

APPENDIX 2

Welsh Government

**Technical Note on Timetables and
Diagramming**

December 2011

Welsh Government

Valley Lines Electrification

Technical Note on Timetables and
Diagramming

117300-81

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1 Timetable Modelling – Key Assumptions and Outcomes

1.1 Approach

Timetables and diagrams have been produced by John Headon Ltd. All timetables have been tested in CMS timetable planning software. Services on the lines through Pontypridd, Caerphilly, Penarth, Barry and the Vale of Glamorgan have been considered together, as is the case with the existing timetable.

Services to Maesteg and the Ebbw Vale have been timetabled independently.

1.2 Scenarios

The following timetables have been designed:

1. Diesel do minimum timetable;
2. Electrification timetable.

The diesel do minimum case includes in the timetable new services which are enabled by CASR. These services are in line with Welsh Government priorities and each is included in the Welsh Government's National Transport Plan. The new services that have been introduced are as follows:

- Bridgend to Pontypridd service via Cathays (one per hour);
- Caerphilly to Pontypridd via the City Line (two per hour);

These services fulfil the National Transport Plan priority for turnback services to Pontypridd and Caerphilly and a doubling of frequency on the Vale of Glamorgan line. The inclusion of these services increases the number of Valley Line trains passing between Cardiff Central and Cardiff Queen Street from 12 trains per hour to 15 trains per hour¹.

Services to and from Ebbw Vale remain at one train per hour², whilst the frequency on the Maesteg line is increased in line with the National Transport Plan to 2 trains per hour.

1.3 Key Assumptions

Dwell Times

The current timetable is based on dwell times of 30 seconds and one minute at successive stations (actual access/egress time under current operating methods is 45 seconds), except Cardiff Central and Cardiff Queen Street which are both 1 minute 30 seconds. Improved access and egress times for modern rolling stock

¹ CASR provides for increased capacity which would theoretically allow for 16 trains per hour in the peak. The potential for an additional turnback service between Cardiff and Pontypridd is currently under review.

² The potential for introduction of services from Ebbw Vale to Newport is also a Welsh Government priority and the feasibility of their inclusion in the timetable is currently under review.

could have the potential to reduce dwell time to 30 seconds at all but the busiest stations. However, given that such dwell times would leave little ‘slack’ in the timetable, *it is considered expedient that dwell times are unchanged from current allowances in all scenarios.*

Network and Stations

For the initial timetabling exercise, a post-CASR network has been assumed with no other changes in the rail network. Existing speed restrictions are assumed to remain in place. No new stations have been included although the timetable has been constructed such that it allows for a new station at Ebbw Vale.

Freight Paths and other Services

Existing freight paths have been assumed based on advice from Network Rail. Valley Lines services using the main line have been timetabled such that they fit with the timetable under the IEP programme.

The Maesteg-Ebbw Vale timetable is such that existing services to Cheltenham and some services from Holyhead, which currently run to Maesteg, would need to be re-diagrammed.

Sectional Running Times (SRTs)

Do minimum timetables are based on current SRTs. Sectional running times for the electrification scenario were produced using RailSys software using a Class 315 as the proxy electrification rolling stock type. Given the frequency of stops and the gradients on the Valley Lines, the superior acceleration and braking performance of electric rolling stock results in higher performance against the existing units. Electric vehicles show time savings of up to 9 minutes against the current timetable on longer routes, with small time savings on local routes to Coryton and Penarth. Over all routes, the aggregate time saved by Class 315 SRTs is over an hour compared with the existing timetable.

Table 1.2 - Sectional Running Times (RailSys)

From	To	Current Timetable (excl. Allowances)	Class 315	Class 315 versus Timetable
Cardiff	Coryton	00:14:30	00:13:00	00:01:30
Coryton	Cardiff	00:12:30	00:12:30	00:00:00
Cardiff	Penarth	00:09:00	00:08:30	00:00:30
Penarth	Cardiff	00:09:00	00:09:00	00:00:00
Cardiff	Treherbert	00:46:00	00:42:00	00:04:00
Treherbert	Cardiff	00:43:30	00:40:00	00:03:30
Cardiff	Rhymney	00:45:30	00:41:00	00:04:30
Rhymney	Cardiff	00:44:00	00:39:30	00:04:30
Cardiff	Merthyr Tydfil	00:45:30	00:40:30	00:05:00
Merthyr Tydfil	Cardiff	00:45:00	00:41:00	00:04:00
Cardiff	Maesteg	00:46:30	00:39:30	00:07:00
Maesteg	Cardiff	00:44:00	00:37:30	00:06:30
Cardiff	Aberdare	00:43:30	00:38:30	00:05:00
Aberdare	Cardiff	00:44:30	00:39:00	00:05:30
Cardiff	Bridgend	00:46:30	00:43:30	00:03:00
Bridgend	Cardiff	00:47:00	00:44:30	00:02:30

Cardiff	Ebbw Vale	00:49:00	00:43:30	00:05:30
Ebbw Vale	Cardiff	00:47:30	00:44:00	00:03:30
Totals		11:23:00	10:15:00	01:08:00

1.4 Timetables and time savings (see separate sheets)

A standard hour timetable has been defined which operates from approximately 0600 to 1900 and is then thinned out to approximate to the current timetable. Reduced travel times in the timetable have been achieved on the longer routes between Cardiff Central and Bridgend, Aberdare, Merthyr Tydfil, Treherbert, Rhymney, Maesteg and Ebbw Vale. There are no changes in travel time on lines to Barry, Penarth, Radyr and Coryton. Very significant improvements in journey time are achieved on services to/from Merthyr Tydfil and Aberdare as a result of reduced pathing time enabled by the faster electric units.

Table 1.2 Travel Time to Cardiff Central

Origin Station	Diesel			Electrification			Time Saving	
	Depart	Arrive	Time	Depart	Arrive	Time	Time	%
Bridgend	11:42:00	12:39:00	00:57:00	11:44:00	12:39:00	00:55:00	00:02:00	4%
Barry Island	12:26:00	12:56:00	00:30:00	12:26:00	12:56:00	00:30:00	00:00:00	0%
Penarth	12:19:00	12:30:00	00:11:00	12:19:00	12:30:00	00:11:00	00:00:00	0%
Aberdare	11:27:00	12:32:30	01:05:30	11:25:00	12:17:30	00:52:30	00:13:00	20%
Merthyr Tydfil	11:13:00	12:17:30	01:04:30	11:09:00	12:02:30	00:53:30	00:11:00	17%
Treherbert	11:05:00	12:08:30	01:03:30	11:10:00	12:08:30	00:58:30	00:05:00	8%
Pontypridd	11:34:00	12:02:30	00:28:30	11:36:00	12:02:30	00:26:30	00:02:00	7%
Rhymney	11:05:00	12:05:30	01:00:30	11:10:00	12:05:30	00:55:30	00:05:00	8%
Bargoed	11:24:30	12:05:30	00:41:00	11:28:00	12:05:30	00:37:30	00:03:30	9%
Caerphilly	12:02:30	12:20:30	00:18:00	12:03:30	12:20:30	00:17:00	00:01:00	6%
Radyr	12:17:00	12:33:30	00:16:30	12:17:00	12:33:30	00:16:30	00:00:00	0%
Coryton	11:56:00	12:14:30	00:18:30	11:56:00	12:14:30	00:18:30	00:00:00	0%
Maesteg	11:15:00	12:08:00	00:53:00	13:44:00	14:31:00	00:47:00	00:06:00	11%
Ebbw Vale	11:40:00	12:37:00	00:57:00	12:40:00	13:34:00	00:54:00	00:03:00	5%

1.5 Diagramming (see separate sheets)

Currently, there are a total of 32 diagrams operating Valley Lines services on routes excluding Maesteg and Ebbw Vale. Enhancing the existing service pattern following CASR requires an additional 9 diagrams. An existing diagram would need to be extended to allow for the half hourly service to Rhymney. Assuming that the new diagrams are two car units, there would be a total of 41 diagrams, 30 of which would be 2-car units and the remaining 11 would be 4-car units.

Under an electrification scenario, the time saved on round trips to Aberdare and Merthyr enables the same service pattern to be achieved with 40 diagrams. In addition, there is potential to save a further diagram if higher speeds can be achieved on the line between Bridgend and Barry meaning that the timetable can be served by 39 diagrams.

Maesteg and Ebbw Vale

At present, services on the Maesteg line are primarily made up of trains between Maesteg and Cheltenham. Services to Ebbw Vale operate as a shuttle from Cardiff Central. Shorter journey times under the electrification scenario are such that only 4 diagrams are needed to operate hourly services to Maesteg and Ebbw Vale. Currently 3 diagrams are required for Ebbw Vale line alone. Although the Cheltenham services would require re-diagramming, it is expected that removing the Maesteg services and operating Ebbw Vale – Maesteg trains would save a further diagram for the franchise overall.

1.6 Sources

CASR Rules of the Plan and Scheme Layout

Network Rail RUS

Network Rail Track Diagrams

IEP timetable (DfT)

Discussions with Arriva Trains Wales

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TIMETABLES

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Standard Pattern Timetable – Do Minimum

		PPD								PPD								
Radvr		12:17:00					12:34:00				12:47:00				13:04:00			
Ninian Park		12:27:00						12:48:00			12:57:00					13:18:00		
Brideend				11:42:00								12:06:00						
Aberthaw Rec			11:55:00	(12:02:30)								(12:26:30)						
Barrv Island									12:26:00				12:41:00				12:56:00	
Barrv Town			12:10:00	12:15:30					12:30:30			12:39:30	12:45:30				13:00:30	
Penarth	12:19:00						12:34:00			12:49:00					13:04:00			
Coean Jn	12:22:30		12:26:00	12:31:30	←		12:37:30		12:46:30		12:52:30		12:55:30	13:01:30		13:07:30	13:16:30	
Cardiff Central	12:30:00	12:33:30	→	12:39:00	12:42:00	12:45:00	12:48:30	12:52:30	12:56:00	13:00:00	13:03:30	13:06:30	13:10:00	13:15:00	13:18:30	12:22:00	13:26:00	
		MTR	CAE		BGD	CWM	ABA	CYT	TRE	RHY	MTR	CAE	PPD	BGD	ABA	CYT	TRE	RHY
		12:31:30	12:35:00		12:40:30	12:43:30	12:46:30	12:50:00	12:54:00	12:57:30	13:01:30	13:05:00	13:08:00	13:11:30	13:16:30	13:20:00	13:24:00	13:27:30
Queen St	12:35:30	12:39:00		12:44:30	12:47:30	12:50:30	12:54:00	12:58:00	13:01:00		13:05:30	13:09:00	13:12:00	13:15:30	13:20:30	13:24:00	13:28:00	13:31:00
Radvr	12:45:00		12:50:00				13:00:00	13:08:00		13:15:00	13:18:30	13:22:30		13:30:00		13:38:00		
Pontvrridd	13:01:00		13:06:00				13:15:00	13:25:00		13:31:00	13:34:30	13:38:30		13:45:00		13:55:00		
Treherbert								13:58:00									14:28:00	
Abercvnon	13:11:00						13:25:00			13:41:00				13:55:00				
Mountain Ash							13:39:30							14:09:30				
Aberdare							13:50:30							14:20:30				
Merthvr Vale	13:26:00									13:56:00								
Merthvr	13:37:00									14:07:00								
Heath Jn		12:42:00		12:48:00	12:54:00		12:57:30		13:04:00		13:12:00		13:18:30		13:27:30		13:34:00	
Corvton							13:09:30								13:39:30			
Caerhillv		12:54:00		13:01:00	13:07:00					13:16:30		13:24:00		13:31:30				13:46:30
Ystrad Mvnach				13:12:30	13:19:00					13:28:00				13:43:00				13:58:00
Cwmbargoed					14:05:00													
Bargoed				13:24:00						13:39:30				13:53:30				13:09:30
Rhymnev										13:54:00								14:24:00
Rhymnev	11:05:00										11:35:00							
Bargoed	11:24:30						11:39:30				11:54:30			12:09:30				
Cwmbargoed													11:10:00					
Ystrad Mvnach	11:36:00						11:51:00				12:06:00		12:13:00		12:21:00			
Caerhillv	11:47:30						12:02:30		12:11:00		12:17:30		12:23:30		12:32:30			12:41:00
Corvton			11:56:00											12:26:00				
Heath Jn	11:58:00		12:07:00				12:13:00		12:21:30		12:28:00		12:34:00	12:37:00	12:43:00			12:51:30
Merthvr				11:13:00											11:43:00			
Merthvr Vale				11:27:00											11:57:00			
Aberdare	10:57:00										11:27:00							
Mountain Ash	11:09:00										11:39:00							
Abercvnon	11:23:30			11:40:00							11:53:30			12:10:00				
Treherbert		11:05:00											11:35:00					
Pontvrridd	11:34:00	11:38:30		11:48:30				11:59:30	12:04:00		12:08:30			12:18:30	12:25:30	12:29:30		
Radvr	11:47:00	11:53:00		12:03:00				12:13:30	12:17:00		12:23:00			12:33:00	12:40:00	12:43:30		
Queen St	12:00:00	12:03:00	12:06:00	12:12:00	12:15:00		12:18:00		12:27:00	12:30:00	12:33:00	12:36:00	12:39:00	12:42:00	12:45:00	12:48:00	12:51:30	12:57:00
	12:02:30	12:05:30	12:08:30	12:14:30	12:17:30		12:20:30		12:29:30	12:32:30	12:35:30	12:38:30	12:42:00	12:44:30	12:47:30	12:50:30	12:54:00	12:59:30
	ABA	RHY	TRE	CYT	MTR		BGD		CAE	ABA	RHY	TRE	CWM	CYT	MTR	BGD	PPD	CAE
Cardiff Central	12:04:00	12:07:00	12:10:00	12:16:00	12:19:00		12:22:00		12:31:00	12:34:00	12:37:00	12:40:00	12:43:00	12:46:00	12:49:00	12:52:00	12:58:00	13:01:00
Coean Jn	12:10:30	12:13:30			12:25:30		12:28:30			12:40:30	12:43:30		12:51:00	12:55:30	12:58:30	12:04:30		
Penarth	12:15:00			12:30:00						12:45:00				13:00:00				
Barrv Town		12:31:00					12:46:00				13:01:00		13:07:00		13:16:00	13:22:00		
Barrv Island		12:34:30					12:49:30								13:19:30			
Aberthaw Rec											(13:10:30)		13:24:30			(13:31:30)		
Bridgend											13:33:00					13:54:00		
Ninian Park		12:13:00								12:35:00		12:43:00						13:05:00
Radvr		12:31:00								12:45:30				13:01:00				13:15:30

Standard Pattern Timetable – Electrification

		PPD								PPD									
Radvr		12:17:00					12:34:00			12:47:00					13:04:00				
Ninian Park		12:27:00						12:48:00		12:57:00								13:18:00	
Bridgeend					11:44:00								12:08:30						
Aberthaw Rec			11:55:00	(12:03:00)									(12:27:30)						
Barry Island									12:26:00					12:41:00					12:56:00
Barry Town			12:10:00	12:15:30					12:30:30				12:39:30	12:45:30					13:00:30
Penarth	12:19:00						12:34:00			12:49:00					13:04:00				
Cogan Jn	12:22:30		12:26:00	12:31:30	←		12:37:30		12:46:30	12:52:30			12:55:30	13:01:30	13:07:30				13:16:30
Cardiff Central	12:30:00	12:33:30	→	12:39:00	12:42:00	12:45:00	12:48:30	12:52:30	12:56:00	13:00:00	13:03:30		13:06:30	13:10:00	13:15:00	13:18:30	12:22:00	13:26:00	
		MTR	CAE		BGD	CWM	ABA	CYT	TRE	RHY		MTR	CAE	PPD	BGD	ABA	CYT	TRE	RHY
		12:31:30	12:35:00		12:40:30	12:43:30	12:46:30	12:50:00	12:54:00	12:57:30		13:01:30	13:05:00	13:08:00	13:11:30	13:16:30	13:20:00	13:24:00	13:27:30
Queen St	12:35:30	12:39:00		12:44:30	12:47:30	12:50:30	12:54:00	12:58:00	13:01:00		13:05:30	13:09:00		13:12:00	13:15:30	13:20:30	13:24:00	13:28:00	13:31:00
Radvr	12:45:00		12:49:00				13:00:00	13:08:00		13:15:00	13:19:00	13:23:00		13:30:00		13:38:00			
Pontypridd	13:00:00		13:05:00				13:14:30	13:25:00		13:30:00	13:35:00	13:38:00		13:44:30		13:55:00			
Treherbert								13:57:00											14:27:00
Abercynon	13:06:30						13:23:00			13:36:30					13:53:00				
Mountain Ash							13:36:30								15:06:30				
Aberdare							13:47:00								15:47:00				
Merthyr Vale	13:19:00									13:49:00									
Merthyr	13:29:00									13:59:00									
Heath Jn		12:42:00		12:47:30	12:53:30		12:57:30		13:04:00		13:12:00			13:18:30		13:27:30		13:34:00	
Coryton							13:08:00									13:38:00			
Caerphilly		12:53:00		12:58:00	13:04:00					13:14:30		13:23:00		13:29:00					13:44:30
Ystrad Mynach				13:09:00	13:16:00					13:25:30				13:40:00					13:55:30
Cwmbargoed					14:00:00														
Bargoed				13:19:00						13:37:30				13:50:00					14:07:30
Rhymnev										13:55:00									14:25:00
Rhymnev	11:10:00										11:40:00								
Bargoed	11:28:00						11:43:00				11:58:00			12:13:00					
Cwmbargoed													11:10:00						
Ystrad Mynach	11:38:00						11:53:00			12:08:00			12:14:00		12:23:00				
Caerphilly	11:48:30						12:03:30		12:12:30	12:18:30			12:24:30		12:33:30				12:42:30
Coryton			11:56:30											12:26:30					
Heath Jn	11:58:30		12:07:30				12:13:30		12:22:30	12:28:30		12:34:30	12:37:30		12:43:30				12:52:30
Merthyr	11:09:00									11:39:00									
Merthyr Vale	11:19:00									11:49:00									
Aberdare					11:25:00										11:55:00				
Mountain Ash					11:34:30										12:04:30				
Abercynon	11:27:30				11:43:00					11:57:30					12:13:00				
Treherbert		11:10:00									11:40:00								
Pontypridd	11:36:00	11:40:00		11:51:30				12:02:00	12:06:00		12:10:00			12:21:30		12:28:00	12:32:00		
Radvr	11:49:00	11:54:00		12:04:00				12:15:00	12:19:00		12:24:00			12:34:00		12:42:00	12:45:00		
Queen St	12:00:00	12:03:00	12:06:00	12:12:00	12:15:00		12:18:00		12:27:00	12:30:00	12:33:00	12:36:00		12:39:00	12:42:00	12:45:00	12:48:00	12:51:30	12:57:00
	12:02:30	12:05:30	12:08:30	12:14:30	12:17:30		12:20:30		12:29:30	12:32:30	12:35:30	12:38:30		12:42:00	12:44:30	12:47:30	12:50:30	12:54:00	12:59:30
	MTR	RHY	TRE	CYT	ABA		BGD		CAE	MTR	RHY	TRE		CWM	CYT	ABA	BGD	PPD	CAE
Cardiff Central	12:04:00	12:07:00	12:10:00	12:16:00	12:19:00		12:22:00		12:31:00	12:34:00	12:37:00	12:40:00		12:43:00	12:46:00	12:49:00	12:52:00	12:58:00	13:01:00
Cogan Jn	12:10:30	12:13:30		12:25:30	12:28:30				12:40:30	12:43:30				12:51:00	12:55:30	12:58:30	12:04:30		
Penarth	12:15:00			12:30:00					12:45:00					13:00:00					
Barry Town		12:30:00					12:45:00			13:00:00			13:07:00		13:15:00	13:22:00			
Barry Island		12:34:30					12:49:30								13:19:30				
Aberthaw Rec										13:10:00			13:24:30				(13:31:00)		
Bridgeend										13:31:00							13:52:00		
Ninian Park		12:13:00							12:35:00		12:43:00								13:05:00
Radvr			12:31:00						12:45:30				13:01:00						13:15:30
									PPD										PPD

Maesteg - Cardiff - Ebbw Vale Electrification Timetable

DaysRun	2L01DB SX	2L05DB SX	2L09DB SX	2L13DB SX	2L17DB SX	2L21DB SX	2L25DB SX	2L29DB SX	2L33DB SX	2L37DB SX	2L41DB SX	2L45DB SX	2L49DB SX	2L51DB SX	2L63DB SX	2L55DB SX	2L67DB SX	2L57DB SX	2L71DB SX	2L61DB SX	2L77DB SX	2L69DB SX
Ebbw Vale Parkway			06:40	07:40	08:40	09:40	10:40	11:40	12:40	13:40	14:40	15:40	16:40	17:40		18:40		19:40		20:40	21:40	22:40
Llanhilleth			06:47	07:47	08:47	09:47	10:47	11:47	12:47	13:47	14:47	15:47	16:47	17:47		18:47		19:47		20:47	21:47	22:47
Newbridge			06:53	07:53	08:53	09:53	10:53	11:53	12:53	13:53	14:53	15:53	16:53	17:53		18:53		19:53		20:53	21:53	22:53
Cross Keys			07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00		19:00		20:00		21:00	22:00	23:00
Risca			07:05	08:05	09:05	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05		19:05		20:05		21:05	22:05	23:05
Rogerstone			07:09	08:09	09:09	10:09	11:09	12:09	13:09	14:09	15:09	16:09	17:09	18:09		19:09		20:09		21:09	22:09	23:09
Cardiff Central (Arr)			07:34	08:34	09:34	10:34	11:34	12:34	13:34	14:34	15:34	16:34	17:34	18:34		19:34		20:34		21:34	22:34	23:34
Cardiff Central (Dep)	05:43	06:43	07:43	08:43	09:43	10:43	11:43	12:43	13:43	14:43	15:43	16:43	17:43		19:13		20:13		21:13		22:43	
Pontyclun	05:54	06:54	07:54	08:54	09:54	10:54	11:54	12:54	13:54	14:54	15:54	16:54	17:54		19:24		20:24		21:24		22:54	
Llanharan	05:57	06:57	07:57	08:57	09:57	10:57	11:57	12:57	13:57	14:57	15:57	16:57	17:57		19:27		20:27		21:27		22:57	
Pencoed	06:01	07:01	08:01	09:01	10:01	11:01	12:01	13:01	14:01	15:01	16:01	17:01	18:01		19:31		20:31		21:31		23:01	
Bridgend (Arr)	06:06	07:06	08:06	09:06	10:06	11:06	12:06	13:06	14:06	15:06	16:06	17:06	18:06		19:36		20:36		21:36		23:06	
Bridgend (Dep)	06:08	07:08	08:08	09:08	10:08	11:08	12:08	13:08	14:08	15:08	16:08	17:08	18:08		19:38		20:38		21:38		23:08	
Wildmill	06:10	07:10	08:10	09:10	10:10	11:10	12:10	13:10	14:10	15:10	16:10	17:10	18:10		19:40		20:40		21:40		23:10	
Sam	06:13	07:13	08:13	09:13	10:13	11:13	12:13	13:13	14:13	15:13	16:13	17:13	18:13		19:43		20:43		21:43		23:13	
Tondu	06:16	07:16	08:16	09:16	10:16	11:16	12:16	13:16	14:16	15:16	16:16	17:16	18:16		19:46		20:46		21:46		23:16	
Garth (Mid-Glamorgan)	06:25	07:25	08:25	09:25	10:25	11:25	12:25	13:25	14:25	15:25	16:25	17:25	18:25		19:55		20:55		21:55		23:25	
Maesteg (Ewenny Road)	06:27	07:27	08:27	09:27	10:27	11:27	12:27	13:27	14:27	15:27	16:27	17:27	18:27		19:57		20:57		21:57		23:27	
Maesteg	06:32	07:32	08:32	09:32	10:32	11:32	12:32	13:32	14:32	15:32	16:32	17:32	18:32		20:02		21:02		22:02		23:32	

DaysRun	2N03DB SX	2N05DB SX	2N09DB SX	2N13DB SX	2N17DB SX	2N21DB SX	2N25DB SX	2N29DB SX	2N33DB SX	2N37DB SX	2N41DB SX	2N45DB SX	2N49DB SX	2N53DB SX	2L56DB SX	2N57DB SX	2L60DB SX	2N61DB SX	2L64DB SX	2N67DB SX
Maesteg		06:44	07:44	08:44	09:44	10:44	11:44	12:44	13:44	14:44	15:44	16:44	17:44		19:14		20:14		21:14	22:14
Maesteg (Ewenny Road)		06:45	07:45	08:45	09:45	10:45	11:45	12:45	13:45	14:45	15:45	16:45	17:45		19:15		20:15		21:15	22:15
Garth (Mid-Glamorgan)		06:48	07:48	08:48	09:48	10:48	11:48	12:48	13:48	14:48	15:48	16:48	17:48		19:18		20:18		21:18	22:18
Tondu		06:57	07:57	08:57	09:57	10:57	11:57	12:57	13:57	14:57	15:57	16:57	17:57		19:27		20:27		21:27	22:27
Sam		07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00		19:30		20:30		21:30	22:30
Wildmill		07:02	08:02	09:02	10:02	11:02	12:02	13:02	14:02	15:02	16:02	17:02	18:02		19:32		20:32		21:32	22:32
Bridgend (Arr)		07:04	08:04	09:04	10:04	11:04	12:04	13:04	14:04	15:04	16:04	17:04	18:04		19:34		20:34		21:34	22:34
Bridgend (Dep)		07:05	08:05	09:05	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05		19:35		20:35		21:35	22:35
Pencoed		07:10	08:10	09:10	10:10	11:10	12:10	13:10	14:10	15:10	16:10	17:10	18:10		19:40		20:40		21:40	22:40
Llanharan		07:14	08:14	09:14	10:14	11:14	12:14	13:14	14:14	15:14	16:14	17:14	18:14		19:44		20:44		21:44	22:44
Pontyclun		07:18	08:18	09:18	10:18	11:18	12:18	13:18	14:18	15:18	16:18	17:18	18:18		19:48		20:48		21:48	22:48
Cardiff Central (Arr)		07:31	08:31	09:31	10:31	11:31	12:31	13:31	14:31	15:31	16:31	17:31	18:31		20:03		21:03		22:03	23:03
Cardiff Central (Dep)	06:35	07:35	08:35	09:35	10:35	11:35	12:35	13:35	14:35	15:35	16:35	17:35	18:35		19:40		20:40		21:40	23:05
Rogerstone	06:53	07:53	08:53	09:53	10:53	11:53	12:53	13:53	14:53	15:53	16:53	17:53	18:53		19:58		20:58		21:58	23:23
Risca	06:57	07:57	08:57	09:57	10:57	11:57	12:57	13:57	14:57	15:57	16:57	17:57	18:57		20:02		21:02		22:02	23:27
Cross Keys	07:02	08:02	09:02	10:02	11:02	12:02	13:02	14:02	15:02	16:02	17:02	18:02	19:02		20:07		21:07		22:07	23:32
Newbridge	07:09	08:09	09:09	10:09	11:09	12:09	13:09	14:09	15:09	16:09	17:09	18:09	19:09		20:14		21:14		22:14	23:39
Llanhilleth	07:15	08:15	09:15	10:15	11:15	12:15	13:15	14:15	15:15	16:15	17:15	18:15	19:15		20:20		21:20		22:20	23:45
Ebbw Vale Parkway	07:27	08:27	09:27	10:27	11:27	12:27	13:27	14:27	15:27	16:27	17:27	18:27	19:27		20:32		21:32		22:32	23:57

TRAIN DIAGRAMS

Confidential

Post CASR 15 tph Diagrams

Class 315

1	Cardiff	ecs	13	Cardiff Central	0619	Penarth	0633	32	Cardiff Central	0535	Caerphilly	0553	
	Pontypridd	0520	Penarth	0603	Penarth	0634	Aberdare	0751	Caerphilly	0612	Pontypridd	0708	
	Penarth	0604	Aberdare	0721	Aberdare	0755	Penarth	0903	Pontypridd	0732	Caerphilly	0823	
	Aberdare	0725	Penarth	0833	Penarth	0904	Aberdare	1021	Caerphilly	0842	Pontypridd	0938	
	Penarth	0834	Aberdare	0951	Aberdare	1025	Penarth	1133	Pontypridd	1002	Cardiff Central	1034	
	Aberdare	0955	Penarth	1103	Penarth	1134	Aberdare	1251					
	Penarth	1104	Aberdare	1221	Aberdare	1255	Penarth	1403	Cardiff Central	1535	Caerphilly	1553	
	Aberdare	1225	Penarth	1333	Penarth	1404	Aberdare	1521	Caerphilly	1612	Pontypridd	1708	
	Penarth	1334	Aberdare	1451	Aberdare	1525	Penarth	1633	Pontypridd	1732	Caerphilly	1823	
	Aberdare	1455	Penarth	1603	Penarth	1634	Aberdare	1751	Caerphilly	1842	Pontypridd	1938	
	Penarth	1604	Aberdare	1721	Aberdare	1755	Penarth	1903	Pontypridd	2032	Caerphilly	2123	
	Aberdare	1725	Penarth	1833	Penarth	1904	Aberdare	2021	Caerphilly	2148	Barry Island	2237	
	Penarth	1834	Aberdare	1951	Aberdare	2025	Penarth	2133	Barry Island	2255	Ystrad Mynach	2357	
	Aberdare	1955	Cardiff Central	2050	Penarth	2134	Aberdare	2251	ecs		Cardiff Central		
	Cardiff Central	2104	Penarth	2118	Aberdare	2255	Pontypridd	2320					
	Penarth	2119	Merthyr Tydfil	2232	ecs	Treherbert		33	Cardiff	ecs			
	Merthyr Tydfil	2239	Cardiff Central	2334					Caerphilly	0642	Pontypridd	0738	
									Pontypridd	0802	Caerphilly	0853	
2	Cardiff Central	0649	Penarth	0703	14	Treherbert	0640	Cardiff Central	0740	Caerphilly	0912	Pontypridd	1008
	Penarth	0704	Aberdare	0821	Cardiff Central	0754	Treherbert	0901					
	Aberdare	0825	Penarth	0933	Treherbert	0910	Cardiff Central	1010	Pontypridd	1532	Caerphilly	1623	
	Penarth	0934	Aberdare	1051	Cardiff Central	1024	Treherbert	1131	Caerphilly	1642	Pontypridd	1738	
	Aberdare	1055	Penarth	1203	Treherbert	1140	Cardiff Central	1240	Pontypridd	1802	Caerphilly	1853	
	Penarth	1204	Aberdare	1321	Cardiff Central	1254	Treherbert	1401	ecs		Cardiff		
	Aberdare	1325	Penarth	1433	Treherbert	1410	Cardiff Central	1510					
	Penarth	1434	Aberdare	1551	Cardiff Central	1524	Treherbert	1631	34	Cardiff	ecs		
	Aberdare	1555	Penarth	1703	Treherbert	1640	Cardiff Central	1740	Pontypridd	0602	Caerphilly	0653	
	Penarth	1704	Aberdare	1821	Cardiff Central	1754	Treherbert	1901	Caerphilly	0712	Pontypridd	0808	
	Aberdare	1825	Penarth	1933	Treherbert	1910	Cardiff Central	2010	Pontypridd	0832	Caerphilly	0923	
	Penarth	1934	Aberdare	2051	Cardiff Central	2024	Treherbert	2131	Caerphilly	0942	Pontypridd	1038	
	Aberdare	2055	Cardiff Central	2150	Treherbert	2140	Cardiff Central	2240					
	Cardiff Central	2204	Penarth	2218	Cardiff Central	2254	Treherbert	0001	Pontypridd	1602	Caerphilly	1653	

	Penarth	2219	Merthyr Tydfil	2332					Caerphilly	1712	Pontypridd	1808		
	ecs		Cardiff		15	Treherbert	0540	Cardiff Central	0640		Pontypridd	1832	Caerphilly	1923
						Cardiff Central	0654	Treherbert	0801		Caerphilly	1942	Pontypridd	2038
3	Cardiff		ecs			Treherbert	0810	Cardiff Central	0910		Pontypridd	2132	Caerphilly	2223
	Aberdare	0625	Penarth	0733		Cardiff Central	0924	Treherbert	1031		Caerphilly	2248	Barry Island	2337
	Penarth	0734	Aberdare	0851		Treherbert	1040	Cardiff Central	1140		ecs		Cardiff	
	Aberdare	0855	Penarth	1003		Cardiff Central	1154	Treherbert	1301					
	Penarth	1004	Aberdare	1121		Treherbert	1310	Cardiff Central	1410	35	Cardiff		ecs	
	Aberdare	1125	Penarth	1233		Cardiff Central	1424	Treherbert	1531		Pontypridd	0632	Caerphilly	0723
	Penarth	1234	Aberdare	1351		Treherbert	1540	Cardiff Central	1640		Caerphilly	0742	Pontypridd	0838
	Aberdare	1355	Penarth	1503		Cardiff Central	1654	Treherbert	1801		Pontypridd	0902	Caerphilly	0953
	Penarth	1504	Aberdare	1621		Treherbert	1810	Cardiff Central	1910					
	Aberdare	1625	Penarth	1733		Cardiff Central	1924	Treherbert	2031		Caerphilly	1512	Pontypridd	1608
	Penarth	1734	Aberdare	1851		Treherbert	2040	Cardiff Central	2140		Pontypridd	1632	Caerphilly	1723
	Aberdare	1855	Cardiff Central	1950		Cardiff Central	2224	Treherbert	2331		Caerphilly	1742	Pontypridd	1838
											Pontypridd	1902	Caerphilly	1953
4	Cardiff Central	0546	Aberdare	0651	16	Treherbert	0710	Cardiff Central	0810		ecs		Cardiff	
	Aberdare	0655	Penarth	0803		Cardiff Central	0824	Treherbert	0931					
	Penarth	0804	Aberdare	0921		Treherbert	0940	Cardiff Central	1040	36	Cardiff		ecs	
	Aberdare	0925	Penarth	1033		Cardiff Central	1054	Treherbert	1201		Pontypridd	0702	Caerphilly	0753
	Penarth	1034	Aberdare	1151		Treherbert	1210	Cardiff Central	1310		Caerphilly	0812	Pontypridd	0908
	Aberdare	1155	Penarth	1303		Cardiff Central	1324	Treherbert	1431		Pontypridd	0932	Caerphilly	1023
	Penarth	1304	Aberdare	1421		Treherbert	1440	Cardiff Central	1540					
	Aberdare	1425	Penarth	1533		Cardiff Central	1554	Treherbert	1701		Caerphilly	1542	Pontypridd	1638
	Penarth	1534	Aberdare	1651		Treherbert	1710	Cardiff Central	1810		Pontypridd	1702	Caerphilly	1753
	Aberdare	1655	Penarth	1803		Cardiff Central	1824	Treherbert	1931		Caerphilly	1812	Pontypridd	1908
	Penarth	1804	Aberdare	1921		Treherbert	1940	Cardiff Central	2040		Pontypridd	1932	Caerphilly	2023
	Aberdare	1925	Penarth	2033							Caerphilly	2042	Pontypridd	2138
	Penarth	2034	Aberdare	2151	17	Cardiff Central	0624	Treherbert	0731		ecs		Cardiff	
	Aberdare	2155	Cardiff Central	2250		Treherbert	0740	Cardiff Central	0840					
	Cardiff Central	2304	Penarth	2318		Cardiff Central	0854	Treherbert	1001	37	Cardiff		ecs	
	Penarth	2334	Cardiff Central	2345		Treherbert	1010	Cardiff Central	1110		Bridgend	0608	Pontypridd	0742
						Cardiff Central	1124	Treherbert	1231		Pontypridd	0828	Bridgend	0956
5	Cardiff Central	0531	Merthyr Tydfil	0632		Treherbert	1240	Cardiff Central	1340		Bridgend	1008	Cardiff Central	1107
	Merthyr Tydfil	0639	Penarth	0748		Cardiff Central	1354	Treherbert	1501		Cardiff Central	1158	Bridgend	1256
	Penarth	0749	Merthyr Tydfil	0902		Treherbert	1510	Cardiff Central	1610		Bridgend	1308	Cardiff Central	1407
	Merthyr Tydfil	0909	Penarth	1018		Cardiff Central	1624	Treherbert	1731		Cardiff Central	1458	Bridgend	1556
	Penarth	1019	Merthyr Tydfil	1132		Treherbert	1740	Cardiff Central	1840		Bridgend	1608	Pontypridd	1742

	Merthyr Tydfil	1139	Penarth	1248	Cardiff Central	1854	Treherbert	2001	Pontypridd	1828	Bridgend	1956	
	Penarth	1249	Merthyr Tydfil	1402	Treherbert	2010	Cardiff Central	2110	ecs		Cardiff		
	Merthyr Tydfil	1409	Penarth	1518	Cardiff Central	2124	Treherbert	2231					
	Penarth	1519	Merthyr Tydfil	1632					38	Cardiff	ecs		
	Merthyr Tydfil	1639	Penarth	1748	18	Treherbert	0610	Cardiff Central	0710	Pontypridd	0528	Bridgend	0656
	Penarth	1749	Merthyr Tydfil	1902	Cardiff Central	0724	Treherbert	0831		Bridgend	0708	Pontypridd	0842
	Merthyr Tydfil	1909	Penarth	2018	Treherbert	0840	Cardiff Central	0940		Pontypridd	0928	Bridgend	1056
	Penarth	2019	Merthyr Tydfil	2132	Cardiff Central	0954	Treherbert	1101		Bridgend	1108	Cardiff Central	1207
	Merthyr Tydfil	2139	Cardiff Central	2234	Treherbert	1110	Cardiff Central	1210	Cardiff Central	1258	Bridgend	1356	
	Cardiff Central	2324	Pontypridd	2353	Cardiff Central	1224	Treherbert	1331		Bridgend	1408	Pontypridd	1542
	ecs		Cardiff		Treherbert	1340	Cardiff Central	1440		Pontypridd	1628	Bridgend	1756
					Cardiff Central	1454	Treherbert	1601		Bridgend	1808	Pontypridd	1942
6	Cardiff Central	0601	Merthyr Tydfil	0702	Treherbert	1610	Cardiff Central	1710	ecs		Cardiff		
	Merthyr Tydfil	0709	Penarth	0818	Cardiff Central	1724	Treherbert	1831					
	Penarth	0819	Merthyr Tydfil	0932	Treherbert	1840	Cardiff Central	1940	39	Cardiff	ecs		
	Merthyr Tydfil	0939	Penarth	1048						Pontypridd	0628	Bridgend	0756
	Penarth	1049	Merthyr Tydfil	1202	19	Cardiff Central	0552	Barry Island	0622	Bridgend	0808	Pontypridd	0942
	Merthyr Tydfil	1209	Penarth	1318	Barry Island	0625	Rhymney	0759		Pontypridd	1028	Bridgend	1156
	Penarth	1319	Merthyr Tydfil	1432	Rhymney	0810	Barry Island	0937		Bridgend	1208	Cardiff Central	1307
	Merthyr Tydfil	1439	Penarth	1548	Barry Island	0940	Bargoed	1053		Cardiff Central	1358	Bridgend	1456
	Penarth	1549	Merthyr Tydfil	1702	Bargoed	1113	Barry Island	1222		Bridgend	1508	Pontypridd	1642
	Merthyr Tydfil	1709	Penarth	1818	Barry Island	1225	Rhymney	1359		Pontypridd	1728	Bridgend	1856
	Penarth	1819	Merthyr Tydfil	1932	Rhymney	1410	Barry Island	1537		ecs		Cardiff	
	Merthyr Tydfil	1939	Penarth	2048	Barry Island	1540	Bargoed	1653					
	Penarth	2049	Cardiff Central	2100	Bargoed	1713	Barry Island	1822	40	Cardiff	ecs		
					Barry Island	1825	Caerphilly	1917		Pontypridd	0728	Bridgend	0856
7	Cardiff		ecs		Caerphilly	1948	Barry Island	2037		Bridgend	0908	Cardiff Central	1007
	Penarth	0619	Merthyr Tydfil	0732	Barry Island	2055	Rhymney	2229		Cardiff Central	1558	Bridgend	1656
	Merthyr Tydfil	0739	Penarth	0848						Bridgend	1708	Pontypridd	1842
	Penarth	0849	Merthyr Tydfil	1002	20	Rhymney	0710	Barry Island	0837	ecs		Cardiff	
	Merthyr Tydfil	1009	Penarth	1118	Barry Island	0840	Bargoed	0953					
	Penarth	1119	Merthyr Tydfil	1232	Bargoed	1013	Barry Island	1122					
	Merthyr Tydfil	1239	Penarth	1348	Barry Island	1125	Rhymney	1259					
	Penarth	1349	Merthyr Tydfil	1502	Rhymney	1310	Barry Island	1437					
	Merthyr Tydfil	1509	Penarth	1618	Barry Island	1440	Bargoed	1553					
	Penarth	1619	Merthyr Tydfil	1732	Bargoed	1613	Barry Island	1722					
	Merthyr Tydfil	1739	Penarth	1848	Barry Island	1725	Rhymney	1859					
	Penarth	1849	Cardiff Central	1900									

				21	Rhymney	0640	Bridgend	0834	
8	Cardiff Central	0634	Penarth	0648	Bridgend	0844	Bargoed	1022	
	Penarth	0649	Merthyr Tydfil	0802	Bargoed	1043	Barry Island	1152	
	Merthyr Tydfil	0809	Penarth	0918	Barry Island	1155	Rhymney	1329	
	Penarth	0919	Merthyr Tydfil	1032	Rhymney	1340	Bridgend	1534	
	Merthyr Tydfil	1039	Penarth	1148	Bridgend	1544	Bargoed	1722	
	Penarth	1149	Merthyr Tydfil	1302	Bargoed	1743	Barry Island	1852	
	Merthyr Tydfil	1309	Penarth	1418	Barry Island	1855	Rhymney	2029	
	Penarth	1419	Merthyr Tydfil	1532	Rhymney	2040	Bridgend	2234	
	Merthyr Tydfil	1539	Penarth	1648	Bridgend	2244	Cardiff Central	2342	
	Penarth	1649	Merthyr Tydfil	1802					
	Merthyr Tydfil	1809	Penarth	1918	22	Cardiff Central	0622	Barry Island	0652
	Penarth	1919	Merthyr Tydfil	2032		Barry Island	0655	Rhymney	0829
	Merthyr Tydfil	2039	Penarth	2148		Rhymney	0840	Bridgend	1034
	Penarth	2149	Cardiff Central	2200		Bridgend	1044	Bargoed	1222
	Cardiff Central	2219	Penarth	2233		Bargoed	1243	Barry Island	1352
	Penarth	2234	Aberdare	2351		Barry Island	1355	Rhymney	1529
	ecs		Cardiff			Rhymney	1540	Bridgend	1734
						Bridgend	1744	Bargoed	1922
9	Cardiff		ecs			ecs		Rhymney	
	Merthyr Tydfil	0609	Penarth	0718					
	Penarth	0719	Merthyr Tydfil	0832	23	Rhymney	0610	Barry Island	0737
	Merthyr Tydfil	0839	Penarth	0948		Barry Island	0740	Bargoed	0853
	Penarth	0949	Merthyr Tydfil	1102		Bargoed	0913	Barry Island	1022
	Merthyr Tydfil	1109	Penarth	1218		Barry Island	1025	Rhymney	1159
	Penarth	1219	Merthyr Tydfil	1332		Rhymney	1210	Barry Island	1337
	Merthyr Tydfil	1339	Penarth	1448		Barry Island	1340	Bargoed	1453
	Penarth	1449	Merthyr Tydfil	1602		Bargoed	1513	Barry Island	1622
	Merthyr Tydfil	1609	Penarth	1718		Barry Island	1640	Rhymney	1759
	Penarth	1719	Merthyr Tydfil	1832		Rhymney	1810	Cardiff Central	1906
	Merthyr Tydfil	1839	Penarth	1948					
	Penarth	1949	Cardiff Central	2000	24	Cardiff		ecs	
						Bargoed	0613	Barry Island	0722
10	Cardiff		ecs			Barry Island	0725	Rhymney	0859
	Coryton	0626	Radyr	0704		Rhymney	0910	Barry Island	1037
	Radyr	0704	Coryton	0741		Barry Island	1040	Bargoed	1153
	Coryton	0756	Radyr	0834		Bargoed	1213	Barry Island	1322
	Radyr	0834	Coryton	0911		Barry Island	1325	Rhymney	1459

	Coryton	0926	Radyr	1004	Rhymney	1510	Barry Island	1637
	Radyr	1004	Coryton	1041	Barry Island	1640	Bargoed	1753
	Coryton	1056	Radyr	1134	Bargoed	1813	Barry Island	1922
	Radyr	1134	Coryton	1211	Barry Island	1925	Caerphilly	2017
	Coryton	1226	Radyr	1304	Caerphilly	2048	Barry Island	2137
	Radyr	1304	Coryton	1341	Barry Island	2155	Rhymney	2329
	Coryton	1356	Radyr	1434				
	Radyr	1434	Coryton	1511	25 Rhymney	0740	Bridgend	0934
	Coryton	1526	Radyr	1604	Bridgend	0944	Bargoed	1122
	Radyr	1604	Coryton	1641	Bargoed	1143	Barry Island	1252
	Coryton	1656	Radyr	1734	Barry Island	1255	Rhymney	1429
	Radyr	1734	Coryton	1811	Rhymney	1440	Bridgend	1634
	Coryton	1826	Radyr	1904	Bridgend	1644	Bargoed	1822
	Radyr	1904	Coryton	1941	Bargoed	1843	Barry Island	1952
	ecs		Cardiff		Barry Island	1955	Rhymney	2129
					Rhymney	2140	Bridgend	2334
11	Cardiff Central	0620	Coryton	0641				
	Coryton	0656	Radyr	0734	26 Bridgend	0544	Bargoed	0722
	Radyr	0734	Coryton	0811	Bargoed	0743	Barry Island	0852
	Coryton	0826	Radyr	0904	Barry Island	0855	Rhymney	1029
	Radyr	0904	Coryton	0941	Rhymney	1040	Bridgend	1234
	Coryton	0956	Radyr	1034	Bridgend	1244	Bargoed	1422
	Radyr	1034	Coryton	1111	Bargoed	1443	Barry Island	1552
	Coryton	1126	Radyr	1204	Barry Island	1555	Rhymney	1729
	Radyr	1204	Coryton	1241	Rhymney	1740	Bridgend	1934
	Coryton	1256	Radyr	1334	Bridgend	1944	Cardiff Central	2042
	Radyr	1334	Coryton	1411				
	Coryton	1426	Radyr	1504	27 Cardiff		ecs	
	Radyr	1504	Coryton	1541	Bargoed	0643	Barry Island	0752
	Coryton	1556	Radyr	1634	Barry Island	0755	Rhymney	0929
	Radyr	1634	Coryton	1711	Rhymney	0940	Bridgend	1134
	Coryton	1726	Radyr	1804	Bridgend	1144	Bargoed	1322
	Radyr	1804	Coryton	1841	Bargoed	1343	Barry Island	1452
	Coryton	1856	Radyr	1934	Barry Island	1455	Rhymney	1629
	Radyr	1934	Coryton	2011	Rhymney	1640	Bridgend	1834
	Coryton	2026	Radyr	2104	Bridgend	1844	Cardiff Central	1942
	Radyr	2104	Coryton	2141				
	Coryton	2226	Cardiff Central	2245	28 Cardiff Central	0507	Barry Island	0537

					Barry Island	0540	Bargoed	0653
12	Cardiff	ecs			Bargoed	0713	Barry Island	0822
	Radyr	0634	Coryton	0711	Barry Island	0825	Rhymney	0959
	Coryton	0726	Radyr	0804	Rhymney	1010	Barry Island	1137
	Radyr	0804	Coryton	0841	Barry Island	1140	Bargoed	1253
	Coryton	0856	Radyr	0934	Bargoed	1313	Barry Island	1422
	Radyr	0934	Coryton	1011	Barry Island	1425	Rhymney	1559
	Coryton	1026	Radyr	1104	Rhymney	1610	Barry Island	1737
	Radyr	1104	Coryton	1141	Barry Island	1740	Bargoed	1853
	Coryton	1156	Radyr	1234	ecs		Cardiff	
	Radyr	1234	Coryton	1311				
	Coryton	1326	Radyr	1404	29	Cardiff	ecs	
	Radyr	1404	Coryton	1441		Barry Island	0640	Bargoed 0753
	Coryton	1456	Radyr	1534		Bargoed	0813	Barry Island 0922
	Radyr	1534	Coryton	1611		Barry Island	0925	Rhymney 1059
	Coryton	1626	Radyr	1704		Rhymney	1110	Barry Island 1237
	Radyr	1704	Coryton	1741		Barry Island	1240	Bargoed 1353
	Coryton	1756	Radyr	1834		Bargoed	1413	Barry Island 1522
	Radyr	1834	Coryton	1911		Barry Island	1525	Rhymney 1659
	Coryton	1926	Radyr	2004		Rhymney	1710	Barry Island 1837
	Radyr	2004	Coryton	2041		Barry Island	1840	Cardiff Central 1909
	Coryton	2126	Radyr	2204				
	Radyr	2204	Coryton	2241	30	Cardiff Central	0537	Bridgend 0634
	ecs		Cardiff			Bridgend	0644	Bargoed 0822
						Bargoed	0843	Barry Island 0952
						Barry Island	0955	Rhymney 1129
						Rhymney	1140	Bridgend 1334
						Bridgend	1344	Bargoed 1522
						Bargoed	1543	Barry Island 1652
						Barry Island	1655	Rhymney 1829
						Rhymney	1840	Bridgend 2034
						Bridgend	2044	Cardiff Central 2142
					31	Cardiff Central	0637	Bridgend 0734
						Bridgend	0744	Bargoed 0922
						Bargoed	0943	Barry Island 1052
						Barry Island	1055	Rhymney 1229
						Rhymney	1240	Bridgend 1434

Bridgend	1444	Bargoed	1622
Bargoed	1643	Barry Island	1752
Barry Island	1755	Rhymney	1929
Rhymney	1940	Bridgend	2134
Bridgend	2144	Cardiff Central	2242
Cardiff Central	2337	Barry Island	0007
ecs		Cardiff	

Confidential

Maesteg - Cardiff Diagrams

Class 150

1	Cardiff Central	0551	Maesteg	0645
	Maesteg	0647	Cardiff Central	0739
	Cardiff Central	0751	Maesteg	0845
	Maesteg	0847	Cardiff Central	0939
	Cardiff Central	0951	Maesteg	1045
	Maesteg	1047	Cardiff Central	1139
	Cardiff Central	1151	Maesteg	1245
	Maesteg	1247	Cardiff Central	1339
	Cardiff Central	1351	Maesteg	1445
	Maesteg	1447	Cardiff Central	1539
	Cardiff Central	1551	Maesteg	1645
	Maesteg	1647	Cardiff Central	1739
	Cardiff Central	1751	Maesteg	1845
	Maesteg	1847	Cardiff Central	1939
2	Cardiff Central	0651	Maesteg	0745
	Maesteg	0747	Cardiff Central	0839
	Cardiff Central	0851	Maesteg	0945
	Maesteg	0947	Cardiff Central	1039
	Cardiff Central	1051	Maesteg	1145
	Maesteg	1147	Cardiff Central	1239
	Cardiff Central	1251	Maesteg	1345
	Maesteg	1347	Cardiff Central	1439
	Cardiff Central	1451	Maesteg	1545
	Maesteg	1547	Cardiff Central	1639
	Cardiff Central	1651	Maesteg	1745
	Maesteg	1747	Cardiff Central	1839

<h2>Maesteg - Cardiff - Ebbw Vale Diagrams</h2>

Class 315

1	Cardiff Central	0543	Maesteg	0632
	Maesteg	0644	Ebbw Vale Parkway	0827
	Ebbw Vale Parkway	0840	Maesteg	1032
	Maesteg	1044	Ebbw Vale Parkway	1227
	Ebbw Vale Parkway	1240	Maesteg	1432
	Maesteg	1444	Ebbw Vale Parkway	1627
	Ebbw Vale Parkway	1640	Maesteg	1832
	Maesteg	1914	Cardiff Central	2003
	Cardiff Central	2013	Maesteg	2102
	Maesteg	2114	Cardiff Central	2203
2	Cardiff Central	0643	Maesteg	0732
	Maesteg	0744	Ebbw Vale Parkway	0927
	Ebbw Vale Parkway	0940	Maesteg	1132
	Maesteg	1144	Ebbw Vale Parkway	1327
	Ebbw Vale Parkway	1340	Maesteg	1532
	Maesteg	1544	Ebbw Vale Parkway	1727
	Ebbw Vale Parkway	1740	Cardiff Central	1834
	Cardiff Central	1913	Maesteg	2002
	Maesteg	2014	Cardiff Central	2103
	Cardiff Central	2113	Maesteg	2202
	Maesteg	2214	Ebbw Vale Parkway	2357
	ecs		Cardiff	
3	Cardiff		ecs	
	Ebbw Vale Parkway	0640	Maesteg	0832
	Maesteg	0844	Ebbw Vale Parkway	1027
	Ebbw Vale Parkway	1040	Maesteg	1232
	Maesteg	1244	Ebbw Vale Parkway	1427
	Ebbw Vale Parkway	1440	Maesteg	1632
	Maesteg	1644	Ebbw Vale Parkway	1827
	Ebbw Vale Parkway	1840	Cardiff Central	1934
	Cardiff Central	1940	Ebbw Vale Parkway	2032
	Ebbw Vale Parkway	2040	Cardiff Central	2134
Cardiff Central	2140	Ebbw Vale Parkway	2232	
Ebbw Vale Parkway	2240	Cardiff Central	2334	
4	Cardiff Central	0635	Ebbw Vale Parkway	0727
	Ebbw Vale Parkway	0740	Maesteg	0932
	Maesteg	0944	Ebbw Vale Parkway	1127
	Ebbw Vale Parkway	1140	Maesteg	1332
	Maesteg	1344	Ebbw Vale Parkway	1527
	Ebbw Vale Parkway	1540	Maesteg	1732
	Maesteg	1744	Ebbw Vale Parkway	1927
	Ebbw Vale Parkway	1940	Cardiff Central	2034
	Cardiff Central	2040	Ebbw Vale Parkway	2132
	Ebbw Vale Parkway	2140	Maesteg	2332
ecs		Cardiff		