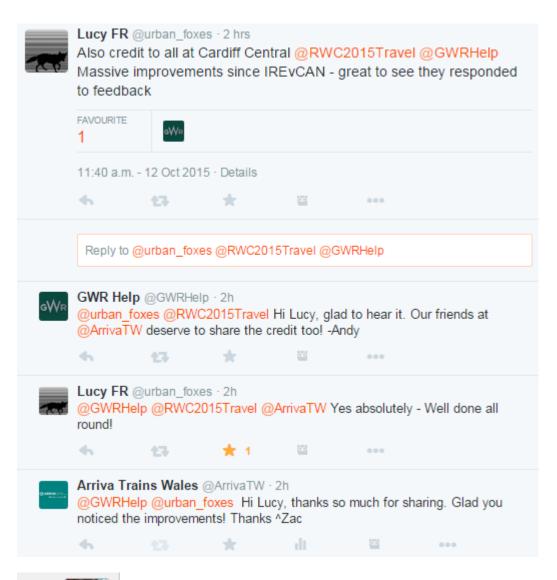


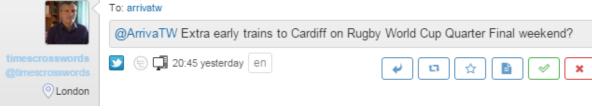
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#### Appendix 3 - Table 2

	Saturday 19t	h September	er Sunday 20th September		Wednesday 23rd September		Thursday 1st October		Friday 2nd October		Sunday 11th October		Saturday 17th October		Sunday 18th October		TOTALS		% of total return traffic	
	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN
Newport Shuttles	1,699	1,956	1,670	2,200	2,005	2,152		1,522	599	1,800	2,058	1,098	1,019	1,481	934	1,084	9,984	13,293	3.2%	5.9%
Newport - Cardiff	3,439		3,239		2,604		3,497		3,260		1,272		2,521		1,544		21,376		6.9%	0.0%
London	4,033	5,525	5,482	4,580	11,070	6,100	4,724	3,530	11,372	2,426	8,548	6,901	8,468	2,925	7,748	8,514	61,445	40,501	19.8%	17.8%
Bristol Temple Meads	5,183	4,962	3,444	4,160	5,964	4,545	7,200	4,289	9,477	3,878	3,304	3,724	6,369	3,300	3,164	3,766	44,105	32,624	14.2%	14.4%
Bristol Parkway	1,936	1,792	1,672	1,780	1,499	2,900	4,068	982		2,375	1,041	1,600	824	1,104	1,073	1,024	12,113	13,557	3.9%	6.0%
Ebbw Vale	2,512	831	1,622	463	1,729	222	1,602	483	1,142	287	300	0	1,581	177	390	222	10,878	2,685	3.5%	1.2%
Marches	2,089	1,244	1,034	1,066	2,599	861	1,199	917	1,926	603	1,880	252	1,473	319	171	624	12,371	5,886	4.0%	2.6%
North Wales	1,445	253	356	170	2,375	150	1,262	500	1,300	0	107	300	616	0	0	242	7,461	1,615	2.4%	0.7%
Birmingham	3,896	1,661	1,892	1,335	2,653	857	2,253	932	1,772	388	1,929	802	1,501	100	877	882	16,773	6,957	5.4%	3.1%
Gloucester	1,769	1,487	953	1,025	2,296	1,599	1,666	1,069	1,084	1,284	1,350	755	1,321	887	745	422	11,184	8,528	3.6%	3.8%
West Wales	3,892	3,510	2,602	2,179	3,517	1,598	5,214	3,277	4,075	1,500	2,201	1,355	4,701	1,681	1,976	1,598	28,178	16,698	9.1%	7.4%
Valleys	5,778	8,350	4,192	5,200	5,667	2,800	7,552	5,930	6,057	3,000	2,760	2,051	7,735	3,407	3,531	2,900	43,272	33,638	14.0%	14.8%
Cardiff Queen Street	5,390		2,081		790		5,491		5,780		3,304		5,731		1,956		30,523		9.9%	0.0%
Free Flow		2,831		6,510		2,351		2,893		18,142		2,402		10,539		5,403		51,071		
CROWD MANAGEMENT TOTAL		31,571		24,158		23,784		23,431		17,541		18,838		15,381		21,278		175,982		
OVERALL TOTAL	43,061	34,402	30,239	30,668	44,768	26,135	45,728	26,324	47,844	35,683	30,054	21,240	43,860	25,920	24,109	26,681	309,663	227,053		

		SIX NA	TIONS			RWC W	ARMUPS						
	Friday 6th	r February	Saturday 1	L4th March	Saturday 8	8th August	Saturday 5th	September	тот	ALC	% OF OVERALL TRAFFIC		
	Wales v. England (K/O: 20:05)		Wales v. Ireland (K/O: 14:30)		Wales v. Ireland (K/O: 14:30)		Wales v. Italy	(K/O: 17:00)	101	ALS	% OF OVERALL TRAFFIC		
	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	INWARD	RETURN	
Newport Shuttles	732	800	970	2,435	782	2,249	915	1,366	3,399	6,850	2%	7%	
Newport - Cardiff	2,250		3,802		3,861		4,367		14,280		9%		
London	6,200	495	4,622	2,538	3,886	1,941	1,617	548	16,325	5,522	11%	5%	
Bristol Temple Meads	4,154	1,902	4,391	3,027	3,113	1,744	1,992	587	13,650	7,260	9%	7%	
Ebbw Vale	1,730	300	1,758	1,479	1,840	1,971	1,716	819	7,044	4,569	5%	4%	
Marches	2,107	710	1,607	975	1,750	1,211	1,181	857	6,645	3,753	4%	4%	
North Wales	716	0	1,267	0	1,003	825	617	250	3,603	1,075	2%	1%	
Birmingham		0	1,519		1,144	1,498	966	464	3,629	1,962	2%	2%	
Gloucester	2,966	972	569	1,736	887	600	803	150	5,225	3,458	3%	3%	
West Wales	3,300	2,584	7,727	6,916	8,644	6,069	4,944	2,945	24,615	18,514	16%	18%	
Valleys	9,376	3,010	9,323	10,350	7,294	11,600	7,732	5,470	33,725	30,430	22%	30%	
Cardiff Queen Street	4,297		5,716		4,653		7,629		22,295		14%		
Free Flow		6,473		5,925		1,037		4,969		18,404			
CROWD MANAGEMENT TOTAL		10,773		29,456		29,708		13,456		83,393			
OVERALL TOTAL	37,828	17,246	43,271	35,381	38,857	30,745	34,479	18,425	154,435	101,797			
	Free Flow count from 16:00 until start of crowd management start of crowd management				from 14:00 until I management	Free Flow count from 14:00 until start of crowd management							