Magor and Undy Walkway Station

GRIP Stage 2 - Technical Feasibility

April 2016

Magor Action Group On Rail (MAGOR)

Mott MacDonald

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1 Introduction

1.1 Background to Study

In October 2005 a Sewta Rail Strategy Study was produced which covered:

- A review of the former TIGER Strategy recommendations for a new station to serve the communities of Magor and Undy. It suggested that there were 5 possible locations for a new station:
  1. Llandevenny – accessed from the road leading from M4 Junction 23a to Green Moor.
  2. Magor Old Station Site – accessed from Redwick Road.
  3. Magor with Undy – at the footbridge linking Chapel Terrace with Whitewall and with highway access from the B4245 Main Road through the open land to the north.
  4. Undy – site recommended in the TIGER Strategy at the point where the B4245 Main Road parallels the railway.
  5. East Undy – access from Church Road East which leads from the B4245 at the eastern edge of the built-up area.
- A review of the demand and revenue implications,
- A review of operations and engineering issues; and,
- A review of the economics and scheme justification

The conclusion of this report was that due to the journey time savings and the freeing up of the main lines, the best outcome was given by a complete transfer of services from Severn Tunnel Junction to a new station on the relief lines at Magor and Undy.

In June 2015 the Magor Action Group On Rail (MAGOR) contacted Mott MacDonald for advice in relation to Governance for Railway Investment Projects (GRIP) 1 and 2 study for the station site at Magor and Undy. The requirement was to consider only a walkway station at their preferred site; therefore the options would be focussed on one location. This study was formally instructed via Monmouthshire County Council in February 2016.

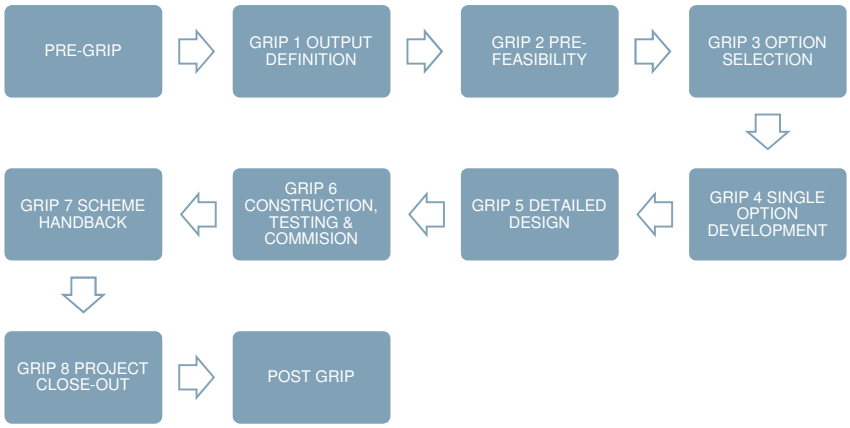
For further details of the history and work undertaken to date refer to the MAGOR website: http://magorstation.co.uk/

A possible station at Magor is in the National Transport Finance Plan, referenced in Network Rail's draft Wales Route Study and is in the current Metro Phase 2 list of potential schemes.

1.2 GRIP Study

The GRIP process is Network Rail's management and control process for delivering projects that enhance or renew the national rail network. The GRIP process is an eight-stage process as illustrated in Figure 1.1 below.

Figure 1.1: The GRIP Process



Source: Network Rail

1.3 GRIP 2

This GRIP 2 report provides options for the proposed walkway station and considers potential constraints to the project. This report is comprised of the following sections.

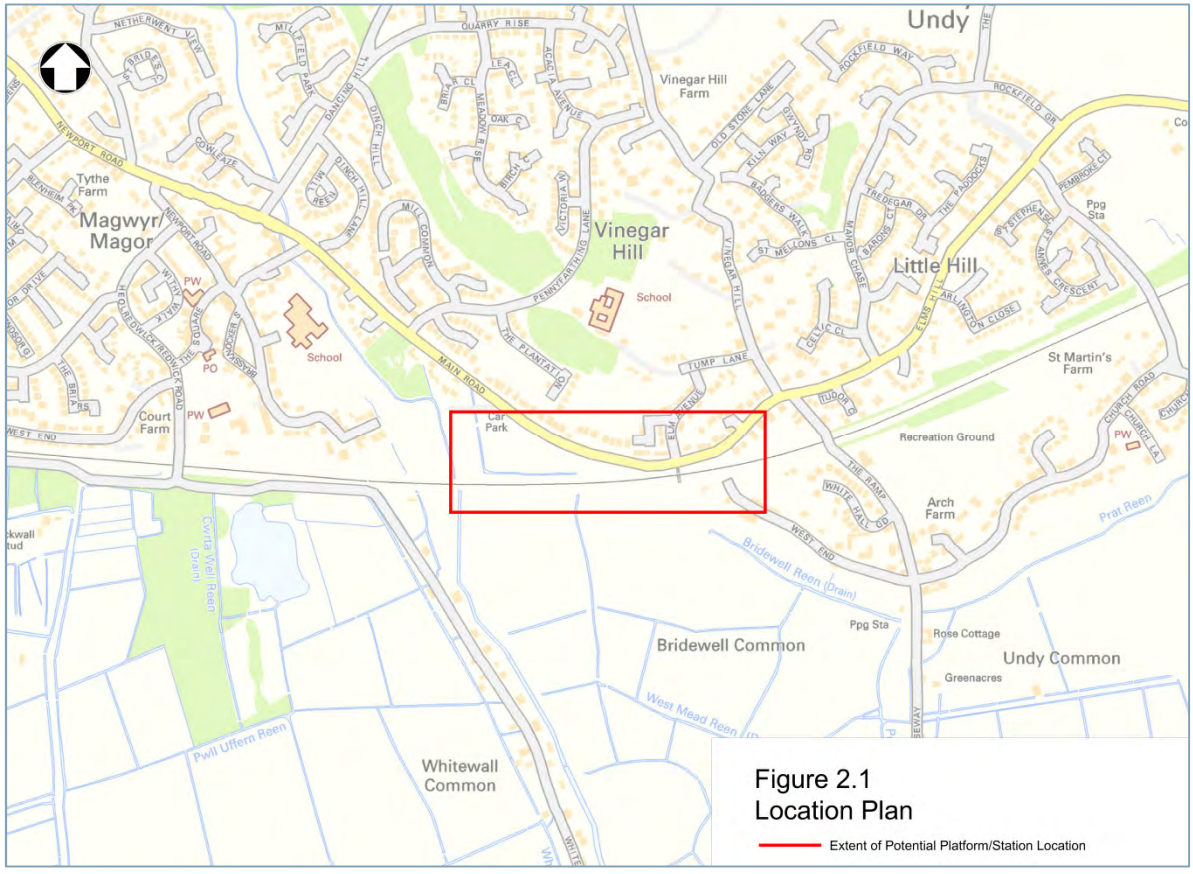
- Site Location – reviews the planned location of the station, as well as access routes to and from the station.
- Environmental, Ecological, Geotechnical and Flood Risk Assessment – discusses the main issues and studies for future GRIP stages.
- Existing and Future Rail Operations – reviews the current rail services and planned developments for services and infrastructure.
- Scheme Objectives – highlights national, regional, and local transport objectives.
- Potential Rail Services – sets out the options and feasibility of services stopping at Magor and Undy.
- Track, Signalling, Electrical & Plant (E&P), Overhead Line Equipment (OLE), Mechanical & Electrical (M&E) and Telecommunications – discusses the issues for each rail discipline.

- Infrastructure for Proposed Station – provides high level options and design parameters for the station.
- Stakeholders' engagement – provides details stakeholder engagement undertaken as part of the GRIP 2 study.
- Cost Estimates – proposes indicative costs estimate for the preferred platform option.
- Station Appraisal – provides a high level appraisal and associated risks, broadly following WelTAG guidelines.
- Conclusion – delivers recommendations for the station, along with next steps for the GRIP process.

2 Site Location

The Magor and Undy Walkway Station is to cater for the population of both villages, therefore it requires a centralised location. The preferred site for MAGOR is where the B4245 adjoins the rail corridor as shown in Figure 2.1. The site is bisected by the South Wales Main Line, and the B4245 (marked as Main Road) which runs immediately to the north of the proposed station location.

Figure 2.1: General location



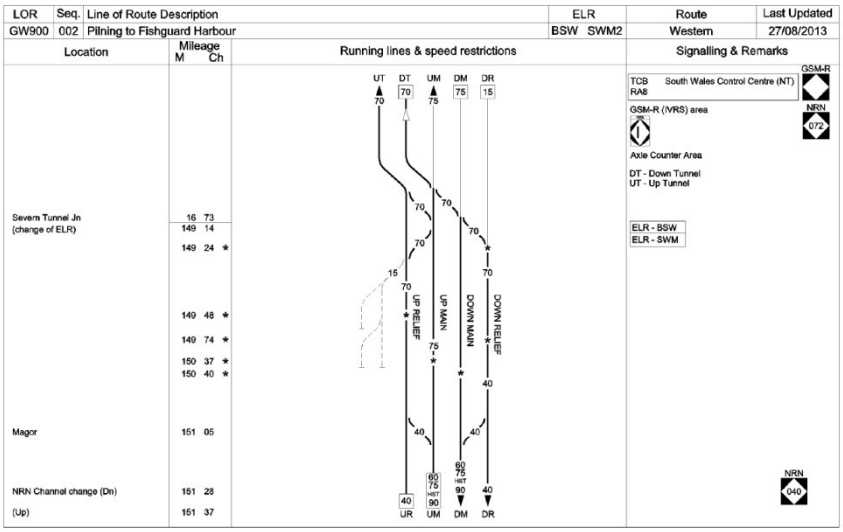
Source: Mott MacDonald

2.1.1 Surrounding Area

Together Magor and Undy are composed of an estimated population of over 6100. Currently the nearest train station available is Severn Tunnel Junction, located roughly 2.5 miles away, serving trains on the Newport to Gloucester Line and the South Wales Main Line.

The track in the area consists of Up and Down Mains (east and west) as the inner lines and Up and Down Relief (east and west) as the outer lines. See Figure 2.2 below.

Figure 2.2: Track Section Diagram (Extract Sectional Appendix)



Source: Western Route Sectional Appendix Module WR1 / Network Rail

There are three crossing points in the vicinity of the area. Towards the east is the Undy Halt Footbridge, just west of it the West End subway and to the west is Whitewall footbridge. All of these provide pedestrian access across the tracks, while the subway provides step free access, but with non-compliant ramp gradients.

There is also a signal gantry west of the West End subway, providing signalling to all four tracks, see section 7.2.2.

2.2 Future Developments

There are a number of planned developments in the immediate vicinity to the proposed station site that are relevant to the scheme, these are as detailed below.

2.2.1 Great Western Electrification Programme

As part of Network Rail's electrification programme, the South Wales Main Line will be electrified to Cardiff by 2017 and Swansea by 2018. OLE gantries are being introduced through the route.

2.2.2 M4 Relief Road

The M4 currently experiences severe traffic congestion around the Brynglas Tunnels. In order to deal with the situation, a 14 mile road is planned to be built south of Newport, diverting at Magor, then following the A4180 and joining back to the existing motorway at Castleton.

Connections between the M4, M48 and B4245 will be improved between Magor/Undy and Rogiet as part of the scheme. The improvements will reduce demand to the possible station of passengers driving in from nearby towns, providing easier access to Severn Tunnel Junction from the M48 and M4. The existing junction at Magor will become part of the reclassified trunk road.

Whilst there are discussions regarding the final alignment, the section near Magor is similar for all options.

2.2.3 Local Development Plan Site

The Adopted Local Development Plan (LDP) for Monmouthshire County Council (adopted February 2014) has safeguarded a large area north of Magor and Undy between the M4 and both villages, marked for housing and mixed development (495 dwellings). These comprise of the Rockfield Farm and Vinegar Hill sites.

The site is approximately 800~1000m from the station which is on the limit of the distance passengers can be expected to walk to reach a train station. As such, it is possible some might drive to Severn Tunnel Junction, where more parking is available, rather than walk. A bus route serving both the station and the development site/future residential area would have obvious benefits.

2.2.4 B4245 Magor and Undy By-Pass

For the LDP site, the Council has safe guarded space for a possible diversion of the B4245 depending on the M4 proposal. The by-pass would turn North West before Rockfield Grove, going north of all of the existing housing, and would re-join the existing B4245/Newport road just outside of Magor. The new route would provide access to the new housing developments and provide relief to the existing road (Main Rd/Newport Rd).

2.2.5 Three Fields Site

North West of the station, along the B4245, is the Three Fields Site. There are plans for developing a community centre built near the existing car park. There are currently no plans for this building and it is not anticipated that parking will be provided for the station as part of the development, but some facilities may be provided by the centre.

2.3 Access to Site

2.3.1 Main Road/B4245

The station will be served by Main Road (B4245), the main connection between both villages, most of the roads in the area, and the M4.

The B4245 is located just to the north of the station and would provide the main access route to the station. Pedestrian access is also expected to come from the B4245, leading directly to the Up Relief platform, and to the Down Relief platform via the subway or the reconstructed Undy Halt footbridge, located to the east.

2.3.2 West End

South of the station, the access for vehicles is West End road, leading directly to the Undy Halt footbridge on the Down Relief side of the tracks. However this road would unlikely be used except for emergency access.

2.3.3 Undy Halt Footbridge

Just east of the station, Undy Halt footbridge has recently been reconstructed by Network Rail as part of the electrification of the South Wales Main Line. The footbridge provides access to both sides of the track connecting Main Road (B4245) with West End. The footbridge is a Right of Way.

2.3.4 West End Subway

West of the Undy Halt footbridge, is the West End subway, connecting Main Road (B4245) and West End. Just like Undy Halt footbridge the subway is a Right of Way.

2.3.5 Bus Services

Opposite the station are two bus stops servicing three bus routes. The 74 bus serves the station once an hour in each direction on the Newport/Chepstow route. The 75 bus stops every two hours in each direction and serves the Magor – Chepstow route. The X7 bus connecting Newport to Bristol stops once at each stop, in the morning towards Bristol and in the evenings towards Newport.

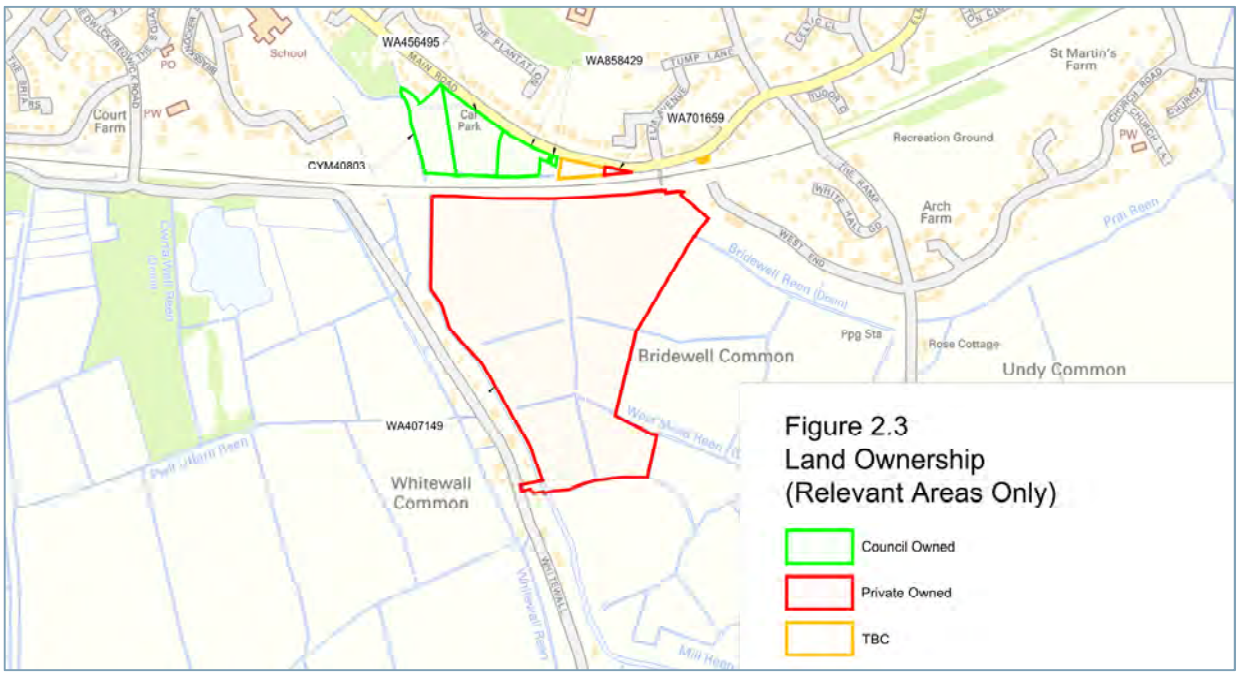
2.3.6 Grass Routes Community Transport

The Grass Routes Community Transport is a bus service that makes trips on request for community members, using voluntary staff. It is operated on a membership basis and available to all members of the community. The buses have capabilities to serve individuals with restricted mobility.

2.4 Land Ownership

Between Main Road (B4245) and the tracks, there are seven separate land plots that have been identified as relevant to the footprints of the potential platform positions. The plots are presented in the following figure with their respective tile number when available.

Figure 2.3: Land ownership Image



Source: Mott MacDonald

The four land plots to the west presented in Figure 2.3 are owned by Monmouthshire Council. The plots are, CYM40803, WA456495 (the two middle plots having the same title number) and WA858429. These plots contain the car park in the Three Fields' site (proposed for the community centre).

Located next to the four plots there is a plot where ownership is not registered on the Land Registry database. The same applies to a small plot next to the footbridge (the furthest plot to the east).

The plot in Figure 2.3 numbered WA701659 belongs to a private individual having been sold by the British Rail Board in 1992.

3 Environmental, Ecological, Geotechnical, and Flood Risk assessments

3.1 Environmental Assessment

A high level environmental assessment has been conducted at the proposed station location, in order to identify any potential environmental constraints and to recommend any further investigation in future phases.

3.1.1 Site Description

The current environmental setting to the south of the railway line is generally agricultural in nature with a single industrial business (a builder's merchant), pockets of residential developments and isolated properties.

3.1.2 Historical Plans

As part of the assessment the historical plans dating from 1882 through to the late 1980s were reviewed. The earliest historical maps identify the site and surrounding areas were agricultural in nature with isolated properties. Limited evidence of industrial activities are shown on the plans, with the exception of old quarries, an isolated limekiln to the north and a sawpit 100m to the north east. The plans show an orchard immediately to the west of the site and the surrounding field boundaries are clearly defined. The railway is shown as the Great Western Railway which has been constructed on an embankment and the main road is present on the map. The plans from 1922 identifies a series of reens to the south of the site and a number of residential developments to the west adjacent to the rail line and to the south west in the village of Whitehall. Further residential developments have been commenced by 1968 along Main Road, and Magor is shown as a small village. The final plans from 1989 show that the agricultural fields between the villages of Magor and Undy had been developed for residential properties and the two villages are now one.

3.1.3 Water Courses

Aerial photography of the site suggests that the area is low lying and crossed by complex reen system. Additional evidence of the low lying nature of the land is supported by a number of road names suggesting that the roads in the area have been built up and include names such as 'The Causeway' and the Ramp which crosses the rail line approximately 200m to the east of the site.

A review of the Natural Resources Wales' website identifies a number of main rivers in close proximity to the site, the closest being the River Prat and Bridewell Reen which run to the south of the railway line. In addition, there are numerous ordinary watercourses present within close proximity to the site in the form of an extensive reen system that forms part of the Caldicot Levels. No chemical or biological data was available for review to determine the water quality of the water sources. Due to the low lying nature of the site and the surrounding area the site may be subject to flooding from surface water sources, and from river and sea defences.

3.1.4 Ecological Assessment

An initial desk based ecological assessment of the site was undertaken, which identified seven statutory designated sites within 2km of the site. A visual assessment of the site using aerial photography identified that the site contains habitats that have the potential to support a wide variety of protected species. Refer to the detailed Ecological assessment report in Appendix A

3.1.5 Contamination

A number of potentially contaminative sources may be present from the sites previous uses, which are mainly concentrated around the railway line. This may include import of contaminated material to create the embankments and oil and fuel spills associated with its use. In addition areas which have been subject to quarrying were often used as unofficial landfill sites which may contain hazardous materials.

3.1.6 Unexploded Ordnance (UXO)

Records indicate that there is a high potential risk from UXO at the site due to its proximity to WWII bombing targets. It is recommended that further desk based assessment is undertaken to obtain further information and fully classify the risk.

3.1.7 Further Studies

A full geo-environmental assessment report would need to be undertaken to support the environmental information relating to the site. This is particularly prudent as no baseline data for historic landfills, pollution incidents, source protection zones, nitrate vulnerability zones, water abstraction licences, and underlying aquifers could be obtained at

the time of preparation of this report as Natural Resources Wales database has not yet been adopted.

In addition Historic Environmental Records and Biological Records should be obtained to identify potential archaeological and ecological constraints.

There are a number of geotechnical logs available from Network Rail for the Great Western Electrification Project that provide information of the grounds conditions. Should a project specific ground investigation be undertaken a broad suite of chemical testing of both the soils and groundwater to identify potential contamination and to allow any waste generated during the development to be disposed of to a suitably licensed landfill facility.

3.2 Geotechnical Assessment

The following section is based on information provided by Network Rail as part of an investigation undertaken for the Great Western Electrification Project.

3.2.1 Published Information

The British Geological Survey (BGS) GeoIndex online application indicates that the drift geology underlying the site is a mixture of Head Deposits to the north, comprising clays, silts, sands and gravel, and Tidal Flat Deposits to the south, comprising clays and silts. These are predominantly consolidated soft cohesive materials. The underlying solid geology is the Black Rock Limestone Subgroup comprising packstones, mudstones and limestones. The Mercia Mudstone Group (Marginal Facies) outcrops to the east of the site, comprising of conglomerates.

3.2.2 Existing Ground Investigation Information

Two ground investigations are pertinent to the site (relevant exploratory hole references in **bold**):

- Structural Soils, Final Factual Information on Ground Investigation for GWRM Section F – Severn Tunnel Junction to Llandavenny Road, Report No: 730064, November 2015.
  GWRM-F-BH09, GWRM-F-CPT04, GWRM-F-DP41, GWRM-F-DP42

- Geotechnical, Undy Halt Footbridge – Factual Report on Ground Investigation, Report Re: 30374, May 2015.
  BH02, BH03, WS01

Made Ground is encountered in all exploratory holes to depths ranging from 1.20m to 3.00m below ground level (bgl) and comprises a mix of silt, sand, very soft clay and silty sandy gravel bands. Below 1.20m bgl in BH03, the soft reddish brown slightly sandy CLAY with black organic matter is noted as Possible Made Ground, and may in reality be natural ground based on its similarity to the underlying superficial deposits. This could also apply to the Made Ground between 1.35m and 2.70m bgl in GWRM-F-BH09, described as very soft to soft slightly sandy slightly gravelly CLAY with black organic matter.

The underlying Tidal Flat/Head Deposits are generally described as soft pinkish/reddish brown slightly sandy slightly gravelly CLAY with frequent pockets of black organic matter. Assuming that the Possible Made Ground described above is indeed natural, these deposits are generally encountered between 1.20m and 2.85m bgl. Standard Penetration Test (SPT) N values of 5 to 12, and Hand Penetrometer undrained shear strength, c_u, values of 10 to 25kPa confirm the soft nature of the stratum, in addition to the equivalent N value of 4 broadly correlated from dynamic cone penetrometer results (GWRM-F-DP42).

Limestone bedrock is encountered below the superficial deposits from depths ranging from 2.85m to 3.90m bgl. The limestone is described as very weak and weak greyish brown LIMESTONE recovered as fine to coarse gravel.

3.2.3 Foundation Options

A preliminary bearing pressure of 20kPa for the platforms has been estimated. On the assumption that shallow foundations are utilised, the founding stratum consisting of soft clay would provide an allowable bearing capacity of approximately 25kPa, with settlement being the likely limiting factor. Raft foundations instead of strips will provide an improved condition.

Should a suspended platform arrangement be progressed, consideration of transferring loading to the relatively shallow depth of the limestone bedrock at approximately 3m may give construction efficiencies.

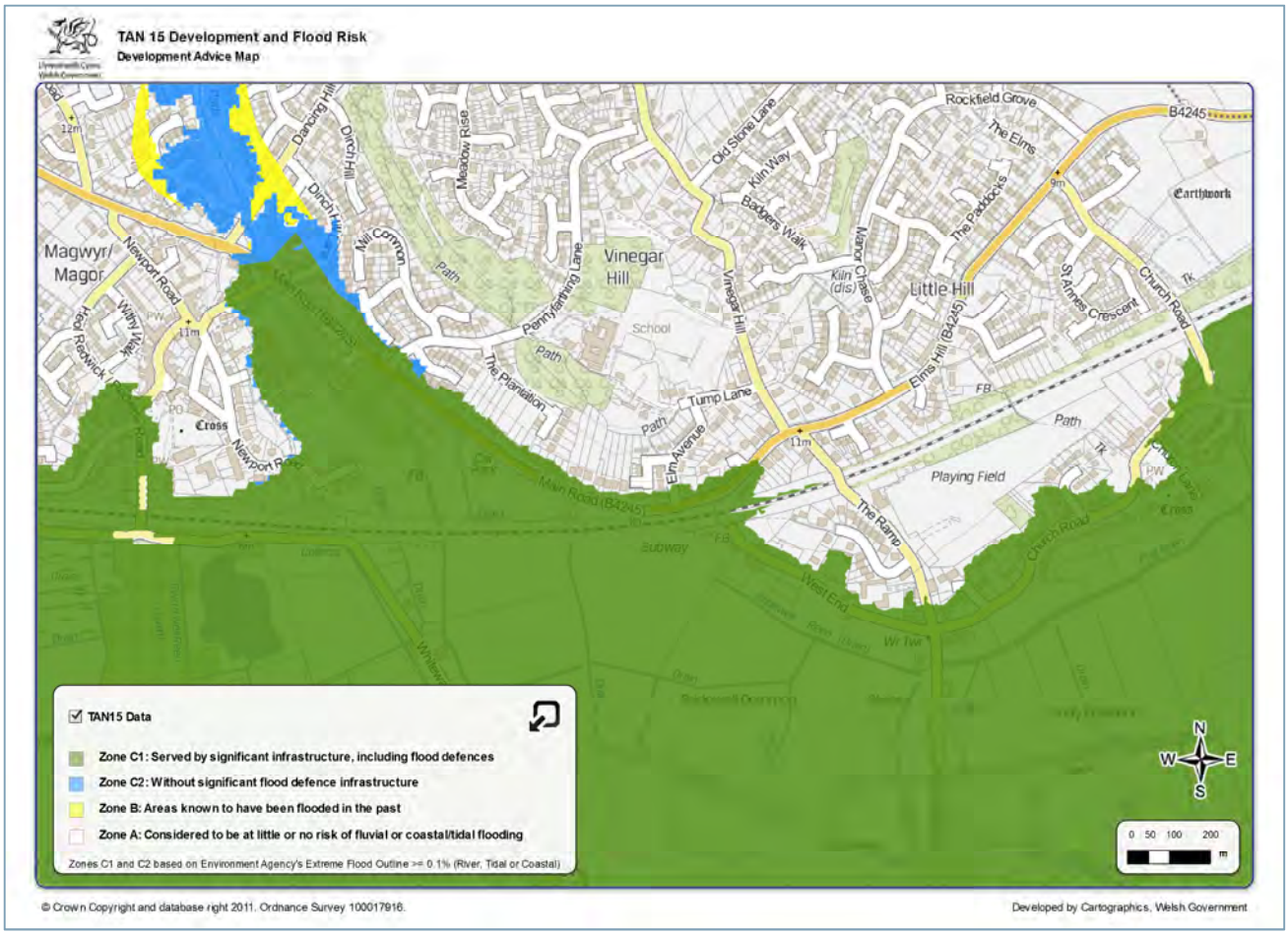
3.3 Flood Risk Assessment

3.3.1 Development Advice Map (DAM) and Technical Advice Note (TAN)

For developments in Wales requiring planning consent, the planning response is informed by the Welsh Government (WG) Development Advice Map (DAM), and Planning Policy Wales Technical Advice Note 15: Development and Flood Risk (TAN 15).

The WG DAM indicates that the site is located in Zone C1 (Figure 3.1). Zone C1 is described as “areas of the floodplain which are served by significant infrastructure, including flood defences“. It is based on the Natural Resources Wales extreme flood outline. Areas in Zone C1 have an annual probability of flooding of 0.1%, or greater.

Figure 3.1: Development Advice Map.



Source: Tan 15 Development and flood risk Welsh Government Development Advice Maps

TAN 15 guidance is that, Zone C1 is used to indicate that development can take place subject to application of justification test, including the acceptability of consequences.

According to the TAN 15 justification test development, including transport infrastructure, will only be justified if it can be demonstrated that:

i Its location in Zone C is necessary to assist, or be part of, a local authority regeneration initiative or a local authority strategy required to sustain an existing settlement; or,

ii its location in Zone C is necessary to contribute to key employment objectives supported by the local authority, and other key partners, to sustain an existing settlement or region; and,

iii it concurs with the aims of PPW and meets the definition of previously developed land; and,

iv the potential consequences of a flooding event for the particular type of development have been considered and found to be acceptable.

3.3.2 Water Courses

The site is located on the Gwent Levels at the edge of the tidal flood plain and also in close proximity to two watercourses; Bridewell Reen and Mill Reen.

3.3.3 Natural Resources Wales Flood Map

The Natural Resources Wales (NRW) online flood map indicates that the site has a “low” risk of flooding from rivers or the sea. “Low” in this context means that each year, the site area has a chance of flooding of between 1 in 1000 (0.1%) and 1 in 100 (1%). This takes into account the effect of any flood defences that may be in the area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.

The NRW online flood map also indicates that parts of the site have a “medium” risk of flooding from surface water. This particularly applies to the area of land north of the existing railway line, west from the signal gantry.

In addition the NRW online flood map indicates that the site is within an area where flood warnings are provided.

3.3.4 Further Studies

Therefore as part of the scheme development and to inform any application for planning consent, the likelihood and consequences of flooding from sources including tidal, fluvial and surface water should be assessed, and appropriate mitigation measures incorporated into the development proposals.

Any such assessment of flooding consequences should be informed by consultation with both NRW and the Lead Local Flood Authority (LLFA). It is recommended that these organisations are contacted as a first step in order to ascertain their expectations and what existing relevant information is available to inform the assessment (e.g. flood mapping and modelling, records of drainage infrastructure). It is possible that surveys and quantitative flood modelling will be required to supplement the existing available information.

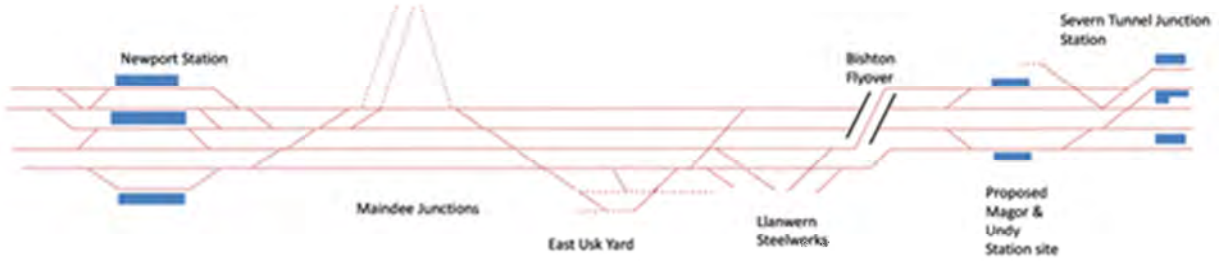
4 Existing and Future Rail operation

4.1 Track Arrangement

The proposed location of Magor and Undy station is approximately at 150 miles 60 chains from London, with a platform on the Down Relief line and another platform on the Up Relief Line of the South Wales Main Line (NESA : GW900 seq. 002). This is 1 mile 46 chains west of Severn Tunnel Junction, and 50 chains east of the Bishton Flyover.

The line between Severn Tunnel Junction and Newport consists of four tracks, with the opportunity to cross between fast and Relief Lines at the junction west of Severn Tunnel Junction 149 miles 24 chains and at Magor Junction 151 mains 05 chains. The mainline currently operates at 75mph and the Relief Lines at 40mph. See Figure 4.1.

Figure 4.1: Existing Track Arrangement



Source: Mott MacDonald

4.2 Current Train Services

The assessment later in this report is based upon train services that operate in the December 2015 to May 2016 Timetable. A typical hour comprises of the following services:

- 1 train from Taunton/Exeter St. Davids/Weston-super-Mare to Cardiff and return via Bristol Temple Meads (Main Line) calling at Severn Tunnel Junction; (Great Western Railway - GWR)
- 1 train from London Paddington to Cardiff and return via Bristol Parkway (Main Line); (GWR)
- 1 train from London Paddington to Swansea and return via Bristol Parkway (Main Line); (GWR)
- 1 train from Portsmouth to Cardiff and return via Bristol Temple Meads (Main Line); (GWR)

- 1 train from Nottingham to Cardiff and return via Chepstow (Main Line); Cross Country
- 1 train every two hours from Cheltenham Spa to Maesteg and return via Chepstow (Main Line) calling at Severn Tunnel Junction; (Arriva Trains Wales - ATW) and
- Two Freight paths per hour and return on the (Relief lines).

4.3 Future Rail Infrastructure Development

4.3.1 Electrification

Current published details of the Network Rail Electrification project show of the South Wales Main Line programme is expected to be completed by 2019. The project will include the following infrastructure development near the proposed site location:

4.3.1.1 The Ramp/Huggets Road Bridge

Partial reconstruction of the bridge to allow for the introduction of the OLE infrastructure is expected to start in September 2016 with intended construction duration of 6 months.

4.3.1.2 Church Road/Roberts Road Bridge

Partial reconstruction of the bridge is taking place between October 2015 and spring 2016 to allow for the introduction of OLE infrastructure. Works to lower the track will also be undertaken through 2016.

4.3.1.3 Magor/Redwick Road Bridge

Reconstruction of the bridge taking place between Autumn 2016 and Spring 2017 for the introduction of OLE infrastructure.

4.3.1.4 OLE Gantries

There are four gantries being introduced for the section between the New Undy Halt footbridge and the signalling gantry. Starting from the footbridge, the first two will have the northern column of the portal gantry, located in the six foot between Up Relief and Up Main, with the southern column, south of the Down Relief line. The remaining two gantries will present the columns on the outside of both relief lines. The gantries would then have to be incorporated into the station design at a future stage of the design process.

4.3.2 Rolling Stock

The Intercity Express Programme (IEP) will be introduced between Swansea, Cardiff and London, using 9-car electric trains and 5-car electro-diesel trains starting on 2017. Journey times from Swansea and Cardiff to London are expected to be 15 minutes quicker, and IEP will also provide additional seating capacity for passengers.

5 Scheme Objectives

5.1 Policy Plans

5.1.1 Wales Transport Strategy

The Wales Transport Strategy sets out the Welsh Government's aims for transport. The strategy gives five over-arching priorities to provide direction for delivery, these are:

- Reducing greenhouse gas emissions and other environmental impacts;
- Integrating local transport;
- Improving access between key settlements and sites;
- Enhancing international connectivity; and
- Increasing safety and security

5.1.2 National Transport Finance Plan

The National Transport Finance Plan provides an approach to transport to allow greater flexibility and ensure that funding is effectively used both in value and impact. The report highlights the need to coordinate transport planning with other aspects of planning such as land use, environment, health, education etc. to deliver fully sustainable solutions.

The report states that the government will support the delivery of a number of committed schemes, subject to a business case justifying the expenditure and the delivery agent obtaining any necessary statutory consent.

Whilst recognising that rail is non-devolved, it identifies priorities for future rail investment in Wales to inform Network Rail and UK Government investment plans and, where appropriate, Welsh Government investment plans. One of the items mentioned is the development of a prioritised list of new station proposals for further consideration in relation to securing funding from the rail industry. Amongst the locations considered is Magor.

5.1.3 Monmouthshire Local Transport Plan

The Local Transport Plans for Monmouthshire Council identifies the priorities for transport investment at the local level to support the outcomes in the Wales Transport Strategy. As such it recognises the main issues affecting the council and provides a set of projects to be delivered in the short term (2015-2020) as well as long term aspirations (2030).

The LTP raises the issue of the substantial passenger growth of the stations in Monmouthshire. Over the ten years of the Arriva Trains Wales franchise, Abergavenny has seen growth of 43%, Caldicot 88%, Severn Tunnel Junction 92%, Chepstow 136% and interchanges at Severn Tunnel Junction are estimated to have increased by more than 300%.

5.2 Cardiff Capital Region Metro

The Cardiff Capital Region Metro is a transport initiative by Welsh Government and along with the support of the local authorities to further develop the travel infrastructure between them. The project is focused on improving transport times between the more outlying areas of the region towards the major business and commercial centres of Cardiff and Newport, through a sustainable and reliable transport system.

Magor is one of the locations to be considered for a heavy rail station to be implemented in the future stages of the project.

5.3 Magor Action Group On Rail (MAGOR)

MAGOR is a local community action group based on Magor and Undy. The MAGOR group presented in June 2013 their constitution. It states the aims of the group, presented below:

1. To work towards the provision of a station and rail services to serve the residents and those who travel to the Magor and Undy area.
2. To represent the interests of users and potential users of rail (including light rail or tram) services in the area and aim to minimise the impact on any people who may be adversely affected.
3. To raise awareness, encourage and promote the use of rail travel for residents, visitors, business users and tourists, including supporting tourism/leisure, community development projects and local businesses; therefore enabling local communities to increase their economic, social and environmental welfare.
4. To foster and encourage sustainable transport and work towards maximising transport integration with the rail services for the Magor and Undy area.
5. To seek to build and maintain good working relationships with the rail industry companies, the Welsh Government, the South East Wales Transport Consortium, County and Local councils and other stakeholders as necessary.

6. To liaise, work with, or form partnerships with other user groups and organisations where this could be beneficial to the other aims of the Group.
7. To increase community involvement with the railway, by bringing together a range of local people and organisations who share the above aims.

6 Potential Rail Services

6.1 Line Speeds

Line speeds for the Main Lines are 75 miles per hour (mph) with a higher differential speed of 90 mph for HST reducing to 40 mph in the Maindee Junction and Newport areas. The Relief Lines are predominately 40 mph with some stretches of 70 mph in the Severn Tunnel Junction area.

6.2 Sectional Running Times

Technical Running Times (TRTs) are used to calculate the details for Sectional Running Times (SRTs). TRTs are the actual transit times in minutes and seconds between locations. These are prepared for each type of rolling stock operating trains.

The TRTs for Magor and Undy station calls were calculated by using a desktop time and distance analysis with the following parameters taken into consideration:

- Linespeed
- Gradients
- Distance
- Stopping locations
- Stations

Various rolling stock parameters were also taken into consideration:

- Max Speed
- Acceleration rate
- Rolling stock weight
- Rolling stock length
- Braking rate

The Speed Profile graphs display the line speed between Severn Tunnel Junction and Newport for the route the trains will travel over in purple. The changes to the train speed when starting and stopping and reaching the line speed are similarly represented in black. See Figure 6.1 and Figure 6.2.

The TRTs were rounded cumulatively over the section of route of the new station, to make sure minimal variance between SRT values and the TRTS at the timing points.

SRTs are compiled individually by:

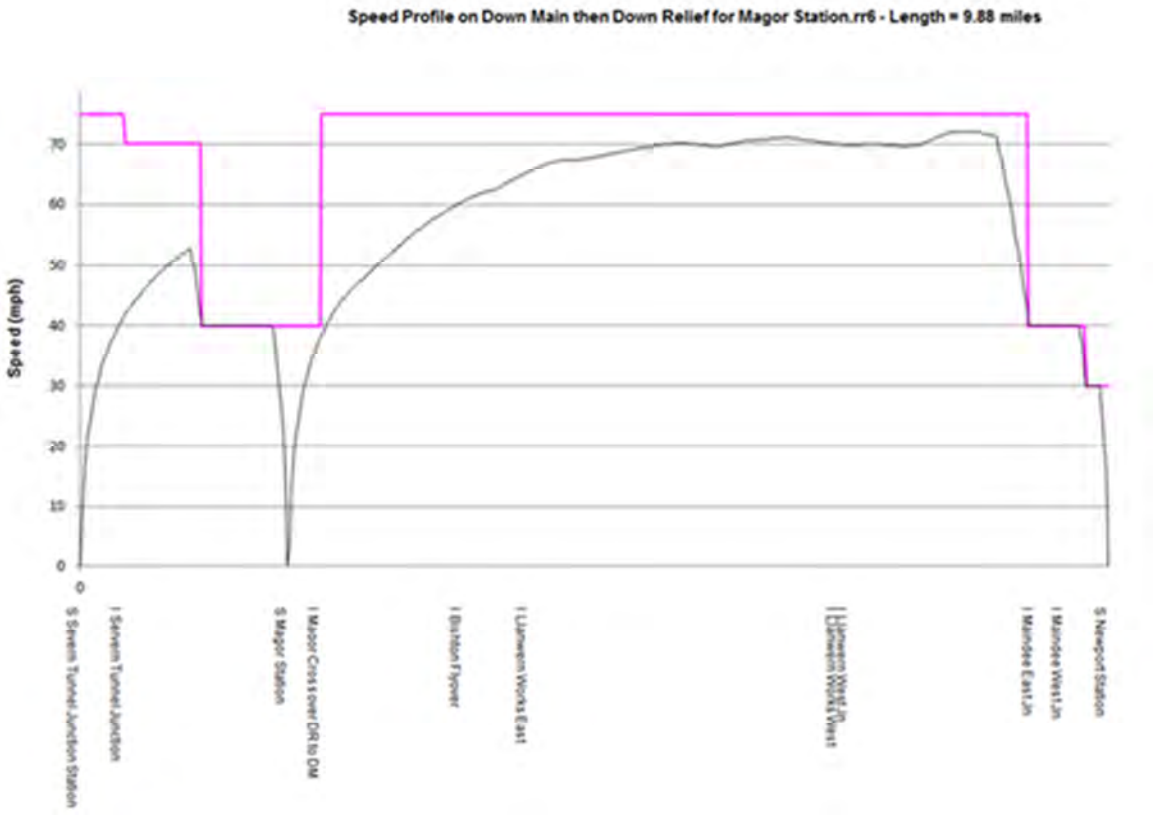
- Direction of Travel; and
- Each Track on Multiple Lines.

SRTs are split by type into 4 different timing links

- Start to Pass – wheels stationary to front of train passing the second location;
- Pass to Pass – front of the train passing the first timing point and passing the second timing point assuming maximum speed possible for line and rolling stock;
- Pass to Stop – the front of train passing a timing point to wheels stop; and
- Start to Stop – wheels stationary to wheels stationary.

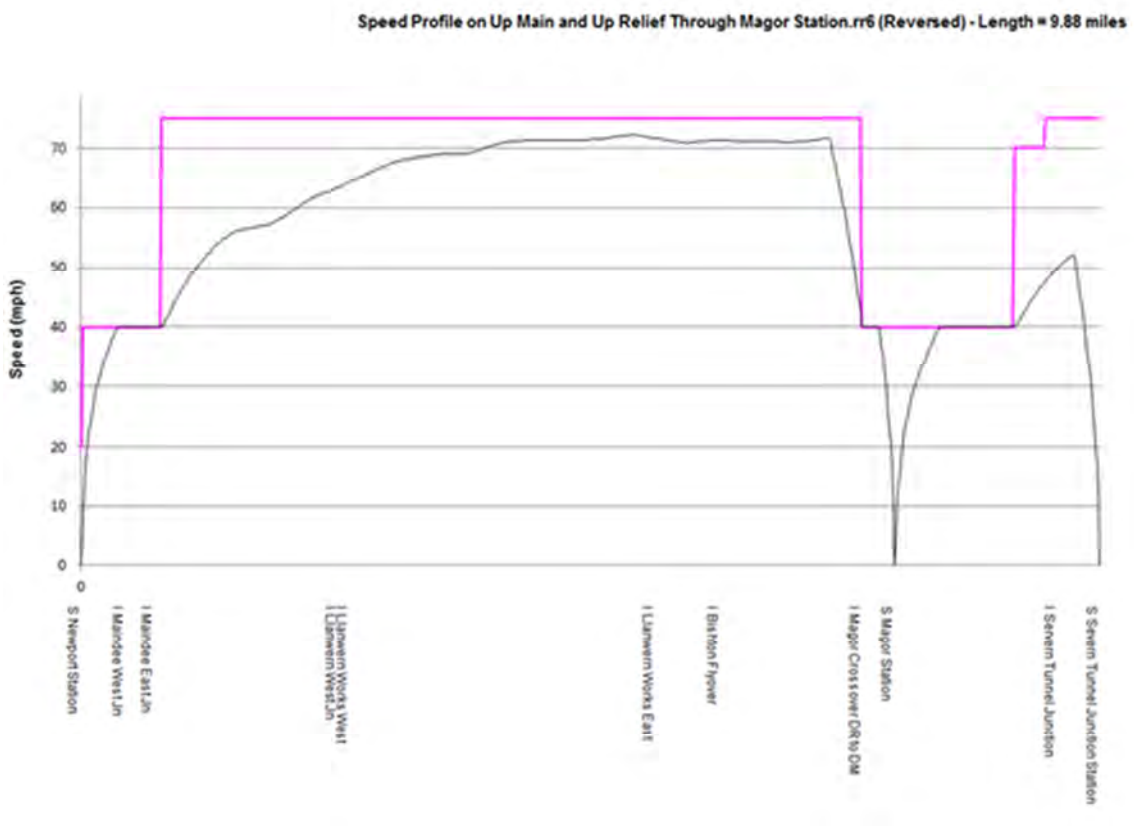
SRTs allow sufficient time between each timing point to permit reasonable variations in operational train performance, not to be so generous that trains run and arrive early, having an adverse impact on performance, safety and capacity or to be too tight as not able to react to day to day variations.

Figure 6.1: Speed Profile Westbound



Source: Mott MacDonald

Figure 6.2: Speed Profile Eastbound



Source: Mott MacDonald

6.3 SRTs for Magor and Undy calls

SRTs were calculated for Class 150 Diesel Multiple Unit (DMU) rolling stock, which is the rolling stock currently operating the Taunton – Cardiff Central service, as the base for calculation. The location of the proposed new station on the Relief Line requires down trains that are to call at Magor and Undy station to cross from the Down Main line at Severn Tunnel Junction to the Down Relief Line and call at the proposed station before crossing back to the Main Line. Up trains will travel on the Up Main line from Newport, crossing to the Up Relief Line before the proposed station at Magor and Undy, trains then make the station call and continue Relief line to Seven Tunnel Junction before crossing back to the Main Lines. See Tables 6.1 and 6.2.

Alternatively, trains can continue on the Relief Lines between Magor crossovers and Newport, but because the Relief lines have slower

permissible speeds than the Main Lines the time penalty is increased as a result. See Tables 6.1 & 6.2.

Table 6.1: Sectional Running Times before crossing back to the Main Line - Westbound

Location	Heading Right		Cumulative TRTs		Sectional Running Time Values	Cumulative SRTs
	Mins	Secs	Mins	Secs	Mins	Mins
Severn Tunnel Jn to Magor and Undy station stop	3	21	3	21	3½	3½
Magor and Undy station start to Magor Crossover pass	0	47	4	08	½	4
Magor Crossover pass to Maindee Jn pass	6	55	11	03	7	11

Source: Mott MacDonald

Table 6.2: Sectional Running Times before crossing back to the Main Line - Eastbound

Location	Heading Right		Cumulative TRTs		Sectional Running Time Values	Cumulative SRTs
	Mins	Secs	Mins	Secs	Mins	Mins
Maindee West Jn pass to Magor Crossover pass	6	49	6	49	7	7
Magor Crossover pass to Magor and Undy station stop	0	41	7	30	½	7½
Magor and Undy station start to Severn Tunnel Jn stop	3	26	10	56	3½	11

Source: Mott MacDonald

Table 6.3: Sectional Running Times remaining on relief lines from/to Newport - Westbound

Location	Heading Right		Cumulative TRTs		Sectional Running Time Values	Cumulative SRTs
	Mins	Secs	Mins	Secs	Mins	Mins
Severn Tunnel Jn to Magor and Undy station stop	3	21	3	21	3½	3½
Magor and Undy station start to Magor Crossover pass	0	47	4	08	½	4
Magor Crossover pass to Maindee Jn pass	10	15	14	23	10½	14½

Source: Mott MacDonald

Table 6.4: Sectional Running Times remaining on relief lines from/to Newport - Eastbound

Location	Heading Right		Cumulative TRTs		Sectional Running Time Values	Cumulative SRTs
	Mins	Secs	Mins	Secs	Mins	Mins
Maindee West Jn pass to Magor Crossover pass	10	42	10	42	11	11
Magor Crossover pass to Magor and Undy station stop	0	41	11	23	½	11½
Magor and Undy station start to Severn Tunnel Jn stop	3	26	14	49	3½	15

Source: Mott MacDonald

6.4 Timetable Analysis

6.4.1 Magor and Undy Station Dwell Time

Network Rail's Timetable Planning Rules for the planning of train services, indicates that a 30 second dwell time for services calling at similar sized stations is appropriate for Magor and Undy station.

6.4.2 Train Service Calls

As described previously in this report, the location of the station on the Relief lines requires down trains which are to call at Magor and Undy station, to cross from the Down Main line at Severn Tunnel Junction to the Down Relief Line and call at the proposed station before crossing back to the Main Line. Up trains will travel on the Up Main line from Newport, crossing to the Up Relief Line before the station at Magor and Undy, trains then make the station call and continue Relief line to Seven Tunnel Junction before crossing back to the Main Lines.

Train services in the December 2015 SX timetable that call at Severn Tunnel Junction station were selected as the most appropriate to also call at the new station.

- 1 train per hour from Taunton to Cardiff Central and return via Bristol Temple Meads (Main Line) and
- 1 train every two hours from Cheltenham Spa to Maesteg and return via Chepstow (Main Line).

The geographical scope of the timetable analysis covers trains originating from Gloucester and Patchway in the east and Cardiff Central in the west.

The trains that are to include a station call at Magor and Undy were compared against other trains in the timetable, the tables below summarise the affect an increase in journey time for trains calling on a train by train basis has upon other services.

The Timetable Planning Rules indicates that four minute headway is required between trains in the timetable area. This has been applied to our analysis.

Table 6.5: Westbound

Train Title	Magor and Undy Depart	Remarks
05.37 ATW CNM to MST	06.34½	CDF **arrives one minute late**, forward as planned.
06.19 GWR BRI to CDF	06.50	CDF **arrives three minutes late**.
05.37 XC BHM to CDF	07.45½	CDF **arrives two minutes late**.
06.02 GWR TAU to CDF	08.00	CDF **arrives two minutes late**.
07.46 ATW CNM to MST	08.43½	CDF **arrives one minute late,** forward as planned.
07.37 GWR WSM to CDF	08.53	CDF arrives as planned.
08.46 ATW CNM to MST	09.45½	CDF arrives as planned.
08.41 GWR WSM to CDF	09.51	CDF **arrives one minute late.**
09.45 GWR WSM to CDF	10.53	CDF **arrives one minute late.** 09.15 PAD to CDF retimed but arrives at CDF on time. 08.12 NOT to CDF retimed but arrives at CDF on time.
10.45 ATW CNM to MST	11.44	CDF arrives as planned.
06.00 GWR PNZ to CDF	11.52	CDF **arrives one minute late.** 10.15 PAD to CDF retimed arrives at CDF **one minute late.** 09.10 NOT to CDF retimed but arrives at CDF on time
11.46 ATW CNM to MST	12.43½	CDF **arrives one minute late.**
11.04 GWR TAU to CDF	12.51	CDF arrives as planned.
12.08 GWR TAU to CDF	13.51	CDF arrives as planned. 12.15 PAD to CDF retimed but arrives at CDF on time.
13.45 ATW CNM to MST	14.43½	CDF arrives as planned.
13.08 GWR TAU to CDF	14.53½	CDF arrives as planned.
14.48 GCR to FGH	15.32½	CDF **arrives half a minute late.**
12.48 GWR PGN to CDF	15.52½	CDF arrives as planned.
14.57 GWR TAU to CDF	16.53½	CDF arrives as planned.
16.46 ATW CNM to MST	17.44½	CDF **arrives one minute late.**
16.07 GWR TAU to CDF	17.52	CDF **arrives three minutes late.**
17.45 ATW CNM to MST	18.44½	CDF **arrives one minute late.**
17.06 GWR TAU to CDF	18.56½	CDF arrives as planned. 17.15 PAD to CMN retimed arrives at CDF **half a minute late.**

Train Title	Magor and Undy Depart	Remarks
18.45 ATW CNM to MST	19.45	CDF **arrives half a minute late.**
18.08 GWR TAU to CDF	19.54	CDF **arrives half a minute late.**
		18.15 PAD to SWA retimed arrives at CDF **one minute late.**
		17.10 NOT to CDF retimed but arrives at CDF on time
19.45 ATW CNM to MST	20.45	CDF **arrives half a minute late.**
21.19 GWR BRI to CDF	21.50*	CDF **arrives half a minute late.** 20.15 PAD to SWA retimed arrives at CDF **half a minute late.**
19.23 GWR PMH to CDF	22.22*	CDF arrives as planned.
		1930 MAN to CMN retimed arrives at CDF one minute late.
20.23 GWR PMH to CDF	23.21*	CDF arrives as planned.
23.00 ATW CNM to CDF	23.58*	CDF arrives as planned.

Source: Mott MacDonald – Abbreviations are as follow: Birmingham New Street (BHM), Bristol Temple Meads (BRI), Cardiff Central (CDF), Carmarthen (CNM), Cheltenham Spa (CNM), Exeter St Davids (EXD), Fishguard Harbour (FGH), Gloucester (GCR), Manchester Piccadilly (MAN), Maesteg (MST), Nottingham (NOT), London Paddington (PAD), Paignton (PGN), Plymouth (PLY), Penzance (PNZ), Portsmouth Harbour (PMH), Patchway (PWY), Swansea (SWA), Taunton (TAU), Westbury (WSB), Weston-super-Mare (WSM).

Table 6.6: Eastbound

Train Title	Magor and Undy Depart	Remarks
06.13 ATW CDF to CNM	06.37	GCR **arrives two minutes late.**
06.28 GWR CDF to PMH	06.52	PWY **arrives three minutes late.**
07.00 XC CDF to MAN	07.24½	PWY **arrives three minutes late.**
07.05 ATW CDF to CNM	07.33	GCR arrives as planned.
08.00 GWR CDF to PGN	08.24	PWY **arrives two and a half minutes late.**
09.00 GWR CDF to PLY	09.24	PWY **arrives two and a half minutes late.**
07.59 ATW MST to CNM	09.36½	GCR **arrives two and a half minutes late.**
10.00 GWR CDF to TAU	10.24	PWY **arrives two and a half minutes late.**
09.16 ATW MST to CNM	10.36	GCR **arrives half minute late.**
11.00 GWR CDF to TAU	11.24	PWY **arrives two and a half minutes late.**
12.00 GWR CDF to TAU	12.24	PWY **arrives two and a half minutes late.**
11.15 ATW MST to CNM	12.37½	GCR **arrives two and a half minutes late.**
13.00 GWR CDF to EXD	13.24	PWY **arrives two and a half minutes late.**
12.17 ATW MST to GCR	13.37½	GCR **arrives two and a half minutes late.**
14.00 GWR CDF to TAU	14.24	PWY **arrives two and a half minutes late.**
15.00 GWR CDF to TAU	15.24	PWY **arrives two and a half minutes late.**
14.15 ATW MST to CNM	15.37½	GCR **arrives two minutes late.**
16.00 GWR CDF to TAU	16.24	PWY **arrives two and a half minutes late.**
15.17 ATW MST to CNM	16.36	GCR **arrives two and a half minutes late.**
17.00 GWR CDF to TAU	17.24	PWY **arrives two and a half minutes late.**
16.15 ATW MST to CNM	17.37	GCR **arrives two and a half minutes late.**
18.00 GWR CDF to TAU	18.24	PWY **arrives two and a half minutes late.**
17.15 ATW MST to CNM	18.36	GCR **arrives one and a half minutes late.**
19.00 GWR CDF to TAU	19.24	PWY **arrives two and a half minutes late.**
20.00 GWR CDF to TAU	20.24	PWY **arrives one minute late.**
21.00 GWR CDF to WSB	21.24	PWY **arrives two and a half minutes late.**
20.15 ATW MST to CNM	21.36	GCR arrives as planned.
22.04 GWR CDF to BRI	22.27*	PWY arrives as planned.
22.15 ATW MST to GCR	23.49*	GCR arrives as planned.
23.27 GWR CDF to BRI	23.55*	PWY arrives as planned.

Source: Mott MacDonald – Abbreviations are as follow: Birmingham New Street (BHM), Bristol Temple Meads (BRI), Cardiff Central (CDF), Carmarthen (CNM), Cheltenham Spa (CNM), Exeter St Davids (EXD), Fishguard Harbour (FGH), Gloucester (GCR), Manchester Piccadilly (MAN), Maesteg (MST), Nottingham (NOT), London Paddington (PAD), Paignton (PGN), Plymouth (PLY), Penzance (PNZ), Portsmouth Harbour (PMH), Patchway (PWY), Swansea (SWA), Taunton (TAU), Westbury (WSB), Weston-super-Mare (WSM).

*see Engineering Access Statement comments.

Full details of the complete timetable of trains can be found in Appendices B &C.

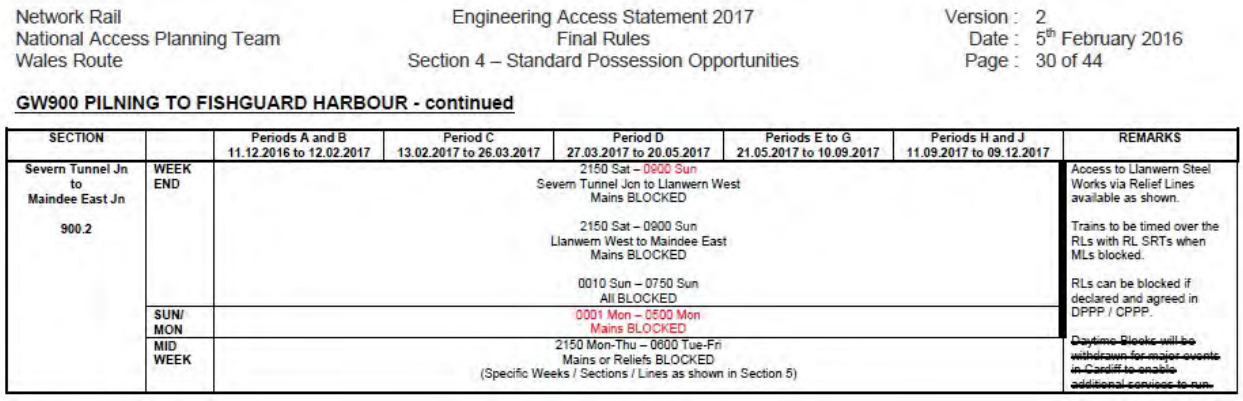
In the appendices, please note that trains which call at Magor and Undy are shaded in yellow. Other trains that have been retimed are reflected in orange.

6.5 Engineering Access Statement

As part of the maintenance of the route in this area, Network Rail in their Engineering Access Statement, publish the times when opportunities are available to take possessions on the Main or Relief Lines. See Figure 6.3 below for the latest rules.

The commencement time of these possession opportunities in the evening could restrict station calls from 2150 onward. These rules will need to be renegotiated with Network Rail if access is to be provided for trains to call at Magor and Undy station.

Figure 6.3: Severn Tunnel Junction to Maindee East Junction.



Network Rail
National Access Planning Team
Wales Route

Engineering Access Statement 2017
Final Rules
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GW900 PILNING TO FISHGUARD HARBOUR - continued

SECTION		Periods A and B 11.12.2016 to 12.02.2017	Period C 13.02.2017 to 26.03.2017	Period D 27.03.2017 to 20.05.2017	Periods E to G 21.05.2017 to 10.09.2017	Periods H and J 11.09.2017 to 09.12.2017	REMARKS
Severn Tunnel Jn to Maindee East Jn 900.2	WEEK END	2150 Sat – 0900 Sun Severn Tunnel Jcn to Llanwern West Mains BLOCKED 2150 Sat – 0900 Sun Llanwern West to Maindee East Mains BLOCKED 0010 Sun – 0750 Sun All BLOCKED					Access to Llanwern Steel Works via Relief Lines available as shown. Trains to be timed over the RLs with RL SRTs when MLs blocked. RLs can be blocked if declared and agreed in DPPP / CPPP. ~~Daytime Blocks will be withdrawn for major events in Cardiff to enable additional services to run.~~
	SUN/ MON	0001 Mon – 0500 Mon Mains BLOCKED					
	MID WEEK	2150 Mon-Thu – 0600 Tue-Fri Mains or Reliefs BLOCKED (Specific Weeks / Sections / Lines as shown in Section 5)					

Source: Engineering Access Statement 2017, Network Rail.

6.6 Freight Impact

The assessment has been carried out under the premise that the trains stopping at Magor and Undy would join the relief lines for a short section between Severn Tunnel Junction and Newport to provide access to the station. As such, no issues have been envisaged regarding freight services.

This has only been checked against Working Timetable (WTT) freight paths and not against the day to day operation which changes depending on the day selected, many WTT freight are not used and some additional paths are added to the route.

6.7 Future Train Services

The introduction of new franchises for the Wales in October 2018 and the Greater Western in December 2019 are likely to change the level of train services along the route used in the timetable analysis.

The new franchises will reflect the introduction of Intercity Express Programme (IEP) and the Great Western Electrification projects, which will include the roll-out of new train services and rolling stock.

Also as a result of the electrification programme, a cascade of rolling stock will take place from other areas that have been electrified; consequently differing rolling stock types may be operating the Taunton – Cardiff and the Cheltenham Spa – Maesteg service.

6.8 Conclusion

The operation assessment shows that when services call at Magor and Undy there is a time penalty on the services. When heading towards Cardiff this can be up to three minutes but in most cases will not affect the next train working. In some instances this time penalty reacts upon trains following immediately behind and can lead to later arrivals in to Cardiff Central. Although in most instances, the additional time is fairly minimal.

In the opposite direction the penalty can be up to three minutes later at Gloucester and Patchway respectively and could affect the continuation of their onward journey. Other services outside of the scope of this review could also be affected by this.

To minimise the reaction upon trains following behind, trains that call at Magor and Undy may be considered to continue on the Down Relief line to Cardiff. The advantage of this is to remove any conflict between trains caused by the four minute headway between trains. However this will increase the journey time to Cardiff Central resulting in a further penalty time of four minutes, and later departure times for services going beyond Cardiff, in particular to the Cheltenham to Maesteg service. These trains will also interact with freight services which make

use of the Relief Line to access freight yards at Llanwern, East Usk, Alexandra Dock Junction, Wentlog and Cardiff Tidal.

Further options to minimise the time penalty of the Magor and Undy call is to remove Severn Tunnel Junction station calls, with trains calling at Magor and Undy only, but this may prove unacceptable to users of this station. Similarly an even split of calls between both Magor and Undy and Severn Tunnel Junction will minimise the time penalty. This will offer a reduced level of service to both stations.

An alternative to these options may be to start the eastbound trains earlier from Cardiff Central to enable the planned times to be achieved at Gloucester and Patchway. These are dependent on the train turnround time still being achievable.

7 Track, Signalling, E&P, OLE, M&E, and Telecommunications

7.1 Track

7.1.1 Down Relief

The horizontal alignment presents a nominal deviation (3 to 5mm).The vertical alignment is more variable, with maximum deviations of +20mm / -10mm estimated. A smoothing alignment design may be appropriate to support the platform design, unless any subsequent maintenance tamping addresses this.

7.1.2 Up Relief

The horizontal alignment is very similar to the Down Relief. Vertically the Up is better than the Down. There is a spike on the approach to the proposed site, but this may be a result of the adjacent S&C. At the site itself the maximum deviations appear to be +8mm / -10mm. A smoothing alignment design may be appropriate to support the platform design, unless maintenance tamping has addressed this in the intervening period.

There are other track geometry measurements, such as twist, which are recorded, but have not been provided. This is a non-issue as the horizontal and vertical measurements give a reasonable reflection of the current track geometry.

7.2 Signalling

7.2.1 Existing Signalling System

The area is controlled from Cardiff Signalling Control Centre (SCC) which employs VDU technology for controls and indications. The area has been signalled using Solid State Interlocking (SSI). Any alteration to the signalling arrangements will drive VDU updates: this is a significant cost risk and will have a substantial impact on the business case for the station.

It should be noted that an update to the VDU screens will be required to show the station, however it *may* be possible to incorporate this change into another, larger update driven by a different project.

7.2.2 Signalling Infrastructure

The major piece of signalling infrastructure in the proposed station footprint is a signal gantry which supports signals NT1235 (Down Relief), NT1039 (Down Main), NT1038 (Up Main) and NT1232 (Up Relief). Taking each in turn:

- NT1235 is a controlled signal plus junction indicator that controls movements over the Relief-Main crossover just beyond the 151 milepost.
- NT1039 is a controlled signal that protects movements across the Relief-Main crossover.
- NT1038 and NT1232 are automatic signals provided for the separation of trains.

7.2.3 Platform

It is not best practice to place a signal just before a station, especially one that has route information such as NT1235, as station duties can be a sufficient distraction to cause the driver to forget what the signal was displaying. With automatic signals the issue is less acute, but should still be avoided if possible.

This means that, either the stations Down platform should be placed on the approach to the gantry, or signals NT1235 and NT1039 will require moving closer to the crossover. Moving the signals is **not** recommended: cost aside, moving the signals closer to the crossover increases the potential risk of a signal overrun and therefore makes the railway less safe.

For the Up platform, placing it beyond the signal gantry (i.e. parallel with the Down platform) may be possible, but the project should be aware that it may be resisted by Train Operating Companies (TOCs).

7.3 Operational E&P

There should be very little operational low voltage E&P requirements from the station as there are minimal alterations planned to the signalling and other infrastructure. On some of the options there are three lineside equipment cabinets that are affected by the position of the platform and which will need to be relocated. In addition any lineside cabling will need to be moved and corresponding UTX's extended. No track access was undertaken at GRIP2 so a full review of

the affected equipment has not been undertaken, but may be altered as part of the electrification.

7.4 Traction Power

The electrification of the line is currently underway and any positioning of the platforms will impact on a number of stanchions. The construction of the station will require repositioning of these and any alterations to the autotransformer/return wires. The station will need to consider bonding and immunisation issues in its design and the wire height through the station will need to be raised which has implications for Magor Road which is pushing the wire height down. The OLE layout show that in several areas the OLE masts are being placed in the 6-foot due to constrained cess and boundaries.

7.5 Station M&E

The new station M&E requires a new DNO for the station services to feed the station and the station telecoms cabinet. This would likely be positioned close to the entrance to the station in an accessible position for Western Power (or other service provider) to access the equipment. WPD have not been contacted as part of this GRIP2 study but the power requirements and provision of a supply would need to be discussed with them at GRIP3.

7.6 Telecommunication – Station Information and Security Systems (SISS)

The station will comprise of two platforms where CCTV, CIS display and a Help Point installed on each. A CIS display shall be installed at the entrance and an external telecoms cabinet provided for the station. The subway will likely be included in the CCTV system for the station; due to the enclosed nature of the existing footbridge this could require coverage as well. ATW have been consulted on these aspects and would be open to discussions about including areas outside of the station lease in the CCTV coverage.

8 Infrastructure for Proposed Station

8.1 Proposed Station Category

The 2009, Better Rail Stations report published by the Department for Transport (DfT), provides a set of guidelines regarding minimum standards for stations. The stations are divided into six categories, and these are presented in Table 8.1.

Table 8.1: Department for Transport's Station Categories.

Category	Description	Criteria (Trips per annum)
A	National hub	Over 2 million
B	Regional Interchange	Over 2 million
C	Important feeder	0.5- 0.2 million
D	Medium staffed	0.25-0.5 million
E	Small staffed	Under 0.25 million
F	Small unstaffed	Under 0.25 million

Source: Better Rail Stations (November 2009) (DfT)

The proposed station at Magor and Undy, considering its location and levels of demand it would fall under category F. Meetings with Arriva Trains Wales confirm that this would be their assumption as well.

8.2 Platform Arrangement

8.2.1 Platform Construction

8.2.1.1 Platform Length

In the options presented in this report a platform length of 150m has been assumed. This distance has been based on a six car train plus some allowances for stopping and splitting/joining of services. This figure will need to be reviewed with Network Rail and ATW/GWR in terms of any proposed changes to the rolling stock requirements in the future, but it is consistent with other new stations.

8.2.1.2 Platform Width

The GRIP2 drawings have been based on a platform width of 3.3m. Network Rail standards require a clear width of 2.5m, and the additional width provided gives ample space for lighting, signage and other platform infrastructure. It is a similar width to that provided at the recently opened Ebbw Vale Town Station.

8.2.1.3 Platform Construction

The traditional construction of platforms would either be solid fill i.e. masonry walls front and back and infilled or a suspended platform construction could be utilised, see example in Figure 8.1 from Platform 4 at Newport Station. A suspended platform would be quicker to construct and would suit those situations where the platform is being constructed atop of the existing railway embankment, especially with the bedrock near the surface.

Figure 8.1: Newport Platform 4

Source: Mott MacDonald

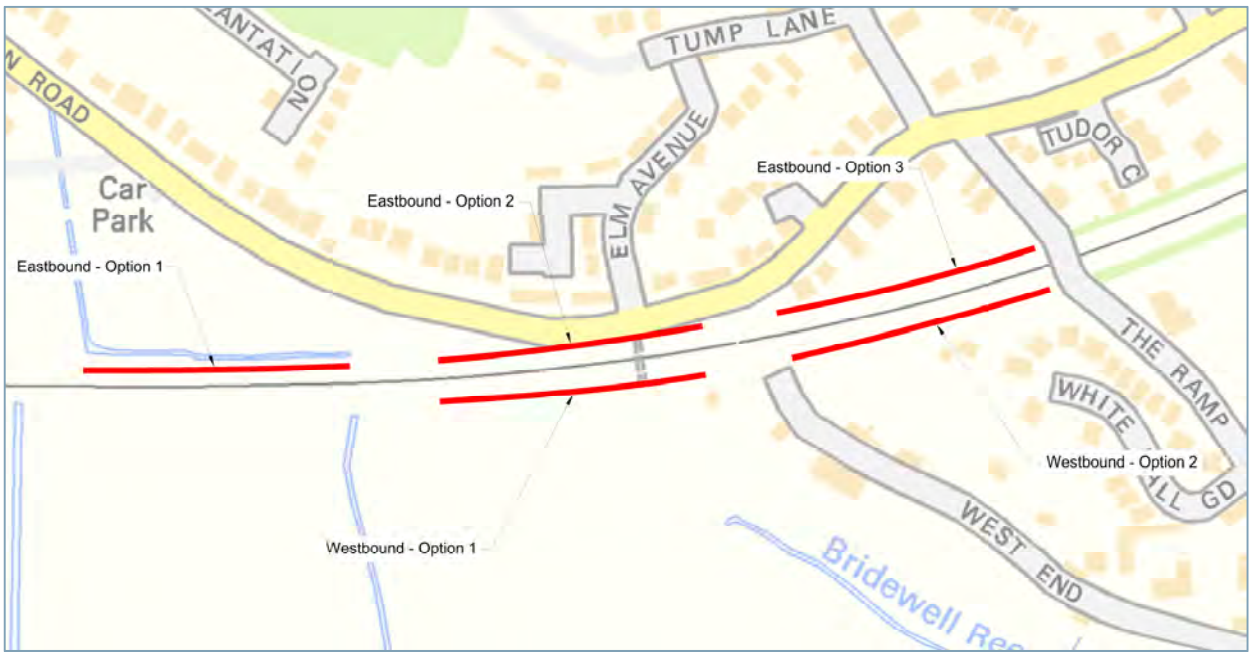
8.2.2 Platform Locations

A number of options for the layout of each platform have been considered. The Up Relief platform has three main possible layouts and the Down Relief has two main layouts, these are presented below.

A number of the platform arrangements refer to the car parking options which are presented later in section 8.3.5. The below is just the general descriptions of each platform, the relative advantages and disadvantages of the different platform options are presented in Table 8.2 in section 8.5 at the end of this chapter.

Figure 8.2 shows the locations of the various options for the platforms (more detailed drawings of the options are in Appendix D).

Figure 8.2: Platform possible locations



Source: Mott MacDonald

8.2.3 Up Relief Platforms

8.2.3.1 Option 1 (Eastbound)

The platform for option one will be located west of the signalling gantry to benefit from the existing signalling infrastructure. The station would be the furthest option from both the subway and the footbridge providing access to the Down Relief line. This platform could not be combined with a platform opposite on the Relief line due to its proximity to the existing crossover. There would be good access to a number of the possible parking options as well as the B4245.

8.2.3.2 Option 2 (Eastbound)

The platform for option two will be located between the signalling gantry and the Undy Halt footbridge. The platform would be above the subway and encroaching on the highway width (it reduces the pavement width and most access ramp options would further impact on the width), this means this option is unlikely to be acceptable. It would however have close access to the footbridge and subway as well as the B4245 and

some of the possible sites for the car park/ drop off areas. It is feasible that a westbound platform could be directly opposite.

8.2.3.3 Option 3 (Eastbound)

The platform for option three is located east of the Undy Halt footbridge. The subway and footbridge would be directly next to the platform. It would be close to car park option A with car park B a short walk away. However car park option C would be a considerable distance away. It is possible that the westbound platform could be directly opposite.

8.2.4 Down Relief Platform

8.2.4.1 Option 1 (Westbound)

The platform for option one is between the signalling gantry and the Undy Halt footbridge on the down relief. The main access is expected to be either from the subway or the footbridge. The subway and footbridge provide good access to Car park options A and B. Car park option C is further along the B4245.

8.2.4.2 Option 2 (Westbound)

The platform for option two is east of the Undy Halt footbridge on the down relief. The main access is expected to be either from the subway or the footbridge. The subway and footbridge provide close access to car park options A and B. Car park option C is further along the B4245.

8.3 Access to station

This report has focussed more on the rail feasibility of the Magor and Undy station therefore no review of the traffic flows and pedestrian routes to the area has been undertaken. Most of the platform options presented would mean increased pedestrian activity adjacent to the B4245 and this will need to be reviewed at the next GRIP stage. This would likely require a Transport Assessment or Statement for planning considering:

- Assessment of capacity of public transport, walking/ cycling and road network;
- Assumptions about the development and generation of road trips
- Measures to promote sustainable active travel;
- Safety implications; and
- Mitigation measures

8.3.1 Pedestrian Access

The main access for pedestrians to the stations is the B4245, north of the station. This road connects both villages, and passes adjacent to the station site. The road has paved paths on both sides, consideration will need to be given to the options for widening these, especially on the southern path where the station entrance would be and where also on the approaches there is grass verges which might provide easy opportunities for improvements. It appears that there are some utilities in this footpath and a number of the platform access options would require some alteration to the services along these routes.

8.3.1.1 Undy Halt Footbridge

The Undy Halt Footbridge provides alternative means of access between both sides of the track and as such it would allow access to either side of the line, no major modifications are expected.

8.3.1.2 West End Subway

The West End subway is proposed to be the step free access way for crossing the tracks. Works would be required to increase the headroom in the subway as well as regrading ramped access to the subway from platform and street level. If the works are unable to be carried out, the subway could remain as a non-compliant access.

In order to ensure the safety of passengers and pedestrians using the subway, CCTV should be introduced as part of the project.

8.3.1.3 Right of Way

The West End subway and the Undy Halt footbridge to West End are right of way paths, and as such they must be allowed to continue to be used once the station is introduced. The location of the platforms and the associated structures must allow for the paths to be open for public access at all times.

8.3.2 Cycle Access

Magor and Undy do not have any registered cycle routes through the villages. The Route 4 of the National Cycle Network, passing a short distance from the station.

Considerations have been made for the introduction of cycle lanes into the B4245 but due to lack of space it appears to not be feasible without highway alteration.

8.3.3 Bus Access

There are two bus stops directly opposite West End subway. The stop is served by the buses No 74, 75 and X7 as mentioned before.

8.3.4 Vehicular Access

8.3.4.1 Up Relief (Westbound)

The station will be served by the Main Road (B425). The road provides direct access to the Up Relief platform, as well as to the subway and to footbridge for the Down Relief platform. It is also the location of the bus stops mentioned previously. The road connects Magor and Undy, as well as several other towns in the area. It currently provides a link to the M4. This will be the main vehicular access into the station, where the drop off areas as well as the parking spaces for persons with reduced mobility (PRM) will be located.

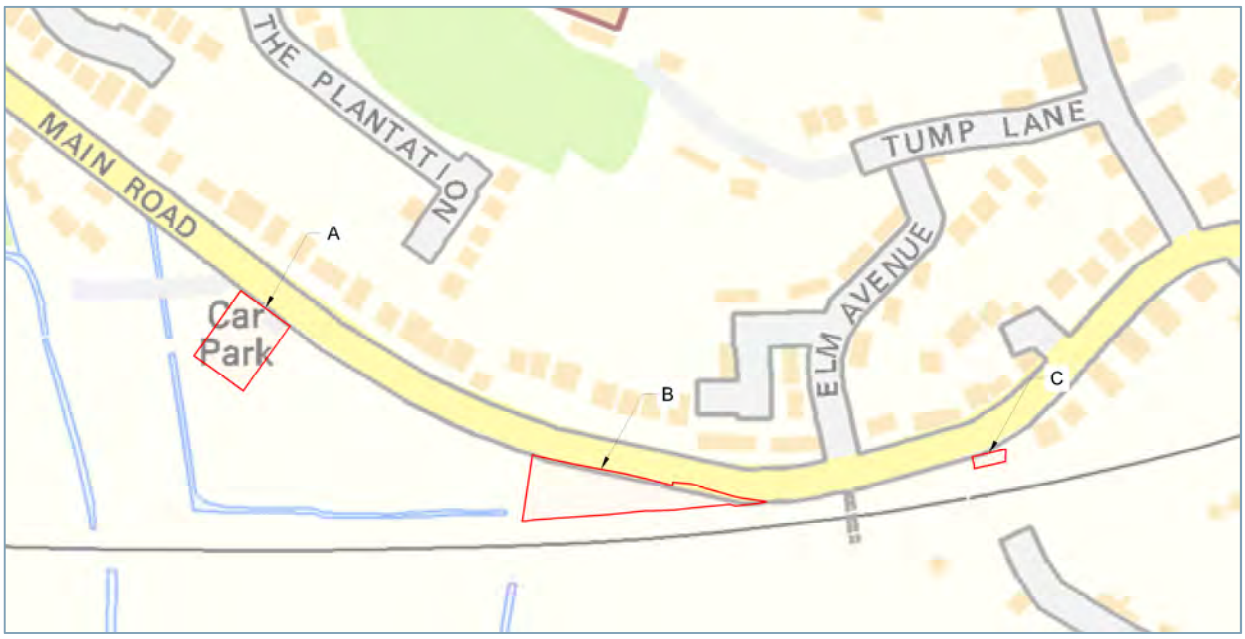
8.3.4.2 Down Relief (Eastbound)

South of the Down Relief platform, is West End road which connects into the footbridge as well as the subway. This road would provide a means of access for emergency services to the Down Relief platform.

8.3.5 Car Parking

As a walkway station, it is expected that most passengers will reach the platforms by means other than driving; however some level of vehicular usage is expected. As such, a small car park is anticipated to be part of the detailed design in the next stages. For the purpose of this report, 3 potential locations have been as shown below in Figure 8.3:

Figure 8.3: Potential Car Park Locations



Source: Mott MacDonald

8.3.5.1 Car Park Option A (Community Car Park)

There is an existing car park north of the location of the station along Main Road (B4245) that services the community. It is within the Three Fields' site for the development of the community centre. It is considerably further down the road from the subway which could be an issue for disabled passengers trying to reach the Down Relief platform. The car park has a height restriction of 6'6'', possibly as a means to limit weight of vehicles on the surfacing. However due to the planned use for the community centre, this location is not favoured.

8.3.5.2 Car Park Option B (West End Subway)

This area is comprised of two separate plots, one without a registered owner as mentioned in section 2.4 and the plot No WA858429. Ownership of the land would have to be determined as a first step to acquiring the land. The area is large enough to provide sufficient space for several parking spaces, including disabled car park spaces and a stop for bus replacement services. A drop off area could be incorporated as well as space for a focal entrance point at the station.

8.3.5.3 Car Park Option C (Veterinary/Undy Halt Footbridge)

There is a small area between the Undy Halt footbridge and Marlow Veterinary Surgery. The area is partially the location of the original footbridge and also a gated access point for the railway. Due to its proximity to the subway this area is ideal for disabled parking if the Up Relief platform is located East of the footbridge or between the footbridge and the gantry. It would allow for 3 disabled spaces to be incorporated. The position also already incorporates a layby and therefore this area may be suitable for a drop off area, but this would need to be confirmed in terms of acceptability and traffic flows.

8.4 Station Facilities

At a preliminary stage, and following the advice provided in the Better Rail Stations report from DfT and considering the station as category F, the following facilities will be provided as a minimum.

8.4.1 Shelters

Standard shelters will be provided at two points on each platform to allow for a better distribution of passengers. The shelters are designed to serve up to 15 passengers each. Figure 8.4 shows an example of an existing similar shelter at Ebbw Vale Town Station.

Figure 8.4: Shelter Example from Ebbw Vale Town Station

Source: Mott MacDonald

8.4.2 Ticket Vending Machines (TVM)

As the station will not be staffed, ticket vending machines will have to be included in the station. Arriva Trains Wales has recommended that two TVM's be placed at the station, one per platform. This could be reduced to one if all passengers access the station through a single point of entry.

8.4.3 Cycle Parking

The availability of safe and comprehensive cycle parking is essential to encourage the general public to reach the station safely. As a category F station, a minimum of 4 cycle racks would be provided, following the guidance provided by the Department for Transport (DfT) on the Better Rail Stations report.

8.4.4 Lighting and SISS

Using an estimate based on the station at Ebbw Vale Town, the following equipment is suggested to be part of a future station. Twenty four lighting columns spread through the platforms, eight CCTV cameras for platforms plus additional ones to cover access routes, two Help Points two CIS and two ticket vending machines.

8.5 Platform Option Appraisal

Table 8.2: Platform Option Appraisal. See drawings 002 to 006 on Appendix D.

	Platform Location	Pedestrian Access	Parking	Safety	Constructability	Land Requirements
Up Relief Line (Eastbound)	Option 1	Raised footpath connecting the pavement on the B4245 to the platform.	Car Park option B would be relatively close to the platform. Option C would be directly North of the platforms, but still would require some walking to reach them.	Platform will not be parallel to the Down Relief. As such, visibility to/from passengers on opposite platform will be limited or non-existent.	Likely construction would be suspended platform, this could be on short piles down to bedrock. The access routes could be of similar raised construction using steel structure. The footpath would need to span a culvert on the approach to the station.	Footpaths connecting to the station would require land to be purchased.
	Option 2	Platform encroaches into the existing footway. The ramp necessary to reach platform level will reduce width further. Access to subway therefore unlikely to be feasible.	Car Park option B would be the ideal solution.	Could possibly be placed parallel to the Down Relief platform, allowing for visibility of/from passengers in opposite platform. Requires option 5.	Construction would be similar to option 1, however the access routes would have substantial impact on the adjacent highway and unlikely to be feasible.	Severe space constraints regarding access to the subway.
	Option 3	The footbridge provides access from both sides of the track, and a ramp provides access from footpath level to the platform. Ramp connects the subway to the footpath level and the footpath level to the platform.	Would rely on car park option A, possibly B but it would require some walking to reach the platform.	Could possibly be placed parallel to the Down Relief platform, allowing for visibility of/from passengers in opposite platform. Requires option 4.	Due to the location in a cutting this platform could be solid fill platform, however due to the increased speed of construction a suspended platform might be preferred.	Space constraints adjacent to rail corridor regarding both ramps.
Down Relief Line (Westbound)	Option 1	Ramp connecting the footpath level to the subway level on north entrance to the subway. Ramp connecting the subway level to the platform.	Options A and B provide the quickest access to the subway.	Could possibly be placed parallel to the Down Relief platform, allowing for visibility of/from passengers in opposite platform. Requires option 2 Eastbound.	Suspended platform construction would again be preferred option similar to Eastbound option 1.	Space constraints on both ramps would require land purchase.
	Option 2	Subway provides access across the tracks. Ramp connecting the subway to the base of the footbridge level. Ramp connecting the base of footbridge to the platform	Options A and B provide the quickest access to the subway.	Could possibly be placed parallel to the Down Relief platform, allowing for visibility of/from passengers in opposite platform. Requires option 3 Eastbound.	Platform construction options would be similar to Eastbound option 3, the ramp construction needs careful review as appears there could be insufficient width for the route to be compliant adjacent to the rail corridor.	Ramp from the subway to the footpath level south of the track could require land purchase.

Source: Mott MacDonald

9 Stakeholder Engagement

9.1 Network Rail

As the owner and manager of most of the rail network, Network Rail was consulted at the start of the GRIP 1 and 2 process and during the production of the reports. Specific information provided is outlined below.

9.1.1 Land Ownership

Enquiries were made to determine if the land next to the plot WA701659 was or had been owned by Network Rail. The company stated that the plot has never been in railway ownership. Refer to Figure 2.3 .

9.1.2 Great Western Electrification Project

Network Rail were asked to provide information regarding the GWEP modifications on the section of the line near Magor. Network Rail provided details on the location of OLE gantries, as well as the Ground Investigation report for the section. They highlighted the possible issue regarding lifting the contact wire to enable compliant 'standing surface' distances from the platform. This might be a significant issue at Magor Rd/Redwick Rd Bridge where the existing low soffit is pushing the wire height down. This needs to be looked at carefully in relation to the existing subway and the headroom restriction already discussed. Track is getting lowered on Magor road to allow for gauge clearance.

9.2 Arriva Trains Wales

Arriva Train Wales, as main operator of the Welsh & Borders Franchise, was consulted regarding the possibility of introducing a walkway station in Magor, and possible issues in the near future. Questions were responded on email and a follow up meeting held on the 29th of March 2016. The responses of those questions and discussions are detailed below.

9.2.1 Pacer Replacements

ATW stated that the replacement of the Pacer units will depend on the rolling stock strategy and franchise specification determined by Welsh Government (WG) and/or DfT. It requires consideration of a number of other possible impacts such as electrification of the Cardiff Valleys network, electrification and the timetable impact of the Great Western

Electrification Programme, the Metro project and other projects such as additional train services from Ebbw Vale into Newport and Cardiff Central.

9.2.2 Cheltenham- Cardiff Services

Changes to the services will depend on the future franchise specification and Welsh Government are currently carrying out a public consultation to inform this process.

9.2.3 Platform Location/Signalling

Regarding the potential platform position, ATW initial preference was for the platforms to be opposite each other for improved security. They accepted that operationally there might be other considerations in terms of the signalling and train operation.

9.2.4 Ticketing

ATW agreed that an unmanned station was the preferred option with Ticket Vending Machines (TVM) provided either at a central location or adjacent to each platform. Alternatively TVMs could be provided in third party locations, such as the planned Community Hall and ATW confirmed that similar facilities had been provided elsewhere.

9.2.5 Down Relief Emergency Access

The emergency access provisions for the Down Relief platform could benefit from being adjacent to the road, but these provisions would be subject to agreement with the Fire Officer.

9.2.6 Subway

The use of the subway as part of the station access arrangements was seen as possible and there are examples where 3rd party infrastructure has been used in new station construction i.e. Risca and Pontymister. This 3rd party access route could have CCTV provision included within the station system.

9.2.7 Shelter Location

ATW requested that two shelters be shown on each platform as this approach is being adopted to encourage people to spread out along the platform and thus reduce boarding times.

9.2.8 Bus Replacement Drop Off

The need of including stopping places for bus replacement services within the proposal was highlighted by ATW.

9.3 Other Stakeholders

Similar issues were raised with Great Western Railway, but no responses received.

Other stakeholders such as Cross Country or the freight operators where not consulted as they had a lesser level of impact on operations of services to the station. All these and other stakeholders should be consulted at the next GRIP stage in advance of any network change process.

10 Cost Estimates

10.1 Costs table

Table 10.1 presents the high level estimates of the costs of introducing a walkway station at Magor and Undy based on drawing MMD-364017-C-DR-00XX-0007 in appendix D.

Table 10.1: Summary of Costs

RMM Vol 1 Ref	Group Element	Total Cost £		Comments / Assumptions
1	**Direct Construction Works**			
1.01	Railway Control Systems	£	74,024.49	
1.02	Train Power Systems	£	264,940.87	
1.03	Electric Power and Plant	£	66,150.00	
1.04	Permanent Way	£	143,605.80	
1.05	Telecommunication Systems	£	224,331.33	
1.06	Buildings and Property	£	1,694,370.27	
1.07	Civil Engineering	£	515,685.26	
1.08	Enabling Works	£	58,733.57	
	Direct Construction Works Costs	**£**	**3,041,841.59**	
2	**Preliminaries, overheads and profit**			
2.01	Preliminaries	£	1,025,615.00	
2.02	Contractor Overheads and profit	£	331,497.71	*If zero, included within the rates*
	Indirect Construction Works Costs Subtotal	£	1,357,112.71	
	CONSTRUCTION COST	**£**	**4,398,954.30**	
3	**Project / Design Team Fees and Other Project Development Costs**			
3.01	Design Team Fees	£	488,907.00	*Includes contractor design costs (if applicable)*
3.02	Project Team Fees / Other Project Development Costs	£	502,137.00	
	Employer Indirect Costs Subtotal	£	991,044.00	
	POINT ESTIMATE Construction + Development Cost	**£**	**5,389,998.30**	
4	**Risk**			*GRIP Stage 2 allowance of 30% included*
4.01	Risk	£	1,616,999.00	
	Anticipated Final Cost - AFC TOTAL COST LIMIT	**£**	**7,006,997.30**	**Current prices – 2Q16, no allowance for inflation**

Source: Mott MacDonald

10.2 Assumptions

The assumptions made for the costing are outlined below.

10.2.1 General

- The estimate base date is Second quarter of 2016
- Pending a formal Quantitative Risk Analysis (QRA) an allowance of 30% has been included to cover project risks and cost and scope uncertainty.
- Possession working has been included in the rates where considered to be required.
- TOC / FOC compensation costs included within the estimate as 5% of the direct costs and contractor preliminaries.

10.2.2 Signalling

- Assumes no changes to signalling layout. No new signalling required for station and no issues regarding signal sighting (signal sighting activity included within design and project management costs)
- Allowance included to lift and shift existing line side cables for new platform construction and includes a new 4 track UTX.
- Excludes cost for updates to VDU, assuming it can be accommodated within another scheme update.

10.2.3 Electrification

- Allowance included relocating 7 OLE structures including all associated works.

10.2.4 E&P

- Allowance included for new station DNO connection and for electric power and distribution systems.
- Allowance included to lift and shift or divert any OLE cables running through platform footprint.

10.2.5 Permanent Way (P'way)

- Allowance included to track lift, shift, re-cant, etc through platform area to optimise alignment and stepping distances with platform copers
- Allowance included to divert track drainage through platform footprint

10.2.6 Telecommunications

- Includes allowance for station telephony.

- PA system to platforms, footbridge, subway and shelters, including allowance for columns.
- Assumes one customer help point to each platform
- Customer Information System, assumes 1 per platform and at each station entrance.
- CCTV system to platforms, footbridge, subway and car park, including allowance for columns.
- All systems networked back to the control centre.

10.2.7 OP Property

- Assumes modular platform - 150m long x 3.5m wide with local widening to accommodate shelters, includes all furniture, drainage, ducts, lighting, signage and finishes.
- Secondary means of escape from platforms assumed to be via steps at ends of platforms onto safe cess area.
- Assumes two waiting shelters, Voyager Shelter (5x2 type) to each platform.
- Car park including lighting, drainage, perimeter fencing, finishes and allowance for attenuated drainage system.

10.2.8 Civil Engineering

- Works to deepen existing subway and new DDA ramps.

10.2.9 Utilities

- Allowance included for protecting/diverting existing utilities along Main Road footpath.

10.2.10 Indirect Costs

- Indirect costs based upon CP5 frameworks.

10.3 Exclusions

The following exclusions have been applied to the costing.

- Excludes any allowance for Optimism Bias and risk allowance based on Network Rail estimating guidance
- Excludes VAT
- Excludes 3rd party compensation costs (TOC/FOC and land purchase included)
- Excludes planning and approval charges and costs associated with Statutory Fees
- Costs associated with changes in legislation and any form of applicable standards
- Christmas, Easter or Bank Holiday working

11 Station Appraisal

As detailed in Welsh Transport Planning and Appraisal Guidance - WelTAG an appraisal is required but the level of effort, depth and detail required for appraisal has to be in keeping with the costs, risks, appraisal stage and size of the proposal. Small proposals (under £5 million) should be appraised using the planning and appraisal in WelTAG at a broad level. Therefore a high level appraisal broadly following WelTAG Stage 1 appraisal guidance using the following criteria:

- Economy, Environment and Society
- Transport Planning Objectives
- Feasibility and Deliverability Appraisal

Stage 1 appraisal is always required (for strategies and schemes) and is intended to screen and test options. MAGOR may wish to consult with the Welsh Government and Network Rail stakeholders on the basis of the Stage 1 appraisal in order to obtain feedback on the planning and appraisal process. This appraisal will need to be developed and some parts of the process (Revenue and Operating Cost) require further review. The initial appraisal is set out below along with a summary.

Table 11.1: Option Description Magor and Undy

Criteria	Assessment	Significance
Welsh Impact Areas		
Economy		
TEE	**Capital costs:**	
	• The initial capital cost estimate is £7m at 2016 costs.	Slight adverse
	Operating Costs:	
	• There will be a small increase in train operating costs due to the additional stop for the Taunton to Cardiff and return via Bristol Temple Meads journey and the Cheltenham Spa to Maesteg and return via Chepstow journey.	Slight adverse
	• Approximate operating costs can be provided by Arriva Trains Wales to estimate how much the new station will add to the overall network operating costs.	Slight adverse
	Travel Time:	
	• There will be a small increase in journey time for rail passengers travelling through the station, which may result in a reduction in the quantity of existing passengers as they make seek alternative transport.	Slight adverse
	• Connectivity will improve for journeys involving travelling on the wider rail network which will increase use	Moderate beneficial
	Economic Objectives:	

Criteria	Assessment	Significance
	• Regional economic objectives addressed by improvement in connectivity for the people of Magor and Undy, as they will have direct access to the wider rail network and will particularly benefit in west bound services, as they are no longer penalised in the time travel east to STJ.	Moderate beneficial
	• The interaction of bus and rail services and any changes in the level of bus services and the effect this may have on local centres and community facilities will need to be addressed, but the services could be similar to existing LDP site on the M4.	Neutral
Environment		
Noise	Minor impact in terms of trains stopping current rail services which operate on the section.	Neutral
Local Air Quality	Minor impact in terms of stopping current rail services which operate on the section. There may be some additional car emissions but again the impacts are likely to be low.	Neutral
Greenhouse Gas Emissions	Negligible changes in CO_2 emissions considering the existing rail line.	Neutral
Landscape and townscape	Some impact on the outlook of the adjacent properties. An assessment would be required to address the local impacts.	Slight adverse
Bio-diversity	Some land take required for the car park to service the station. A number of statutory designated sites within close proximity to the location. Unlikely to be significant.	Neutral
Heritage	Some impact from local interest in Ancient Orchard on Three Fields Site. No significant issues anticipated.	Neutral
Water environment	Area crossed by extensive reen system so controls for run off during construction will need to be put in place.	Slight adverse
Soils	Unlikely to be significant.	Neutral
Social		
Transport safety	Increased pedestrian use of surrounding foot paths will introduce increased potential for safety issues with the B4245 a busy road adjacent to the entrance.	Slight adverse
Personal security	Some of the platform arrangement options include the staggering of platforms which will reduce the visibility of rail users if one of these options is carried forward.	Severe adverse
Permeability	New station will increase access to the rail network.	Moderate beneficial
Physical fitness	Opportunities for using active travel routes to reach the station will be improved.	Moderate beneficial
Social inclusion	Opportunities to access services will be improved. Ideally would not decrease bus services to the area.	Moderate beneficial
Equality, Diversity & Human Rights	Unlikely to be significant.	Neutral
Public acceptability		
Evidence would suggest the community is behind the project, however there may be some issues including: • Those living/working within close proximity of the project may object. • The visual impact of new station facilities. • The drop-off and pick-up by cars will impact on existing flows of traffic. This is unlikely to be significant and is likely to be mitigated by the possibility of introducing methods to control unauthorised parks and promoting active travel routes.		

Criteria	Assessment	Significance
Acceptability to other stakeholders		
Key stakeholders in respect of this proposal are Network Rail, Monmouthshire Council, Arriva Trains Wales, Great Western Railway and Welsh Government/Metro Project. From stakeholder discussions, key issues which will affect acceptability are likely to be: • Our assessment of the impact that there will be on the timetable by stopping services at Magor and Undy will need to be reviewed by ATW and GWR. • Future capacity of train services to accommodate additional passengers boarding or travelling to Magor and Undy. • Compatibility with potential future 'Metro' rail proposals. • Compatibility with the proposed electrification of the South West Main Line. • Arrangement of platforms for operation and security.		
Technical and operational feasibility:		
• **Stopping trains within timetable:** 1 train per hour from Taunton to Cardiff Central and return via Bristol Temple Meads and 1 train every two hours from Cheltenham Spa to Maesteg and return via Chepstow (Main Line) would appear feasible. • **Crowding:** The additional passengers using the train to or from Magor and Undy may cause crowding on the train and passengers may need to stand for the distance between Magor and Undy and Newport. • **Train Operations:** There does not appear to be any operational issues in terms of track or signalling which could make the proposal unviable, but this needs to be confirmed by NR, ATW and GWR. • **Construction:** Construction of a new station and associated facilities is technically feasible without any apparent major risks to delivery. Geotechnical information suggests a suspended construction may be suitable due to bedrock being close to the surface.		
Financial affordability and deliverability:		
• **Capital costs:** The initial capital cost estimate is £7m at 2016 costs. • **Operating Costs and Revenues:** Operating cost information to be confirmed. • **Reliability:** The new station could impact on flexibility for journey time catch up. • **Travel time savings:** Analysis of travel time suggests that time savings for rail journeys will be anything from 15 minutes to 1 hour quicker than for bus journeys depending on the time of day and direction of travel. • **Funding, grant, subsidy**: Funding for the new station has not been considered in this study.		
Risks: See Table 11.2		

Source: Mott Macdonald

Table 11.2: Magor and Undy Walkway Station GRIP 2 Risk Assessment

Element	Initial Assessment	Potential Risk to Project	Comments
Revenue	More detailed demand forecasting and abstraction from Severn Tunnel Junction needs to be undertaken	Medium	The production of a South Wales Transport Model by Welsh Government is underway and will enable a common basis for assessing the relative benefits of different stations along the south Wales mainline.
Funding	There are other proposed station sites along the same line being referenced in the National Transport Finance Plan and which may produce competing business cases.	High	The viability of the various station options may be considered in parallel by Welsh Government as part of phase 2 of the Cardiff Capital Region Metro scheme. Alternatively a standalone demand study and business case might be progressed for this single site.
Timetabling	1 train per hour from Taunton to Cardiff Central and return via Bristol Temple Meads and 1 train every two hours from Cheltenham Spa to Maesteg and return via Chepstow (Main Line)	Medium	Stopping the services at Magor and Undy needs to be reviewed by Network Rail, ATW and GWR in terms of their future proposals and the impact on the turnaround times. Operational flexibility will be reduced due to the addition of a new station and could lead to delays.
OLE	The OLE design may alter and will require further review about the alterations needed. In particular the planned track lowering at Magor Road bridge could impact on track gradients in the station. Lineside equipment in the vicinity of the platform may be moving as part of the OLE design as sometimes this equipment is within the drop zone of the wire and needs to be relocated.	Medium	The alteration to the OLE stanchions have been included in the cost estimation and the track lower may not impact on the station as the S&C to the west at Magor Jn may be a constraint to their proposals
Subway and platform accesses	Under all platform options the subway is proposed to be used as the step free access route. The subway headroom is less than that required in DfT accessible stations guidance. It is proposed for the subway to be locally altered to increase the headroom, but this will require further technical study. Other ramp accesses proposed for the platforms have different technical issues in relation to constructability and land availability that would need to be reviewed in the option selection.	Low	A number of alternative proposals have been considered in case or issues at GRIP3. However a more detailed review of the subway alterations is needed to ascertain whether it is viable to use a step free access. An alternative would be to not provide step free access at the Magor and Undy station and instead rely on Severn Tunnel Junction for step free access.
Land Ownership	A review of land registry has been undertaken and most of the relevant plots identified. One key piece of land adjacent to the three fields' site is unregistered and Network Rail have no record of their ownership.	Low	Further work will be needed to try and determine ownership. Land Registry does not offer much specific advice other than reviewing adjacent registered land. Utilising local knowledge is suggested, but it is understood that MAGOR have already been exploring ownership of this area.

Element	Initial Assessment	Potential Risk to Project	Comments
Planning	Planning advice has not been obtained at GRIP2 and the local planning authority should be consulted as part of determining the scope for GRIP3.	Medium	By contacting the local planning authority, but utilising Network Rail Town Planner, a consistent approach will be achieved. A number of the environmental and flooding requirements for GRIP3 will be better understood following initial discussions.
Unexploded Ordnance	Records indicate that there is a high potential risk from UXO at the site due to its proximity to WWII bombing targets.	Low	It is recommended that further desk based assessment is undertaken to obtain further information and fully classify the risk.

Source: Mott MacDonald

12 Conclusions and Next Steps

12.1 Conclusion

A station at Magor and Undy is already included as an option in the National Transport Finance Plan and Network Rail Wales Route Strategy. Therefore there is commitment by the relevant parties to consider its inclusion in future proposals.

The stopping of trains at Magor and Undy appears technically viable, a summary of the conclusions from each of the main technical areas is outlined below.

12.1.1 Track

The alignment and condition of the track do not appear to present any obvious problems to introducing a station

12.1.2 Signalling

Positioning the Down Relief to the east of the signal gantry is necessary to avoid large penalties for travelling further along the relief lines and alterations to signalling. The position of the Up Relief platform to the west of the gantry could be done, but the most acceptable option would be keeping the platform to the west to avoid expensive signalling alterations.

12.1.3 Operations

The operational assessment shows that when services call at Magor and Undy there is a time penalty on the services. When heading towards Cardiff this can be up to three minutes but in most cases will not affect the next train working. In the opposite direction the penalty can be up to three minutes later at Gloucester and Patchway respectively and could affect the continuation of their onward journey. Other services outside of the scope of this review could also be affected by this.

Overall the additional time is fairly minimal and should be able to be accommodated by the operators.

12.1.4 Traction Power

Due to the ongoing Great Western Electrification Programme a more detailed review of the impact of the station site will be necessary following completion of the Works.

12.1.5 M&E, E&P, Telecoms

There will be some service diversions (in the highway and/or rail corridor) in order to accommodate the proposals. But these will be necessary in some form regardless of the option selected.

12.1.6 Environmental /Geotechnical

A more detailed review of the ecology will be necessary but predominantly the Works will be taking place on the existing rail corridor and unlikely to have significant impacts on the existing situation.

The ground conditions may dictate the construction methodology as the presence of bedrock near the surface lends itself to suspended construction.

12.1.7 Civils

There were a number of possible platform positions for a walkway station at Magor and Undy. Some of the positions do not appear viable due to either encroaching on the highway corridor or the rail corridor. But some of the other options have various advantages and disadvantages such as security and proximity to likely parking areas.

12.1.8 Option selection

The preferred signalling option to have the platforms staggered would have the least impact on surrounding area and suits the geography of the area and proposal for the access routes.

12.2 Next Steps

Before this project should progress to GRIP3 the following steps would be seen as necessary:

1. Review the impact of the stopping services at Magor and Undy with Network Rail

2. Confirm the demand for the level of services planning to be stopped at Magor and Undy. A short review of the various studies undertaken so far has been included in Appendix D. This review suggest a basic trip rate model could be built for a station using Magor and Undy, however there will be a requirement for comparing the levels of demand at Magor and Undy with other station sites proposed on this line in the National Transport Finance Plan. Since the line will only be able to accommodate a certain number of additional stops and the site at Magor and Undy will need to be considered alongside these other sites. Welsh Government is in the process of producing a transport model for South Wales and which potentially could be the means of testing the different options.
3. Linked to point 2 is the production of an initial business case for the station site. This would need to be done on the basis of the predicated demand and is linked to the appraisal that Welsh Government would be undertaking for the different station sites and other transportation initiatives being considered in the National Transport Finance Plan and as part of Transport for Wales proposals.

From the above, the demand forecast and initial business case could be undertaken as a standalone exercise for Magor and Undy. But discussions should be held with Transport for Wales about their planned assessment for the South East Wales Metro Phase 2 so the assumptions and criteria are aligned.

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Appendix A. Ecological Desk Study Magor and Undy Walkway Station

A.1 Methodology

A high level ecological desktop assessment has been undertaken for the proposed options at Magor and Undy Walkway Station. The site has been assessed using the following methodology in line with guidance provided in the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines on Preliminary Ecological Appraisal (2013):

- A review of the existing designated sites within 2km of the site. Identify the Special Areas of Conservation (SAC) designated for bats within 10km of the site;
- A review of the information regarding local and national species, and action plan habitats and areas of protected status from the Multi-Agency Geographic Information for the Countryside (MAGIC) (http://magic.defra.gov.uk/), the Joint Nature Conservation Committee (JNCC) (http://jncc.defra.gov.uk/) websites; and
- Use of online aerial and O/S mapping using ArcGIS World Imagery(http://www.arcgis.com/)

A.2 Legislative Context and Policy Framework

The key legislation relating to ecology and the environment is the Wildlife and Countryside Act 1981 as amended (WCA) which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) in Great Britain. The WCA is complemented by the Conservation (Natural Habitats, etc.) Regulations 1994 (as amended), which implements Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive). The Regulations provide for the designation and protection of 'European sites', and the protection of 'European protected species'. The species and habitats listed by these measures are legally protected to varying degrees through the WCA. Together, the WCA and The Conservation of Habitats and Species Regulations 2010 form the precedent for species and habitat protection in England and Wales.

The key policy which influences ecology and nature conservation assessments in Wales is Planning Policy Wales Technical Advice Note 5 (TAN5), Nature Conservation and Planning (Welsh Assembly Government, 2009).

Developers must ensure that they comply with the above legislation by fully assessing the potential impacts on protected species and habitats from the proposed options. Where planning permission is required, this assessment must be finalised prior to and included with the submission of the planning application. The Planning Authority can then ensure that the necessary protected species and habitats surveys have been completed.

A.3 Desk Study Results

A.3.1 Statutory Designated Sites

There are seven statutory designated sites within 2km of the site. No SAC designated for bats are within 10 km of the site. List of the sites are provided within the table below:

Table A.1: Statutory Designated Sites

Name	Status	Details	Approximate Distance
Gwent Levels Magor and Undy	Special Site of Scientific Interest	The Gwent Levels constitute the lowlands between Cardiff and Chepstow and are drained by an ordered network of drainage ditches. They are an example of one of the most extensive areas of reclaimed wet pasture in Great Britain which includes the Somerset Levels, Romney Marsh and the Pevensey Levels, and is the largest area of its kind in Wales. Together these Levels systems constitute a national series of sites each with its own special features. The Gwent Levels reens are rich in plant species and invertebrates, many of which are rare or absent in other Levels systems.	Adjacent to the site
Gwent Levels Redwick and Llandevening	Special Site of Scientific Interest		0.4 km south west
Magor Marsh	Special Site of Scientific Interest	The largest remnant of the formerly extensive fenlands near the Gwent coast. It lies on estuarine alluvium but receives run-off from an area of Carboniferous Limestone. The site supports a variety of reed Phragmites australis, sedge Carex spp. and submerged and emergent aquatic plants. There are areas of wet meadow and both willow Salix spp. and alder Alnus glutinosa carr with an intersecting system of drainage ditches – or reens and ponds. It is an important breeding ground for water and marsh birds.	0.2km west
Severn Estuary	Special Site of Scientific Interest	The Severn Estuary lies on the south west coast of Britain at the mouth of four major rivers (the Severn, Wye, Usk and Avon) and many lesser rivers. The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. The intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh is one of the largest and most important in Britain. The estuarine fauna includes: internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory	1.9 km south

Name	Status	Details	Approximate Distance
		fish.	
Severn Estuary / Mor Hafren	Special Area of Conservation	Site designated for its Annex I habitats that include estuaries, mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, sandbanks which are slightly covered by sea water all the time, reefs. Annex II species include sea lamprey (Petromyzon marinus), river lamprey (Lampetra fluviatilis), twaite shad (Alosa fallax).	1.9 km south
Severn Estuary	Special Protection Area	The Severn Estuary qualifies under Article 4.1 of the Birds Directive by regularly supporting an internationally important wintering population of Bewick's swan Cygnus columbianus bewickii, an Annex I species. The Severn Estuary qualifies under Article 4.2 as a wetland of international importance by regularly supporting in winter over 20,000 waterfowl. The Severn Estuary also qualifies under Article 4.2 by regularly supporting in winter internationally important numbers of migratory waterfowl.	1.9 km south
Severn Estuary	Ramsar	The Severn Estuary qualifies under Criterion 1 of the Ramsar convention due to its immense tidal Range. The Severn Estuary qualifies under Criterion 2b due to its unusual estuarine communities, reduced species diversity and high productivity. The estuary qualifies under Criterion 2c, as it is particularly important for the run of migratory fish between the sea and rivers via the estuary. The estuary also qualifies under Criterion 2c as it is particularly important for migratory birds during passage periods in spring and autumn. The Severn Estuary qualifies under Criterion 3a by regularly supporting in winter over 20,000 waterfowl. The Severn Estuary qualifies under Criterion 3c by regularly supporting, during the same period, internationally important populations of five species of waterfowl.	1.9 km south

A.3.2 Habitat Interpretation

The options for the proposed works are to be located within the railway embankment. Potential habitat within this area may comprise of scrub, ruderal vegetation and bare ground. The adjacent habitat to the works looks to comprise of broad-leaved trees, scrub, grassland and a series of ditches. Two buildings are within 10m of the proposed options.

A.3.3 Protected species interpretations

From reviewing aerial photography, the potential habitats on and adjacent to site may have the potential to support protected and notable species, such as birds, badgers, otters, water voles, dormouse, bats, reptiles, great crested newts, invertebrates and invasive species.

A.4 Further Studies and Assessment

There is the potential that the proposed options may have a direct impact on the Gwent Levels Magor and Undy Special Site of Scientific Interest which is located adjacent to the site. It is recommended that an application for Countryside Rights of Way assent is required for any proposed works. The site is also within 2km of the European designated sites, it is recommended that a Habitats Regulation Assessment screening exercise is undertaken in order to assess the potential impacts on the key species and habitats of the European designated sites.

A biological records search should be undertaken for the site from the local biodiversity information service. Records within 2km of the proposed options are required to determine the historical presence / absences of protected and notable species.

An ecological site survey should be undertaken following the methodology in line with guidance provided in the CIEEM Guidelines on Preliminary Ecological Appraisal (2013). This survey will map the existing habitat on site and provide information on any potential habitat to support protected or notable species. This survey will comply with current legislation requirements and inform any targeted Phase 2 species surveys that may be required for the proposed options.

Appendix B. Westbound Timetable

			65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Signal ID			**2Y07**	**2U00**	**2L43**			**2B55**	**2U02**	**1V01**				**2F02**	**5N07**	**2B01**		**1V31**
Orig. Dep. Time			05.26	05.54	05.37				06.19	05.00				06.35		05.58		04.50
Orig. Loc. Name			Hereford	Bristol Temple Meads	Cheltenham Spa				Bristol Temple Meads	Birmingham New Street				Ebbw Vale Town		Westbury		Crewe
Dest. Loc. Name			Barry Island		Maesteg			Swansea										Milford H
Timing Load			**142**	**158**	**142**			**150**	**150**	**170**				**150**	**150**	**158**		**175**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**			**SX**	**SX**	**SX**				**SX**	**SX**	**SX**		**SX**
Patchway	dep	9	...	**06a06**	...	...	...	...	**06a35½**	...		...	...	...	...	*07/04½*	...	...
	mgn	10	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Pilning	dep	11	...	*06/10*	...	...	...	...	*06/39½*	...		...	...	...	...	*07/07½*	...	...
	mgn	12	...	...	...	...	...	...	**[1](2)**	...		...	...	...	...	...	...	...
Severn Tunnel East	dep	13	...	*06/11*	...	...	...	...	*06/43½*	...		...	...	...	...	*07/08½*	...	...
	mgn	14	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Severn Tunnel West	dep	15	...	*06/14½*	...	...	...	...	*06/47½*	...		...	...	...	...	*07/12*	...	...
	mgn	16	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Gloucester	arr	17	...	...	**05.48**	...	...	...	...	**06.15½**		...	...	...	...	...	...	...
	dep	18	...	...	**05.50**	...	...	...	...	**06.17½**	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	*06/03*	...	...	...	...	*06/30*	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	**06a09½**	...	...	...	...	**06a36½**	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	**06a19**	...	...	...	...	**06a46**	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	**06ap27½**	...	...	...	...	**06a54½**	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	**3**	**1**	...	...	...	**3**	**1**	...	...	...	...	...	**3**	...	...
	dep	28	...	**06a17**	**06ap30½**	...	...	...	**06aq50**	**06a57½**	...	...	...	...	...	**07a14½**	...	...
	dep-line	29	...	**ML**	**RL**	...	...	...	**RL**	**ML**	...	...	...	...	...	**ML**	...	...
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep				**06.34½**				**06.54**									
Magor crossovers	dep				*06/35*				*06/54½*									
	dep-line				**ML**				**ML**									
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	*06/15½*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*07/27*
	mgn	35	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*06/16½*	*06/26½*	*06/42*	...	...	...	*07/01½*	*07/07*	...	...	...	...	...	*07/24*	...	*07/28*
	mgn	37	**(1)**	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**(1)**
Newport (South Wales)	arr	38	**06.19**	**06.27½**	**06#43**	...	...	...	**07#02½**	**07.08**	...	...	...	...	...	**07.25**	...	**07#30**
	plt	39	**2**	**2**	**2**	...	...	...	**2**	**2**	...	...	...	...	...	**2**	...	**2**
	dep	40	**06.23**	**06.29½**	**06.45**	...	...	...	**07.04½**	**07.10**	...	...	...	...	...	**07.27**	...	**07p32**
	dep-line	41	**ML**	**ML**	**ML**	...	...	...	**ML**	**ML**	...	...	...	...	...	**ML**	...	**ML**
	mgn	42	**(1)**	**[2]**	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*06/26½*	*06/34*	*06/47½*	...	...	...	*07/07*	*07/12½*	...	...	...	*07/19½*	...	*07/29½*	...	*07/34½*
	dep-line	47	**ML**	**ML**	**ML**	...	...	...	**ML**	**ML**	...	...	...	**ML**	...	**ML**	...	**ML**
	mgn	48	**[2](1)**	...	**[2]**	...	...	...	**[2]**	**[2]**	...	...	...	**[2]**	...	**[2]**	...	**[2]**
Marshfield	dep	49	*06/32*	*06/36½*	*06/52*	...	...	...	*07/11½*	*07/17*	...	...	...	*07/24*	...	*07/34*	...	*07/39*
	mgn	50	...	**(1)**	...	...	...	...	**(½)**	...	...	...	...	...	...	...	...	**(1)**
Cardiff Central	arr	51	**06.41**	**06y45**	**07v00**	...	...	...	**07v20**	**07.26**	...	...	...	**07y32**	...	**07y41**	...	**07w47**
	plt	52	**4A**	**3A**	**3A**	...	...	**4A**	**3A**	**4A**	...	...	...	**3A**	**3A**	**3A**	...	**3**
	dep	53	**06p56**	...	**07.03**	...	...	**07q16**	...	...	...	...	...	...	**07.35**	...	...	**07.50**
					1 late arr CDF FAB				3 late arr CDF									

			81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Signal ID			**1C01**	**1C01**	**1V02**	**1V89**	**2S04**				**2F04**	**1B04**			**1B05**			**1V32**
Orig. Dep. Time			05.20	05.19	05.37	06.10	06.02				07.37	06.45			06.45			05.55
Orig. Loc. Name			London Paddington	London Paddington	Birmingham New Street	Shrewsbury	Taunton				Ebbw Vale Town	Frome			London Paddington			Crewe
Dest. Loc. Name			Swansea	Swansea		Maesteg									Swansea			Carmarthe
Timing Load			**HST8-125**	**HST8-125**	**170**	**150**	**150**				**150**	**158**			**HST8-125**			**175**
Operating Characteristics																		
Dates Of Operation			**MO**	**MSX**	**SX**	**SX**	**SX**				**SX**	**SX**			**SX**			**SX**
Patchway	dep	9	*07/28*	*07/29*	...	...	**07a44½**		...	...	...	**08a06½**	...	...	*08/11*	...	...	...
	mgn	10	...	...	...	...	...		...	...	...	...	...	...	**[1](1)**	...	...	...
Pilning	dep	11	*07/31*	*07/32*	...	...	*07/48½*		...	...	...	*08/10½*	...	...	*08/16*	...	...	...
	mgn	12	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	*07/32*	*07/33*	...	...	*07/49½*		...	...	...	*08/11½*	...	...	*08/17*	...	...	...
	mgn	14	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	*07/35½*	*07/36½*	...	...	*07/53½*		...	...	...	*08/15*	...	...	*08/20½*	...	...	...
	mgn	16	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Gloucester	arr	17	...	...	**06D53**	...	...		...	...	...	...	...	...	...	...	...	...
	dep	18	...	...	**07.01**	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	*07/13½*	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	**07a20**	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	**07a29½**	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	**07a38**	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	**1**	...	**3**		...	...	...	...	...	...	...	...	...	...
	dep	28	*07/36½*	*07/37½*	**07a41½**	...	**07a56**		...	...	...	*08/16*	...	...	*08/21½*	...	...	...
	dep-line	29	**ML**	**ML**	**RL**	...	**ML**		...	...	...	**ML**	...	...	**ML**	...	...	...
	mgn	30	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep				**07.45½**		**08.00**											
Magor crossovers	dep				*07/46*		*08/00½*											
	dep-line				**ML**		**ML**											
Maindee East Jn	dep	31	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	*07/58*	...		...	...	...	...	...	...	...	...	...	*08/32*
	mgn	35	...	...	...	...	...		...	...	...	...	...	...	...	...	...	**(1)**
Maindee West Jn	dep	36	*07/45*	*07/46*	*07/53*	*07/59*	*08/07½*		...	...	...	*08/25½*	...	...	*08/30*	...	...	*08/34*
	mgn	37	...	...		...	...		...	...	...	...	...	...	...	...	...	**(1½)**
Newport (South Wales)	arr	38	**07.46½**	**07.47½**	**07.54**	**08.00**	**08.08½**		...	...	...	**08.26½**	...	...	**08.31½**	...	...	**08.36½**
	plt	39	**2**	**2**	**2**	**2**	**2**		...	...	...	**2**	...	...	**2**	...	...	**2**
	dep	40	**07p48½**	**07p49½**	**07.56**	**08q03**	**08.10½**		...	...	...	**08p28½**	...	...	**08p33½**	...	...	**08.38½**
	dep-line	41	**ML**	**ML**	**ML**	**ML**	**ML**		...	...	...	**ML**	...	...	**ML**	...	...	**ML**
	mgn	42	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*07/51½*	*07/52½*	*07/58½*	*08/05½*	*08/13*		...	...	*08/21½*	*08/31*	...	...	*08/36½*	...	...	*08/41*
	dep-line	47	**ML**	**ML**	**ML**	**ML**	**ML**		...	...	**ML**	**ML**	...	...	**ML**	...	...	**ML**
	mgn	48	**[2]**	**[2]**	**[2]**	*[2]*	**[2]**		...	...	**[2]**	**[2](1)**	...	...	**[2]**	...	...	**[2]**
Marshfield	dep	49	*07/56*	*07/57*	*08/03*	*08/10*	*08/17½*		...	...	*08/26*	*08/36½*	...	...	*08/41*	...	...	*08/45½*
	mgn	50	...	...	...	...	**(½)**		...	...	...	**(2½)**	...	...	...	...	...	...
Cardiff Central	arr	51	**08#03**	**08#04**	**08.10**	**08.18**	**08.26**		...	...	**08y34**	**08.46**	...	...	**08#50**	...	...	**08.53**
	plt	52	**3**	**3**	**4**	**3A**	**3A**		...	...	**3**	**3A**	...	...	**4**	...	...	**3**
	dep	53	**08q06**	**08q07**	...	**08.21**	...		...	...	...	...	...	...	**08p53**	...	...	**09.04**
					2 late arr CDF		2 late arr CDF											

			97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Signal ID					2L47	1V90	2U06	1B09	1V03			2F06	1F06	1B10				1V33
Orig. Dep. Time					07.46	04.25	07.37	07.15	07.04			08.39	06.00	07.45				06.30
Orig. Loc. Name					Cheltenham	Holyhead	Weston SM	London Paddington	Nottingham			Ebbw Vale Town	Portsmouth Harbour	London Paddington				Manchester
Dest. Loc. Name					Maesteg									Swansea				Milford H
Timing Load					142	175	150	HST8-125	170			150	158	HST8-125				175
Operating Characteristics																		
Dates Of Operation					SX	SX	SX	SX	SX			SX	SX	SX				SX
Patchway	dep	9					08.37½	*08/44½*	...		...	...	*09/04*	*09/11*	...	...	...	...
	mgn	10			...		...	...	...		...	...	...	...	...	...	...	...
Pilning	dep	11					*08/41½*	*08/47½*	...		...	...	*09/07*	*09/14*	...	...	...	...
	mgn	12			...		...		...		...	...	...		...	...	...	...
Severn Tunnel East	dep	13					*08/42½*	*08/48½*	...		...	...	*09/08*	*09/15*	...	...	...	...
	mgn	14			...		...	...	...		...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15					*08/46½*	*08/52*	...		...	...	*09/11½*	*09/18½*	...	...	...	...
	mgn	16			...	...	...	...	...		...	...	(1)	...	...	...	...	...
Gloucester	arr	17			**07.57**	...	...	...	**08#21**		...	...	...	...	...	...	...	...
	dep	18			**07.58**	...	...	...	**08.25**		...	...	...	...	...	...	...	...
	mgn	19			...	...	...	...	...		...	...	...	...	...	...	...	...
Awre	dep	20			*08/12*	...	...	...	*08/37½*		...	...	...	...	...	...	...	...
	mgn	21			...	...	...	...	...		...	...	...	...	...	...	...	...
Lydney	dep	22			**08p18½**	...	...	...	*08/42½*		...	...	...	...	...	...	...	...
	mgn	23			...	...	...	...	...		...	...	...	...	...	...	...	...
Chepstow	dep	24			**08p28**	...	...	...	**08a51**		...	...	...	...	...	...	...	...
	mgn	25			...	...	...	...	(3½)		...	...	...	...	...	...	...	...
Caldicot	dep	26			**08p36½**	...	...	...	...		...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27			**1**	...	**3**	...	...		...	...	...	...	...	...	...	...
	dep	28			**08p39½**		**08a49**	*08/53*	*09/02*		...	...	*09/13½*	*09/19½*	...	...	...	...
	dep-line	29			**RL**		**RL**	**ML**	**ML**		...	...	**ML**	**ML**	...	...	...	...
	mgn	30			...	...		(3½)	...		...	...	...	...	...	...	...	...
Magor & Undy	dep				**08.43½**		**08.53**											
Magor crossovers	dep				*08/44*		*08/53½*											
	dep-line				**ML**		**ML**											
Maindee East Jn	dep	31			...	...	...	...	...		...	...	...	...	...	...	...	...
	dep-line	32			...	...	...	...	...		...	...	...	...	...	...	...	...
	mgn	33			...	...	...	...	...		...	...	...	...	...	...	...	...
Maindee North Jn	dep	34			...	*08/57½*	...	...	...		...		...	...	...	...	...	*09/25½*
	mgn	35			...	...	...	...	...		...		...	...	...	...	...	(6)
Maindee West Jn	dep	36			*08/51*	*08/58½*	*09/00½*	*09/05*	*09/10½*		...		*09/23*	*09/28*	...	...	...	*09/32½*
	mgn	37			...	...	...	...			...		...	...	...	...	...	(1)
Newport (South Wales)	arr	38			**08.52**	***08#59½***	**09.02**	**09.06½**	**09.11½**		...		**09.24**	**09.29½**	...	...	...	**09.34½**
	plt	39			**2**	**2**	**1**	**2**	**2**		...		**2**	**2**	...	...		**2**
	dep	40			**08.54**	**09q01½**	**09.04**	**09.08½**	**09.13½**		...		**09p26**	**09p31½**	...	...		**09.36½**
	dep-line	41			**ML**	**ML**	**RL**	**ML**	**ML**		...		**ML**	**ML**	...	...		**ML**
	mgn	42			...	...	...	...	...		...	...		...	...	...		...
Gaer Jn	dep	43			...	...	...	...	...		...	...	...	...	...	...		...
	dep-line	44			...	...	...	...	...		...	...	...	...	...	...		...
	mgn	45			...	...	...	...	...		...	...	...	...	...	...		...
Ebbw Jn	dep	46			*08/56½*	*09/04*	*09/07½*	*09/11½*	*09/16*		...	*09/23½*	*09/28½*	*09/34½*	...	...		*09/39*
	dep-line	47			**ML**	**ML**	**RL**	**ML**	**ML**		...	**ML**	**ML**	**ML**	...	...		**ML**
	mgn	48			**[2]**	**[2]**	**[2]**	**[2]**	**[2]**		...	**[2]**	**[2]**	**[2]**	...	...		**[2]**
Marshfield	dep	49			*09/01*	*09/08½*	*09/13½*	*09/16*	*09/20½*		...	*09/28*	*09/33*	*09/39*	...	...		*09/43½*
	mgn	50			...	...	(½)	...	(2½)		...		(2)	...	...	...		(½)
Cardiff Central	arr	51			**09y09**	**09.18**	**09.23**	**09.23**	**09.30**		...	**09y36**	**09v42**	***09#48***	...	...		**09.51**
	plt	52			**3A**	**4A**	**4**	**3**	**3A**		...	**3**	**3A**	**4**	...	...		**3**
	dep	53			**09.18**	...	...	...	...	...	...		...	**09q51**	...	...		**10.04**
					1 late arr CDF FAB		arr CDF AB											

			113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
Signal ID			**1V91**	**2L49**	**2U08**	**1B12**	**1V04**			**2F12**		**1V35**	**1F08**	**1B15**			**1B96**	
Orig. Dep. Time			05.33	08.46	08.41	08.15	07.04			09.38		07.30	07.05	08.45				
Orig. Loc. Name			Holyhead	Cheltenham Spa	Weston SM	London Paddington	Nottingham			Ebbw Vale Town		Manchester Piccadilly	Portsmouth Harbour	London Paddington				
Dest. Loc. Name				Maesteg								Carmarthen		Swansea			Fishguard Harbour	
Timing Load			**10067140**	**142**	**150**	**HST8-125**	**170**			**150**		**175**	**158**	**HST8-125**			**150**	
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**	**SX**			**SX**		**SX**	**SX**	**SX**			**SX**	
Patchway	dep	9	...	...	**09a35½**	*09/47*	...		...	...	...	...	*10/06*	*10/11*	...	...	...	...
	mgn	10	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	...	...	*09/39½*	*09/50*	...		...	...	...	...	*10/09*	*10/14*	...	...	...	...
	mgn	12	...	...	...	...	...		...	...	...	...	...	**<1>**	...	...	...	...
Severn Tunnel East	dep	13	...	...	*09/40½*	*09/51*	...		...	...	...	...	*10/10*	*10/16*	...	...	...	...
	mgn	14	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	...	...	*09/44½*	*09/54½*	...		...	...	...	...	*10/13½*	*10/19½*	...	...	...	...
	mgn	16	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Gloucester	arr	17	...	**08# 59**	...	...	**09# 20½**		...	...	...	...	...	...	...	...	...	...
	dep	18	...	**09r01**	...	...	**09.25**		...	...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	*09/14*	...	...	*09/37½*		...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	**09ar20½**	...	...	*09/42½*		...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	**09ar30**	...	...	**09a51**		...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	**(1½)**		...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	**09ar38½**	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	**1**	**3**	...	...		...	...	...	...	...	...	...	...	...	...
	dep	28	...	**09ar41½**	**09ap47**	*09/55½*	*10/00*		...	...	...	...	*10/14½*	*10/20½*	...	...	...	...
	dep-line	29	...	**RL**	**ML**	**ML**	**ML**		...	...	...	...	**ML**	**ML**	...	...	...	...
	mgn	30	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep			**09.45½**	**09.51**													
Magor crossovers	dep			*09/46*	*09/51½*													
	dep-line			**ML**	**ML**													
Maindee East Jn	dep	31	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	*09/35½*	...	...	...	...		...	...	...	*10/20*	...	...	...	...	...	...
	mgn	35	**(½)**	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*09/37½*	*09/53*	*09/58½*	*10/04*	*10/08½*		...	...	...	*10/21*	*10/24*	*10/29*	...	...	...	...
	mgn	37	**(½)**	...	...	...	**(1½)**		...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	38	**09.39½**	**09.54**	**09.59½**	**10# 05½**	**10.11**		...	...	...	**10.22**	**10v25**	**10.30½**	...	...	...	...
	plt	39	**2**	**2**	**2**	**2**	**2**		...	...	...	**3**	**2**	**3**	...	...	**2**	...
	dep	40	**09p41½**	**09.56**	**10.01½**	**10q07½**	**10.13**		...	...	...	**10.24**	**10p27**	**10p32½**	...	...	**10.40**	...
	dep-line	41	**ML**	**ML**	**ML**	**ML**	**ML**		...	...	...	**ML**	**ML**	**ML**	...	...	**ML**	...
	mgn	42	...	...	...	...	...		...	...	...	...	**(1)**	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*09/43½*	*09/58½*	*10/04*	*10/10½*	*10/15½*		...	*10/22½*	...	*10/26½*	*10/30½*	*10/35½*	...	...	*10/42½*	...
	dep-line	47	**ML**	**ML**	**ML**	**ML**	**ML**		...	**ML**	...	**ML**	**ML**	**ML**	...	...	**ML**	...
	mgn	48	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**		...	**[2]**	...	**[2]**	**[2]**	**[2]**	...	...	...	...
Marshfield	dep	49	*09/48½*	*10/03*	*10/08½*	*10/15*	*10/20*		...	*10/27*	...	*10/31*	*10/35*	*10/40*	...	...	*10/45*	...
	mgn	50	...		**(½)**	...	...		...	...	...	**(1)**	...	...	...	...	**[2](1)**	...
Cardiff Central	arr	51	**09.59**	**10.11**	**10y17**	**10.22**	**10.30**		...	**10y35**	...	**10.39**	**10.44**	**10# 47**	...	...	**10.56**	...
	plt	52	**4**	**3A**	**4A**	**3**	**3A**		...	**4**	...	**3A**	**4B**	**3**	...	...	**3A**	...
	dep	53	...	**10.18**	...	...	...		...	...	...	**10.42**	...	**10q50**	...	...	**10.58**	...
				Arr CDF AB	1 late arr CDF													

			129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
Signal ID			**2B61**	**1V92**	**2L51**	**2U10**	**1B17**	**1V05**			**2F24**	**1V37**	**1F10**	**1B20**	**2L53**			**1V93**
Orig. Dep. Time				06.28		09.45	09.15	08.12			10.37	08.30	08.23	09.45	10.45			08.30
Orig. Loc. Name				Holyhead		Weston-super- Mare	London Paddington	Nottingham			Ebbw Vale Town	Manchester Piccadilly	Portsmouth Harbour	London Paddington	Cheltenham Spa			Llandudno
Dest. Loc. Name			Llanelli		Maesteg							Milford H		Swansea	Maesteg			
Timing Load			**150**	**175**	**142**	**150**	**HST8-125**	**170**			**150**	**175**	**158**	**HST8-125**	**142**			**175**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	**SX**			**SX**
Patchway	dep	9	...	...	...	**10aq37**	*10/44*	...		...	...	...	*11/04½*	*11/11*	...	...	...	...
	mgn	10	...	...	...	...	...	...		...	...	...	**(1½)**	...	...	...	...	...
Pilning	dep	11	...	...	...	*10/41*	*10/47*	...		...	...	...	*11/09*	*11/14*	...	...	...	...
	mgn	12	...	...	...	**[½]**	...	...		...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	...	...	...	*10/42½*	*10/48*	...		...	...	...	*11/10*	*11/15*	...	...	...	...
	mgn	14	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	...	...	...	*10/46½*	*10/51½*	...		...	...	...	*11/13½*	*11/18½*	...	...	...	...
	mgn	16	...	...	...	...	**(½)**	...		...	...	...	...	...	...	...	...	...
Gloucester	arr	17	...	...	...	...	...	**10#21**		...	...	...	...	...	**10# 58**	...	...	...
	dep	18	...	...	...	...	...	**10.25**		...	...	...	...	...	**11q00**	...	...	...
	mgn	19	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	*10/37½*		...	...	...	...	...	*11/13*	...	...	...
	mgn	21	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	**10a44**		...	...	...	...	...	**11aq19½**	...	...	...
	mgn	23	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	*10/52*		...	...	...	...	...	**11aq29**	...	...	...
	mgn	25	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...		...	...	...	...	...	**11q37**	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	**3**	...	...		...	...	...	...	...	**1**	...	...	...
	dep	28	...	...	...	**10ar49**	*10/53*	*10/59*		...	...	...	*11/14½*	*11/19½*	**11aq40**	...	...	...
	dep-line	29	...	...	...	**RL**	**ML**	**ML**		...	...	...	**ML**	**ML**	**RL**	...	...	...
	mgn	30	...	...	...		**(3)**	**(1)**		...	...	...	...	...	...	...	...	...
Magor & Undy	dep					**10.53**									**11.44**			
Magor crossovers	dep					*10/53½*									*11/44½*			
	dep-line					**ML**									**ML**			
Maindee East Jn	dep	31	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	*10/56½*	...	...	...	...		...	...	*11/16*	...	...	...	...	...	*11/49*
	mgn	35	...	...	...	...	...	...		...	...	**[1](1)**	...	...	...	...	...	**(1)**
Maindee West Jn	dep	36	...	*10/57½*	...	*11/00½*	*11/04½*	*11/08½*		...	...	*11/19*	*11/24*	*11/29*	*11/51½*	...	...	*11/51*
	mgn	37	...	...	...	**RL**	...	**(2)**		...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	38	...	**10w58½**	...	**11.02**	**11.06**	**11.11**		...	...	**11.20**	**11v25**	**11.30½**	**11.52½**	...	...	**11.53**
	plt	39	...	**2**	...	**1**	**2**	**2**		...	...	**2**	**2**	**2**	**2**	...	...	**4**
	dep	40	...	**11.01**	...	**11p04**	**11p08**	**11.13**		...	...	**11.22**	**11.27**	**11p32½**	**11.54½**	...	...	**11.55**
	dep-line	41	...	**ML**	...	**RL**	**ML**	**ML**		...	...	**ML**	**ML**	**ML**	**RL**	...	...	**ML**
	mgn	42	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	...	*11/03½*	...	*11/07½*	*11/11*	*11/16*		...	*11/21½*	*11/24½*	*11/29½*	*11/35½*	*11/58*	...	...	*11/57½*
	dep-line	47	...	**ML**	...	**RL**	**ML**	**ML**		...	**ML**	**ML**	**ML**	**ML**	**RL**	...	...	**ML**
	mgn	48	...	**[2]**	...	**[2]**	**[2]**	**[2]**		...	**[2]**	**[2](1)**	**[2]**	**[2]**	**[2](1)**	...	...	**[2]**
Marshfield	dep	49	...	*11/08*	...	*11/13½*	*11/15½*	*11/20½*		...	*11/26*	*11/30*	*11/34*	*11/40*	*12/05*	...	...	*12/02*
	mgn	50	...	...	...	**(½)**	**(½)**	**(1½)**		...	...	...	...	...	...	...	...	...
Cardiff Central	arr	51	...	**11.15**	...	**11v23**	**11.23**	**11.29**		...	**11w34**	**11.37**	**11w43**	**11#47**	**12#14**	...	...	**12.11**
	plt	52	**4A**	**4A**	**3A**	**4A**	**3**	**4A**		...	**4A**	**3**	**4**	**3**	**3A**	...	...	**4A**
	dep	53	**11.14**	...	**11q20**	...	...	...		...	...	**11r41**	...	**11q50**	**12.18**	...	...	...
						1 late arr CDF	RT STJ to CDF arr AB	RT STJ to CDF arrAB							CDF arr AB			

			145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Signal ID			**2U12**	**1B22**	**1V06**			**2F26**				**1V38**	**1F12**	**1B25**	**2G55**			
Orig. Dep. Time			06.00	10.15	09.10			11.37				09.30	09.23	10.45	11.46			
Orig. Loc. Name			Penzance	London Paddington	Nottingham			Ebbw Vale Town				Manchester Piccadilly Carmarthen	Portsmouth Harbour	London Paddington Swansea	Cheltenham Spa			
Dest. Loc. Name																		
Timing Load			**150**	**HST8-125**	**170**			**150**				**175**	**158**	**HST8-125**	**142**			
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**			**SX**				**SX**	**SX**	**SX**	**SX**			
Patchway	dep	9	**11a35½**	*11/46½*	...			...		...	...	...	*12/04*	*12/11*	...	...	...	...
	mgn	10	...	...	...			...		...	...	...		...	...	...	...	...
Pilning	dep	11	*11/39½*	*11/49½*	...			...		...	...	...	*12/07*	*12/14*	...	...	...	...
	mgn	12	**(1)**	...	...			...		...	...	...	...	<1>	...	...	...	...
Severn Tunnel East	dep	13	*11/41½*	*11/50½*	...			...		...	...	...	*12/08*	*12/16*	...	...	...	...
	mgn	14	...	...	...			...		...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	*11/45½*	*11/54*	...			...		...	...	...	*12/11½*	*12/19½*	...	...	...	...
	mgn	16	...	...	...			...		...	...	...	**(1½)**	...	...	...	...	...
Gloucester	arr	17	...	...	**11#20½**					...	...	...	...	...	**11.57**	...	...	...
	dep	18	...	...	**11.25**					...	...	...	...	...	**11.59**	...	...	...
	mgn	19	...	...	...				...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	*11/37½*				...	...	...	...	...	...	*12/12*	...	...	...
	mgn	21	...	...	...				...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	*11/42½*				...	...	...	...	...	...	**12a18½**	...	...	...
	mgn	23	...	...	...				...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	**11a51**				...	...	...	...	...	...	**12a28**	...	...	...
	mgn	25	...	...	**(½)**				...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...				...	...	...	...	...	...	**12a36½**	...	...	...
Severn Tunnel Jn	plt	27	**3**	...	...				...	...	...	...	...	...	**1**	...	...	...
	dep	28	**11aq48**	*11/55*	*11/59*				...	...	...	...	*12/14*	*12/20½*	**12a39½**	...	...	...
	dep-line	29	**RL**	**ML**	**ML**				...	...	...	...	**ML**	**ML**	**RL**	...	...	...
	mgn	30							...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep		**11.52**												**12.43½**			
Magor crossovers	dep		*11/52½*												*12/44*			
	dep-line		**ML**												**ML**			
Maindee East Jn	dep	31	...	...	...			...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...			...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...			...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...			...	...	...	...	*12/19*	...	...	...	...	...	
	mgn	35	...	...	...			...	...	...	...		...	...	...	...	...	
Maindee West Jn	dep	36	*11/59½*	*12/03½*	*12/07½*				...	...	...	*12/20*	*12/25*	*12/29½*	*12/51*	...	...	
	mgn	37	...	**(½)**	**(2)**				...	...	...	...	...	...	...	...	...	
Newport (South Wales)	arr	38	**12.00½**	**12.05½**	**12.10½**				...	...	...	**12.21**	**12.26**	**12.31**	**12# 52**	...	...	
	plt	39	**2**	**2**	**2**				...	...	...	**2**	**2**	**2**	**2**	...	...	
	dep	40	**12.02½**	**12.07½**	**12.12½**				...	...	...	**12.23**	**12.28**	**12q33**	**12.54**	...	...	
	dep-line	41	**ML**	**ML**	**ML**				...	...	...	**ML**	**ML**	**ML**	**ML**	...	...	
	mgn	42	...	...	...			...	...	...	...	...	...	...	...	...	...	
Gaer Jn	dep	43	...	...	...			...	...	...	...	...	...	...	...	...	...	
	dep-line	44	...	...	...			...	...	...	...	...	...	...	...	...	...	
	mgn	45	...	...	...			...	...	...	...	...	...	...	...	...	...	
Ebbw Jn	dep	46	*12/05*	*12/10½*	*12/14½*			*12/21½*	...	...		*12/25½*	*12/30½*	*12/36*	*12/56½*	...	...	
	dep-line	47	**ML**	**ML**	**ML**			**ML**	...	...		**ML**	**ML**	**ML**	**ML**	...	...	
	mgn	48	**[2]**	**[1½]**	**[2]**			**[2]**	...	...		**[2]**	**[2]**	**[1½]**	**[2]**	...	...	
Marshfield	dep	49	*12/09½*	*12/14½*	*12/19*			*12/26*	...	...		*12/30*	*12/35*	*12/40*	*13/01*	...	...	
	mgn	50	**(½)**	**(½)**	...			...	...	...		...	...	...	...	...	...	
Cardiff Central	arr	51	**12y18**	**12.22**	**12.28**			**12.34**	...	...		**12.37**	**12.44**	**12# 47**	**13.09**	...	...	
	plt	52	**4A**	**3**	**4A**			**4B**	...	...		**3A**	**4**	**3**	**3A**	...	...	
	dep	53	...	...	...			...	...	...	...	**12r41**	...	**12q50**		...	...	...
			CDF arr 1 late	RT STJ to CDF arr1 late	RT STJ to CDF arr AB										CDF arr 1 late			

			161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
Signal ID			**2B65**	**1V94**	**2L55**	**2U14**	**1B27**	**1V07**				**2F30**		**1V39**	**1F14**	**1B28**		
Orig. Dep. Time				08.05		11.04	11.15	10.10				12.37		10.30	10.23	11.45		
Origin Loc. Name				Holyhead		Taunton	London Paddington	Nottingham				Ebbw Vale Town		Manchester Piccadilly	Portsmouth Harbour	London Paddington		
Dest. Loc. Name			Swansea		Maesteg									Milford H		Swansea		
Timing Load			**150**	**175**	**142**	**150**	**HST8-125**	**170**				**142**		**175**	**158**	**HST8-125**		
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**				**SX**		**SX**	**SX**	**SX**		
Patchway	dep	9	...	...	...	**12a35½**	*12/44½*	...		...	...	...	...	...	*13/04*	*13/12*	...	...
	mgn	10	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Pilning	dep	11	...	...	...	*12/39½*	*12/47½*	...		...	...	...	...	...	*13/07*	*13/15*	...	...
	mgn	12	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	...	...	...	*12/40½*	*12/48½*	...		...	...	...	...	...	*13/08*	*13/16*	...	...
	mgn	14	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	...	...	...	*12/44½*	*12/52*	...		...	...	...	...	...	*13/11½*	*13/19½*	...	...
	mgn	16	...	...	...	...	...	...		...	...	...	...	...	**(1)**	...	...	...
Gloucester	arr	17	...	...	...	...	...	**12.20**		...	...	...	...	...	...	...	...	...
	dep	18	...	...	...	...	...	**12.25**		...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	*12/37½*	...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	*12/42½*	...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	**12a51**	...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	...	(½)	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	**3**	...	...	...	...	...	...	...	...	...	...	...	...
	dep	28	...	...	...	**12ap47**	*12/53*	*12/59*	...	...	...	...	...	...	*13/13½*	*13/20½*	...	...
	dep-line	29	...	...	...	**RL**	**ML**	**ML**	...	...	...	...	...	...	**ML**	**ML**	...	...
	mgn	30	...	...	...		(½)	(½)	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep					**12.51**												
Magor crossovers	dep					*12/51½*												
	dep-line					**ML**												
	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	*12/55*	...	...	...	...	...	...	...	...	...	*13/19*	...	...	...	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	...	*12/56*	...	*12/58½*	*13/02*	*13/08*	...	...	...	...	...	*13/20*	*13/23*	*13/29*	...	...
	mgn	37	...	...	...	...	...	(1½)	...	...	...	...	...	...	(1)	...	...	...
Newport (South Wales)	arr	38	...	**12#57**	...	**13.00**	**13.03½**	**13.10½**	...	...	...	...	...	**13.21½**	**13v25**	**13.30½**	...	...
	plt	39	...	**2**	...	**1**	**2**	**2**	...	...	...	...	...	**1**	**2**	**2**	...	...
	dep	40	...	**12q59**	...	**13p02**	**13.05½**	**13.12½**	...	...	...	...	...	**13.23½**	**13p27**	**13p32½**	...	...
	dep-line	41	...	**ML**	...	**RL**	**ML**	**ML**	...	...	...	...	...	**RL**	**ML**	**ML**	...	...
	mgn	42	...	...	...	...	...	...	...	...	...	...	...	...	(1)	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	*13/25*	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	**ML**	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	...	*13/01½*	...	*13/05½*	*13/08½*	*13/15*	...	...	...	*13/23*	...	*13/26½*	*13/30½*	*13/35½*	...	...
	dep-line	47	...	**ML**	...	**RL**	**ML**	**ML**	...	...	...	**ML**	...	**ML**	**ML**	**ML**	...	...
	mgn	48	...	**[2]**	...	**[2]**	**[2]**	**[2]**	...	...	...	**[½]**	...	**[2]**	**[2]**	**[2]**	...	...
Marshfield	dep	49	...	*13/06*	...	*13/11½*	*13/13*	*13/19½*	...	...	...	*13/26*	...	*13/31*	*13/35*	*13/40*	...	...
	mgn	50	...	**(2)**	...	...	**(2)**	**(3½)**	...	...	...	...	...	**(1)**	...	...	...	...
Cardiff Central	arr	51	...	**13z18**	...	**13v21**	**13.22**	**13.3**	...	...	...	**13y34**	...	**13.39**	**13.44**	**13#47**	...	...
	plt	52	**4A**	**4A**	**3A**	**4**	**3**	**3A**	...	...	...	**4A**	...	**3**	**4A**	**3**	...	...
	dep	53	**13q15**	...	**13p19**	...	...	...	...	...	...	...	...	**13r44**	...	**13q50**	...	...
						CDF arr AB												

			177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
Signal ID			**2U16**	**2L57**	**1B31**	**1V08**			**2F38**			**1V40**	**1F16**	**1B35**				**2L59**
Orig. Dep. Time			12.08		12.15	11.10			13.37			11.3	11.23	12.45				13.45
Orig. Loc. Name			Taunton		London Paddington	Nottingham			Ebbw Vale Town			Manchester Piccadilly	Portsmouth Harbour	London Paddington				Cheltenham
Dest. Loc. Name												Carmarthen		Swansea				Maesteg
Timing Load			**150**	**142**	**HST8-125**	**170**			**142**			**175**	**158**	**HST8-125**				**142**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**			**SX**			**SX**	**SX**	**SX**				**SX**
Patchway	dep	9	**13a35½**	...	*13/44½*	...		...	...	...	...	...	*14/04*	*14/11*	...	...	...	...
	mgn	10	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	*13/39½*	...	*13/47½*	...		...	...	...	...	...	*14/07*	*14/14*	...	...	...	...
	mgn	12	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	*13/40½*	...	*13/48½*	...		...	...	...	...	...	*14/08*	*14/15*	...	...	...	...
	mgn	14	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	*13/44½*	...	*13/52*	...		...	...	...	...	...	*14/11½*	*14/18½*	...	...	...	...
	mgn	16	...	...	...	...		...	...	...	...	...	(½)	...	...	...	...	...
Gloucester	arr	17	...	...	...	**13.19½**		...	...	...	...	...	...	...	...	...	...	**13.57**
	dep	18	...	...	...	**13.25**	...	...	...	...	...	...	...	...	...	...	...	**13p59**
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	*13/37½*	...	...	...	...	...	...	...	...	...	...	...	*14/12*
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	**13a44**	...	...	...	...	...	...	...	...	...	...	...	**14ap18½**
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	*13/52*	...	...	...	...	...	...	...	...	...	...	...	**14ap28**
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**14ap36½**
Severn Tunnel Jn	plt	27	**3**	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**1**
	dep	28	**13ap47**	...	*13/53*	*13/59*	...	...	...	...	...	...	*14/13*	*14/19½*	...	...	...	**14ap39½**
	dep-line	29	**RL**	...	**ML**	**ML**	...	...	...	...	...	...	**ML**	**ML**	...	...	...	**RL**
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep		**13.51**															**14.43½**
Magor crossovers	dep		*13/51½*															*14/44*
	dep-line		**ML**															**ML**
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	*14/18*	...	...	...	...	...	...
	mgn	35	...	...	**(1)**	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*13/58½*	...	*14/02½*	*14/07½*	...	...	...	...	...	*14/19*	*14/23*	*14/28*	...	...	...	*14/51*
	mgn	37	...	...	(½)	(1½)	...	...	...	...	...	...	(1)	(½)	...	...	...	---->
Newport (South Wales)	arr	38	**13.59½**	...	**14#04½**	**14.10**	...	...	...	...	...	**14.20**	**14v25**	**14.30**	...	...	...	
	plt	39	**2**	...	**2**	**2**	...	...	...	...	...	**2**	**2**	**2**	...	...	...	
	dep	40	**14.01½**	...	**14#06½**	**14.12**	...	...	...	...	...	**14.22**	**14.27**	**14p32**	...	...	...	
	dep-line	41	**ML**	...	**ML**	**ML**	...	...	...	...	...	**ML**	**ML**	**ML**	...	...	...	
	mgn	42	...	...	...	...	...	...	...	...	...	**(1)**	...	...	...	...	...	
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*14/02½*	...	*14/09½*	*14/14½*	...	...	*14/21½*	...	...	*14/25½*	*14/29½*	*14/35*	...	...	...	...
	dep-line	47	**ML**	...	**ML**	**ML**	...	...	**ML**	...	...	**ML**	**ML**	**ML**	...	...	...	...
	mgn	48	**[2]**	...	**[1½]**	**[2]**	...	...	**[2]**	...	...	**[2]**	**[2]**	**[2]**	...	...	...	...
Marshfield	dep	49	*14/07*	...	*14/13½*	*14/19*	...	...	*14/26*	...	...	*14/30*	*14/34*	*14/39½*	...	...	...	...
	mgn	50	...	...	(½)	...	...	...	...	...	...	...	...	...	...	...	...	...
Cardiff Central	arr	51	**14y15**	...	**14v21**	**14.28**	...	...	**14y35**	...	...	**14.37**	**14w43**	**14#47**	...	...	...	...
	plt	52	**3A**	**4A**	**3**	**4A**	...	...	**4A**	...	...	**3A**	**4A**	**3**	...	...	...	...
	dep	53	...	**14.21**	...	...	...	...	...	...	...	**14.43**	...	**14q50**	...	...	...	...
			CDF arr AB		RT STJ to MSF arr CDF AB													

			193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208
Signal ID			**1V95**	**2L59**	**2U18**	**1B37**	**1V09**			**2F42**	**1V42**	**1F18**	**1B40**				**1B67**	
Orig. Dep. Time			10.40	13.45	13.08	13.15	12.10			14.37	12.30	12.23	13.45					
Orig. Loc. Name			Holyhead	Cheltenham Spa	Taunton	London Paddington	Nottingham			Ebbw Vale Town	Manchester Piccadilly	Portsmouth Harbour	London Paddington					
Dest. Loc. Name			Llanelli	Maesteg							Milford H		Swansea				Fishguard Harbour	
Timing Load			**175**	**142**	**150**	**HST8-125**	**170**			**150**	**175**	**150**	**HST8-125**				**142**	
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**	**SX**			**SX**	**SX**	**SX**	**SX**				**SX**	
Patchway	dep	9	...	...	**14ar38**	*14/44½*	...		...	...	...	*15/04*	*15/11½*	...	...	...	...	...
	mgn	10	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	...	...	*14/42*	*14/47½*	...		...	...	...	*15/07*	*15/14½*	...	...	...	...	...
	mgn	12	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	...	...	*14/43*	*14/48½*	...		...	...	...	*15/08*	*15/15½*	...	...	...	...	...
	mgn	14	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	...	...	*14/47*	*14/52*	...		...	...	...	*15/12*	*15/19*	...	...	...	...	...
	mgn	16	...	...	...	**(½)**	...		...	...	...	**(½)**	...	...	...	...	...	...
Gloucester	arr	17	...	...	...	...	**14.23**		...	...	...	...	...	...	...	...	...	...
	dep	18	...	...	...	...	**14.25**		...	...	...	...	...	...	...	...	**14.48**	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	*14/37½*	...	...	...	...	...	...	...	...	...	*15/01*	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	*14/42½*	...	...	...	...	...	...	...	...	...	**15a07½**	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	**14a51**	...	...	...	...	...	...	...	...	...	**15a17**	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**15a25½**	...
Severn Tunnel Jn	plt	27	...	...	**3**	...	...	...	...	...	...	...	...	...	...	...	**1**	...
	dep	28	...	...	**14ar49½**	*14/53½*	*14/58½*	...	...	...	...	*15/13½*	*15/20*	...	...	...	**15a28½**	...
	dep-line	29	...	...	**RL**	**ML**	**ML**	...	...	...	...	**ML**	**ML**	...	...	...	**RL**	...
	mgn	30	...	...	...	**(1½)**	**(½)**	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep				**14.53½**												**15.32½**	
Magor crossovers	dep				14/54												15/33	
	dep-line				**ML**												**ML**	
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	*14/52*	...	...	...	...	...	...	...	*15/17*	...	...	...	...	...	...	...
	mgn	35	...	<----	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*14/53*	*14/51*	*15/01*	*15/03½*	*15/07½*	...	...	...	*15/19*	*15/25½*	*15/29½*	...	...	...	*15/40*	...
	mgn	37	...	...	...	...	**(1½)**	...	...	...	...	...	**(½)**	...	...	...	...	...
Newport (South Wales)	arr	38	**14.54**	**14# 52**	**15#02½**	**15.05**	**15.10**	...	...	...	**15v20**	**15.26½**	**15#31½**	...	...	...	**15.41**	...
	plt	39	**3**	**2**	**1**	**2**	**2**	...	...	...	**3**	**2**	**2**	...	...	...	**1**	...
	dep	40	**14.56**	**15p00**	**15p04½**	**15p07**	**15.12**	...	...	...	**15.22**	**15p28½**	**15q33½**	...	...	...	**15.43**	...
	dep-line	41	**ML**	**ML**	**RL**	**ML**	**ML**	...	...	...	**ML**	**ML**	**ML**	...	...	...	**ML**	...
	mgn	42	...	...	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*14/58½*	*15/02½*	*15/08*	*15/10*	*15/14½*	...	...	*15/21½*	*15/25½*	*15/31*	*15/36½*	...	...	...	*15/45½*	...
	dep-line	47	**ML**	**ML**	**RL**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	...	...	**ML**	...
	mgn	48	**[2]**	*[2](1)*	**[2]**	**[2]**	**[2]**	...	...	**[2]**	**[2](1)**	**[2]**	**[1]**	...	...	...	**[2]**	...
Marshfield	dep	49	*15/03*	*15/08*	*15/14*	*15/14½*	*15/19*	...	...	*15/26*	*15/31*	*15/35½*	*15/40*	...	...	...	*15/50*	...
	mgn	50	...	...	...	...	**(4)**	...	...	...	**(1)**	...	...	...	...	...	...	...
Cardiff Central	arr	51	**15.10**	**15# 16**	**15v23**	**15.22**	**15.30**	...	...	**15y34**	**15.39**	**15.45**	**15#47½**	...	...	...	**15.58**	...
	plt	52	**3A**	**3A**	**4**	**3**	**3A**	...	...	**4A**	**3A**	**4A**	**3**	...	...	...	**3A**	...
	dep	53	**15.13**	**15.19**	...	...	...	...	...	...	**15r42**	...	**15q50½**	...	...	...	**16@04**	...
				NWP arr AB	NWP arr AB												CDF arr ½ late	

			209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
Signal ID			**2U20**	**2L61**	**1B42**	**1V10**			**2F46**	**1F20**		**1B46**				**1V44**	**1V96**	**2U22**
Orig. Dep. Time			12.48		14.15	13.10			15.37	13.23		14.45				13.30	12.32	14.57
Orig. Loc. Name			Paignton		London Paddington	Nottingham			Ebbw Vale Town	Portsmouth Harbour		London Paddington				Manchester Piccadilly	Holyhead	Taunton
Dest. Loc. Name				Maesteg					Bridgend			Swansea				Tenby	Maesteg	
Timing Load			**150**	**150**	**HST8-125**	**170**			**150**	**158**		**HST8-125**				**175**	**175**	**150**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**	**SX**			**SX**	**SX**		**SX**				**SX**	**SX**	**SX**
Patchway	dep	9	**15bp36**	...	*15/48*	...		...	...	*16/04*	...	*16/11*	...	...	...	...	...	**16ap38**
	mgn	10	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	*15/40*	...	*15/51*	...		...	...	*16/07*	...	*16/14*	...	...	...	...	...	*16/42*
	mgn	12	**(1)**	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13	*15/42*	...	*15/52*	...		...	...	*16/08*	...	*16/15*	...	...	...	...	...	*16/43*
	mgn	14	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	*15/46*	...	*15/55½*	...		...	...	*16/11½*	...	*16/18½*	...	...	...	...	...	*16/47*
	mgn	16	...	...	...	...		...	...	**(½)**	...	...	...	...	...	...	...	...
Gloucester	arr	17	...	...	...	**15.19½**		...	...	...	...	...	...	...	...	...	...	...
	dep	18	...	...	...	**15.25**	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	*15/37½*	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	*15/42½*	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	**15a51**	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	**(2)**	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	**3**	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**3**
	dep	28	**15ap48½**	...	*15/56½*	*16/00½*	...	...	...	*16/13*	...	*16/19½*	...	...	...	...	...	**16ap49½**
	dep-line	29	**RL**	...	**ML**	**ML**	...	...	...	**ML**	...	**ML**	...	...	...	...	...	**RL**
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep		**15.52½**															**16.53½**
Magor crossovers	dep		15/53															16/54
	dep-line		**ML**															**ML**
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	...	...	...	...	*16/36½*	*16/57*	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*16/00*	...	*16/05*	*16/09*	...	...	...	*16/22½*	...	*16/28½*	...	...	...	*16/37½*	*16/58*	*17/01½*
	mgn	37	...	...	...	**(1½)**	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	38	**16.01**	...	**16.06½**	**16.11½**	...	...	...	**16v23½**	...	**16.30**	...	...	...	**16.38½**	**16.59**	**17#03**
	plt	39	**2**	...	**2**	**2**	...	...	...	**2**	...	**2**	...	...	...	**2**	**2**	**1**
	dep	40	**16.03**	...	**16p08½**	**16.13½**	...	...	...	**16.25½**	...	**16p32**	...	...	...	**16.40½**	**17.01**	**17p05**
	dep-line	41	**ML**	...	**ML**	**ML**	...	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	**RL**
	mgn	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*16/05½*	...	*16/11½*	*16/16*	...	...	*16/21½*	*16/28*	...	*16/35*	...	...	...	*16/43*	*17/03½*	*17/08½*
	dep-line	47	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**	...	**ML**	...	...	...	**ML**	**ML**	**RL**
	mgn	48	**[2]**	...	**[2]**	**[2]**	...	...	**[2]**	**[2]**	...	**[2]**	...	...	...	**[2]**	**[2]**	**[2](2½)**
Marshfield	dep	49	*16/10*	...	*16/16*	*16/20½*	...	...	*16/26*	*16/32½*	...	*16/39½*	...	...	...	*16/47½*	*17/08*	*17/17*
	mgn	50	...	...	...	**(1½)**	...	...	...	...	...	...	...	...	...	**(2½)**	...	**(1)**
Cardiff Central	arr	51	**16v18**	...	**16.23**	**16.29**	...	...	**16#35**	**16y42**	...	**16#47**	...	...	...	**16.57**	**17.15**	**17.27**
	plt	52	**4A**	**3A**	**3**	**3A**	...	...	**4**	**4A**	...	**3**	...	...	...	**3**	**3A**	**3A**
	dep	53	...	**16.18**	...	...	...	...	**16.37**	...	...	**16q50**	...	...	...	**17.04**	**17#22**	...
			CDF arr AB															NWP arr AB

			225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
Signal ID			**1B48**	**1V11**			**2B71**		**1V46**	**1F24**	**1B51**				**2B69**	**2L65**	**2U24**	
Orig. Dep. Time			15.15	14.10			16.37		14.3	14.23	15.45					16.46	16.07	
Orig. Loc. Name			London Paddington	Nottingham			Ebbw Vale Town		Manchester Piccadilly	Portsmouth Harbour	London Paddington					Cheltenham Spa	Taunton	
Dest. Loc. Name									Milford H		Swansea				Swansea	Maesteg		
Timing Load			**HST8-125**	**170**			**150**		**175**	**158**	**HST8-125**				**150**	**142**	**150**	
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**			**SX**		**SX**	**SX**	**SX**				**SX**	**SX**	**SX**	
Patchway	dep	9	*16/44*	...		...	...	...	...	*17/06*	*17/11*	...	...	...	...	...	**17a35½**	...
	mgn	10	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	*16/47*	...		...	...	...	...	*17/09*	*17/14*	...	...	...	...	...	*17/39½*	...
	mgn	12	**(½)**	...		...	...	...	...	...	**(½)**	...	...	...	...	...	**[1]**	...
Severn Tunnel East	dep	13	*16/48½*	...		...	...	...	...	*17/10*	*17/15½*	...	...	...	...	...	*17/41½*	...
	mgn	14	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15	*16/52*	...		...	...	...	...	*17/13½*	*17/19*	...	...	...	...	...	*17/45½*	...
	mgn	16	**(½)**	...		...	...	...	...	...	**(½)**	...	...	...	...	...	...	...
Gloucester	arr	17	...	**16.20**		...	...	...	...	...	...	...	...	...	...	**16#58**	...	...
	dep	18	...	**16.25**		...	...	...	...	...	...	...	...	...	...	**17q00**	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	*16/37½*	...	...	...	...	...	...	...	...	...	...	...	*17/13*	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	**16a44**	...	...	...	...	...	...	...	...	...	...	...	**17aq19½**	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	**16a53½**	...	...	...	...	...	...	...	...	...	...	...	**17aq29**	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	**17aq37½**	...	...
Severn Tunnel Jn	plt	27	...	...	...	...	...	...	...	**3**	...	...	...	...	...	**1**	**3**	...
	dep	28	*16/53½*	*17/01*	...	...	...	...	...	**17a16**	*17/20½*	...	...	...	...	**17aq40½**	**17aq48**	...
	dep-line	29	**ML**	**ML**	...	...	...	...	...	**ML**	**ML**	...	...	...	...	**RL**	**RL**	...
	mgn	30	**(2)**	...	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...	...
Magor & Undy	dep															**17.44½**	**17.52**	
Magor crossovers	dep															17/45	17/52½	
	dep-line															**ML**	**ML**	
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	*17/17*	...	...	...	...	...	...	...	...	...
	mgn	35	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*17/04*	*17/09½*	...	...	...	...	*17/19*	*17/25½*	*17/30*	...	...	...	...	*17/52*	17/59½	...
	mgn	37	...	...	...	...	...	...	...	...	**(½)**	...	...	...	...	...	...	...
Newport (South Wales)	arr	38	**17.05½**	**17.10½**	...	...	...	...	**17v20**	**17.26½**	**17.32**	...	...	...	...	**17#53**	**18.00½**	...
	plt	39	**2**	**2**	...	...	...	...	**2**	**2**	**2**	...	...	...	...	**2**	**2**	...
	dep	40	**17p07½**	**17.12½**	...	...	...	...	**17.22**	**17.28½**	**17p34**	...	...	...	...	**17q55**	**18.02½**	...
	dep-line	41	**ML**	**ML**	...	...	...	...	**ML**	**ML**	**ML**	...	...	...	...	**ML**	**ML**	...
	mgn	42	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*17/10½*	*17/15*	...	...	*17/21½*	...	*17/25½*	*17/31*	*17/37*	...	...	...	...	*17/57½*	*18/05*	...
	dep-line	47	**ML**	**ML**	...	...	**ML**	...	**ML**	**ML**	**ML**	...	...	...	...	**ML**	**ML**	...
	mgn	48	**[2]**	**[2]**	...	...	**[2]**	...	**[2](1)**	**[2]**	**[2]**	...	...	...	...	**[2]**	**[2]**	...
Marshfield	dep	49	*17/15*	*17/19½*	...	...	*17/26*	...	*17/31*	*17/35½*	*17/41½*	...	...	...	...	*18/02*	18/09½	...
	mgn	50	...	**(3½)**	...	...	...	...	**(1)**	...	...	...	...	...	...	...	**(½)**	...
Cardiff Central	arr	51	**17.24**	**17.30**	...	...	**17y34**	...	**17.39**	**17.45**	**17#48½**	...	...	...	...	**18v10**	**18w18**	...
	plt	52	**4**	**3**	...	...	**4B**	...	**3A**	**4A**	**3**	...	...	...	**4B**	**4A**	**3A**	...
	dep	53	...	...	...	...	...	...	**17@p41**	...	**17p51½**	...	...	...	**18.04**	**18.12**	...	...
																CDF arr 1 late	CDF arr 3 late	

			241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256
Signal ID			**1B55**	**1V12**			**2F61**	**1F26**		**1B59**			**1V48**	**2L67**	**1V97**	**2U26**	**1B63**	**1V13**
Orig. Dep. Time			16.15	15.10			17.37	15.23		16.45			15.3	17.45	14.34	17.06	17.15	16.10
Orig. Loc. Name			London P	Nottingham			Ebbw Vale Town	Portsmouth		London P			Manchester	Cheltenham Spa	Holyhead	Taunton	London P	Nottingham
Dest. Loc. Name			Swansea							Swansea			Carmarthen	Maesteg			Carmarthen	
Timing Load			**HST8-125**	**170**			**150**	**158**		**HST8-125**			**175**	**142**	**175**	**150**	**HST8-125**	**170**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**			**SX**	**SX**		**SX**			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**
Patchway	dep	9	*17/48*	...		...	...	*18/04*	...	*18/11½*	...	...	...	...	...	**18a37½**	*18/45*	...
	mgn	10	...	...		...	...	**(½)**	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	*17/51*	...		...	...	*18/07½*	...	*18/14½*	...	...	...	...	...	*18/41½*	*18/48*	...
	mgn	12	...	...		...	...	...	...	...	...	...	...	...	...	**(1½)**	**(½)**	...
Severn Tunnel East	dep	13	*17/52*	...		...	...	*18/08½*	...	*18/15½*	...	...	...	...	...	*18/44*	*18/49½*	...
	mgn	14	...	...		...	...	...	...	...	...	...	...	...	...	**(2)**	**(2)**	...
Severn Tunnel West	dep	15	*17/55½*	...		...	...	*18/12*	...	*18/19*	...	...	...	...	...	*18/50*	*18/55*	...
	mgn	16	...	...		...	...	...	...	...	...	...	...	...	...	...	**(2)**	...
Gloucester	arr	17	...	**17.23**		...	...	...	...	...	...	...	...	**17#58**	...	...	...	**18.27½**
	dep	18	...	**17.25**	...	...	...	...	...	...	...	...	...	**18q00**	...	...	...	**18.31**
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	*17/37½*	...	...	...	...	...	...	...	...	...	*18/13*	...	...	...	*18/43½*
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	**17a44**	...	...	...	...	...	...	...	...	...	**18aq19½**	...	...	...	*18/48½*
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	*17/52*	...	...	...	...	...	...	...	...	...	**18aq29**	...	...	...	*18/55½*
	mgn	25	...	**(1½)**	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	**18aq37½**	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	...	...	**3**	...	...	...	...	...	**1**	...	**3**	...	...
	dep	28	*17/56½*	*18/00½*	...	...	...	**18a14½**	...	*18/20*	...	...	...	**18aq40½**	...	**18a#52½**	*18/58*	*19/02½*
	dep-line	29	**ML**	**ML**	...	...	...	**ML**	...	**ML**	...	...	...	**RL**	...	**RL**	**ML**	**ML**
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**(1½)**
Magor & Undy	dep													**18.44½**		**18.56½**		
Magor crossovers	dep													18/45		18/57		
	dep-line													**ML**		**ML**		
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	...	*18/37*	...	*18/56½*	...	...	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	**[1]**	...	**(½)**	...
Maindee West Jn	dep	36	*18/05*	*18/09*	...	...	...	*18/24*	...	*18/28½*	...	...	*18/38*	*18/52*	*18/58½*	*19/04*	*19/08*	*19/14½*
	mgn	37	...	**(1½)**	...	...	...	...	...	...	...	...	...	...	...		**(½)**	...
Newport (South Wales)	arr	38	**18.06½**	**18#11½**	...	...	...	**18.25**	...	**18.30**	...	...	**18.39**	**18#53**	**18.59½**	**19.05**	**19.10**	**19.15½**
	plt	39	**2**	**2**	...	...	...	**2**	...	**2**	...	...	**2**	**2**	**2**	**2**	**2**	**2**
	dep	40	**18.08½**	**18p13½**	...	...	...	**18.27**	...	**18p32**	...	...	**18.41**	**18p55**	**19.01½**	**19.07**	**19.12**	**19.17½**
	dep-line	41	**ML**	**ML**	...	...	...	**ML**	...	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	**ML**	**ML**
	mgn	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*18/11½*	*18/16*	...	...	*18/21½*	*18/29½*	...	*18/35*	...	...	*18/43½*	*18/57½*	*19/04*	*19/09½*	*19/15*	*19/20*
	dep-line	47	**ML**	**ML**	...	...	**ML**	**ML**	...	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	**ML**	**ML**
	mgn	48	**[2]**	**[2]**	...	...	**[2]**	**[2]**	...	**[2]**	...	...	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**
Marshfield	dep	49	*18/16*	*18/20½*	...	...	*18/26*	*18/34*	...	*18/39½*	...	...	*18/48*	*19/02*	*19/08½*	*19/14*	*19/19½*	*19/24½*
	mgn	50	...	...	...	...	...	**(2)**	...	**(2½)**	...	...	...	...	**(1)**	**(2)**	...	**(1½)**
Cardiff Central	arr	51	**18#23**	**18.30**	...	...	**18y34**	**18.43**	...	**18#49**	...	...	**18.55**	**19.10**	**19y17**	**19.24**	**19#26½**	**19.33**
	plt	52	**3**	**4A**	...	...	**3**	**3A**	...	**3A**	...	...	**3**	**3A**	**3A**	**4**	**3**	**3A**
	dep	53	**18.27**	...	...	...	...	...	...	**18q52**	...	...	**19.04**	**19#14**	...	...	**19p30**	...
														CDF arr 1 late		CDF arr AB	RT STJ to CDF arr ½ late	

			257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272
Signal ID					**2F74**	**1V50**	**1F28**	**1B69**	**2L69**				**2U28**		**1B76**	**1V14**		**2F79**
Orig. Dep. Time					18.37	16.30	16.23	17.45	18.45				18.08		18.15	17.10		19.37
Orig. Loc. Name					Ebbw Vale Town	Manchester Piccadilly Milford H	Portsmouth Harbour	London Paddington Swansea	Cheltenham Spa Maesteg				Taunton		London Paddington Swansea	Nottingham		Ebbw Vale Town
Dest. Loc. Name																		
Timing Load					**142**	**175**	**158**	**HST8-125**	**142**				**150**		**HST8-125**	**170**		**142**
Operating Characteristics																		
Dates Of Operation					**SX**	**SX**	**SX**	**SX**	**SX**				**SX**		**SX**	**SX**		**SX**
Patchway	dep	9			...	...	*19/05*	*19/13½*	...	...	...	...	**19p36½**	...	*19/47*	...		...
	mgn	10			...	...	...	...	...	...	...	...	**[2]**	...	...	...		...
Pilning	dep	11			...	...	*19/08*	*19/16½*	...	...	...	...	*19/42½*	...	*19/50*	...		...
	mgn	12			...	...	...	...	...	...	...	...	...	...	...	...		...
Severn Tunnel East	dep	13			...	...	*19/09*	*19/17½*	...	...	...	...	*19/43½*	...	*19/51*	...		...
	mgn	14			...	...	...	...	...	...	...	...	...	...	...	...		...
Severn Tunnel West	dep	15			...	...	*19/12½*	*19/21*	...	...	...	...	*19/47½*	...	*19/54½*	...		...
	mgn	16			...	...	...	**(1)**	...	...	...	...	...	...	...	...		...
Gloucester	arr	17			...	...	...	...	**18.58**	...	...	...	...	...	...	**19.22½**		...
	dep	18			...	...	...	...	**19.00½**	...	...	...	...	...	...	**19.25**		...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	...	*19/13½*	...	...	...	...	...	...	*19/37½*	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	...	**19a20**	...	...	...	...	...	...	*19/42½*	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	...	**19a29½**	...	...	...	...	...	...	*19/49½*	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	**(5)**	...	...
Caldicot	dep	26	...	...	...	...	...	...	**19ap38**	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	...	**3**	...	**1**	...	...	...	**3**	...	...	...	...	...
	dep	28	...	...	...	...	**19ap15**	*19/23*	**19ap41**	...	...	...	**19a#50**	...	*19/55½*	*20/01½*	...	...
	dep-line	29	...	...	...	...	**ML**	**ML**	**RL**	...	...	...	**RL**	...	**ML**	**ML**	...	...
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep								**19.45**				**19.54**					
Magor crossovers	dep								19/45½				19/54½					
	dep-line								**ML**				**ML**					
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	*19/17*	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	35	...	...	...	**(1)**	...	...	...	...	...	...	...	...	**(1½)**	(½)	...	...
Maindee West Jn	dep	36	...	...	...	*19/19*	*19/24½*	*19/31½*	*19/52½*	...	...	...	*20/01½*	...	*20/05½*	*20/09½*	...	...
	mgn	37	...	...	...	...	...	...	...	...	...	...	...	...	(½)	(2)	...	...
Newport (South Wales)	arr	38	...	...	...	**19v20½**	**19.25½**	**19.33**	**19.53½**	...	...	...	**20.02½**	...	**20#07½**	**20.12½**	...	...
	plt	39	...	...	...	**2**	**2**	**2**	**2**	...	...	...	**2**	...	**2**	**2**	...	...
	dep	40	...	...	...	**19.22½**	**19p27½**	**19q35**	**19.55½**	...	...	...	**20p04½**	...	**20q09½**	**20.14½**	...	...
	dep-line	41	...	...	...	**ML**	**ML**	**ML**	**ML**	...	...	...	**ML**	...	**ML**	**ML**	...	...
	mgn	42	...	...	...	**(2½)**	**(½)**	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	...	...	*19/24*	*19/27½*	*19/30½*	*19/38*	*19/58*	...	...	...	*20/07*	...	*20/12½*	*20/17*	...	*20/21½*
	dep-line	47	...	...	**ML**	**ML**	**RL**	**ML**	**ML**	...	...	...	**ML**	...	**ML**	**ML**	...	**ML**
	mgn	48	...	...	**[2]**	**[2](1½)**	**[2]**	**[2]**	**[2]**	...	...	...	**[2]**	...	**[2]**	**[2]**	...	**[2]**
Marshfield	dep	49	...	...	*19/28½*	*19/33½*	*19/37*	*19/42½*	*20/02½*	...	...	...	*20/11½*	...	*20/17*	*20/21½*	...	*20/26*
	mgn	50	...	...	**(½)**	**(2½)**	...	**(½)**	...	...	...	...	...	...		**(½)**	...	...
Cardiff Central	arr	51	...	...	**19y37**	**19.43**	**19.46**	**19#50**	**20w10½**	...	...	...	**20w19½**	...	**20#24**	**20.29**	...	**20y34**
	plt	52	...	...	**4A**	**3A**	**4**	**3A**	**3A**	...	...	...	**4**	...	**3**	**4B**	...	**3A**
	dep	53	...	...	...	**19.46**	...	**19p53**	**20.13**	...	...	...	...	...	**20p26**	...	...	...
									CDF arr ½ late				CDF arr ½ late		RT STJ to CDF arr 1 late	RT STJ to CDF arr AB		

			273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288
Signal ID			**1F30**		**1V65**	**1B79**	**1V58**	**2B73**	**2B73**	**1V65**	**2L71**					**1B81**	**1B81**	**1V15**
Orig. Dep. Time			17.23		17.05	18.45	17.30			17.05	19.45					19.15	19.15	18.1
Orig. Loc. Name			Portsmouth Harbour		Manchester Piccadilly	London Paddington	Manchester Piccadilly			Manchester Piccadilly	Cheltenham Spa					London Paddington	London Paddington	Nottingham
Dest. Loc. Name					Cardiff Central	Swansea		Milford Haven	Milford Haven		Maesteg					Swansea	Swansea	
Timing Load			**158**		**221**	**HST8-125**	**175**	**175**	**175**	**221**	**142**					**HST8-125**	**HST8-125**	**170**
Operating Characteristics																		
Dates Of Operation			**SX**		**SX**	**SX**	**SX**	**FO**	**FSX**	**SX**	**SX**					**FSX**	**FO**	**SX**
Patchway	dep	9	*20/05*	...	**20a25½**	*20/11*	...	...	...	...	...		...	...	...	*20/45*	*20/46½*	...
	mgn	10	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...
Pilning	dep	11	*20/08*	...	*20/29*	*20/14*	...	...	...	...	...		...	...	...	*20/48*	*20/49½*	...
	mgn	12	**(1)**	...	**(1)**	...	...	...	...	...	...		...	...	...	...	...	...
Severn Tunnel East	dep	13	*20/10*	...	*20/31*	*20/15*	...	...	...	...	...		...	...	...	*20/49*	*20/50½*	...
	mgn	14	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...
Severn Tunnel West	dep	15	*20/13½*	...	*20/35*	*20/18½*	...	...	...	...	...		...	...	...	*20/52½*	*20/54*	...
	mgn	16	**(½)**	...	...	**(1)**	...	...	...	...	...		...	...	...	...	...	...
Gloucester	arr	17	...	...	...	...	...	...	...	...	**19#58**		...	...	...	...	...	**20.20**
	dep	18	...	...	...	...	...	...	...	...	**20q00**		...	...	...	...	...	**20.25**
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	...	...	...	*20/13*	...	...	...	...	...	...	*20/37½*
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	...	...	...	**20aq19½**	...	...	...	...	...	...	*20/42½*
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	...	...	...	**20aq29**	...	...	...	...	...	...	*20/49½*
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**(3)**
Caldicot	dep	26	...	...	...	...	...	...	...	...	**20ar38**	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	**3**	...	**3**	...	...	...	...	...	**1**	...	...	...	...	...	...	...
	dep	28	**20a16½**	...	**20a37**	*20/20½*	...	...	...	...	**20ar41**	...	...	...	...	*20/53½*	*20/55*	*20/59½*
	dep-line	29	**ML**	...	**ML**	**ML**	...	...	...	...	**RL**	...	...	...	...	**ML**	**ML**	**ML**
	mgn	30	...	...	...	**(1)**	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep										**20.45**							
Magor crossovers	dep										20.45½							
	dep-line										**ML**							
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	*20/34*	...	...	...	...	...	...	...	...	...	...	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	*20/26*	...	*20/46*	*20/30½*	*20/35*	...	...	**<----**	*20/52½*	...	...	...	...	*21/02*	*21/03½*	*21/08*
	mgn	37	...	...	...	...	**(1)**	...	...	...	...	...	...	...	...	...	...	**(1)**
Newport (South Wales)	arr	38	**20.27**	...	**20.47**	**20#32**	**20U37**	...	...	**20.47**	**20#53½**	...	...	...	...	**21.03½**	**21.05**	**21.10**
	plt	39	**3**	...	**2**	**3**	**2**	...	...	**2**	**2**	...	...	...	...	**2**	**2**	**2**
	dep	40	**20p29**	...	**20.49**	**20p34**	**20r42**	...	...	**20.49**	**20q55½**	...	...	...	...	**21.05½**	**21.07**	**21.12**
	dep-line	41	**ML**	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	...	...	...	...	**ML**	**ML**	**ML**
	mgn	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	**----->**	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	*20/31½*	...	...	*20/37*	*20/44½*	...	...	*20/51½*	*20/58*	...	...	...	...	*21/08½*	*21/10*	*21/14½*
	dep-line	47	**ML**	...	...	**ML**	**ML**	...	...	**ML**	**ML**	...	...	...	...	**ML**	**ML**	**ML**
	mgn	48	**[2]**	...	...	**[2]**	**[2]**	...	...	**[2]**	**[2]**	...	...	...	...	**[2]**	**[2]**	**[2]**
Marshfield	dep	49	*20/36*	...	...	*20/41½*	*20/49*	...	...	*20/56*	*21/02½*	...	...	...	...	*21/13*	*21/14½*	*21/19*
	mgn	50	...	...	...	**(½)**	**(2)**	...	...	...	...	...	...	...	...	...	**(½)**	**(2)**
Cardiff Central	arr	51	**20.46**	...	...	**20#49**	**20#58**	...	...	**21.05**	**21.10½**	...	...	...	...	**21#20**	**21#22**	**21.28**
	plt	52	**4A**	...	...	**3**	**3**	**3**	**4A**	**4**	**3**	...	...	...	...	**3**	**3**	**3A**
	dep	53	...	...	...	**20p55**	...	**21.04**	**21.04**	...	**21@r13**	...	...	...	...	**21p25**	**21p25**	...
											CDF arr ½ late							

			289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
Signal ID					**1V98**			**2F83**	**1F32**	**1V62**		**1V62**	**2U32**	**2U32**	**1B88**	**1W80**	**1B88**	**1B88**
Orig. Dep. Time					16.50			20.41	18.23	18.3		18.30	21.19	21.19	20.15	21.55	20.15	20.15
Orig. Loc. Name					Holyhead			Ebbw Vale Town	Portsmouth	Manchester		Manchester	Bristol TM	Bristol TM	London	Cardiff Central	London P	London P
Dest. Loc. Name										Carmarthen		Carmarthen			Swansea	Crewe	Swansea	Swansea
Timing Load					**175**			**142**	**158**	**175**		**175**	**150**	**150**	**HST8-125**	**150**	**HST8-125**	**HST8-125**
Operating Characteristics																		
Dates Of Operation					**SX**			**SX**	**SX**	**FSX**		**FO**	**SX Until 01/04/2016**	**SX From 04/04/2016**	**FO**	**FSX From 04/04/2016**	**FSX Until 31/03/2016**	**FSX From 04/04/2016**
Patchway	dep	9		...	...	...	...	...	*21/05*	...	...	...	**21.34½**	**21.34½**	*21/44½*	...	*21/44½*	*21/44½*
	mgn	10		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11		...	...	...	...	...	*21/08*	...	...	...	*21/38½*	*21/38½*	*21/47½*	...	*21/47½*	*21/47½*
	mgn	12		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	13		...	...	...	...	...	*21/09*	...	...	...	*21/39½*	*21/39½*	*21/48½*	...	*21/48½*	*21/48½*
	mgn	14		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	15		...	...	...	...	...	*21/12½*	...	...	...	*21/43½*	*21/43½*	*21/52*	...	*21/52*	*21/52*
	mgn	16		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gloucester	arr	17		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	18		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	...	...	...	**3**	...	...	...	**3**	**3**	...	...	...	...
	dep	28	...	...	...	...	...	...	**21ap15**	...	...	...	**21a46**	**21a46**	*21/53*	...	*21/53*	*21/53*
	dep-line	29	...	...	...	...	...	...	**ML**	...	...	...	**RL**	**RL**	**ML**	...	**ML**	**ML**
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep												**21.50**	**21.50**				
Magor crossovers	dep												21.50½	21.50½				
	dep-line												**ML**	**ML**				
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/28*	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	**[1]**	...	...
Maindee North Jn	dep	34	...	...	*21/05½*	...	...	...	...	*21/45*	...	*21/45*	...	...	...	*22/31*	...	...
	mgn	35	...	...	**(4)**	...	...	...	...	**(3)**	...	**(3)**	...	...	...	...	...	...
Maindee West Jn	dep	36	...	...	*21/10½*	...	...	...	*21/24½*	*21/49*	...	*21/49*	*21/57½*	*21/57½*	*22/01½*	...	*22/01½*	*22/02*
	mgn	37	...	...	**(2½)**	...	...	...	...	...	...	...	...	...	**(½)**	...	**(½)**	...
Newport (South Wales)	arr	38	...	...	**21.14**	...	...	...	**21.25½**	**21.50**	...	**21.50**	**21v58½**	**21v58½**	**22.03½**	...	**22.03**	**22.04**
	plt	39	...	...	**2**	...	...	...	**2**	**2**	...	**2**	**2**	**2**	**2**	...	**2**	**1**
	dep	40	...	...	**21.16**	...	...	...	**21p27½**	**21.52**	...	**21.52**	**22.00½**	**22.00½**	**22.05½**	...	**22.05½**	**22.06**
	dep-line	41	...	...	**ML**	...	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...	**ML**	**RL**
	mgn	42	...	...	**(2)**	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	...	...	*21/20½*	...	...	*21/25½*	*21/30*	*21/54½*	...	*21/54½*	*22/03*	*22/03*	*22/08½*	...	*22/08½*	*22/10*
	dep-line	47	...	...	**ML**	...	...	**ML**	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...	**RL**	**ML**
	mgn	48	...	...	**[2]**	...	...	**[2]**	**[2]**	**[2]**	...	**[2]**	**[2]**	**[2]**	**[2]**	...	**[2]**	**[2]**
Marshfield	dep	49	...	...	*21/25*	...	...	*21/31*	*21/34½*	*21/59*	...	*21/59*	*22/07½*	*22/07½*	*22/13*	...	*22/15*	*22/15*
	mgn	50	...	...	**(1)**	...	...	...	**(2½)**	...	...	...	...	...	**(1½)**	...	...	...
Cardiff Central	arr	51	...	...	**21z33**	...	...	**21y39**	**21v44**	**22.06**	...	**22.06**	**22y15½**	**22y15½**	**22w21½**	...	**22#24½**	**22#22½**
	plt	52	...	...	**3**	...	...	**3A**	**3B**	**3A**	...	**3A**	**4B**	**4B**	**3**	...	**3**	**3**
	dep	53	...	...	...	...	...	...	...	**22q11**	...	**22q11**	...	...	**22p27**	...	**22p27**	**22p27**
													CDF arr ½ late	CDF arr ½ late	RT MWJ to CDF arr ½ late		RT MWJ to CDF arr ½ late	

			305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320
Signal ID			**1B88**	**1V16**	**1V16**	**1V16**	**1V16**		**2F87**	**2L73**	**2F87**	**2F87**		**5S70**	**5S70**	**5S70**	**5S70**	**5S70**
Orig. Dep. Time			20.15	19.10	19.10	19.10	19.10		21.37		21.37	21.37		21.05	21.05	21.05	21.05	21.05
Orig. Loc. Name			London Paddington	Nottingham	Nottingham	Nottingham	Nottingham		Ebbw Vale Town		Ebbw Vale Town	Ebbw Vale Town		Cheltenham Spa	Cheltenham Spa	Cheltenham Spa	Cheltenham Spa	Cheltenham Spa
Dest. Loc. Name			Swansea							Maesteg				Swansea	Swansea	Swansea	Swansea	Swansea
Timing Load			**HST8-125**	**170**	**170**	**170**	**170**		**150**	**150**	**142**	**150**		**HST8-125**	**HST8-125**	**HST8-125**	**HST-OEO**	**HST8-125**
Operating Characteristics														**DQ**	**DQ**	**DQ**	**D**	**DQ**
Dates Of Operation			**FSX Until 31/03/2016**	**FSX Until 31/12/2015**	**FSX From 04/01/2016 Until 31/03/2016**	**FO**	**FSX From 04/04/2016**		**FSX Until 31/12/2015**	**SX**	**FO**	**FSX From 04/04/2016**		**FSX Until 31/12/2015**	**FSX From 04/01/2016 Until 31/03/2016**	**FSX From 04/04/2016**	**FSX From 04/04/2016**	**FSX Until 31/12/2015**
Patchway	dep	9	...	...	...	...	...	...	...	...	...	...	...	*21/57½*	*21/57½*	*21/57½*	*21/58*	...
	mgn	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	11	...	...	...	...	...	...	...	...	...	...	...	*22/00½*	*22/00½*	*22/00½*	*22/01*	...
	mgn	12	...	...	...	...	...	...	...	...	...	...	...	**(½)**	**(½)**	**(½)**	...	...
Severn Tunnel East	dep	13	...	...	...	...	...	...	...	...	...	...	...	*22/02*	*22/02*	*22/02*	*22/02*	...
	mgn	14	...	...	...	...	...	...	...	...	...	...	...	**(2)**	**(2)**	**(2)**	**(1)**	...
Severn Tunnel West	dep	15	...	...	...	...	...	...	...	...	...	...	...	*22/08*	*22/08*	*22/08*	*22/08*	...
	mgn	16	...	...	...	...	...	...	...	...	...	...	...	**(2)**	**(2)**	**(2)**	**(1½)**	...
Gloucester	arr	17	...	**21#19**	**21#19**	**21#19**	**21#19**	...	...	...	...	...	...	...	...	...	...	...
	dep	18	...	**21.21**	**21.21**	**21.21**	**21.21**	...	...	...	...	...	...	...	...	...	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	*21/33½*	*21/33½*	*21/33½*	*21/33½*	...	...	...	...	...	...	...	...	...	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	**21a40**	**21a40**	**21a40**	**21a40**	...	...	...	...	...	...	...	...	...	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	**21a49½**	**21a49½**	**21a49½**	**21a49½**	...	...	...	...	...	...	...	...	...	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	26	...	**21a58**	**21a58**	**21a58**	**21a58**	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	**1**	**1**	**1**	**1**	...	...	...	...	...	...	...	...	...	...	...
	dep	28	...	**22a01**	**22a01**	**22a01**	**22a01**	...	...	...	...	...	...	*22/11*	*22/11*	*22/11*	*22/11*	...
	dep-line	29	...	**ML**	**ML**	**ML**	**ML**	...	...	...	...	...	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor & Undy	dep																	
Magor crossovers	dep																	
	dep-line																	
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	...	*22/10½*	*22/10½*	*22/10½*	*22/12½*	...	...	...	...	...	...	*22/19½*	*22/19½*	*22/21*	*22/21*	...
	mgn	37	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	38	...	**22.11½**	**22.11½**	**22.12**	**22.14**	...	...	...	...	...	...	...	...	...	...	...
	plt	39	...	**2**	**2**	**1**	**2**	...	...	...	...	...	...	...	...	...	...	...
	dep	40	...	**22.13½**	**22.13½**	**22p14**	**22.15½**	...	...	...	...	...	...	*22/21*	*22/21*	*22/22½*	*22/22½*	...
	dep-line	41	...	**ML**	**RL**	**RL**	**RL**	...	...	...	...	...	...	**ML**	**ML**	**RL**	**RL**	...
	mgn	42	...	...	...	...	...	...	...	...	...	...	...	**(2)**	...	**(1½)**	**(1½)**	...
Gaer Jn	dep	43	...	...	...	...	...	...	...	...	...	...	...	...	*22/22½*	...	...	...
	dep-line	44	...	...	...	...	...	...	...	...	...	...	...	...	**RL**	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	**(2)**	...	...	...
	dep	46	...	*22/17*	*22/18*	*22/17½*	*22/20*	...	*22/21½*	...	*22/22½*	*22/23½*	...	*22/25½*	*22/26½*	*22/27*	*22/27*	...
Ebbw Jn	dep-line	47	...	**ML**	**RL**	**ML**	**ML**	...	**ML**	...	**ML**	**ML**	...	**ML**	**RL**	**ML**	**ML**	...
	mgn	48	...	**[2]**	**[2]**	**[2]**	**[2]**	...	**[2]**	...	**[2]**	**[2](1)**	...	**[2]**	**[2]**	**[2](1)**	**[2]**	...
Marshfield	dep	49	**<-----**	*22/21½*	*22/24*	*22/22½*	*22/24½*	...	*22/26*	...	*22/27*	*22/29*	...	*22/30*	*22/32½*	*22/32½*	*22/33*	**<----**
	mgn	50	...	**(1½)**	...	**(3½)**	**(1½)**	...	...	...	**(2)**	...	...	**-6**	**(1½)**	**(1½)**	**(1)**	...
	arr	51	**22#24**	**22y30**	**22.33**	**22.33**	**22.33**	...	**22y34**	...	**22y37**	**22y37**	...	**22C43**	**22C43**	**22C41**	**22C41**	**22C43**
Cardiff Central	plt	52	**3**	**3A**	**3A**	**3A**	**3A**	...	**4A**	**4A**	**4A**	**4A**	...	**3**	**3**	**3**	**3**	**3**
	dep	53	**22p27**	...	...	...	...	...	...	**22p36**	...	...	...	**22.57**	**22.57**	**22.55**	**22.55**	**22.57**

			321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336
Signal ID			**5S70**		**5S70**	**5S70**	**2F87**		**1F34**	**1F34**	**1F34**	**1F34**	**1V64**	**1V64**	**1V64**	**5V42**		
Orig. Dep. Time			21.05		21.05	21.05	21.37		19.23	19.23	19.23	19.23	19.30	19.30	19.30	18.00		
Orig. Loc. Name			Cheltenham Spa		Cheltenham Spa	Cheltenham Spa	Ebbw Vale Town		Portsmouth Harbour	Portsmouth Harbour	Portsmouth Harbour	Portsmouth Harbour	Manchester Piccadilly	Manchester Piccadilly	Manchester Piccadilly	Doncaster Works Up Sidings		
Dest. Loc. Name			Swansea		Swansea	Swansea							Carmarthen	Carmarthen	Carmarthen			
Timing Load			**HST8-125**		**HST-OEO**	**HST-OEO**	**150**		**158**	**158**	**158**	**158**	**175**	**175**	**175**	**150**		
Operating Characteristics			**DQ**		**D**	**D**												
Dates Of Operation			**FSX From 04/01/2016 Until 31/03/2016**		**FO**	**FSX Until 31/03/2016**	**FSX From 04/01/2016 Until 31/03/2016**		**FO**	**FSX Until 31/12/2015**	**FSX From 04/01/2016 Until 31/03/2016**	**FSX From 04/04/2016**	**FO**	**FSX Until 31/03/2016**	**FSX From 04/04/2016**	**ThO**		
Patchway	dep	9	...	...	*21/58*	*21/58*	...	...	**22ap07**	**22ap07**	**22ap07**	**22ap07**	...	...	...	...		
	mgn	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Pilning	dep	11	...	...	*22/01*	*22/01*	...	...	*22/11*	*22/11*	*22/11*	*22/11*	...	...	...	...		
	mgn	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Severn Tunnel East	dep	13	...	...	*22/02*	*22/02*	...	...	*22/12*	*22/12*	*22/12*	*22/12*	...	...	...	...		
	mgn	14	...	...	...	**(1)**	...	...	...	...	...	...	...	...	...	...		
Severn Tunnel West	dep	15	...	...	*22/07*	*22/08*	...	...	*22/15½*	*22/15½*	*22/15½*	*22/15½*	...	...	...	...		
	mgn	16	...	...	**(2)**	**(1½)**	...	...	...	...	...	...	...	...	...	...		
Gloucester	arr	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	dep	18	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/15½*	...	...
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	20	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/28*	...	...
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	22	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/33*	...	...
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	24	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/40½*	...	...
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	**(3½)**	...	...
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	27	...	...	...	...	...	...	**3**	**3**	**3**	**3**	...	...	...	...	...	...
	dep	28	...	...	*22/11*	*22/11*	...	...	**22a18**	**22a18**	**22a18**	**22a18**	...	...	...	*22/51*	...	...
	dep-line	29	...	...	**ML**	**ML**	...	...	**RL**	**RL**	**RL**	**RL**	...	...	...	**RL**	...	...
	mgn	30	...	...	...	...	...	...	**[1]**	...	...	...	...	...	...	**[1]**	...	...
Magor & Undy	dep								**22.23**	**22.22**	**22.22**	**22.22**						
Magor crossovers	dep								*22.23½*	*22.22½*	*22.22½*	*22.22½*						
	dep-line								**ML**	**ML**	**ML**	**ML**						
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	*22/54½*	...	...	...
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	**RL**	...	...	...
	mgn	33	...	...	...	...	...	...	...	**(5)**	**(5)**	**(5)**	...	...	...	...	...	...
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	...	*22/37½*	*22/37½*	...	...	...	...
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	36	...	...	*22/20*	*22/20*	...	...	*22/30½*	*22/34½*	*22/34½*	*22/34½*	*22/38½*	*22/38½*	*22/55½*	*23/06*	...	...
	mgn	37	...	...	...	...	...	...	...	...	...	...	...	(1½)	...	...	...	...
Newport (South Wales)	arr	38	...	...	...	...	**22RM23½**	...	**22.31½**	**22.35½**	**22.35½**	**22.36**	**22#39½**	**22.42**	**22.57½**	**23*08**	...	...
	plt	39	...	...	...	...	**3**	...	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**1**	...	...
	dep	40	...	...	*22/22*	*22/22*	**22.29½**	...	**22.33½**	**22p38½**	**22p38½**	**22q39**	**22.42½**	**22.44**	**22.59½**	...	...	...
	dep-line	41	...	...	**ML**	**RL**	**ML**	...	**ML**	**ML**	**ML**	**RL**	**ML**	**RL**	**RL**	**RL**	...	...
	mgn	42	...	...	**(2)**	**(2)**	**(½)**	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	43	...	...	...	...	*22/33*	...	...	...	*22/40½*	...	...	...	...	----->	...	...
	dep-line	44	...	...	...	...	**RL**	...	...	...	**RL**	...	...	...	...	...	...	...
	mgn	45	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	46	...	...	*22/27*	*22/27*	*22/35*	...	*22/36*	*22/41*	*22/42½*	*22/42½*	*22/45*	*22/48*	*23/03½*	...	...	...
	dep-line	47	...	...	**ML**	**RL**	**RL**	...	**ML**	**RL**	**RL**	**ML**	**ML**	**RL**	**ML**	...	...	...
	mgn	48	...	...	**[2](1)**	**[2]**	**[2](3)**	...	**[2]**	**[2](1)**	**[2]**	**[2]**	**[2]**	**[2](½)**	**[2]**	...	...	...
Marshfield	dep	49	**<----**	...	*22/33*	*22/34*	*22/44*	...	*22/40½*	*22/48½*	*22/49*	*22/47½*	*22/49½*	*22/55*	*23/08½*	...	...	...
	mgn	50	...	...	**(2½)**	...	...	...	**(2½)**	**(1½)**	**(1)**	**(3)**	**(5)**	**(4)**	...	...	...	...
Cardiff Central	arr	51	**22C43**	...	**22C43**	**22C43**	**22y53**	...	**22w51**	**22w58**	**22w58**	**22w58**	**23.02**	**23.07**	**23.16**	...	...	...
	plt	52	**3**	...	**3**	**3**	**4A**	...	**4A**	**4A**	**4A**	**3A**	**3A**	**3A**	**3A**	...	...	...
	dep	53	**22.57**	...	**22.57**	**22.57**	...	...	...	...	...	...	**23@15**	**23@15**	**23@20**	...	...	...
							RT NPT to CDF arr AB		RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr 1 late ½				

			337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352
Signal ID			2F98	2F98	2F98	1B91	1B91	1B91	1B91	1B91	1B91	1B91	2F98	1F36	1F36	1F36	1F36	
Orig. Dep. Time			22.37	22.37	22.37	21.15	21.15	21.15	21.15	21.15	21.15	21.15	22.37	20.23	20.23	20.23	20.23	
Orig. Loc. Name			Ebbw Vale Town	Ebbw Vale Town	Ebbw Vale Town	London Paddington	London Paddington	London Paddington	London Paddington	London Paddington	London Paddington	London Paddington	Ebbw Vale Town	Portsmouth Harbour	Portsmouth Harbour	Portsmouth Harbour	Portsmouth Harbour	
Dest. Loc. Name						Swansea	Swansea	Swansea	Swansea	Swansea	Swansea	Swansea		Cardiff Central	Cardiff Central			
Timing Load			142	142	142	HST8-125	HST8-125	HST8-125	HST8-125	HST8-125	HST8-125	HST8-125	142	158	158	158	158	
Operating Characteristics									Q	Q		Q						
Dates Of Operation			FSX From 04/04/2016	FO	FSX Until 31/12/2015	FO	FSX Until 31/12/2015	FSX From 04/01/2016 Until 31/03/2016	FSX From 04/01/2016 Until 31/03/2016	FSX Until 31/12/2015	FSX From 04/04/2016	FSX From 04/04/2016	FSX From 04/01/2016 Until 31/03/2016	FSX Until 31/12/2015	FSX From 04/01/2016 Until 31/03/2016	FO	FSX From 04/04/2016	
Patchway	dep	9	...	...	...	*22/52*	*22/52*	*22/52*	*22/52*	*22/52*	*22/52*	*22/52*	...	**23a06**	**23a06**	**23a06**	**23a06**	
	mgn	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pilning	dep	11	...	...	...	*22/55*	*22/55*	*22/55*	*22/55*	*22/55*	*22/55*	*22/55*	...	*23/10*	*23/10*	*23/10*	*23/10*	
	mgn	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Severn Tunnel East	dep	13	...	...	...	*22/56*	*22/56*	*22/56*	*22/56*	*22/56*	*22/56*	*22/56*	...	*23/11*	*23/11*	*23/11*	*23/11*	
	mgn	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Severn Tunnel West	dep	15	...	...	...	*22/59½*	*22/59½*	*22/59½*	*22/59½*	*22/59½*	*22/59½*	*22/59½*	...	*23/14½*	*23/14½*	*23/14½*	*23/14½*	
	mgn	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Gloucester	arr	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	dep	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Awre	dep	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Lydney	dep	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chepstow	dep	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Caldicot	dep	26	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Severn Tunnel Jn	plt	27	...	...	...	...	...	...	...	...	...	...	...	**3**	**3**	**3**	**3**	
	dep	28	...	...	...	*23/00½*	*23/00½*	*23/00½*	*23/00½*	*23/00½*	*23/00½*	*23/00½*	...	**23a17**	**23a17**	**23a17**	**23a17**	
	dep-line	29	...	...	...	**ML**	**ML**	**ML**	**ML**	**ML**	**ML**	**ML**	...	**RL**	**RL**	**RL**	**RL**	
	mgn	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Magor & Undy	dep													**23.21**	**23.21**	**23.21**	**23.21**	
Magor crossovers	dep													23.21½	23.21½	23.21½	23.21½	
	dep-line													**ML**	**ML**	**ML**	**ML**	
Maindee East Jn	dep	31	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	dep-line	32	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	33	...	...	...	...	...	...	...	...	...	...	...	**(2)**	**(2)**	**(2)**	**(2)**	
Maindee North Jn	dep	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	mgn	35	...	...	...	...	...	...	...	...	...	...	...	**(2)**	**(2)**	**(2)**	**(2)**	
Maindee West Jn	dep	36	...	...	...	*23/17*	*23/17*	*23/17*	*23/17*	*23/17*	*23/17*	*23/17*	...	*23/32½*	*23/32½*	*23/32½*	*23/32½*	
	mgn	37	...	...	...	...	...	...	...	...	...	...	...	...	...	(½)	...	
Newport (South Wales)	arr	38	...	...	...	**23.18½**	**23.18½**	**23.18½**	**23.18½**	**23.18½**	**23.19**	**23.19**	**23RM23½**	**23.33½**	**23.33½**	**23.34**	**23.34**	
	plt	39	...	...	...	**2**	**2**	**2**	**2**	**2**	**1**	**1**	**3**	**2**	**2**	**2**	**1**	
	dep	40	...	...	...	**23p20½**	**23p20½**	**23p20½**	**23p20½**	**23p20½**	**23p21**	**23p21**	**23.27½**	**23q37**	**23q37**	**23p36**	**23q37½**	
	dep-line	41	...	...	...	**ML**	**ML**	**ML**	**ML**	**ML**	**RL**	**RL**	**ML**	**ML**	**ML**	**ML**	**RL**	
	mgn	42	...	...	...	**(2)**	**(2)**	...	...	**(2)**	**(1)**	**(1)**	...	...	...	...	...	
Gaer Jn	dep	43	...	...	...	...	...	*23/22½*	*23/22½*	...	...	...	*23/29*	*23/39*	*23/39*	...	...	
	dep-line	44	...	...	...	...	...	**RL**	**RL**	...	...	...	**RL**	**RL**	**RL**	...	...	
	mgn	45	...	...	...	...	...	**(1)**	**(1)**	...	...	...	...	...	...	...	...	
Ebbw Jn	dep	46	*23/21½*	*23/21½*	*23/21½*	*23/26*	*23/26*	*23/26*	*23/26*	*23/26*	*23/25½*	*23/25½*	*23/31*	*23/41*	*23/41*	*23/38½*	*23/41*	
	dep-line	47	**ML**	**ML**	**RL**	**ML**	**RL**	**RL**	**RL**	**RL**	**ML**	**ML**	**RL**	**RL**	**RL**	**ML**	**ML**	
	mgn	48	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	**[2](1)**	**[2](1)**	**[2]**	**[2]**	**[2]**	**[2]**	**[2]**	
Marshfield	dep	49	*23/26*	*23/26*	*23/27½*	*23/30½*	*23/32*	*23/32*	*23/32*	*23/32*	*23/31½*	*23/31½*	*23/37*	*23/47*	*23/47*	*23/43*	*23/46*	
	mgn	50	...	...	...	**(2½)**	...	...	...	...	**(2½)**	**(2½)**	...	...	...	...	...	
Cardiff Central	arr	51	**23y34**	**23y34**	**23y36**	**23.40**	**23#41**	**23#41**	**23#41**	**23#41**	**23#41**	**23#41**	**23y45½**	**23.56**	**23.56**	**23#50**	**23y53**	
	plt	52	**3B**	**3**	**4**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**4**	**3A**	**3A**	**3A**	**3A**	
	dep	53	...	...	...	**23p44**	**23p44**	**23p44**	**23r46**	**23r46**	**23p44**	**23r46**	...	...	...	...	...	
														RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr AB	RT STJ to CDF arr AB	

			353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368
Signal ID			**1V66**	**2G75**	**1B91**	**1V99**												
Orig. Dep. Time			20.30	2300	22.45	23.05												
Orig. Loc. Name			Manchester Piccadilly	Cheltenham	London Paddington	Shrewsbury												
Dest. Loc. Name					Swansea													
Timing Load			**175**	**142**	**HST8-125**	**150**												
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**FSX**	**SX**												
Patchway	dep	9		...	*00/30*													
	mgn	10		...	...													
Pilning	dep	11		...	*00/33*													
	mgn	12		...	...													
Severn Tunnel East	dep	13		...	*00/34*													
	mgn	14		...	...													
Severn Tunnel West	dep	15		...	*00/37½*													
	mgn	16		...	...													
Gloucester	arr	17		**23.10½**	...													
	dep	18		**23.13½**	...													
	mgn	19		...	...													
Awre	dep	20		*23/26½*	...													
	mgn	21		...	...													
Lydney	dep	22		**23a33**	...													
	mgn	23		...	...													
Chepstow	dep	24		**23a42½**	...													
	mgn	25		...	...													
Caldicot	dep	26		**23a51**	...													
Severn Tunnel Jn	plt	27		**1**	...													
	dep	28		**23a54**	*00/38½*													
	dep-line	29		**RL**	**ML**													
	mgn	30		...	...													
Magor & Undy	dep			**23.58**														
Magor crossovers	dep			23.58½														
	dep-line			**ML**														
Maindee East Jn	dep	31		...	...													
	dep-line	32		...	...													
	mgn	33		...	...													
Maindee North Jn	dep	34	*23/56½*	...	...	*00/54*												
	mgn	35		**(½)**	...	**(2)**												
Maindee West Jn	dep	36	*23/57½*	*00/10½*	*00/53*	*00/57*												
	mgn	37		...	...	**(1½)**												
Newport (South Wales)	arr	38	**23.58½**	**00.12**	**00.54½**	**00.59½**												
	plt	39	**3**	**2**	**2**	**2**												
	dep	40	**00.01**	**00.14**	**00.56½**	**01.01½**												
	dep-line	41	**ML**	**ML**	**ML**	**ML**												
	mgn	42	**(2½)**	...	...													
Gaer Jn	dep	43		...														
	dep-line	44		...														
	mgn	45		...														
Ebbw Jn	dep	46	*00/05½*	*00/17*	*01/00*	*01/04½*												
	dep-line	47	**RL**	**RL**	**RL**	**RL**												
	mgn	48	**[2]**	**[2]**	**[2]**	**[2]**												
Marshfield	dep	49	*00/11½*	*00/23½*	*01/06½*	*01/11*												
	mgn	50		...	...													
Cardiff Central	arr	51	**00.21**	**00.32**	**00#15½**	**01.20**												
	plt	52	**3A**	**3**	**3**	**4A**												
	dep	53		...	**00#18½**													
				RT STJ to CDF arr AB														

Appendix C. Eastbound Timetable

			65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Signal ID			**5N02**	**5N02**	**1W44**	**1W44**	**1W44**		**1L08**			**2G50**	**1L14**		**1F03**	**2N03**		
Orig. Dep. Time			05.09	05.09					04.58				05.27					
Orig. Loc. Name			Cardiff Canton Sidings	Cardiff Canton Sidings					Swansea				Swansea					
Dest. Loc. Name			Ebbw Vale Town	Ebbw Vale Town	Manchester Piccadilly	Manchester Piccadilly	Manchester Piccadilly		London Paddington			Cheltenham Spa	London Paddington		Portsmouth Harbour	Ebbw Vale Town		
Timing Load			**142**	**142**	**175**	**175**	**175**		**HST8-125**			**142**	**HST8-125**		**158**	**150**		
Operating Characteristics																		
Dates Of Operation			**14/12/2015, 21/12/2015, 28/12/2015, MO From 04/04/2016**	**MO From 04/01/2016 Until 28/03/2016**	**MSX From 05/01/2016 Until 01/04/2016**	**MO From 04/01/2016 Until 28/03/2016**	**SX Until 01/01/2016, SX From 04/04/2016**		**SX**			**SX**	**SX**		**SX**	**SX**		
Cardiff Central	arr	51	**05C14**	**05C14**	...	...	...	...	**05.52**	...		...	**06.21**	...	...	...	...	...
	plt	52	**3B**	**3B**	**3**	**3**	**3**	...	**1**	...		**3**	**1**	...	**2**	**2**	...	...
	dep	53	**05.19**	**05.19**	**05.33**	**05.33**	**05.40**	...	**05.55**	...		**06p13**	**06.24**	...	**06.28**	**06.34**	...	...
	dep-line	54	**RL**	**RL**	**RL**	**RL**	**ML**	...	**ML**	...		**ML**	**ML**	...	**ML**	**ML**	...	...
	mgn	55	...	...	...	...	**(2)**	...	...	...		...	...	...	...	...	...	...
Marshfield	dep	56	*05/28*	*05/28*	*05/42*	*05/42*	*05/49*	...	*06/02*	...		*06/20*	*06/31*	...	*06/35*	*06/41½*	...	...
	mgn	57	...	...	...	...	**(1)**	...	...	...		...	...	...	...	...	...	...
Ebbw Jn	dep	58	*05/32*	*05/32*	*05/46½*	*05/46½*	*05/53½*	...	*06/04½*	...		*06/23½*	*06/33½*	...	*06/37½*	*06/46*	...	...
	dep-line	59	**ML**	**RL**	**RL**	**RL**	*ML*	...	**ML**	...		**ML**	**ML**	...	**ML**	...	...	...
	mgn	60	...	...	...	...	...	...	...	...		...	...	...	**[½]**	...	...	...
Gaer Jn	dep	61	...	...	*05/48*	*05/48*	...	...	...	...		...	...	...	...	...	...	...
	dep-line	62	...	...	**DML**	**DML**	...	...	...	...		...	...	...	...	...	...	...
Newport (South Wales)	arr	63	**05RM35**	**05RM36**	**05.50**	**05.50**	**05.56**	...	**06v07½**	...		**06.26**	**06.36½**	...	**06.40½**	...	...	...
	plt	64	**4**	**4**	**4**	**3**	**4**	...	**3**	...		**3**	**3**	...	**4**	...	...	...
	dep	65	**05.39**	**05.40**	**05.58**	**05.58**	**05.58**	...	**06.09½**	...		**06.28**	**06.38½**	...	**06.42½**	...	...	...
	dep-line	66	**ML**	**RL**	**ML**	**ML**	**ML**	...	**ML**	...		**ML**	**ML**	...	**ML**	...	...	...
	mgn	67	...	...	...	...	...	...	...	...		...	...	...	**[½]**	...	...	...
Maindee West Jn	dep	68	...	...	*05/59*	*05/59*	*05/59*	...	*06/11*	...		*06/29*	*06/40*	...	*06/44*	...	...	...
Maindee North Jn	dep	69	...	...	*06/00*	*06/00*	*06/00*	...	...	...		...	...	...	...	...	...	...
	mgn	70	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Magor Crossovers												*06/36*			*06/51*			
	dep-line											**RL**			**RL**			
Magor & Undy	dep											**06.37**			**06.52**			
	mgn	73	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...		**2**	...	...	**4**	...	...	...
Severn Tunnel Jn	dep	75	...	...	...	...	...	...	*06/18½*	...		**06ap41½**	*06/47½*	...	**06a56½**	...	...	...
	mgn	76	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...		**06ap43½**	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...		**06ap52½**	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...		**07ap01½**	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...		*07/07½*	...	...	...	...	...	...
	mgn	83	...	...	...	...	...	...	...	...		**[1]**	...	...	...	...	...	...
Gloucester	arr	84	...	...	...	...	...	...	...	...		**07.21½**	...	...	...	...	...	
	dep	85	...	...	...	...	...	...	...	...		**07.23½**	...	...	...	...	...	
Severn Tunnel West	dep	86	...	...	...	...	...	...	*06/19½*	...	...	...	*06/48½*	...	*06/58½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	...	...	...	...	*06/23*	...	...	...	*06/52*	...	*07/02½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	...	...	...	...	*06/24*	...	...	...	*06/53*	...	*07/03½*	...	...	...
	mgn	91	...	...	...	...	...	...	**[1]**	...	...	...	**[1]**	...	**[½]**	...	...	...
Patchway	dep	92	...	...	...	...	...	...	*06/28*	...	...	...	*06/57*	...	**07a09**	...	...	...
												GCR arr 2 late			PWY arr 3 late			

			81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
Signal ID			**1M00**	**1W48**	**1L20**						**1M25**	**2G52**	**1W91**	**1L24**	**1F05**	**2N05**		**1M92**
Orig. Dep. Time Orig. Loc. Name Dest. Loc. Name			Nottingham	05.03 Carmarthen Manchester Piccadilly	05.58 Swansea London Paddington						Manchester Piccadilly	Cheltenham Spa	Holyhead	06.28 Swansea London Paddington	Portsmouth Harbour	06.44 Maesteg Ebbw Vale Town		Nottingham
Timing Load			**170**	**175**	**HST8-125**						**221**	**142**	**175**	**HST8-125**	**150**	**142**		**170**
Operating																		
Dates Of Operation			**SX**	**SX**	**SX**						**SX**	**SX**	**SX**	**SX**	**SX**	**SX**		**SX**
Cardiff Central	arr	51	...	**06#44**	**06.52**	...	...	...	...		...	...	...	**07.22**	...	**07.34**		...
	plt	52	**0**	**2**	**1**	...	...	...	...		**2**	**1**	**2**	**1**	**2**	**1**		**1**
	dep	53	**06.40**	**06.50**	**06.55**	...	...	...	...		**07.00**	**07.05**	**07.21**	**07.25**	**07.30**	**07q36½**		**07.45**
	dep-line	54	**ML**	**ML**	**ML**	...	...	...	...		**ML**	**ML**	**ML**	**ML**	**ML**	**ML**		**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...		...	...	...	...	...	...		...
	dep	56	*06/47*	*06/57*	*07/02*	...	...	...	...		*07/06½*	*07/12*	*07/28*	*07/32*	*07/37*	*07/43½*		*07/53*
	mgn	57	**[1]**	...	...	...	...	...	...		...	...	...	...	...	...		...
Ebbw Jn	dep	58	*06/50½*	*06/59½*	*07/04½*	...	...	...	...		*07/09*	*07/15½*	*07/30½*	*07/34½*	*07/40½*	*07/48*		*07/55½*
	dep-line	59	**ML**	**ML**	**ML**	...	...	...	...		**ML**	**ML**	**ML**	**ML**	**ML**	...		**ML**
	mgn	60	...	...	...	...	...	...	...		**[1]**	...	**[1]**	...	...	...		**[1]**
Gaer Jn	dep	61	...	...	...	...	...	...	...		...	...	...	...	...	...		...
	dep-line	62	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Newport (South Wales)	arr	63	**06.53**	**07.02**	**07v07½**	...	...	...	...		**07.12½**	**07.18**	**07.34**	**07v37½**	**07v43**	...		**07.59**
	plt	64	**3**	**3**	**3**	...	...	...	...		**4**	**3**	**4**	**3**	**4**	...		**3**
	dep	65	**06.55**	**07.04**	**07.09½**	...	...	...	...		**07.15**	**07p24**	**07.36**	**07.39½**	**07p45**	...		**08.02**
	dep-line	66	**ML**	**ML**	**ML**	...	...	...	...		**ML**	**ML**	**ML**	**ML**	**ML**	...		**ML**
	mgn	67	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Maindee West Jn	dep	68	*06/56*	*07/05*	*07/11*	...	...	...	...		*07/16½*	*07/25*	*07/37*	*07/41*	*07/46*	...		*08/03*
Maindee North Jn	dep	69	...	*07/06*	...	...	...	...	...		...	...	*07/38*	...	...	...		...
	mgn	70	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Maindee East Jn	dep	71	...	...	...	...	...	...	...		...	...	...	...	...	...		...
	dep-line	72	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Magor Crossovers											*07/23½*	07/32						
	dep-line										**RL**	**RL**						
Magor & Undy	dep										**07.24½**	**07.33**						
	mgn	73	...	...	...	...	...	...	...		...	**(1½)**	...	...	...	...		...
	plt	74	**2**	...	...	...	...	...	...		**4**	**2**	...	...	**4**	...		...
Severn Tunnel Jn	dep	75	**07a05½**	...	*07/18½*	...	...	...	...		**07b29**	**07ap39**	...	*07/49½*	**07ap56**	...		*08/13*
	mgn	76	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Caldicot	dep	77	**07a08**	...	...	...	...	...	...		...	**07ap41½**	...	...	...	...		...
Chepstow	dep	78	**07a16½**	...	...	...	...	...	...		...	**07ap50½**	...	...	...	...		*08/19½*
	mgn	79	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Lydney	dep	80	**07a25**	...	...	...	...	...	...		...	**07ap59½**	...	...	...	...		**08ar28**
	mgn	81	...	...	...	...	...	...	...		...	...	...	...	...	...		...
Awre	dep	82	*07/31*	...	...	...	...	...	...		...	*08/05½*	...	...	...	...		*08/34*
	mgn	83	**[1]**	...	...	...	...	...	...		...	**[1]**	...	...	...	...		**[1]**
Gloucester	arr	84	**07.44**	...	...	...	...	...	...		...	**08.19½**	...	...	...	...		**08#47**
	dep	85	**07.46**	...	...	...	...	...	...		...	**08.21½**	...	...	...	...		**08.49½**
Severn Tunnel West	dep	86	...	...	*07/19½*	...	...	...	...	...	*07/30*	...	...	*07/50½*	*07/58*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	*07/23*	...	...	...	...	...	*07/34*	...	...	*07/54*	*08/02*	...	...	...
	mgn	89	...	...	**[1]**	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	*07/25*	...	...	...	...	...	*07/36*	...	...	*07/55*	*08/03*	...	...	...
	mgn	91	...	...	...	...	...	...	...	...	**[1]**	...	...	...	**[1]**	...	...	...
Patchway	dep	92	...	...	*07/28*	...	...	...	...	...	**07b40½**	...	...	*07/58*	*08/07½*	...	...	...
											PWY arr 3½ late	STJ arr AB						

			97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
Signal ID			**2F52**		**1L32**	**2C67**	**1W10**			**1L34**	**1F07**	**2N07**			**1M01**	**1W52**		**2G54**
Orig. Dep. Time			05.47		06.58		06.15			07.28		08.07				05.55		07.59
Orig. Loc. Name			Carmarthen		Swansea		Carmarthen			Swansea		Bridgend				Milford Haven		Maesteg
Dest. Loc. Name					London Paddington	Paignton	Manchester Piccadilly			London Paddington	Portsmouth Harbour	Ebbw Vale Town			Nottingham	Manchester Piccadilly		Cheltenham Spa
Timing Load			**175**		**HST8-125**	**150**	**175**			**HST8-125**	**158**	**150**			**170**	**175**		**142**
Operating Characteristics																		
Dates Of Operation			**SX**		**SX**	**SX**	**SX**			**SX**	**SX**	**SX**			**SX**	**SX**		**SX**
Cardiff Central	arr	51	**07w46**	...	**07.52**	...	**08.02**	...	...	**08.22**	...	**08.33**	...		...	**08.36½**	...	**8.48**
	plt	52	**2**	...	**1**	**2**	**1**	...	...	**1**	**2**	**1**	...		**0**	**2**	...	**2**
	dep	53	...	...	**07.55**	**08.00**	**08.05**	...	...	**08.25**	**08.30**	**08q36**	...		**08.45**	**08p51**	...	**09@12**
	dep-line	54	...	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	...		**ML**	**ML**	...	**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
	dep	56	...	...	*08/02*	*08/07*	*08/12*	...	...	*08/32*	*08/37*	*08/43*	...		*08/52½*	*08/58*	...	----->
	mgn	57	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Ebbw Jn	dep	58	...	...	*08/04½*	*08/10½*	*08/14½*	...	...	*08/34½*	*08/39½*	*08/47½*	...		*08/55*	*09/00½*	...	...
	dep-line	59	...	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	...	...		**ML**	**ML**	...	...
	mgn	60	...	...	**(½)**	...	...	...	...	...	...	...	...		...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Newport (South Wales)	arr	63	...	...	**08v08**	**08.13**	**08.17**	...	...	**08v37½**	**08.42**	...	...		**08.57½**	**09.03**	...	...
	plt	64	...	...	**3**	**4**	**3**	...	...	**3**	**4**	...	...		**3**	**4**	...	...
	dep	65	...	...	**08p10**	**08.15**	**08.19**	...	...	**08.39½**	**08.44½**	...	...		**09.00**	**09.05**	...	...
	dep-line	66	...	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	...	...		**ML**	**ML**	...	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Maindee West Jn	dep	68	...	...	*08/11½*	*08/16*	*08/20*	...	...	*08/41*	*08/45½*	...	...		*09/01*	*09/06*	...	...
Maindee North Jn	dep	69	...	...	...	...	*08/21*	...	...	...	...	...	...		...	*09/07*	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Magor Crossovers						08/23												
	dep-line					**RL**												
Magor & Undy	dep					**08.24**												
	mgn	73	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
	plt	74	...	...	...	**4**	...	...	...	...	**4**	...	...		...	...	...	...
Severn Tunnel Jn	dep	75	...	...	*08/19*	**08a28½**	...	...	...	*08/48½*	**08a55**	...	...		*09/10*	...	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	...	...	...		**09a18**	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	...	...	...		*09/25½*	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	...	...	...		*09/30½*	...	...	...
	mgn	83	...	...	...	...	...	...	...	...	...	...	...		**[1]**	...	...	...
Gloucester	arr	84	...	...	...	...	...	...	...	...	...	...	...		**09.44**	...	...	...
	dep	85	...	...	...	...	...	...	...	...	...	...	...		**09p51½**	...	...	...
Severn Tunnel West	dep	86	...	...	*08/20*	*08/30½*	...	...	...	*08/49½*	*08/57*	...	...	...	...	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	*08/23½*	*08/34½*	...	...	...	*08/53*	*09/01*	...	...	...	...	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	*08/24½*	*08/35½*	...	...	...	*08/54*	*09/02*	...	...	...	...	...	...	...
	mgn	91	...	...	**[1]**	**[1]**	...	...	...	**[1]**	**[1]**	...	...	...	...	...	...	...
Patchway	dep	92	...	...	*08/28½*	**08a41½**	...	...	...	*08/58*	*09/06½*	...	...	...	...	...	...	...
						PWY arr 2½ late												

			113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
Signal ID			**1L38**		**2C69**	**2G54**	**1W92**			**1L42**	**1F09**	**2N09**			**1M60**	**1L46**	**2C71**	**1W12**
Orig. Dep. Time			07.58			07.59				07.30								07.07
Orig. Loc. Name			Swansea			Maesteg Cheltenham Spa				Carmarthen								Milford Haven
Dest. Loc. Name			London Paddington		Plymouth		Holyhead			London Paddington	Portsmouth Harbour	Ebbw Vale Town			Nottingham	London Paddington	Taunton	Manchester Piccadilly
Timing Load			**HST8-125**		**150**	**150**	**175**			**HST8-125**	**158**	**150**			**170**	**HST8-125**	**150**	**175**
Operating Characteristics																		
Dates Of Operation			**SX**		**SX**	**SX**	**SX**			**SX**	**SX**	**SX**			**SX**	**SX**	**SX**	**SX**
Cardiff Central	arr	51	**08.52**	...	...	**08.48**	...	...	...	**09.22½**	...	...	...	...	...	...	...	**09.44**
	plt	52	**1**	...	**0**	**2**	**2**	...	...	**1**	**2**	**0**	...	...	**1**	**1**	**2**	**2**
	dep	53	**08.55**	...	**09.00**	**09.12**	**09.21**	...	...	**09.25½**	**09.30**	**09.34**	...	...	**09.45**	**09.55**	**10.00**	**10.05**
	dep-line	54	**ML**	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	*09/02*	...	*09/07*	*09/19*	*09/28*	...	...	*09/32½*	*09/37*	*09/41½*	...	...	*09/52½*	*10/02*	*10/07*	*10/12*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	*09/04½*	...	*09/10½*	*09/22½*	*09/30½*	...	...	*09/35*	*09/39½*	*09/46*	...	...	*Sep-55*	*10/05*	*10/10½*	*10/14½*
	dep-line	59	**ML**	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	...	...	...	**ML**	**ML**	**ML**	**ML**
	mgn	60	...	...	...	...	**[1]**	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	**09v07½**	...	**09.13**	**09.25**	**09.34**	...	...	**09v38**	**09.42**	...	...	...	**09.57½**	**10.08**	**10.13**	**10.17**
	plt	64	**3**	...	**4**	**3**	**4**	...	...	**3**	**4**	...	...	...	**3**	**3**	**3**	**4**
	dep	65	**09.09½**	...	**09.15**	**09.27½**	**09.36**	...	...	**09p40**	**09.44½**	...	...	...	**10.00**	**10p10**	**10.15**	**10.19**
	dep-line	66	**ML**	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	...	...	...	**ML**	**ML**	**ML**	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	*09/11*	...	*09/16*	*09/28½*	*09/37*	...	...	*09/41½*	*09/45½*	...	...	...	*10/01*	*10/11½*	*10/16*	*10/20*
Maindee North Jn	dep	69	...	...	...	...	*09/38*	...	...	...	...	...	...	...	...	...	...	*10/21*
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers					09/23	*09/35½*											10/23	
	dep-line				**RL**	**RL**											**RL**	
Magor & Undy	dep				**09.24**	**09.36½**											**10.24**	
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	**4**	**2**	...	...	...	...	**4**	...	...	...	...	...	**4**	...
Severn Tunnel Jn	dep	75	*09/18½*	...	**09a28½**	**09ap41**	...	...	...	*09/49*	**09a55**	...	...	...	*10/10*	*10/19*	**10a28½**	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	**09aq43½**	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	**09aq52½**	...	...	...	...	...	...	...	...	**10a18**	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	**10aq01½**	...	...	...	...	...	...	...	...	*10/25½*	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	*10/07½*	...	...	...	...	...	...	...	...	*10/30½*	...	...	...
	mgn	83	...	...	...	**[1]**	...	...	...	...	...	...	...	...	**[1](½)**	...	...	...
Gloucester	arr	84	...	...	...	**10.21½**	...	...	...	...	...	...	...		**10.44**	...	...	...
	dep	85	...	...	...	**10p23½**	...	...	...	...	...	...	...		**10.50**	...	...	...
Severn Tunnel West	dep	86	*09/19½*	...	*09/30½*	...	...	...	...	*09/50*	*09/57*	...	...	...	...	*10/20*	*10/30½*	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	*09/23*	...	*09/34½*	...	...	...	...	*09/53½*	*10/01*	...	...	...	...	*10/23½*	*10/34½*	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	*09/24*	...	*09/35½*	...	...	...	...	*09/54½*	*10/02*	...	...	...	...	*10/24½*	*10/35½*	...
	mgn	91	**[1](½)**	...	**[1]**	...	...	...	...	**[1]**	**[1]**	...	...	...	...	**[1]**	**[1]**	...
Patchway	dep	92	*09/28½*	...	**09a41½**	...	...	...	...	*09/58½*	*10/06½*	...	...	...	...	*10/28½*	**10a41½**	...
					PWY arr 2½ late	GCR arr 2½ late											PWY arr 2½ late	

			129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
Signal ID				2G56	2.00E+03			1L48		1F11	2N11			1M94	1W56		1L51	2C73
Orig. Dep. Time				09.16	06.59			09.28							07.50			
Orig. Loc. Name				Maesteg	Pembroke Dock			Swansea							Fishguard Harbour			
Dest. Loc. Name				Cheltenham Spa				London Paddington		Portsmouth Harbour	Ebbw Vale Town			Nottingham	Manchester Piccadilly		London Paddington	Taunton
Timing Load				142	153			HST8-125		158	150			170	175		HST8-125	150
Operating Characteristics																		
Dates Of Operation				SX	SX			SX		SX	SX			SX	SX		SX	SX
Cardiff Central	arr	51	...	**10.07**	**10w16**	...	...	**10.22**	...	...	...	...	...	...	**10.48**	...	...	...
	plt	52	...	**1**	**1**	...	...	**1**	...	**2**	**0**	...	...	**0**	**2**	...	**1**	**2**
	dep	53	...	**10.12**	**10.19**	...	...	**10.25**	...	**10.30**	**10.34**	...	...	**10.45**	**10p51**	...	**10.55**	**11.00**
	dep-line	54	...	**ML**	**ML**	...	...	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**	...	**ML**	**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	*10/19*	*10/26½*	...	...	*10/32*	...	*10/37*	*10/41½*	...	...	*10/52½*	*10/58*	...	*11/02½*	*11/07*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	*10/22½*	*10/29*	...	...	*10/34½*	...	*10/39½*	*10/46*	...	...	*10/55*	*11/00½*	...	*11/05*	*11/10½*
	dep-line	59	...	**ML**	**ML**	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	**ML**	**ML**
	mgn	60	...	...	**[2]**	...	...	...	...	**(½)**	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**10.25**	**10.34**	...	...	**10v37½**	...	**10#42½**	...	...	...	**10.57½**	**11#03**	...	**11.08**	**11.13**
	plt	64	...	**4**	**2**	...	...	**3**	...	**3**	...	...	...	**3**	**3**	...	**3**	**3**
	dep	65	...	**10.27**	...	...	...	**10.39½**	...	**10.44½**	...	...	...	**11.00**	**11p05**	...	**11p10**	**11.15**
	dep-line	66	...	**ML**	...	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	**ML**	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*10/28*	...	...	...	*10/41*	...	*10/45½*	...	...	...	*11/01*	*11/06*	...	*11/11½*	*11/16*
Maindee North Jn	dep	69	...	...	...	...	...	...	...	...	...	...	...	...	*11/07*	...	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers				10/35														11/23
	dep-line			**RL**														**RL**
Magor & Undy	dep			**10.36**														**11.24**
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	**2**	...	...	...	...	...	...	...	...	...	...	...	...	...	**4**
Severn Tunnel Jn	dep	75	...	**10a40½**	...	...	...	*10/48½*	...	*10/53½*	...	...	...	*11/10*	...	...	*11/19*	**11a28½**
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	**10a43**	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	...	**10a52**	...	...	...	...	...	...	...	...	...	*11/16½*	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	**11a01½**	...	...	...	...	...	...	...	...	...	**11a25**	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	*11/07½*	...	...	...	...	...	...	...	...	...	*11/31*	...	...	...	...
	mgn	83	...	**[1]**	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...
Gloucester	arr	84	...	**11#21½**	...	...	...	...	...	...	...	...	...	**11.44**	...	...	...	...
	dep	85	...	**11p23**	...	...	...	...	...	...	...	...	...	**11.50**	...	...	...	...
Severn Tunnel West	dep	86	...	...	...	...	...	*10/49½*	...	*10/54½*	...	...	...	...	...	...	*11/20*	*11/30½*
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	...	...	...	*10/53*	...	*10/58½*	...	...	...	...	...	...	*11/23½*	*11/34½*
	mgn	89	...	...	...	...	...	**(½)**	...	...	...	...	...	...	...	...	**[1]**	...
Pilning	dep	90	...	...	...	...	...	*10/54½*	...	*10/59½*	...	...	...	...	...	...	*11/25½*	*11/35½*
	mgn	91	...	...	...	...	...	**[1](½)**	...	**[1](½)**	...	...	...	...	...	...	...	**[1]**
Patchway	dep	92	...	...	...	...	...	*10/59*	...	*11/04½*	...	...	...	...	...	...	*11/28½*	**11a40½**
				GCR arr ½ late														PWY arr 2½ late

			145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
Signal ID			**2V06**	**2L52**	**1W93**			**1L52**	**1F13**	**2N13**			**1M64**	**1L54**	**2C75**	**1W14**		
Orig. Dep. Time			05.56	10.16				10.28								09.10		11.15
Orig. Loc. Name			Shrewsbury	Maesteg				Swansea								Milford Haven		Maesteg
Dest. Loc. Name					Holyhead			London Paddington	Portsmouth Harbour	Ebbw Vale Town			Nottingham	London Paddington	Taunton	Manchester Piccadilly		Cheltenham Spa
Timing Load			**150**	**142**	**175**			**HST8-125**	**158**	**150**			**170**	**HST8-125**	**150**	**175**	**175**	**142**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**	**SX**			**SX**	**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**
Cardiff Central	arr	51	**11z02**	**11v09**	...	...	...	**11.22**	...	...	...	...	...	...	...	**11.46**	...	**12.08**
	plt	52	**4A**	**1**	**2**	...	...	**1**	**2**	**0**	...	...	**1**	**1**	**2**	**2**	...	**1**
	dep	53	...	...	**11.21**	...	...	**11.25**	**11.30**	**11.34**	...	...	**11.45**	**11.55**	**12.00**	**12.05**	...	**12.12**
	dep-line	54	...	...	**ML**	...	...	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	...	*11/28*	...	...	*11/32*	*11/37*	*11/41½*	...	...	*11/52½*	*12/02½*	*12/07*	*12/12*	...	*12/19*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	...	*11/30½*	...	...	*11/34½*	*11/39½*	*11/46*	...	...	*11/55*	*12/05*	*12/10½*	*12/14½*	...	*12/22½*
	dep-line	59	...	...	**ML**	...	...	**ML**	**ML**	...	...	...	**ML**	*ML*	**ML**	**ML**	...	**ML**
	mgn	60	...	...	**[1]**	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	...	**11.34**	...	...	**11v37½**	**11.42**	...	...	...	**11.58½**	**12.08**	**12.13**	**12.17**	...	**12.25**
	plt	64	...	...	**4**	...	...	**3**	**4**	...	...	...	**3**	**3**	**4**	**3**	...	**4**
	dep	65	...	...	**11.36**	...	...	**11.39½**	**11.44**	...	...	...	**12.02**	**12p10**	**12.15**	**12.19**	...	**12.28**
	dep-line	66	...	...	**ML**	...	...	**ML**	**ML**	...	...	...	**ML**	**ML**	**ML**	**ML**	...	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	(½)
Maindee West Jn	dep	68	...	...	*11/37*	...	...	*11/41*	*11/45*	...	...	...	*12/03*	*12/11½*	*12/16*	*12/20*	...	*12/29½*
Maindee North Jn	dep	69	...	...	*11/38*	...	...	...	...	...	...	...	...	...	...	*12/21*	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers															12/23			*12/36½*
	dep-line														**RL**			**RL**
Magor & Undy	dep														**12.24**			**12.37½**
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	...	...	...	**4**	...	...	**2**
Severn Tunnel Jn	dep	75	...	...	...	...	...	*11/48½*	*11/53*	...	...	...	*12/11*	*12/19*	**12a28½**	...	...	**12a42**
	mgn	76	...	...	...	...	...	...	(½)	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**12a44½**
Chepstow	dep	78	...	...	...	...	...	...	...	...	...	...	**12ap19**	...	...	...	...	**12a53½**
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	...	...	*12/26½*	...	...	...	...	**13a02½**
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	...	...	*12/31½*	...	...	...	...	*13/08½*
	mgn	83	...	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	**[1]**
Gloucester	arr	84	...	...	...	...	...	...	...	...	...		**12#44½**	...	...	...	...	**13.22½**
	dep	85	...	...	...	...	...	...	...	...	...		**12.48**	...	...	...	...	**13.24½**
Severn Tunnel West	dep	86	...	...	...	...	...	*11/49½*	*11/54½*	...	...	...	...	*12/20*	*12/30½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	...	...	...	*11/53*	*11/58½*	...	...	...	...	*12/23½*	*12/34½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	...	...	...	*11/54*	*11/59½*	...	...	...	...	*12/24½*	*12/35½*	...	...	...
	mgn	91	...	...	...	...	...	**[1]**	**[1]**	...	...	...	...	**[1]**	**[1]**	...	...	...
Patchway	dep	92	...	...	...	...	...	*11/58*	*12/04*	...	...	...	...	*12/28½*	**12a41**	...	...	...
															PWY arr 2½ late			GCR arr 2½ late

			161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176
Signal ID			**2B56**			**1L55**				**1F17**	**2N15**		**1M99**	**1W60**			**1L60**	**2C77**
Orig. Dep. Time			11.10			11.28								11.03				
Orig. Loc. Name			Swansea			Swansea								Carmarthen				
Dest. Loc. Name						London Paddington				Portsmouth Hbr	Ebbw Vale Town		Nottingham	Manchester Piccadilly			London Paddington	Exeter St Davids
Timing Load			**150**			**HST8-125**				**158**	**150**		**170**	**175**			**HST8-125**	**150**
Operating Characteristics																		
Dates Of Operation			**SX**			**SX**				**SX**	**SX**		**SX**	**SX**			**SX**	**SX**
Cardiff Central	arr	51	**12w16**	...	...	**12.22**	...	...	...	...	...	...	...	**12.48**	...	...	...	...
	plt	52	**1**	...	...	**1**	...	...	...	**2**	**0**	...	**1**	**2**	...	...	**1**	**2**
	dep	53	...	...	...	**12.25**	...	...	...	**12.30**	**12.34**	...	**12.45**	**12p51**	...	...	**12.55**	**13.00**
	dep-line	54	...	...	...	**ML**	...	...	...	**ML**	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	...	...	*12/32*	...	...	...	*12/37*	*12/41½*	...	*12/52½*	*12/58*	...	...	*13/02½*	*13/07*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	...	...	*12/34½*	...	...	...	*12/39½*	*12/46*	...	*12/55*	*13/00½*	...	...	*13/05*	*13/10½*
	dep-line	59	...	...	...	**ML**	...	...	...	**ML**	...	...	**ML**	**ML**	...	...	**ML**	**ML**
	mgn	60	...	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	...	...	**12v37½**	...	...	...	**12.42**	...	...	**12.58½**	**13#03**	...	...	**13.08**	**13.13**
	plt	64	...	...	...	**3**	...	...	...	**4**	...	...	**3**	**4**	...	...	**3**	**4**
	dep	65	...	...	...	**12.39½**	...	...	...	**12.44½**	...	...	**13.01½**	**13p05**	...	...	**13p10**	**13.15**
	dep-line	66	...	...	...	**ML**	...	...	...	**ML**	...	...	**ML**	**ML**	...	...	**ML**	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	...	...	*12/41*	...	...	...	*12/45½*	...	...	*13/02½*	*13/06*	...	...	*13/11½*	*13/16*
Maindee	dep	69	...	...	...	...	...	...	...	...	...	...	...	*13/07*	...	...	...	...
North Jn	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers																		13/23
	dep-line																	**RL**
Magor & Undy	dep																	**13.24**
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**4**
Severn Tunnel Jn	dep	75	...	...	...	*12/48½*	...	...	...	*12/53½*	...	...	*13/10½*	...	...	...	*13/19*	**13a28½**
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	...	...	**13a18½**	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	...	...	*13/26*	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	...	...	*13/31*	...	...	...	...	...
	mgn	83	...	...	...	...	...		...	...	...	...	**[1]**	...	...	...	...	...
	arr	84	...	...	...	...	...		...	...	...	...	**13.44**	...	...	...	...	...
Gloucester	dep	85	...	...	...	...	...		...	...	...		**13.50**	...	...	...	...	...
Severn Tunnel West	dep	86	...	...	...	*12/49½*	...	...	...	*12/54½*	...	...	...	...	...	...	*13/20*	*13/30½*
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	...	*12/53*	...	...	...	*12/58½*	...	...	...	...	...	...	*13/23½*	*13/34½*
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	...	*12/54*	...	...	...	*12/59½*	...	...	...	...	...	...	*13/24½*	*13/35½*
	mgn	91	...	...	...	**[1]**	...	...	...	**[1]**	...	...	...	...	...	...	**[1]**	**[1]**
Patchway	dep	92	...	...	...	*12/58*	...	...	...	*13/04*	...	...	...	...	...	...	*13/28½*	**13a41½**
																		PWY arr 2½ late

			177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192
Signal ID			**2G60**	**1W94**			**1L62**		**1F19**	**2N17**			**1M68**	**1L65**	**2C79**	**1W16**	**2L54**	**2B38**
Orig. Dep. Time			12.17				12.28									11.10	13.15	12.45
Orig. Loc. Name			Maesteg				Swansea									Milford Haven	Maesteg	Llanelli
Dest. Loc. Name				Holyhead			London Paddington		Portsmouth Harbour	Ebbw Vale Town			Nottingham	London Paddington	Taunton	Manchester Piccadilly		
Timing Load			**142**	**175**			**HST8-125**		**158**	**150**			**170**	**HST8-125**	**150**	**175**	**142**	**153**
Operating Characteristics																		
Dates Of Operation			**SX**	**SX**			**SX**		**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**
Cardiff Central	arr	51	**13.08**	...	...	...	**13.22**	...	...	...	...	...	...	...	...	**13.47**	**14.07**	**14.15**
	plt	52	**1**	**2**	...	...	**1**	...	**2**	**0**	...	...	**1**	**1**	**2**	**2**	**4A**	**2**
	dep	53	**13.12**	**13.21**	...	...	**13.25**	...	**13.30**	**13.34**	...	...	**13.45**	**13.55**	**14.00**	**14.05**	...	...
	dep-line	54	**ML**	**ML**	...	...	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	...
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	*13/19*	*13/28*	...	...	*13/32*	...	*13/37*	*13/41½*	...	...	*13/52½*	*14/02½*	*14/07*	*14/12*	...	...
	mgn	57	**(1½)**	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	*13/24*	*13/30½*	...	...	*13/34½*	...	*13/39½*	*13/46*	...	...	*13/55*	*14-May*	*14/10½*	*14/14½*	...	...
	dep-line	59	**ML**	**ML**	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	**ML**	**ML**	...	...
	mgn	60	...	**[1]**	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	**13.26½**	**13.34**	...	...	**13v37½**	...	**13.42**	...	...	...	**13.57½**	**14.08**	**14.13**	**14.17**	...	...
	plt	64	**3**	**4**	...	...	**3**	...	**4**	...	...	...	**3**	**3**	**4**	**3**	...	...
	dep	65	**13.28½**	**13.36**	...	...	**13.39½**	...	**13.44**	...	...	...	**14.00**	**14p10**	**14.15**	**14.19**	...	...
	dep-line	66	**ML**	**ML**	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	**ML**	**ML**	...	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	*13/29½*	*13/37*	...	...	*13/41*	...	*13/45*	...	...	...	*14/01*	*14/11½*	*14/16*	*14/20*	...	...
Maindee North Jn	dep	69	...	*13/38*	...	...	...	...	...	...	...	...	...	...	...	*14/21*	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers			*13/36½*												14/23			
	dep-line														**RL**			
Magor & Undy	dep		**13.37½**												**14.24**			
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	plt	74	**2**	...	...	...	...	...	...	...	...	...	...	...	**4**	...	...	...
	dep	75	**13a42**	...	...	...	*13/48½*	...	*13/53*	...	...	...	*14/10*	*14/19*	**14a28½**	...	...	...
	mgn	76	...	...	...	...	...	...	(½)	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	**13a44½**	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	**13a53½**	...	...	...	...	...	...	...	...	...	*14/16½*	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	**14a02½**	...	...	...	...	...	...	...	...	...	**14a25**	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	*14/08½*	...	...	...	...	...	...	...	...	...	*14/31*	...	...	...	...	...
	mgn	83	**[1]**	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...
Gloucester	arr	84	**14.23½**	...	...	...	...	...	...	...	...		**14.44**	...	...	...	...	...
	dep	85	...	...	...	...	...	...	...	...	...		**14.50**	...	...	...	...	...
Severn Tunnel West	dep	86	...	...	...	...	*13/49½*	...	*13/54½*	...	...	...	...	*14/20*	*14/30½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	...	...	*13/53*	...	*13/58½*	...	...	...	...	*14/23½*	*14/34½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	...	...	*13/54*	...	*13/59½*	...	...	...	...	*14/24½*	*14/35½*	...	...	...
	mgn	91	...	...	...	...	**[1]**	...	**[1]**	...	...	...	...	**[1]**	**[1]**	...	...	...
Patchway	dep	92	...	...	...	...	*13/58*	...	*14/04*	...	...	...	...	*14/28½*	**14a41½**	...	...	...
			GCR arr 2½ late												PWY arr 2½ late			

			193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208
Signal ID					**1L66**	**1V38**	**1F23**	**2N19**			**1M98**	**1W64**		**1L68**	**2C81**	**2G62**	**1W95**	
Orig. Dep. Time					13.28	09.30						13.02				14.15		
Orig. Loc. Name					Swansea	Manchester Piccadilly	Portsmouth Hbr	Ebbw Vale Town				Carmarthen				Maesteg		
Dest. Loc. Name					London Paddington	Carmarthen					Nottingham	Manchester Piccadilly		London Paddington	Taunton	Cheltenham Spa	Holyhead	
Timing Load					**HST8-125**	**175**	**158**	**150**			**170**	**175**		**HST8-125**	**150**	**142**	**175**	
Operating Characteristics																		
Dates Of Operation					**SX**	**SX**	**SX**	**SX**			**SX**	**SX**		**SX**	**SX**	**SX**	**SX**	
Cardiff Central	arr	51	...	...	**14.22**	...	...	...	...	...	...	**14.47**	...	...	...	**15.06**	...	...
	plt	52	...	...	**1**	...	**2**	**0**	...	...	**1**	**2**	...	**1**	**2**	**1**	**2**	...
	dep	53	...	...	**14.25**	...	**14.30**	**14.34**	...	...	**14.45**	**14.50**	...	**14.55**	**15.00**	**15.12**	**15.21**	...
	dep-line	54	...	...	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	...	*14/32*	...	*14/37*	*14/41½*	...	...	*14/52½*	*14/57*	...	*15/02½*	*15/07*	*15/19*	*15/28*	...
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	**(1½)**	...	...
Ebbw Jn	dep	58	...	...	*14/34½*	...	*14/39½*	*14/46*	...	...	*14/55*	*14/59½*	...	*15/05*	*15/10½*	*15/24*	*15/30½*	...
	dep-line	59	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	*ML*	**ML**	**ML**	**ML**	...
	mgn	60	...	...	...	...	**(½)**	...	...	...	**[1]**	...	...	...	...	...	**[1]**	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	...	**14v37½**	...	**14#42½**	...	...	...	**14#58½**	**15.02**	...	**15.08**	**15.13**	**15.26½**	**15.34**	...
	plt	64	...	...	**3**	...	**4**	...	...	...	**4**	**3**	...	**3**	**4**	**3**	**4**	...
	dep	65	...	...	**14.39½**	...	**14.44½**	...	...	...	**15p01**	**15.04**	...	**15p10**	**15.15**	**15.28½**	**15.36**	...
	dep-line	66	...	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	...	*14/41*	...	*14/45½*	...	...	...	*15/02*	*15/05*	...	*15/11½*	*15/16*	*15/29½*	*15/37*	...
Maindee	dep	69	...	...	...	...	...	...	...	...	...	*15/06*	...	...	...	...	*15/38*	...
North Jn	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers															15/23	*15/36½*		
	dep-line														**RL**			
Magor & Undy	dep														**15.24**	**15.37½**		
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	...	...	...	**4**	**2**	...	...
Severn Tunnel Jn	dep	75	...	...	*14/48½*	...	*14/53½*	...	...	...	*15/10*	...	...	*15/20*	**15a28½**	**15aq42**	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	**15ap44½**	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	**15a18**	...	...	...	...	**15ap53½**	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	*15/25½*	...	...	...	...	**16ap02½**	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	*15/30½*	...	...	...	...	*16/08½*	...	...
	mgn	83	...	...	...	...	...	...	...	...	**[1](½)**	...	...	...	...	*[1]*	...	...
	arr	84	...	...	...	...	...	...	...	...	**15.44**	...	...	...	...	**16.22½**	...	...
Gloucester	dep	85	...	...	...	...	...	...	...	...	**15.50**	...	...	...	...	**16.24½**	...	...
Severn Tunnel West	dep	86	...	...	*14/49½*	...	*14/54½*	...	...	...	...	...	...	*15/21*	*15/30½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	*14/53*	...	*14/58½*	...	...	...	...	...	...	*15/24½*	*15/34½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	*14/54*	...	*14/59½*	...	...	...	...	...	...	*15/25½*	*15/35½*	...	...	...
	mgn	91	...	...	**[1](½)**	...	**[1]**	...	...	...	...	...	...	...	**[1]**	...	...	...
Patchway	dep	92	...	...	*14/58½*	...	*15/04*	...	...	...	...	...	...	*15/28½*	**15a41½**	...	...	...
															PWY arr 2½ late	GCR arr 2 late		

			209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
Signal ID				**1L71**			**1F25**	**2N21**			**1M73**	**1W66**	**1L74**	**1B97**	**2C83**	**2G64**	**1W18**	
Orig. Dep. Time				14.28								13.10		13.29		15.17	15.10	
Orig. Loc. Name				Swansea								Milford Haven		Fishguard Harbour		Maesteg	Swansea	
Dest. Loc. Name				London Paddington			Portsmouth Harbour	Ebbw Vale Town			Nottingham	Manchester Piccadilly	London Paddington		Taunton	Cheltenham Spa	Chester	
Timing Load				**HST8-125**			**158**	**150**			**170**	**175**	**HST8-125**	**150**	**150**	**142**	**150**	
Operating Characteristics																		
Dates Of Operation				**SX**			**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**	**SX**	
Cardiff Central	arr	51	...	**15.22**	...	...	...	...	...	...	...	**15v46**	...	**15.58**	...	**16.09**	**16.13**	...
	plt	52	...	**1**	...	...	**2**	**0**	...	...	**1**	**2**	**1**	**1**	**2**	**1**	**2**	...
	dep	53	...	**15.25**	...	...	**15.30**	**15.34**	...	...	**15.45**	**15.50**	**15.55**	...	**16.00**	**16.12**	**16@21**	...
	dep-line	54	...	**ML**	...	...	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	...	**ML**	**ML**	**ML**	...
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	*15/32*	...	...	*15/37*	*15/41½*	...	...	*15/52½*	*15/57*	*16/02½*	...	*16/07*	*16/19*	*16/28*	...
	mgn	57	...	...	...	...	...	...	...	...	(½)	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	*15/34½*	...	...	*15/39½*	*15/46*	...	...	*15/55½*	*15/59½*	*16/05*	...	*16/10½*	*16/22½*	*16/30½*	...
	dep-line	59	...	**ML**	...	...	**ML**	...	...	...	**ML**	**ML**	*ML*	...	**ML**	**ML**	**ML**	...
	mgn	60	...	...	...	...	(½)	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**15v37½**	...	...	**15.42½**	...	...	...	**15.58**	**16.02**	**16.08**	...	**16.13**	**16.25**	**16.33**	...
	plt	64	...	**3**	...	...	**4**	...	...	...	**3**	**4**	**3**	...	**4**	**4**	**4**	...
	dep	65	...	**15.39½**	...	...	**15p45**	...	...	...	**16**	**16.04**	**16p10**	...	**16.15**	**16.27**	**16.35**	...
	dep-line	66	...	**ML**	...	...	**ML**	...	...	...	**ML**	**ML**	**ML**	...	**ML**	**ML**	**ML**	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*15/41*	...	...	*15/46*	...	...	...	*16/01*	*16/05*	*16/11½*	...	*16/16*	*16/28*	*16/36*	...
Maindee North Jn	dep	69	...	...	...	...	...	...	...	...	...	*16/06*	...	...	...	...	*16/37*	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers															16/23	16/35		
	dep-line														**RL**	**RL**		
Magor & Undy	dep														**16.24**	**16.36**		
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	...	...	...	**4**	**2**	...	...
Severn Tunnel Jn	dep	75	...	*15/48½*	...	...	*15/54*	...	...	...	*16/10*	...	*16/19*	...	**16a28½**	**16a40½**	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	**16a43**	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	**16a18**	...	...	...	...	**16a52**	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	*16/25½*	...	...	...	...	**17a01**	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	*16/30½*	...	...	...	...	*17/07*	...	...
	mgn	83	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	**[1]**	...	...
Gloucester	arr	84	...	...	...	...	...	...	...		**16.43½**	...	...	...	...	**17.21**	...	...
	dep	85	...	...	...	...	...	...	...	...	**16.50**	...	...	...	...	**17.26**	...	...
Severn Tunnel West	dep	86	...	*15/49½*	...	...	*15/55*	...	...	...	...	...	*16/20*	...	*16/30½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	*15/53*	...	...	*15/59*	...	...	...	...	...	*16/23½*	...	*16/34½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	*15/54*	...	...	*16/00*	...	...	...	...	...	*16/24½*	...	*16/35½*	...	...	...
	mgn	91	...	**[1]**	...	...	**[1]**	...	...	...	...	...	**[1]**	...	**[1]**	...	...	...
Patchway	dep	92	...	*15/58*	...	...	*16/04½*	...	...	...	...	...	*16/28½*	...	**16a41½**	...	...	...
															PWY arr 2½ late	GCR arr 2½ late		

			225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
Signal ID				**1L76**		**1F27**	**2N23**			**1M75**	**1W70**			**1L82**	**2C85**	**2G66**	**1W96**	
Orig. Dep. Time				15.28							15.03					16.15		
Orig. Loc. Name				Swansea							Carmarthen					Maesteg		
Dest. Loc. Name				London Paddington		Portsmouth Hbr	Ebbw Vale Town			Nottingham				London Paddington	Taunton	Cheltenham Spa	Holyhead	
Timing Load				**HST8-125**		**150**	**150**			**170**	**175**			**HST8-125**	**150**	**142**	**10067140**	
Operating Characteristics																		
Dates Of Operation				**SX**		**SX**	**SX**			**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	
Cardiff Central	arr	51	...	**16.22**	...	...	...	...	...	...	**16.46**	...	...	...	...	**17.06**	...	...
	plt	52	...	**1**	...	**2**	**0**	...	...	**1**	**2**	...	...	**1**	**2**	**1**	**2**	...
	dep	53	...	**16.25**	...	**16.30**	**16.34**	...	...	**16.45**	**16.50**	...	...	**16.55**	**17.00**	**17.12**	**17.16**	...
	dep-line	54	...	**ML**	...	**ML**	**ML**	...	...	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	56	...	*16/32*	...	*16/37*	*16/41½*	...	...	*16/52*	*16/57*	...	...	*17/02½*	*17/07*	*17/19*	*17/23*	...
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**[1]**	...
Ebbw Jn	dep	58	...	*16/34½*	...	*16/40½*	*16/46*	...	...	*16/54½*	*16/59½*	...	...	*17-May*	*17/10½*	*17/22½*	*17/26½*	...
	dep-line	59	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	60	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**16v37½**	...	**16.43**	...	...	...	**16.58**	**17.02**	...	...	**17.08**	**17.13**	**17.25**	**17.29½**	...
	plt	64	...	**3**	...	**4**	...	...	...	**3**	**4**	...	...	**3**	**4**	**4**	**3**	...
	dep	65	...	**16.39½**	...	**16p45**	...	...	...	**17.00**	**17.04**	...	...	**17p10**	**17.15**	**17.28**	**17@31½**	...
	dep-line	66	...	**ML**	...	**ML**	...	...	...	**ML**	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*16/41*	...	*16/46*	...	...	...	*17/01*	*17/05*	...	...	*17/11½*	*17/16*	*17/29*	*17/33*	...
Maindee North Jn	dep	69	...	...	...	...	...	...	...	...	*17/06*	...	...	...	...	...	*17/33½*	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers															17/23	17/36		
	dep-line														**RL**	**RL**		
Magor & Undy	dep														**17.24**	**17.37**		
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	**4**	...	...	...	...	...	...	...	...	**4**	**2**	...	...
Severn Tunnel Jn	dep	75	...	*16/48½*	...	**16ap56**	...	...	...	*17/09*	...	...	...	*17/19*	**17b29**	**17a41½**	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	**17a44**	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	*17/15½*	...	...	...	...	...	**17a53**	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	**17c25**	...	...	...	...	...	**18a02**	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	*17/31*	...	...	...	...	...	*18/08*	...	...
	mgn	83	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...	**[1]**	...	...
Gloucester	arr	84	...	...	...	...	...	...	...	**17.44**	...	...	...	...	...	**18.22**	...	...
	dep	85	...	...	...	...	...	...	...	**17.50**	...	...	...	...	...	**18.24**	...	...
Severn Tunnel West	dep	86	...	*16/49½*	...	*16/58*	...	...	...	...	...	...	...	*17/20*	*17/31*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	*16/53*	...	*17/02*	...	...	...	...	...	...	...	*17/23½*	*17/35*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	*16/54*	...	*17/03*	...	...	...	...	...	...	...	*17/24½*	*17/36*	...	...	...
	mgn	91	...	**[1]**	...	*[1]*	...	...	...	...	...	...	...	**[1]**	**[1]**	...	...	...
Patchway	dep	92	...	*16/58*	...	*17/07½*	...	...	...	...	...	...	...	*17/28½*	**17a42**	...	...	...
															PWY arr 2½ late	GCR arr 2½ late		

			241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256
Signal ID				**1L86**		**1F29**	**5N25**	**2N25**			**1M95**	**1W20**	**1B67**	**1L88**	**2C87**	**2G68**	**1W97**	
Orig. Dep. Time				16.28								15.10	14.48			17.15	16.45	
Orig. Loc. Name				Swansea								Milford Haven	Gloucester			Maesteg	Llanelli	
Dest. Loc. Name				London Paddington		Portsmouth Harbour		Ebbw Vale Town			Nottingham	Manchester Piccadilly	Fishguard Harbour	London Paddington	Taunton	Cheltenham Spa	Chester	
Timing Load				**HST8-125**		**158**	**150**	**150**			**170**	**175**	**150**	**HST8-125**	**150**	**142**	**175**	
Operating Characteristics																		
Dates Of Operation				**SX**		**SX**	**SX**	**SX**			**SX**	**SX**	**SX**	**SX**	**SX**	**SX**	**SX**	
Cardiff Central	arr	51	...	**17.22**		...	**17.31**	...	...	...	...	**17.46**	...	...	...	**18.06**	**18.14**	...
	plt	52	...	**1**	...	**2**	**0**	**0**	...	...	**1**	**2**	...	**1**	**2**	**1**	**2**	...
	dep	53	...	**17.25**	...	**17.30**	...	**17.34**	...	...	**17p46**	**17.50**	...	**17.55**	**18.00**	**18@12**	**18.21**	...
	dep-line	54	...	**ML**	...	**ML**	...	**ML**	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...
Marshfield	mgn	55	...	...	...	...	...	...	...	...	...	(½)	...	...	...	...	...	...
	dep	56	...	*17/32*	...	*17/37*	...	*17/41½*	...	...	*17/53½*	*17/57½*	...	*18/02½*	*18/07*	*18/19*	*18/28*	...
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	*17/34½*	...	*17/39½*	...	*17/46*	...	...	*17/56*	*18/00*	...	*18-May*	*18/10½*	*18/22½*	*18/30½*	...
	dep-line	59	...	**ML**	...	**ML**	...	...	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**17v37½**	...	**17.42**	...	...	...	...	**17.58½**	**18.02½**	...	**18.08**	**18.13**	**18.25**	**18.33**	...
	plt	64	...	**3**	...	**4**	...	...	...	...	**3**	**4**	...	**3**	**4**	**3**	**4**	...
	dep	65	...	**17.39½**	...	**17.44½**	...	...	...	...	**18.00½**	**18.04½**	...	**18p10**	**18.15**	**18.27**	**18.35**	...
	dep-line	66	...	**ML**	...	**ML**	...	...	...	...	**ML**	**ML**	...	**ML**	**ML**	**ML**	**ML**	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*17/41*	...	*17/45½*	...	...	...	...	*18/01½*	*18/05½*	...	*18/11½*	*18/16*	*18/28*	*18/36*	...
Maindee	dep	69	...	...	...	...	...	...	...	...	...	*18/06½*	...	...	...	...	*18/37*	...
North Jn	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers															18/23	18/35		
	dep-line														**RL**	**RL**		
Magor & Undy	dep														**18.24**	**18.36**		
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	**4**	...	...	...	...		...	...	...	**4**	**2**	...	...
Severn Tunnel Jn	dep	75	...	*17/48½*	...	**17a55**	...	...	...	...	*18/10½*	...	...	*18/19*	**18a28½**	**18a40½**	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	**18a43**	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	**18a18½**	...	...	...	...	**18a52**	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	*18/26*	...	...	...	...	**19a01**	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	*18/31*	...	...	...	...	*19/07*	...	...
	mgn	83	...	...	...	...	...	...	...	...	...	...	...	...	...	**[1]**	...	...
	arr	84	...	...	...	...	...	...	...		**18v43**	...	...	...	...	**19.21**	...	...
Gloucester	dep	85	...	...	...	...	...	...	...		**18.46**	...	...	...	...	**19.23**	...	...
Severn Tunnel West	dep	86	...	*17/49½*	...	*17/57*	...	...	...	...	...	...	...	*18/20*	*18/30½*	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	*17/53*	...	*18/01*	...	...	...	...	...	...	...	*18/23½*	*18/34½*	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	*17/54*	...	*18/02*	...	...	...	...	...	...	...	*18/24½*	*18/35½*	...	...	...
	mgn	91	...	**[1]**	...	*[1]*	...	...	...	...	...	...	...	**[1]**	**[1]**	...	...	...
Patchway	dep	92	...	*17/58*	...	*18/06½*	...	...	...	...	...	...	...	*18/28½*	**18a41½**	...	...	...
															PWY arr 2½ late	GCR arr 1½ late		

			257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272
Signal ID				**1L90**		**1F30**	**2N33**						**1M95**	**1W74**			**2C69**	**2L56**
Orig. Dep. Time				17.28										1658				18.20
Orig. Loc. Name				Swansea										Carmarthen				Maesteg
Dest. Loc. Name				London Paddington		Portsmouth Harbour	Ebbw Vale Town						Nottingham	Manchester Piccadilly			Taunton	
Timing Load				**HST8-125**		**158**	**150**						**170**	**175**			**150**	**175**
Operating Characteristics																		
Dates Of Operation				**SX**		**SX**	**SX**						**SX**	**SX**			**SX**	**SX**
Cardiff Central	arr	51	...	**18.22**			...						...	**18.49**			...	**19v12**
	plt	52	...	**1**		**2**	**1**						**1**	**2**			**2**	**2**
	dep	53	...	**18.25**		**18.30**	**18.34**						**18p46**	**18q52**			**19.00**	
	dep-line	54	...	**ML**		**ML**	**ML**						**ML**	**ML**			**ML**	
	mgn	55	...	...		...	...						...	...			...	
Marshfield	dep	56	...	*18/32*		*18/37*	*18/41½*						*18/53*	*18/59*			*19/07*	
	mgn	57	...	...		...	...						...	...			...	
Ebbw Jn	dep	58	...	*18/34½*		*18/39½*	*18/46*						*18/55½*	*19/01½*			*19/10½*	
	dep-line	59	...	**ML**	...	**ML**							**ML**	**ML**			**ML**	
	mgn	60	...	...	...	...							**[1]**				...	...
Gaer Jn	dep	61	...	...	...	...							...	...			...	...
	dep-line	62	...	...	...	...							...	...			...	...
Newport (South Wales)	arr	63	...	**18v37½**	...	**18.42**							**18.59**	**19.04**			**19.13**	...
	plt	64	...	**3**	...	**4**							**3**	**4**			**4**	...
	dep	65	...	**18.39½**	...	**18.44½**							**19p01**	**19p06**			**19.15**	
	dep-line	66	...	**ML**	...	**ML**							**ML**	**ML**			**ML**	
	mgn	67	...	...	...	...							...	...			...	
Maindee West Jn	dep	68	...	*18/41*	...	*18/45½*							*19/02*	*19/07*			*19/16*	
Maindee	dep	69	...	...	...	...							...	*19/08*			...	...
North Jn	mgn	70	...	...	...	...							...	...			...	...
Maindee East Jn	dep	71	...	...	...	...		...	...	...	...	...	...	...			...	...
	dep-line	72	...	...	...	...		...	...	...	...	...	...	...			...	...
Magor Crossovers																	19/23	
	dep-line																**RL**	
Magor & Undy	dep																**19.24**	
	mgn	73	...	...	...	...		...	...	...	...	...	...	...			...	...
	plt	74	...	...	...	...		...	...	...		...	...	...			**4**	...
Severn Tunnel Jn	dep	75	...	*18/49½*	...	**18a55**		...				...	*19/10*	...			**19a28½**	
	mgn	76	...	...	...	...		...				...	...	...			...	
Caldicot	dep	77	...	...	...	...		...				...	...	...			...	...
Chepstow	dep	78	...	...	...	...		...				...	**19a18**	...			...	...
	mgn	79	...	...	...	...		...				...	...	...			...	...
Lydney	dep	80	...	...	...	...		...				...	*19/25½*	...			...	...
	mgn	81	...	...	...	...		...				...	...	...			...	...
Awre	dep	82	...	...	...	...		...				...	*19/30½*	...			...	...
	mgn	83	...	...	...	...		...				...	**[1]**	...			...	...
Gloucester	arr	84	...	...	...	...		...				...	**19.43½**	...			...	...
	dep	85	...	...	...	...		...				...	**19.45½**	...			...	...
Severn Tunnel West	dep	86	...	*18/50½*	...	*18/57*		...				...		...			*19/30½*	
	mgn	87	...	...	...	...		...	...	...	...	...		...			...	
Severn Tunnel East	dep	88	...	*18/54*	...	*19/01*		...	...	...	...	...		...			*19/34½*	
	mgn	89	...	...	...	...		...	...	...	...	...		...			...	
Pilning	dep	90	...	*18/55*	...	*19/02*		...	...	...	...	...		...			*19/35½*	
	mgn	91	...	...	...	**[1]**		...	...	...	...	...		...			**[1]**	
Patchway	dep	92	...	*18/58*	...	*19/06½*		...	...	...	...	...		...			**19a41½**	
																	PWY arr 2½ late	

			273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288
Signal ID				**1L92**		**1F99**	**1W98**	**2N29**				**1M85**	**2C91**	**1B64**	**1W76**	**1W76**		**1L94**
Orig. Dep. Time				18.28										1710	19.21			19.29
Orig. Loc. Name				Swansea										Milford Haven	Maesteg			Swansea
Dest. Loc. Name				London Paddington		Portsmouth Harbour	Holyhead	Ebbw Vale Town				Birmingham New St	Taunton			Manchester Piccadilly		London Paddington
Timing Load				**HST8-125**		**158**	**175**	**142**				**170**	**150**	**150**	**142**	**153**		**HST8-125**
Operating Characteristics																		
Dates Of Operation				**SX**		**SX**	**SX**	**SX**				**SX**	**SX**	**SX**	**SX**	**SX**		**SX**
Cardiff Central	arr	51	...	**19.22**	...	...	...	...	...	...	...	...	...	**20w01**	**20.13**	...	...	**20#23**
	plt	52	...	**1**	...	**2**	**2**	**0**	...	...	...	**2**	**1**	**2**	**1**	**0**	...	**1**
	dep	53	...	**19.25**	...	**19.30**	**19.34**	**19r38**	...	...	...	**19.50**	**20.00**	...	...	**20.17**	...	**20p26**
	dep-line	54	...	**ML**	...	**ML**	**ML**	**ML**	...	...	...	**ML**	**ML**	...	...	**ML**	...	**ML**
	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshfield	dep	56	...	*19/32*	...	*19/37*	*19/41*	*19/45½*	...	...	...	*19/57*	*20/07*	...	...	*20/24*	...	*20/33*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	...	*19/34½*	...	*19/39½*	*19/43½*	*19/50*	...	...	...	*19/59½*	*20/10½*	...	...	*20/26½*	...	*20/35½*
	dep-line	59	...	**ML**	...	**ML**	**ML**	...	...	...	...	**ML**	**ML**	...	...	**ML**	...	**ML**
	mgn	60	...	...	...	...	**[1]**	...	...	...	...	**[1]**	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**19v37½**	...	**19.42**	**19#47**	...	...	...	...	**20.03**	**20.13**	...	...	**20.29**	...	**20#38½**
	plt	64	...	**3**	...	**4**	**3**	...	...	...	...	**3**	**4**	...	...	**4**	...	**3**
	dep	65	...	**19.39½**	...	**19.44½**	**19p49**	...	...	...	...	**20.05**	**20.15**	...	...	**20.31**	...	**20p40½**
	dep-line	66	...	**ML**	...	**ML**	**ML**	...	...	...	...	**ML**	**ML**	...	...	**ML**	...	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*19/41*	...	*19/45½*	*19/50*	...	...	...	...	*20/06*	*20/16*	...	...	*20/32*	...	*20/42*
Maindee North Jn	dep	69	...	...	...	...	*19/51*	...	...	...	...	...	...	...	...	*20/33*	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers													20/23					
	dep-line												**RL**					
Magor & Undy	dep												**20.24**					
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	**2**	**4**	...	...	...	...	...
Severn Tunnel Jn	dep	75	...	*19/48½*	...	*19/53½*	...	...	...	...	...	**20a15½**	**20a28½**	...	...	...	...	*20/49½*
	mgn	76	...	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	**20a18**	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	...	**20a26½**	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	...	**20a35**	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	...	*20/41*	...	...	...	...	...	...
	mgn	83	...	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...	...
Gloucester	arr	84	...	...	...	...	...	...	...		...	**20.54**	...	...	...	...	...	...
	dep	85	...	...	...	...	...	...	...		...	**20.59**	...	...	...	...	...	...
Severn Tunnel West	dep	86	...	*19/49½*	...	*19/54½*	...	...	...	...	...	...	*20/31½*	...	...	...	...	*20/50½*
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	*19/53*	...	*19/58½*	...	...	...	...	...	...	*20/35½*	...	...	...	...	*20/54*
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	*19/54*	...	*19/59½*	...	...	...	...	...	...	*20/36½*	...	...	...	...	*20/55*
	mgn	91	...	**[1]**	...	**[1]**	...	...	...	...	...	...	...	...	...	...	...	**[1](1½)**
Patchway	dep	92	...	*19/58*	...	*20/04*	...	...	...	...	...	...	**20ap41½**	...	...	...	...	*21/00½*
													PWY arr 1 late					

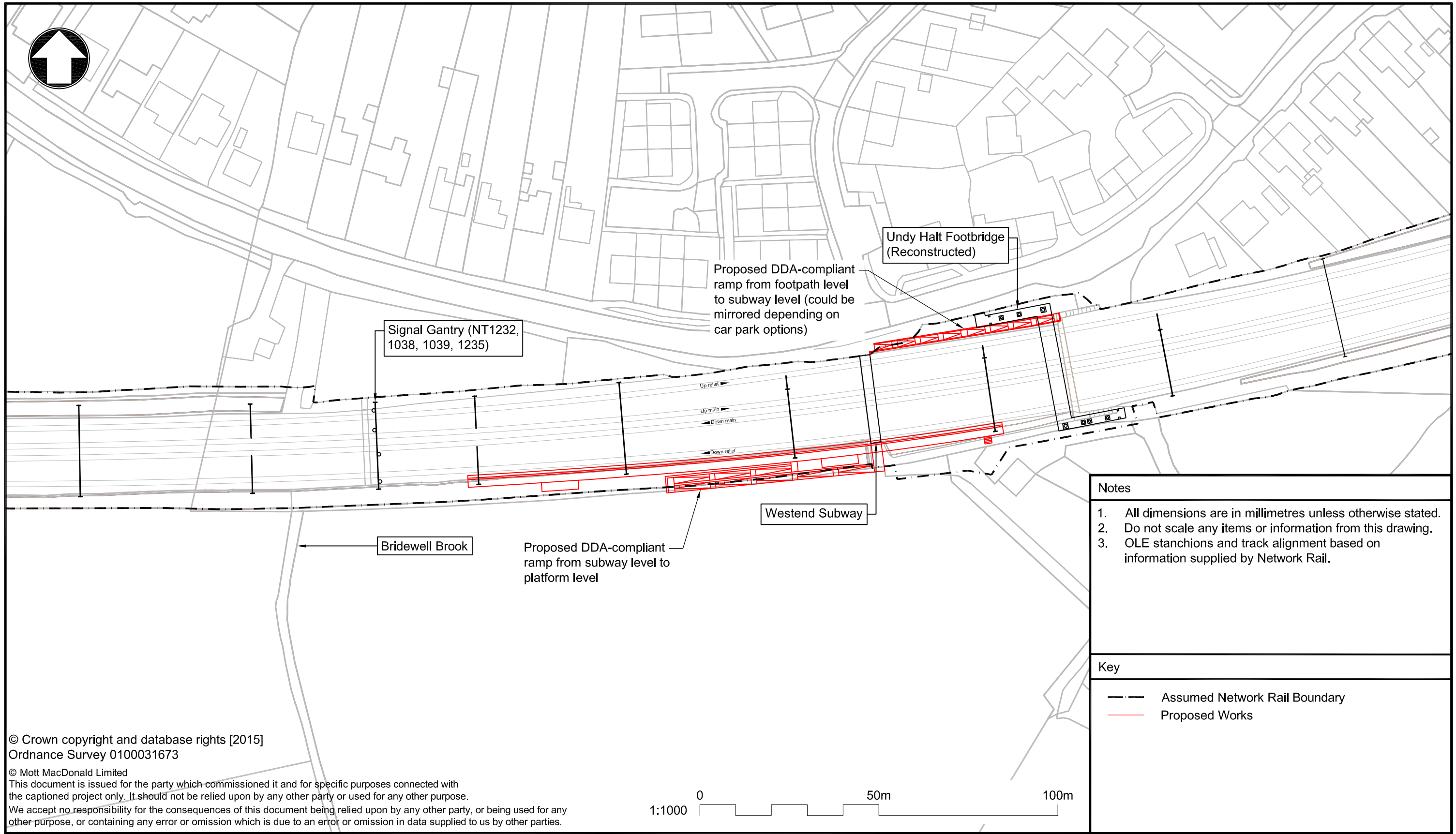
			289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304
Signal ID				1F37	2N31	2B39	2C34		1T47	1M87	2G72	1W78	1L96			2C94	2N33	5C00
Orig. Dep. Time						18.50					20.15		20.28					
Orig. Loc. Name						Carmarthen					Maesteg		Swansea					
Dest. Loc. Name				Portsmouth Harbour	Ebbw Vale Town		Westbury			Birmingham New Street	Cheltenham Spa	Chester	Swindon			Bristol Temple Meads	Ebbw Vale Town	Bristol Barton Hill W.R.D.
Timing Load				158	150	153	150			170	142	175	HST8-125			150	150	221
Operating Characteristics																		
Dates Of Operation				SX	SX	SX	SX			SX	SX	SX	SX			SX	SX	FO From 08/04/2016
Cardiff Central	arr	51	...	...	...	**20.46**	...	...	...	...	**21.06**	...	**21.22**	...	...	...	...	**21OP37**
	plt	52	...	**2**	**0**	**2**	**1**	...	...	**1**	**2**	**1**	**2**	...	...	**1**	**2**	**1**
	dep	53	...	**20.30**	**20.34**	...	**21.00**	...	...	**21.05**	**21.12**	**21.17**	**21.25**	...	...	**21.30**	**21.34**	**21.40**
	dep-line	54	...	**ML**	**ML**	...	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	...	**ML**	**ML**	**ML**
	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshfield	dep	56	...	*20/37*	*20/41½*	...	*21/07*	...	...	*21/12*	*21/19*	*21/24½*	*21/32*	...	...	*21/37*	*21/41½*	*21/46*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**[1](1)**
Ebbw Jn	dep	58	...	*20/39½*	*20/46*	...	*21/10½*	...	...	*21/14½*	*21/22½*	*21/27*	*21/34½*	...	...	*21/40½*	*21/46*	*21/50½*
	dep-line	59	...	**ML**	...	...	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	...	**ML**	...	**ML**
	mgn	60	...	**(1½)**	...	...	...	...	...	**[1]**	...	**[1]**	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	...	**20.43½**	...	...	**21.13**	...	...	**21.18**	**21.25**	**21.30½**	**21.37½**	...	...	**21.43**	...	...
	plt	64	...	**3**	...	...	**4**	...	...	**3**	**4**	**3**	**3**	...	...	**4**	...	...
	dep	65	...	**20p45½**	...	...	**21.15**	...	...	**21.21½**	**21.27**	**21.32½**	**21.39½**	...	...	**21q45**	...	*21/52½*
	dep-line	66	...	**ML**	...	...	**ML**	...	...	**ML**	**ML**	**ML**	**ML**	...	...	**ML**	...	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	*20/46½*	...	...	*21/16*	...	...	*21/22½*	*21/28*	*21/33½*	*21/41*	...	...	*21/46*	...	*21/53½*
Maindee North Jn	dep	69	...	...	...	...	...	...	...	...	...	*21/34½*	...	...	...	...	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers							21/23				21/35							
	dep-line						**RL**				**RL**							
Magor & Undy	dep						**21.24**				**21.36**							
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	plt	74	...	...	...	...	**4**	...	...	...	**2**	...	...	...	...	**4**	...	...
Severn Tunnel Jn	dep	75	...	*20/54½*	...	...	**21ap28½**	...	...	*21/30½*	**21a40½**	...	*21/48½*	...	...	**21aq56**	...	*22/03½*
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**[1]**
Caldicot	dep	77	...	...	...	...	...	...	...	...	**21a43**	...	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	*21/37*	**21a52**	...	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	*21/44*	**22a01**	...	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	*21/49*	*22/07*	...	...	...	...	...	...	...
	mgn	83	...	...	...	...	...	...	...	**[1]**	**[1](1)**	...	...	...	...	...	...	...
Gloucester	arr	84	...	...	...	...	...	...		**22.02**	**22#22**	...	...	...	...	...	...	...
	dep	85	...	...	...	...	...	...		**22.04**	**22p24**	...	...	...	...	...	...	...
Severn Tunnel West	dep	86	...	*20/55½*	...	...	*21/30½*	...	...	...	...	...	*21/49½*	...	...	*21/58*	...	*22/05½*
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	**(1)**	...	...
Severn Tunnel East	dep	88	...	*20/59½*	...	...	*21/34½*	...	...	...	...	...	*21/53*	...	...	*22/03*	...	*22/09½*
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	*21/00½*	...	...	*21/35½*	...	...	...	...	...	*21/54*	...	...	*22/04*	...	*22/10½*
	mgn	91	...	**[1]**	...	...	**[1]**	...	...	...	...	...	**[1]**	...	...	*[1]*	...	**(2)**
Patchway	dep	92	...	*21/05*	...	...	**21a41½**	...	...	...	...	...	*21/58*	...	...	*22/08½*	...	*22/15*
							PWY arr 2½ late				GCR arr AB							

			305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320
Signal ID			**5C00**	**5C00**							**1M09**	**1W80**	**1W80**	**1B41**	**2C95**	**2C95**	**2L60**	**2F87**
Orig. Dep. Time														19.14			21.15	21.37
Orig. Loc. Name														Milford Haven			Maesteg	Ebbw Vale Town
Dest. Loc. Name			Bristol Barton Hill W.R.D.	Bristol Barton Hill W.R.D.							Birmingham New Street	Crewe	Crewe		Bristol Temple Meads	Bristol Temple Meads		Cardiff Central
Timing Load			**221**	**221**							**170**	**150**	**150**	**175**	**158**	**158**	**142**	**150**
Operating Characteristics																		
Dates Of Operation			**SX Until 01/04/2016**	**FSX From 04/04/2016**							**SX**	**SX Until 01/04/2016, FO From 08/04/2016**	**FSX From 04/04/2016**	**SX**	**SX Until 01/04/2016**	**SX From 04/04/2016**	**SX**	**FSX From 04/01/2016 Until 31/03/2016**
Cardiff Central	arr	51	**21OP37**	**21OP37**	...	...	...	...	...	...	...	...	...	**22y00**	...	...	**22.11**	...
	plt	52	**2**	**2**	...	...	...	...	...	...	**0**	**1**	**1**	**2**	**1**	**1**	**4A**	...
	dep	53	**21.40**	**21.40**	...	...	...	...	...	...	**21.50**	**21.55**	**21.55**	...	**22.04**	**22.04**	...	...
	dep-line	54	**ML**	**ML**	...	...	...	...	...	...	**ML**	**ML**	**ML**	...	**ML**	**ML**	...	...
	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshfield	dep	56	*21/46*	*21/46*	...	...	...	...	...	...	*21/57*	*22/02*	*22/02*	...	*22/11*	*22/11*	...	...
	mgn	57	**[1](1)**	**[1]**	...	...	...	...	...	...	**[1]**	...	...	...	...	...	...	...
Ebbw Jn	dep	58	*21/50½*	*21/50½*	...	...	...	...	...	...	*22/00½*	*22/05½*	*22/05½*	...	*22/13½*	*22/13½*	...	...
	dep-line	59	**ML**	**RL**	...	...	...	...	...	...	**ML**	**ML**	**RL**	...	**ML**	**RL**	...	...
	mgn	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	*22/21½*
	dep-line	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**ML**
Newport (South Wales)	arr	63	...	...	...	...	...	...	...	...	**22.03**	**22.08**	**22.09**	...	**22.16**	**22#17**	...	**22RM23½**
	plt	64	...	...	...	...	...	...	...	...	**3**	**3**	**2**	...	**3**	**3**	...	**3**
	dep	65	*21/52½*	*21/53½*	...	...	...	...	...	...	**22.05**	**22.12**	**22.13**	...	**22.18**	**22p19**	...	**22.30**
	dep-line	66	**ML**	**RL**	...	...	...	...	...	...	**ML**	**ML**	**RL**	...	**ML**	**RL**	...	**ML**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**(1)**
Maindee West Jn	dep	68	*21/53½*	*21/55*	...	...	...	...	...	...	*22/06*	*22/13*	*22/15*	...	*22/19*	*22/21*	...	...
Maindee North Jn	dep	69	...	...	...	...	...	...	...	...	...	*22/15*	...	...	...	...	...	...
	mgn	70	...	...	...	...	...	...	...	...	...	**(1)**	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	*22/16*	...	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	**RL**	...	...	...	...	...
Magor Crossovers															22/26	22/32		
	dep-line														**RL**			
Magor & Undy	dep														**22.27**	**22.33**		
	mgn	73	...	...	...	...	...	...	...	...	...	...	...	...	**(4)**	...	...	...
	plt	74	...	...	...	...	...	...	...	...	...	...	...	...	**4**	**4**	...	...
Severn Tunnel Jn	dep	75	*22/03½*	*22/04*	...	...	...	...	...	...	*22/14*	...	...	...	**22a35½**	**22a37**	...	...
	mgn	76	**[1]**	**[1]**	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	...	...	...	...	...	...	...	...	*22/20½*	...	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	*22/27½*	...	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	*22/32½*	...	...	...	...	...	...	...
	mgn	83	...	...	...	...	...	...	...	...	**[1]**	...	...	...	...	...	...	...
Gloucester	arr	84	...	...	...	...		...	...		**22.45½**	...	...	...	...	...	...	...
	dep	85	...	...	...	...		...	...		**22.47½**	...	...	...	...	...	...	...
Severn Tunnel West	dep	86	*22/05½*	*22/06*	...	...	...	...	...	...	...	...	...	...	*22/37½*	*22/39*	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	*22/09½*	*22/10*	...	...	...	...	...	...	...	...	...	...	*22/41½*	*22/43*	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	*22/10½*	*22/11*	...	...	...	...	...	...	...	...	...	...	*22/42½*	*22/44*	...	...
	mgn	91	**(2)**	*(½)*	...	...	...	...	...	...	...	...	...	...	**[1]**	**[1]**	...	...
Patchway	dep	92	*22/15*	*22/14*	...	...	...	...	...	...	...	...	...	...	**22a48½**	**22a50**	...	...
															STJ AB	PWY arr 1½ late		

			321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336
Signal ID			5W08	5W08	5W08	5W08	2C96	2C96	2C96	2C96	2B68	2N35	2N35		2N35	2F98	2G74	2G74
Orig. Dep. Time			21.42	21.42	21.42	21.42					19.59					22.37	22.15	22.15
Orig. Loc. Name			Hereford	Hereford	Hereford	Hereford					Tenby					Ebbw Vale Town	Maesteg	Maesteg
Dest. Loc. Name			St Philips Mrsh H S T D	St Philips Mrsh H S T D	St Philips Mrsh H S T D	St Philips Mrsh H S T D	Bristol Temple Meads	Bristol Temple Meads	Bristol Temple Meads	Bristol Temple Meads		Ebbw Vale Town	Ebbw Vale Town		Ebbw Vale Town	Cardiff Central	Gloucester	Gloucester
Timing Load			HST8-125	HST8-125	HST8-125	HST8-125	150	150	150	150	150	142	142		142	142	142	142
Operating Characteristics			D	D	D	D												
Dates Of Operation			FSX Until 31/12/2015, FSX From 04/04/2016	FO	FSX From 15/02/2016 Until 31/03/2016	FSX From 04/01/2016 Until 11/02/2016	FO	FSX Until 31/12/2015	FSX From 04/04/2016	FSX From 04/01/2016 Until 31/03/2016	SX	FSX From 04/04/2016	FO		FSX Until 31/12/2015	FSX From 04/01/2016 Until 31/03/2016	FO	FSX From 04/04/2016
Cardiff Central	arr	51	...	...	...	...	...	...	...	...	**22v55**	...	...	...	...	...	**23Uv08**	**23v08**
	plt	52	...	...	...	...	**4B**	**4B**	**4B**	**4B**	**2**	**1**	**1**	...	**1**	...	**2**	**1**
	dep	53	...	...	...	...	**22.36**	**22.36**	**22.36**	**22.36**	...	**23.05**	**23.05**	...	**23.05**	...	**23.20**	**23.20**
	dep-line	54	...	...	...	...	**RL**	**RL**	**ML**	**RL**	...	**ML**	**ML**	...	**RL**	...	**ML**	**ML**
	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshfield	dep	56	...	...	...	...	*22/46*	*22/46*	*22/45½*	*22/46*	...	*23/12½*	*23/12½*	...	*23/14½*	...	*23/27*	*23/27*
	mgn	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	**(2½)**
Ebbw Jn	dep	58	...	...	...	...	*22/49½*	*22/50*	*22/49½*	*22/50*	...	*23/17*	*23/17*	...	*23/19*	...	*23/30½*	*23/33*
	dep-line	59	...	...	...	...	**ML**	**ML**	**RL**	**RL**	...	...	...	...	...	...	**ML**	**RL**
	mgn	60	...	...	...	...	...	...	...	...	...	...	**(2)**	...	...	...	...	...
Gaer Jn	dep	61	...	...	...	...	...	...	...	*22/51½*	...	...	...	...	...	*23/21½*	...	...
	dep-line	62	...	...	...	...	...	...	...	**DML**	...	...	...	...	...	**ML**	...	...
Newport (South Wales)	arr	63	...	...	...	...	**22v52**	**22.53**	**22#53½**	**22#54**	...	...	...	...	...	**23RM23½**	**23D#33**	**23v37**
	plt	64	...	...	...	...	**4**	**4**	**2**	**4**	...	...	...	...	...	**3**	**3**	**2**
	dep	65	...	...	...	...	**22q55**	**22q55**	**22r56½**	**22r56**	...	...	...	...	...	**23.27½**	**23.40**	**23.39**
	dep-line	66	...	...	...	...	**ML**	**ML**	**RL**	**ML**	...	...	...	...	...	**ML**	**ML**	**RL**
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	...	...	...	...	*22/56*	*22/56*	*22/58½*	*22/57*	...	...	...	...	...	...	*23/41*	*23/41*
Maindee North Jn	dep	69	*22/23*	*22/23½*	*22/23*	*22/23*	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	70	...	...	**(2½)**	**(2)**	...	...	...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	*22/25*	*22/25½*	*22/27½*	*22/27*	...	...	...	...	...	...	...	...	...	...	...	...
	dep-line	72	**RL**	**RL**	**ML**	**ML**	...	...	...	...	...	...	...	...	...	...	...	...
Magor Crossovers																	23/48	23/52
	dep-line																**RL**	
Magor & Undy	dep																**23.49**	**23.53**
	mgn	73	...	...	**(3)**	**(3½)**	...	...	...	...	...	...	...	...	...	...	**(4½)**	**(1)**
	plt	74	...	...	...	...	**4**	**4**	**4**	**4**	...	...	...	...	...	...	**2**	**2**
Severn Tunnel Jn	dep	75	*22/46*	*22/46½*	*22/46*	*22/46*	**23aq13**	**23aq13**	**23aq13**	**23aq13**	...	...	...	...	...	...	**23a58**	**23a58**
	mgn	76	**(2)**	**(1½)**	**(2)**	**(2)**	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	---->	---->
Chepstow	dep	78	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gloucester	arr	84	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	85	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	86	*22/49*	*22/49*	*22/49*	*22/49*	*23/15*	*23/15*	*23/15*	*23/15*	...	...	...	...	...	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	*22/53*	*22/53*	*22/53*	*22/53*	*23/19*	*23/19*	*23/19*	*23/19*	...	...	...	...	...	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	*22/54*	*22/54*	*22/54*	*22/54*	*23/20*	*23/20*	*23/20*	*23/20*	...	...	...	...	...	...	...	...
	mgn	91	**[1]**	**[1]**	**[1]**	**[1]**	**[1]**	**[1]**	**[1]**	**[1]**	...	...	...	...	...	...	...	...
Patchway	dep	92	*22/58*	*22/58*	*22/58*	*22/58*	*23/24½*	*23/24½*	*23/24½*	*23/24½*	...	...	...	...	...	...	...	...
																	STJ AB	STJ AB

			337	338	339	340	341	342	343	344	345	346	347	348				
Signal ID			2G74	2G74	2C97	2C97	2C97	2C97	2V12					1V66				
Orig. Dep. Time			22.15	22.15					17.20					20.30				
Orig. Loc. Name			Maesteg	Maesteg					Crewe					Manchester Piccadilly				
Dest. Loc. Name			Gloucester	Gloucester	Bristol Temple Meads	Bristol Temple Meads	Bristol Temple Meads	Bristol Temple Meads						Cardiff Central				
Timing Load			142	142	150	150	150	150	153					175				
Operating Characteristics																		
Dates Of Operation			FSX From 04/01/2016 Until 31/03/2016	FSX Until 31/12/2015	FO	FSX From 04/04/2016	FSX Until 31/12/2015	FSX From 04/01/2016 Until 31/03/2016	SX					FSX From 04/04/2016				
Cardiff Central	arr	51	23v08	23v08	...	...	...	...	23w38	...	...	...	...	...	...	...	...	...
	plt	52	1	1	1	1	1	1	2	...	...	...	...	...	...	...	...	...
	dep	53	23.20	23.20	23.27	23.27	23.27	23.27	...	...	...	...	...	...	...	...	...	...
	dep-line	54	RL	RL	ML	ML	RL	RL	...	...	...	...	...	...	...	...	...	...
	mgn	55	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Marshfield	dep	56	*23/29*	*23/29*	*23/34*	*23/36½*	*23/37*	*23/37*	...	...	...	...	...	...	...	...	...	...
	mgn	57	(1½)	(2½)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ebbw Jn	dep	58	*23/34*	*23/35*	*23/37½*	*23/40½*	*23/41*	*23/41*	...	...	...	...	...	...	...	...	...	...
	dep-line	59	RL	ML	ML	RL	ML	RL	...	...	...	...	...	...	...	...	...	...
	mgn	60	...	...	[2](1)	...	...	...	...	...	...	...	...	...	...	...	...	...
Gaer Jn	dep	61	*23/35½*	...	...	...	...	*23/42½*	...	...	...	...	...	...	...	...	...	...
	dep-line	62	ML	...	...	...	...	DML	...	...	...	...	...	...	...	...	...	...
Newport (South Wales)	arr	63	23v38	23v38	23v43	23# 44½	23.44	23# 45	...	...	...	...	...	...	...	...	...	...
	plt	64	3	3	4	4	4	4	...	...	...	...	...	...	...	...	...	...
	dep	65	23.40	23.40	23p46	23p46½	23p46	23q47	...	...	...	...	...	...	...	...	...	...
	dep-line	66	ML	ML	ML	RL	ML	ML	...	...	...	...	...	...	...	...	...	...
	mgn	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Maindee West Jn	dep	68	*23/41*	*23/41*	*23/47*	*23/48*	*23/47*	*23/48*	...	...	...	...	...	...	...	...	...	...
Maindee North Jn	dep	69	...	...					...	...	...	...	...	*23/56½*	...	...	...	...
	mgn	70	...	...					...	...	...	...	...	...	...	...	...	...
Maindee East Jn	dep	71	...	...	...	...	...	...	...	...	...	...	...	*23/58½*	...	...	...	...
	dep-line	72	...	...	...	...	...	...	...	...	...	...	...	RL	...	...	...	...
Magor Crossovers			23/48	23/48	23/54	*23/59*	23/54	23/55										
	dep-line				RL	RL	RL	RL										
Magor & Undy	dep		23.49	23.49	23.55	00.00	23.55	23.56										
	mgn	73	(4½)	(4½)	(4½)	...	(4½)	(3½)	...	...	...	...	...	...	...	...	...	...
	plt	74	2	2	4	4	4	4	...	...	...	...	...	...	...	...	...	...
Severn Tunnel Jn	dep	75	23a58	23a58	00ap04	00ap04	00ap04	00ap04	...	...	...	...	...	...	...	...	...	...
	mgn	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Caldicot	dep	77	00b01	00b01	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chepstow	dep	78	00a10	00a10	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	79	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lydney	dep	80	00a19	00a19	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	81	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Awre	dep	82	00/25	00/25	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	mgn	83	[1]	[1]	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gloucester	arr	84	00.39	00.39	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	dep	85	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel West	dep	86	...	...	00/06	00/06	00/06	00/06	...	...	...	...	...	...	...	...	...	...
	mgn	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Severn Tunnel East	dep	88	...	...	00/10	00/10	00/10	00/10	...	...	...	...	...	...	...	...	...	...
	mgn	89	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilning	dep	90	...	...	00/11	00/11	00/11	00/11	...	...	...	...	...	...	...	...	...	...
	mgn	91	...	...	[1]	[1]	[1]	[1]	...	...	...	...	...	...	...	...	...	...
Patchway	dep	92	...	...	00ap17	00ap17	00ap17	00ap17	...	...	...	...	...	...	...	...	...	...
	mgn	93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bristol Parkway	arr	94	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			STJ AB	STJ AB	STJ AB	STJ AB	STJ AB	STJ AB										

Appendix D. Drawings



Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

Assumed Network Rail Boundary

Proposed Works

1:1000 0 50m 100m

Mott MacDonald
Fitzalan House
Fitzalan Road
Cardiff
CF24 0EL
GB
T (0)29 2046 7800
F
W www.mottmac.com

Client

Magor Action Group On Rail (MAGOR)
22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform General Arrangement
Westbound - Option 1

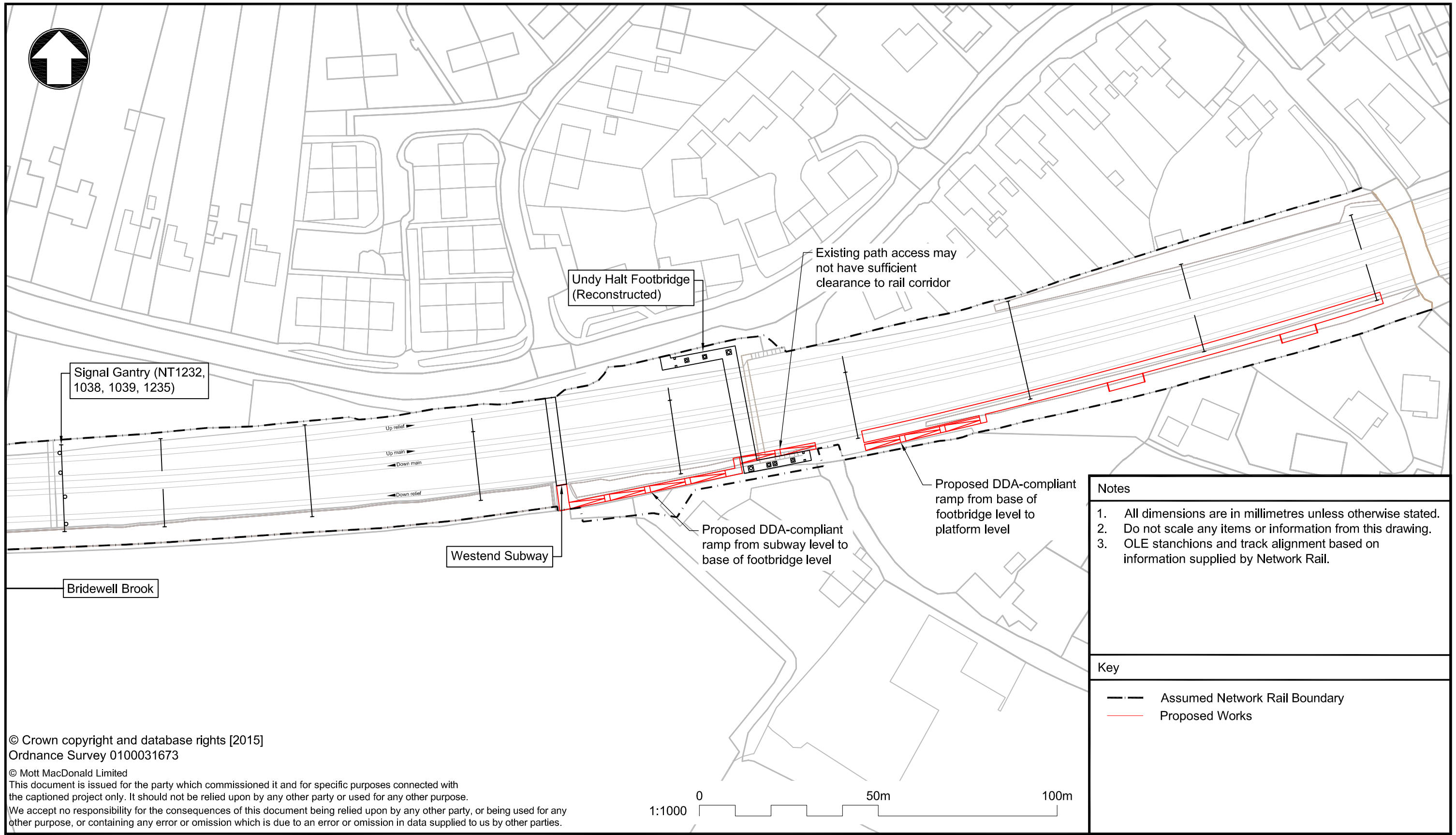
Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3 1:1000

Drawing Number MMD-364017-C-DR-00-XX-0002

Security	Status	Rev
STD	PRE	P1

P:\Cardiff\MNS\Projects\364017 - Magor and Undy Station\01 Drawings\02 Working Drawings\MMD-364017-C-DR-00-XX-0002.dwg April 12, 2016 - 3:14PM wu64619



Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

- Assumed Network Rail Boundary
- Proposed Works

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Client

Magor Action Group On Rail (MAGOR)
22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform General Arrangement
Westbound - Option 2

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3
1:1000

Drawing Number
MMD-364017-C-DR-00-XX-0003

Security	Status	Rev
STD	PRE	P1

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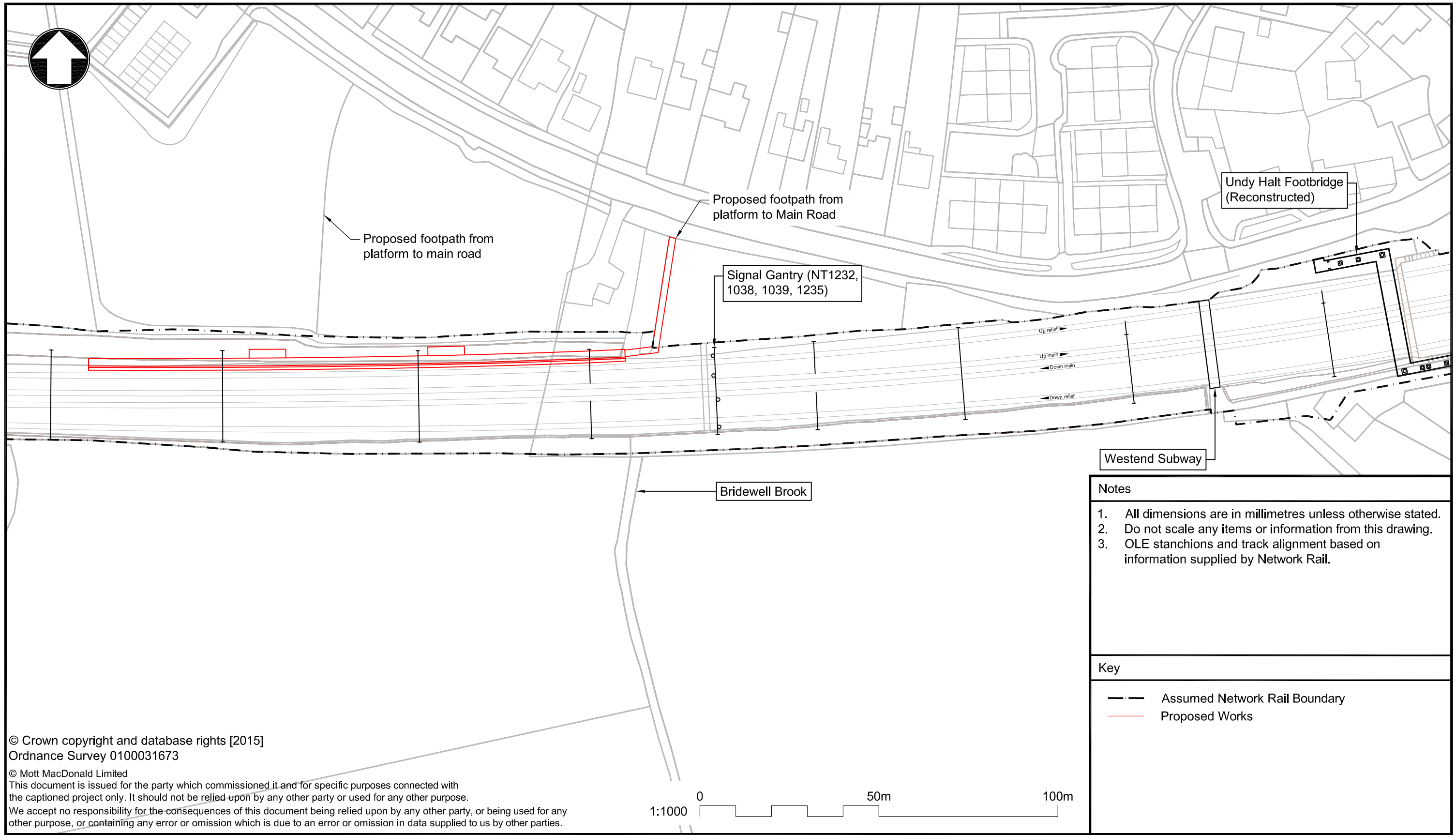

Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

Assumed Network Rail Boundary

Proposed Works

1:1000 0 50m 100m

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22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform General Arrangement
Eastbound - Option 1

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3 1:1000

Drawing Number MMD-364017-C-DR-00-XX-0004

Security	Status	Rev
STD	PRE	P1

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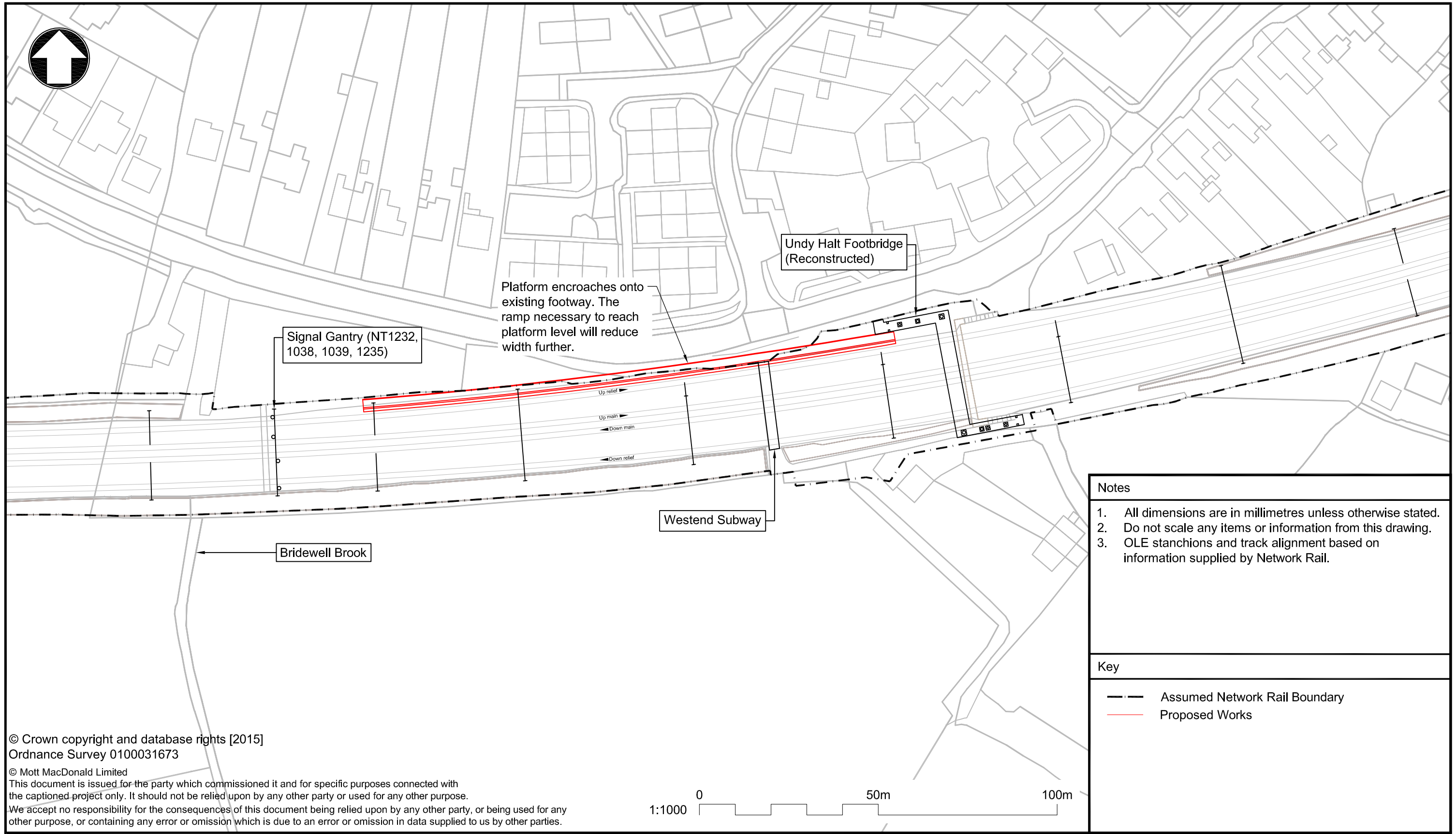

Notes

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2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

Assumed Network Rail Boundary
Proposed Works

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Magor Action Group On Rail (MAGOR)
22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform General Arrangement
Eastbound - Option 2

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3
1:1000

Drawing Number
MMD-364017-C-DR-00-XX-0005

Security	Status	Rev
STD	PRE	P1

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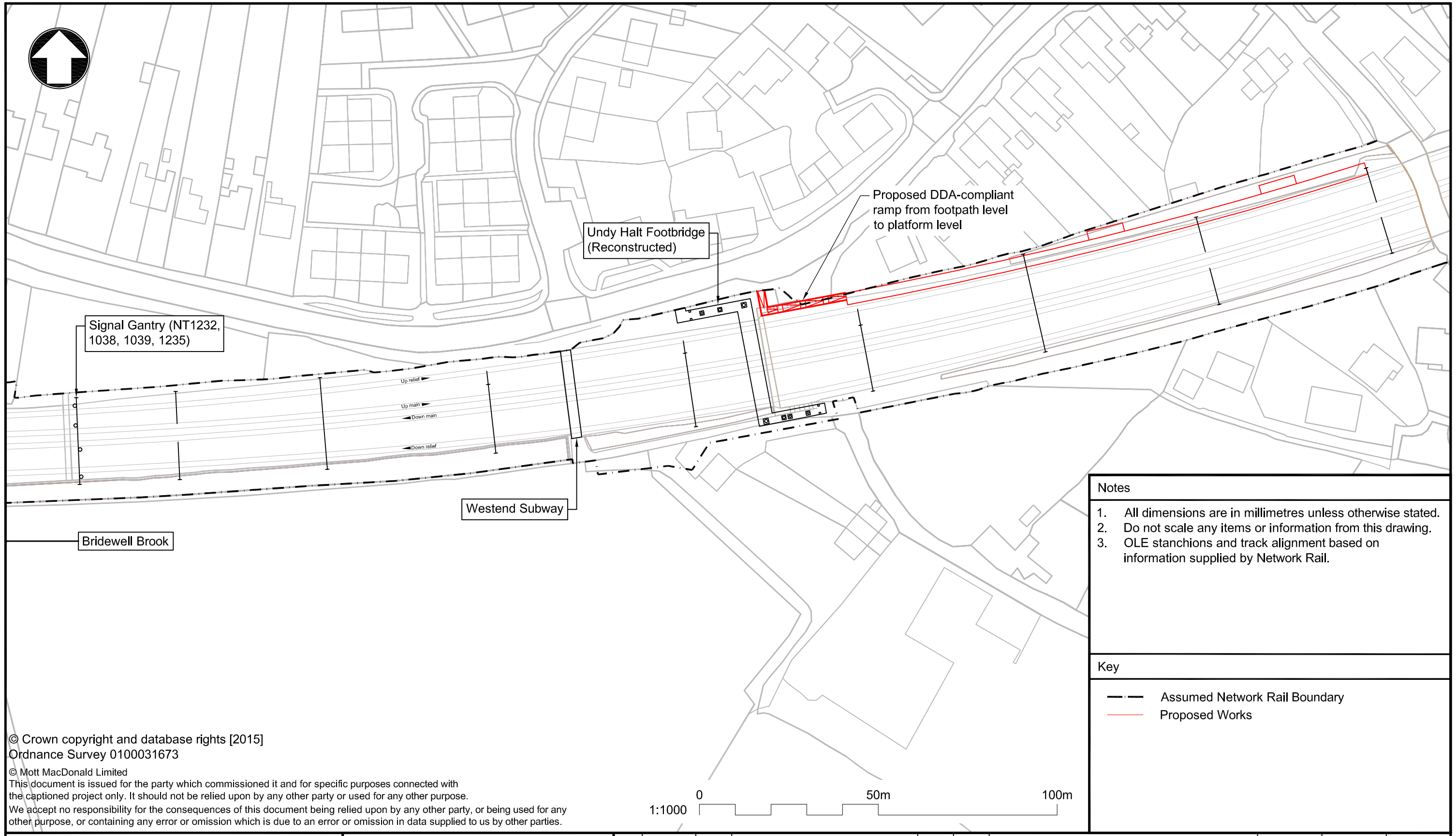

Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

Assumed Network Rail Boundary

Proposed Works

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Client

Magor Action Group On Rail (MAGOR)
22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform Details
Eastbound - Option 3

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3
1:1000

Drawing Number
MMD-364017-C-DR-00-XX-0006

Security	Status	Rev
STD	PRE	P1

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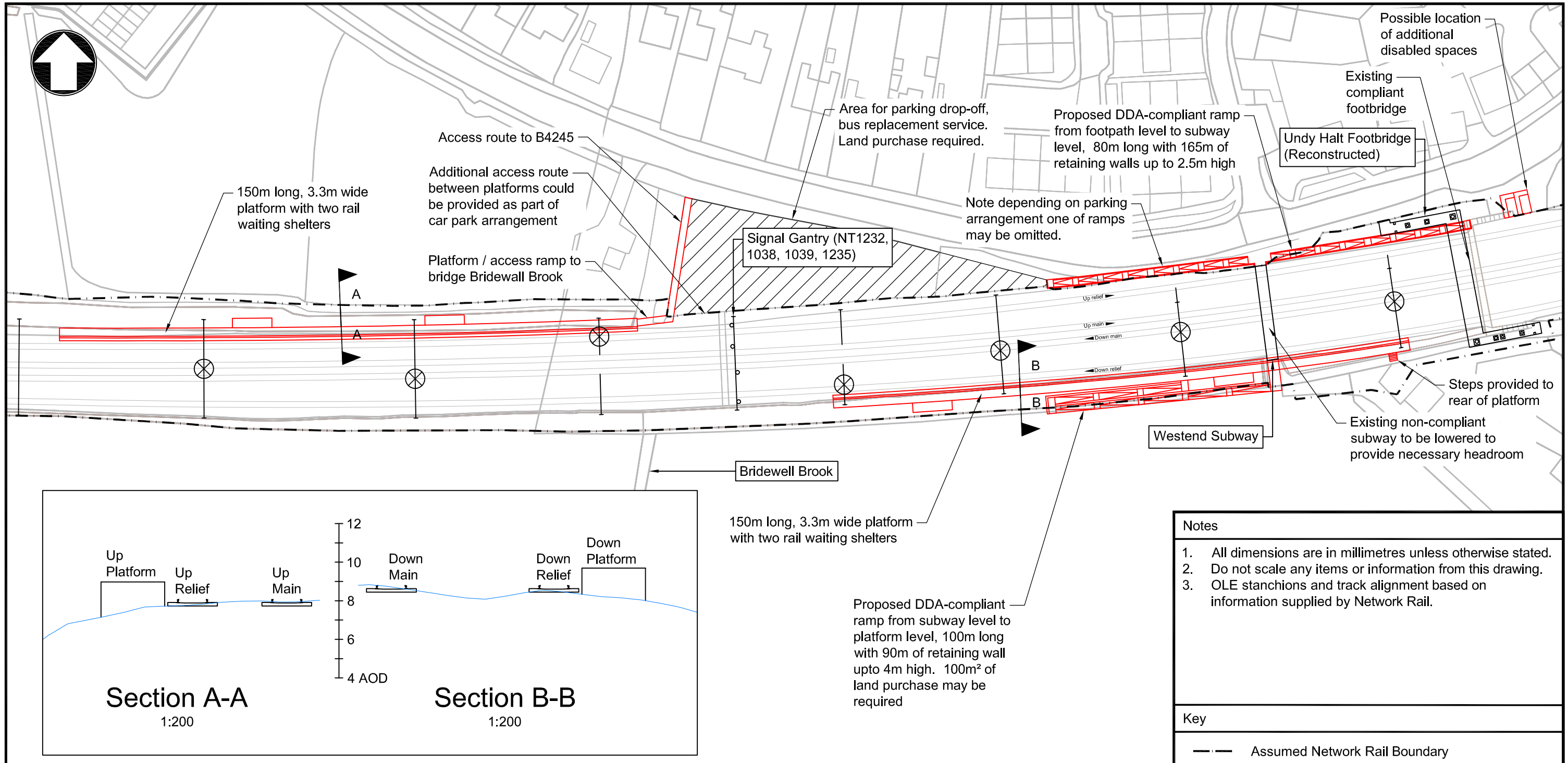

Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. OLE stanchions and track alignment based on information supplied by Network Rail.

Key

- Assumed Network Rail Boundary
- Proposed Works
- Alteration required to OLE stanchions

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22 The Paddocks
Undy
Caldicot
Monmouthsire, NP26 3TD

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Platform General Arrangement
Costed Option

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW

Scale at A3
1:1000

Drawing Number
MMD-364017-C-DR-00-XX-0007

Security	Status	Rev
STD	PRE	P1

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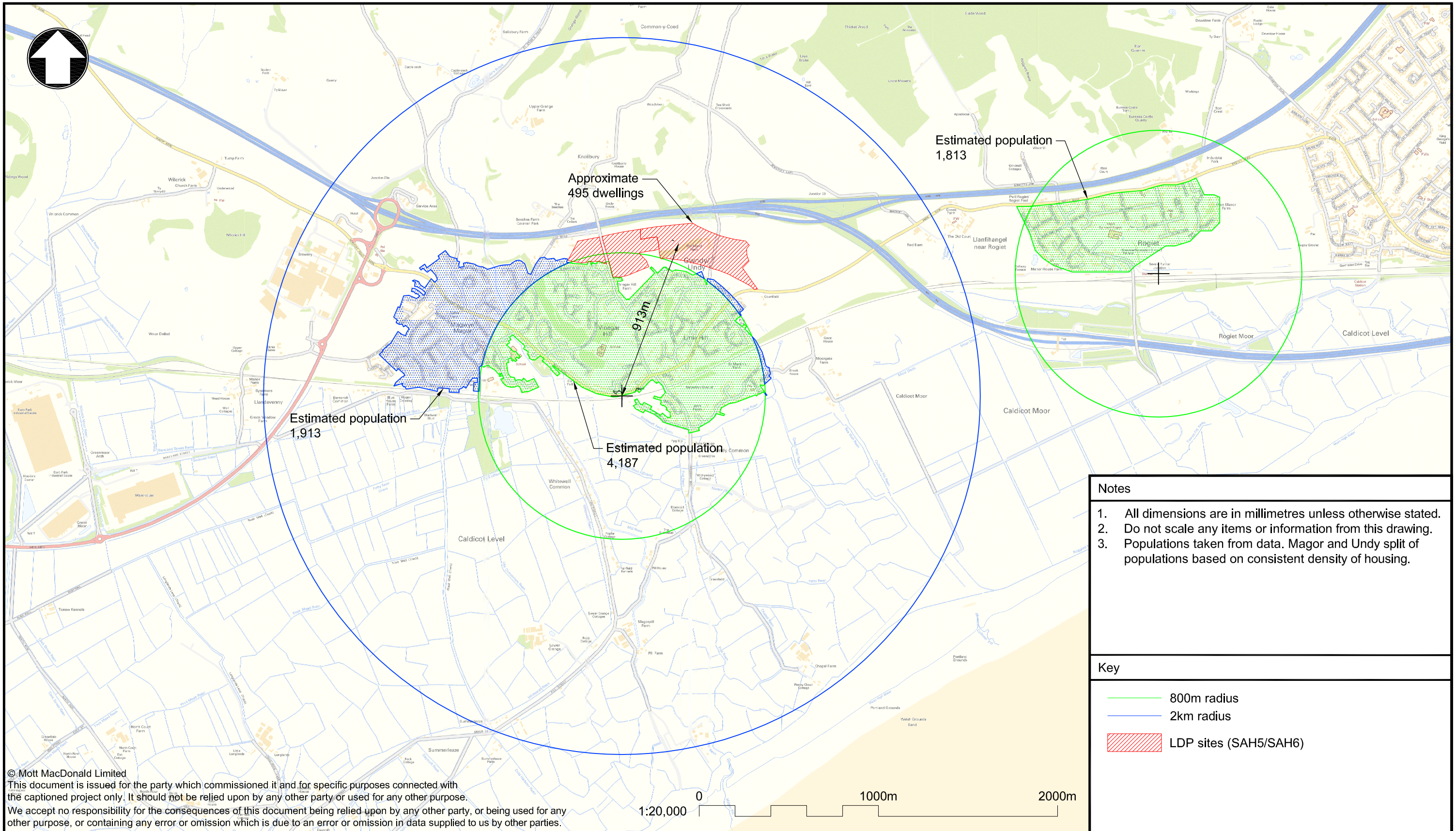

Notes

1. All dimensions are in millimetres unless otherwise stated.
2. Do not scale any items or information from this drawing.
3. Populations taken from data. Magor and Undy split of populations based on consistent density of housing.

Key

- 800m radius
- 2km radius
- LDP sites (SAH5/SAH6)

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Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	12/04/16	JW	First issue	MJ	WW

Title

Magor and Undy Walkway Station

Population Area and Radii

Drawn	J Wu	JW
Checked	M Jones	MJ
Approved	W Wootten	WW
Scale at A3	1:20,000	

Drawing Number: MMD-364017-C-DR-00-XX-0008

Security	Status	Rev
STD	PRE	P1

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Appendix E. Passenger Demand Review

E.1 Demand Forecasting

This appendices looks at the previous work undertaken concerning passenger demand and the impact that introducing a station at Magor and Undy will have on existing passenger flows. In particular, there are two reports which have been reviewed and cover relevant information: Sewta Rail Strategy Study and Severn Tunnel Junction Interchange Study. In addition, the MAGOR report: Proposed Magor Station - An estimation of car parking and other issues has been looked at alongside the published reports.

The reports were reviewed to determine their relevance and to extract information relating to demand, transport modes and destination/origin.

E.2 Sewta Rail Strategy Guide

In October 2005, a Sewta Rail Strategy Study was produced which reviewed the former TIGER Strategy recommendations for a new station to serve the communities of Magor and Undy.

An analysis of MOIRA data showed that there were around 117,500 journeys (2005) undertaken through Severn Tunnel Junction. Further analysis showed that the two most popular destinations, with a combined Flow per annum of 80k (accounting for two-thirds of trips) were Bristol Temple Meads and Cardiff. It was felt that the station was important for flows to Bristol as other local stations (Caldicot and Chepstow) do not serve Bristol.

An analysis of SRA NPS (National Passenger Survey) data showed that 22% of passengers travelled by foot and 57% travelled by car to Severn Tunnel Junction. Of the 57% of passengers who travelled by car, 37% originated from the Magor and Undy area.

Table E.1: Sewta Rail Strategy Guide

Mode of Transport	Percentage
Car (parked)	57%
Car (dropped off)	16%
Walk	22%
Cycle	4%
Mode of Transport	Percentage

Source: Sewta

Table E.2: Seta Rail Strategy Guide

Origin of Severn Tunnel Junction Station Car Users	Percentage
Magor / Undy	37%
Caldicot	23%
Rogiet	19%
Elsewhere in Monmouthshire	17%
Newport	2%
Origin of Severn Tunnel Junction Station Car Users	Percentage

Source: Sewta

E.3 Severn Tunnel Junction Interchange Study

This study was commissioned by Monmouthshire County Council and undertaken by Capita Symonds in April 2011. The purpose of the study was to develop a set of costed feasibility proposals for improvements to passenger interchange at Severn Tunnel Junction Station.

Within the study surveys were conducted at Severn Tunnel Junction in December 2010. An analysis of the data found that 70% of passengers that use Severn Tunnel Junction were from the communities of Rogiet, Caldicot, Magor and Undy. The following table shows the distances that passengers travel to use Severn Tunnel Junction.

Table E.3: Severn Tunnel Junction Interchange Study

Mode of Transport	Number of Passengers	Percentage
Car (parked)	62	39%
Car (dropped off)	40	25%
Train	6	4%
Bus	6	4%
Walk	40	25%
Cycle	6	4%

Source: MCC

Table E.4: Severn Tunnel Junction Interchange Study

Distance from Origin to Severn Tunnel Junction Station	Number of Passengers	Percentage
< 800m	38	24%
Between 800m and 2km	8	5%
Between 2km and 5km	75	47%

Distance from Origin to Severn Tunnel Junction Station	Number of Passengers	Percentage
> 5km	39	24%

Source: MCC

Furthermore the data also showed that 75% of passengers were travelling to either Cardiff or Bristol.

E.4 MAGOR Report

In 2013, MAGOR undertook a short study that aimed to make a preliminary estimation of the anticipated loading on a new station at Magor and Undy and identify any adverse impacts and other issues.

As part of the report, two surveys were undertaken with the intention to show the passenger profile for both mid-week journeys and weekend journeys. A total of 194 people were consulted of which 25% had originated from Magor and Undy (similar for both mid-week and weekend journeys). An analysis of the data showed that around 80% of passengers were travelling to either Cardiff or Bristol.

Table E.5: MAGOR Study

Mode of Transport	Mid-Week Percentage	Weekend Percentage
Car (parked)	45%	27%
Car (dropped off)	40%	65%
Bus	10%	0%
Cycle	5%	0%
Walk	0%	8%

Source: MAGOR

Table E.6: MAGOR Study

Origin of Severn Tunnel Junction Station Users	Mid-Week Percentage	Weekend Percentage
Magor / Undy	25%	24%
Caldicot	12%	21%
Rogiet	23%	23%
Elsewhere	33%	25%

Source: MAGOR

E.5 Comparison

E.5.1 Mode of Transport

A comparison of transport modes using the data gathered for the two studies shows that there has been a decrease in passengers parking at Severn Tunnel Junction (57% to 39%) whilst there has been an increase in passengers who are being dropped off (possibly car-share) at the station (16% to 25%). This is more than likely related to the capacity of the car park at Severn Tunnel Junction which was shown to be at full capacity throughout the day (based on spot surveys) and the increased passenger demand at the station.

A comparison of the percentage of passengers who arrive at Severn Tunnel Junction on foot shows there is very little change and therefore this has become an established method of transport for those who choose it and that there would not be any potential for abstraction to Magor and Undy station. Their origin is more than likely from the community of Rogiet (population of 1,813) as the percentages (22% and 25%) are similar to the origin data that was gathered by Capita Symonds (24% within 800m of station) and MAGOR (23% from Rogiet). This data could be used to generate a trip model that could be applied to Magor and Undy Station (population of 4,187 within 800m of proposed station location assuming evenly spread housing density, see drawing MMD-364017-C-DR-00-0008). However, there are some major differences between Severn Tunnel Junction and the proposed station at Magor and Undy which include proposed service frequency, catchment characteristics, population density etc.

E.5.2 Abstraction Potential

A comparison of origin data shows that the majority of passengers that use Severn Tunnel Junction are between 2km and 5km away from their origin. As previously mentioned, there is an established percentage of passengers who travel from the community of Rogiet. The majority of car users are based within Magor and Undy and it could be said that these could potentially abstract from using Severn Tunnel Junction if a new station at Magor and Undy were to be constructed. The various studies suggest that car users originating from Magor and Undy would result in abstraction of between 25%-30% from Severn Tunnel Junction.

In addition, it could be possible that a much smaller percentage of public transport users and cyclists have originated from Magor and

Undy and they would potentially add to abstraction Severn Tunnel Junction upon the construction of a station at Magor and Undy.

E.5.3 Destination Data

A comparison of destination data for Severn Tunnel Junction is dominated by Cardiff and Bristol which have a combined percentage of between 67% and 86%. These are the two main employment hubs within South Wales and South West. Newport has a fairly consistent percentage of passengers of around 10%. As Cardiff and Bristol are such important flows, it can be justified that services that serve these destinations would be of the most suitable choice for stopping at Magor and Undy.

E.6 Conclusion

The following conclusions can be stated for the previous work undertaken concerning passenger demand:

- Data shows that there has been a reduction in passengers who park at Severn Tunnel Junction whilst there has been an increase in passengers been dropped off by car or possible car sharing
- Data shows that the percentage of passengers who arrive on foot or travel from Rogiet (i.e. within 800m) to Severn Tunnel Junction is fairly consistent and suggests that this is an established transport mode
- Data shows the majority of passengers originate from within 5km of Severn Tunnel Junction

E.7 Next Steps

A number of items would need to be considered as part of a detailed demand forecast considering the New Stations Demand Forecasting Checklist produced by Steer Davies Gleave.

The station at Magor and Undy has been identified in the National Transport Finance Plan and is referenced in Network Rail's Wales Route Study meaning it is planned to consider the potential for a new station. This potentially could use the South Wales Transport Model that is currently being developed by Welsh Government. Although there is information available to undertaken demand forecasting, the transport model could provide a far more robust and reliable forecast.