Llywodraeth Cymru
Welsh Government

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M4 Corridor around Newport

Alignment and Junction Strategy Report Supplement 3

Welsh Government

M4 Corridor around Newport

Alignment and Junctions Report Supplement 3

M4CaN-DJV-GEN-ZG-GEN-RP-CH-0019

P02 | 16 March 2017

CVJV/AAR
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Longcross Court,
47 Newport Road,
Cardiff
CF24 0AD

Contents

1 Introduction

1.1 Purpose of this Report

1.1.1 The Welsh Government's draft Orders and Environmental Statement for the M4 Corridor around Newport (M4CaN) Scheme were published in March 2016. Further Supplements and Modifications to the draft Orders were previosuly developed by the Welsh Government for the following reasons:

- Amendments to the details of parties in the Schedules to the Compulsory Purchase Order following receipt of further information on title holders, lessees and interested parties.
- Amendments to the project further to matters raised by responses received to the draft Orders.

Supplements to the Environmental Statement and Associated Reporting were also published to consider the changes made and the further information that became available since preparing the draft Orders in March 2016.

1.1.2 The Welsh Ministers' draft Supplementary Scheme Order (No. 2) dated March 2017 makes provision for the addition of the eastbound off-slip at Magor. The purpose of this report is to supplement the Alignment and Junctions Report and its two subsequent supplements (Alignment and Junction Report Supplement and Alignment and Junction Report Supplement 2) to take account of the draft Supplementary Order.

1.1.3 The following design change have been incorporated as part of this supplement:

- An additional Eastbound Diverge slip road, terminating at the proposed Newport Road Roundabout, to provide access to the existing Junction 23A for eastbound M4 traffic.

1.1.4 The Key Stage 3 Alignment and Junctions Report provides detail of the highway alignment of the preliminary design for the M4CaN Scheme (excluding the reclassification works to the existing M4), based upon the 2014 TR111 alignment, with modifications as detailed within the Design Options Report. It describes the layout of the scheme, focussing on the design standards and alignment of the route before discussing the Departures and Relaxations from Standard.

1.1.5 This supplementary report provides detail of changes to the highway alignment resulting from the above design amendments.

1.1.6 This supplementary report provides details of traffic turning movement amended as a result of the inclusion of the new diverge slip road. As such information included in Appendix E of the Alignment and Junctions report is superseded by the contents of Appendix B of this report.

2 Additional Eastbound Diverge Slip Road

2.3 Report Layout

2.3.1 This report presents revisions to the Alignment and Junctions Report using the same paragraph numbering as the original report.

6.3 Roads Included in the Proposed Scheme

The following entry is added to Table 6.1 from the original Alignment and Junctions Report.

Table 6. 1 List of Roads in Proposed Scheme

Road Element	Approx Mainline Chainage	Described in Section
Zone 5 - Magor		
Eastbound Off Slip Road at Magor	20200m	11.26

10.6 Eastbound Diverge Slip Road (Glan Llyn Junction)

Table 10.4 Key Geometry – Glan Llyn Junction – Eastbound Diverge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
2575	440	A – Taper

10.6 Eastbound Merge Slip Road (Glan Llyn Junction)

Table 10.5 Key Geometry – Glan Llyn Junction – Eastbound Merge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
2575	757	A – Taper

11.5 B4245 Newport Road Roundabout

11.5.1 An at-grade roundabout with an ICD of 74m is provided at the intersection of the B4245 Newport Road and the A4810. The roundabout has been positioned to avoid relocation of the Communications Transmission Station in the south-east quadrant. At-grade signalised NMU crossings will be provided across the eastbound diverge slip road entry and the A4810 southern arm.

2.3.2 See Plan and Profile drawing M4CaN-DJV-HGN-ZG_GEN-DR-CH-0100

11.13 Eastbound Diverge Slip Road (from M4 to M48 Roundabout)

Table 11. 11 Key Geometry – Magor Interchange – Eastbound Diverge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
2281	717	A – Taper (but use C- Lane drop to permit lane gain on merge)

11.14 Eastbound Merge Slip Road (from M48 Roundabout to M4)

Table 11. 12 Key Geometry – Magor Interchange – Eastbound Merge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
2281	1390	B - Parallel Merge (but use F-Lane Gain with ghost island merge to tie in to existing 3 lane carriageway)

11.15 Westbound Diverge Free Flow Link (from M4 to J23 - J23A Trunk Road Link)

Table 11. 1 Key Geometry – Magor Interchange – Westbound Diverge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
2281	1390	D – Lane drop with ghost island (but use B – Parallel merge to fit within constraint of rail bridge)

11.16 Westbound Merge (from Free-flow to J23-J23A Trunk Road Link)

Table 11. 2 Key Geometry – Free-flow to J23-J23A Trunk Road Link Westbound Merge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
909	1432	F – Lane gain with ghost island (no lane gain therefore use C- Ghost Island Merge)

11.23 Eastbound Merge Slip Road from J23A

Table 11. 20 Key Geometry – J23A – Eastbound Merge

	Reference
Traffic Flow	

Peak Mainline flow (VPH)	Peak Slip flow (VPH)	Layout (TD22)
1616	494	A – Taper Merge

11.24 Westbound Diverge Slip Road to J23A

Table 11. 21 Key Geometry – J23A – Westbound Diverge

<table>
<tr><th></th><th>Reference</th></tr>
<tr><td>Traffic Flow
<table><tr><td>Peak Mainline flow (VPH)</td><td>Peak Slip flow (VPH)</td><td>Layout (TD22)</td></tr><tr><td>1824</td><td>606</td><td>A – Taper Merge</td></tr></table></td><td></td></tr>
</table>

11.26 Eastbound Diverge Slip Road to Newport Road Roundabout

11.26.1 This single lane diverge slip road exits the mainline at chainage 20170 via a Type A diverge layout and connects to the gyratory of the proposed Newport Road Roundabout. The slip road is designed to a design speed of 70 kph.

11.26.2 See Plan and Profile drawings M4CaN-DJV-HGN-ZG_GEN-DR-CH-0100, M4CaN-DJV-HGN-ZG_GEN-DR-CH-0082and Table 11.23

Table 11. 23 Key Geometry – Eastbound Diverge Slip Road to Newport Road Roundabout

<table>
<tr><th></th><th>Reference</th></tr>
<tr><td>Carriageway
Eastbound Diverge slip road to Newport Road Roundabout</td><td>KS3 design</td></tr>
<tr><td>Design Speed
70kph</td><td>TD22/06 T4/1</td></tr>
<tr><td>Traffic Flow
<table><tr><td>Peak Mainline flow (VPH)</td><td>Peak Slip flow (VPH)</td><td>Layout (TD22)</td></tr><tr><td>2886</td><td>717</td><td>A – Taper</td></tr></table></td><td></td></tr>
<tr><td>Stopping Sight Distance
295m (minimum from back of nose)
Reducing to 120m approaching gyratory</td><td></td></tr>
<tr><td>Cross Section
2.4m V Nearside, 3.3 HS, 3.7 L, 0.7m HS, 1.5 V offside</td><td>TD22/06 T3/1b
TD27/05
DG1A Fig 4-1b</td></tr>
<tr><td>Horizontal Geometry
Des. Min. = 360
Min radius used = 510m (180m on approach to roundabout – 2 step allowable relaxation)</td><td>TD 9/93 T3</td></tr>
<tr><td>Vertical Geometry
Des min crest K= 30, sag K= 20
Min K used crest K = 55, sag K = 30</td><td>TD 9/93 T3</td></tr>
<tr><td>Crossfall
Crossfall for 510 radius = 3.5%
Crossfall for 180 radius = 7%</td><td>TD 9/93 T3</td></tr>
<tr><td>Transitions
Provided in accordance with TD 9/93</td><td>TD 9/93</td></tr>
<tr><td></td><td></td></tr>
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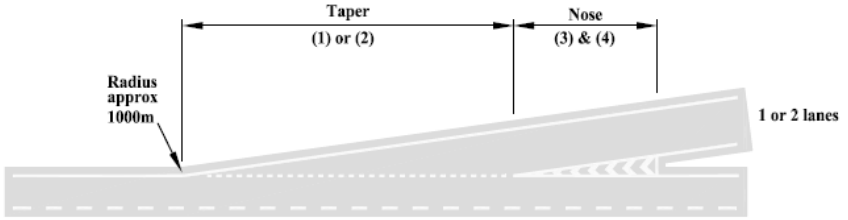
Junction Layout  A - Taper Diverge 1=170m, 4=80m	TD22/06 T4/4 Fig. 2/6.2

Appendix A – Plan and Profile Drawings

Drawing Number	Rev	Title	Location
M4CaN-DJV-HGN-ZG_GEN-DR-CH-0100	P06	Plan and Profile Newport Road and St Brides Road Sheet 1 of 6	Magor
M4CaN-DJV-HGN-ZG_GEN-DR-CH-0101	P06	Plan and Profile J23 to J23A Trunk Road Link EB Slip Road and WB Slip Road – Sheet 2 of 6	Magor
M4CaN-DJV-HGN-ZG_GEN-DR-CH-0111	P02	Plan and Profile J23 to J23A Trunk Road Link EB Slip Road and WB Slip Road	Magor
M4CaN-DJV-HGN-ZG_GEN-DR-CH-0082	P05	Plan and Profile Mainline and Bareland Street Sheet 12 of 15	Magor
M4CaN-DJV-HGN-ZG_GEN-DR-CH-0083	P05	Plan and Profile Mainline Sheet 13 of 15	Magor

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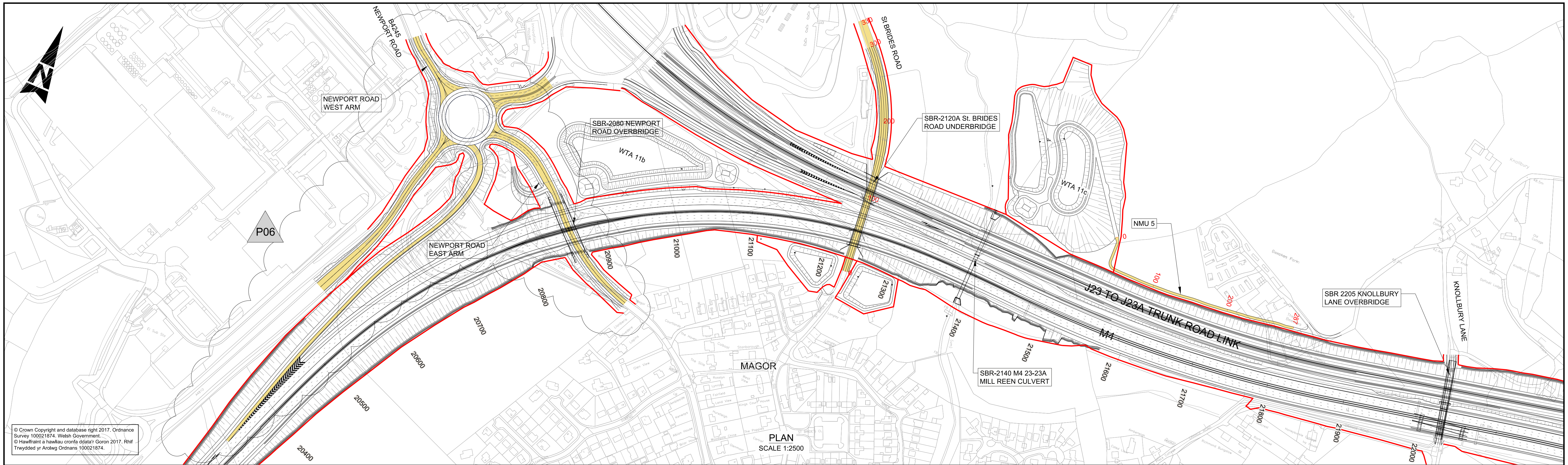

PLAN
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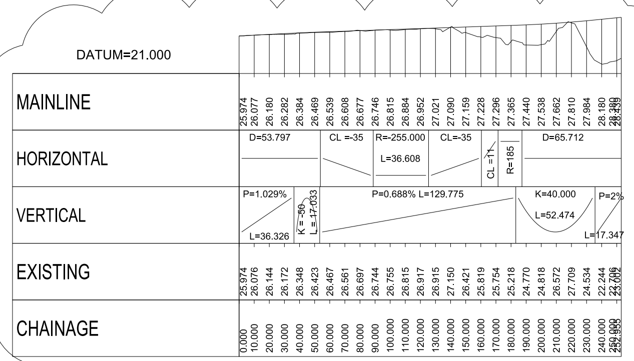

NEWPORT RD RBT SOUTH ARM PROFILE
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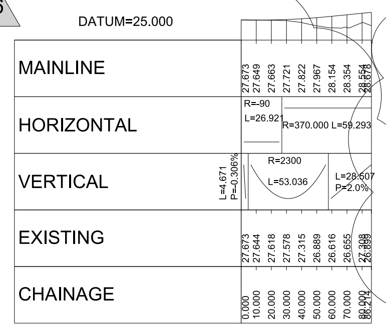

NEWPORT RD RBT NORTH ARM PROFILE
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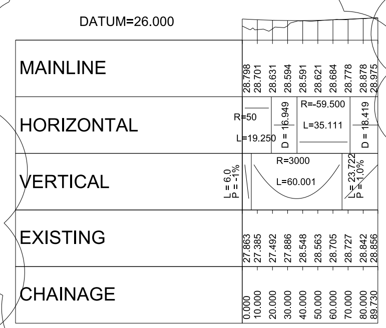

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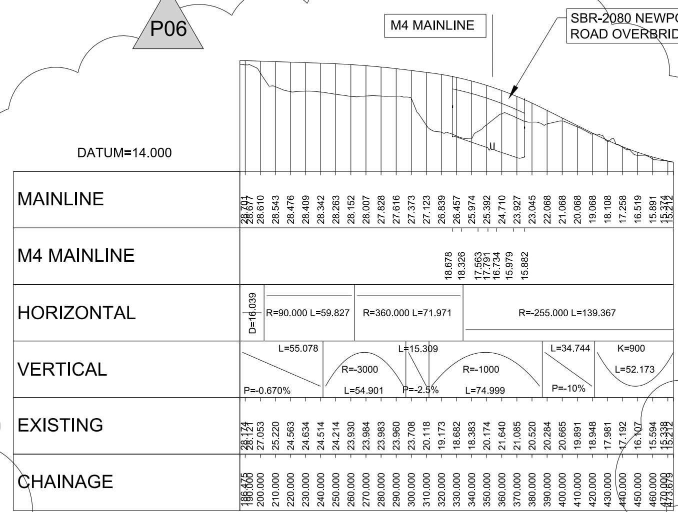

NEWPORT RD RBT EAST ARM PROFILE
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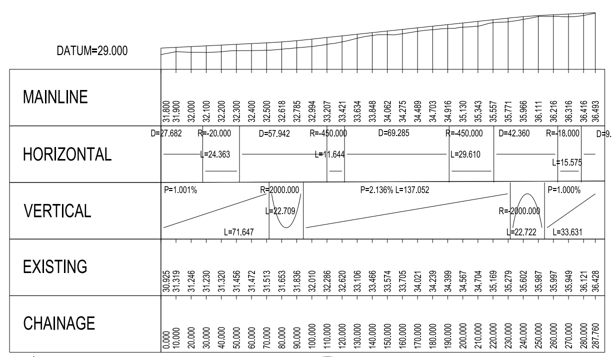

NMU 5 PROFILE
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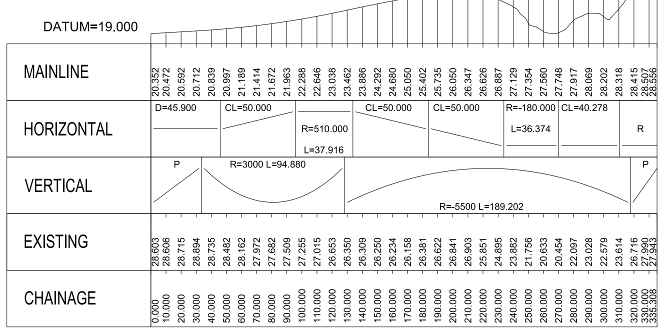
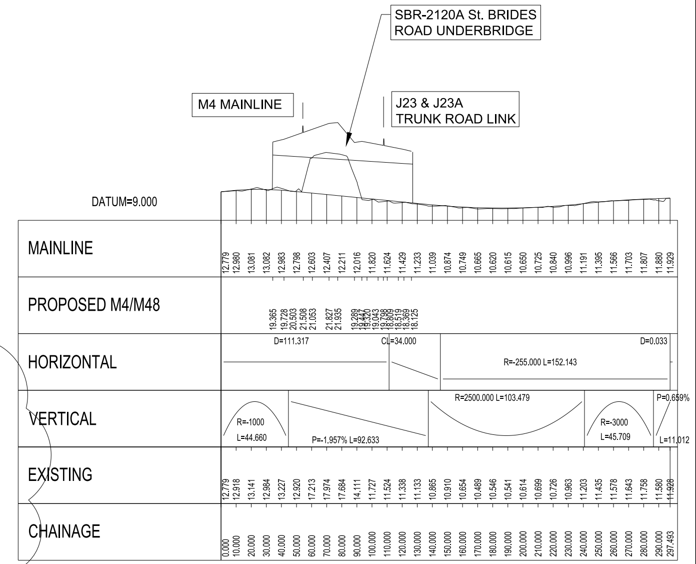


EAST BOUND OFFSLIP PROFILE
SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL



ST BRIDES RD PROFILE
SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL

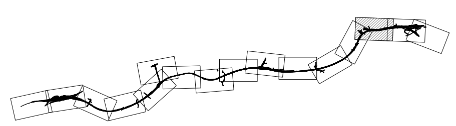
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.
3. FOR MAINLINE AND OTHER JUNCTION PLAN AND PROFILES SEE DRAWING REFERENCES M4CaN-DJV-HGN-ZG_GEN-DR-CH-0071 TO HGN-ZG_GEN-DR-CH-0107.

LEGEND:

HIGHWAY BOUNDARY

KEY PLAN



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
(Enter "None" if applicable)

Maintenance / Cleaning
(Enter "None" if applicable)

Use
(Enter "None" if applicable)

Decommissioning / Demolition
(Enter "None" if applicable)

Rev.	Date	Description	By	Chk'd	App'd
P01	11/11/15	FIRST ISSUE	GMS	DCW	ADK
P02	28/01/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P03	10/03/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P04	29/03/16	PROFILES UPDATED	AjD	CCR	KEN
P05	12/09/16	Newport Road Gradient	AjD	CCR	KEN
P06	17/03/17	EB Off Slip Added	AjD	CCR	GRD

Drawing Status: FOR COSTING

Suitability: D1

Project Team

Client: Llywodraeth Cymru Welsh Government

Project Title: M4 CORRIDOR AROUND NEWPORT

Drawing Title: PLAN AND PROFILE NEWPORT RD AND ST BRIDES RD SHEET 1 OF 6

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	AjD	CCR	GRD	SM
Original Size: A1	Date: 10/03/17	Date: 10/03/17	Date: 15/03/17	Date: 17/03/17

Drawing Number (Project | Originator | Volume / Location | Type | Role | Number): M4CaN - DJV - HGN - ZG_GEN - DR - CH - 0100

Revision: P06

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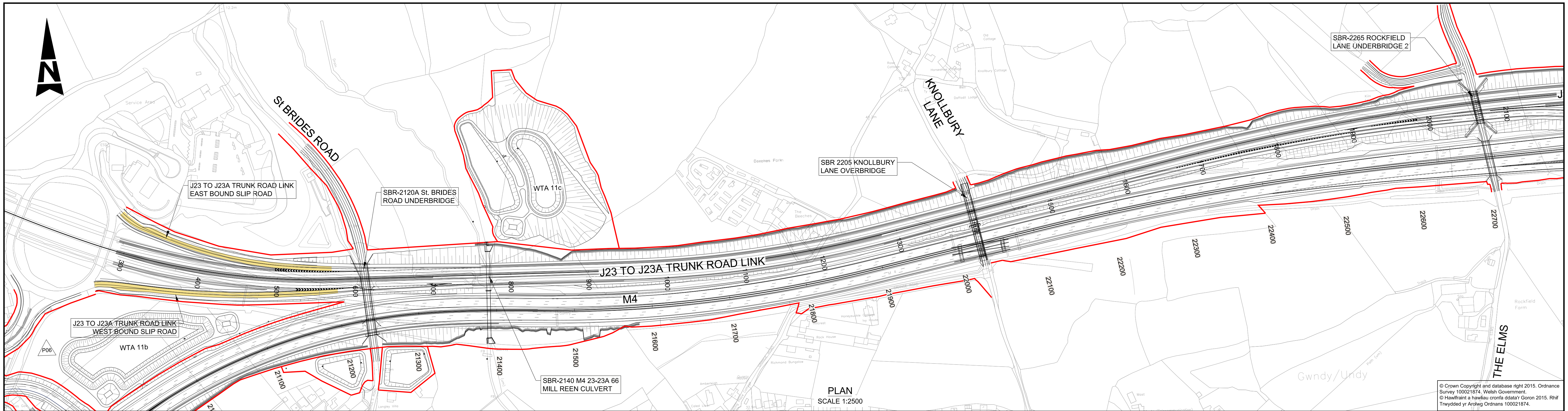
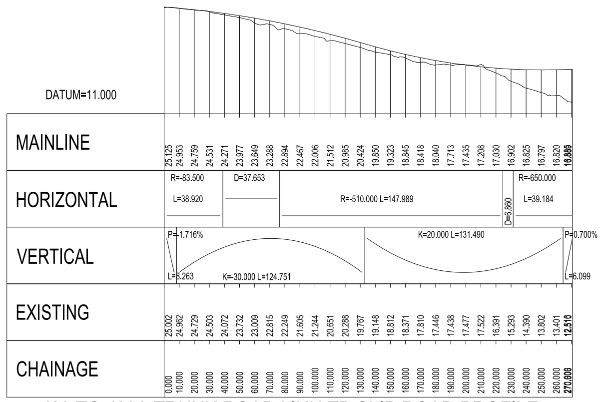
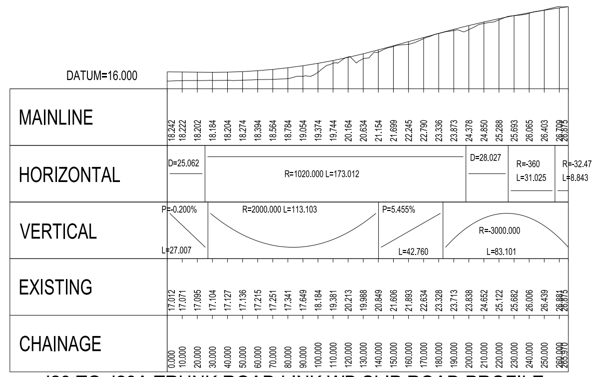




J23 TO J23A TRUNK ROAD LINK EB SLIP ROAD PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL



J23 TO J23A TRUNK ROAD LINK WB SLIP ROAD PROFILE

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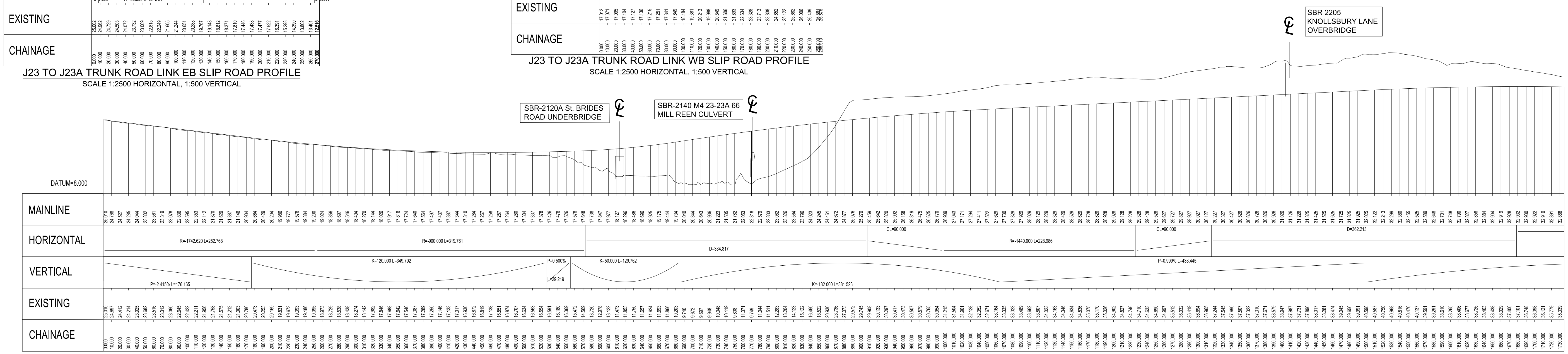

J23 TO J23A TRUNK ROAD LINK PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL

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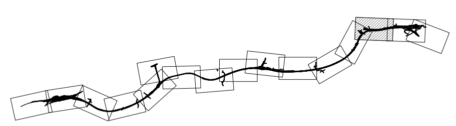
LEGEND:

HIGHWAY BOUNDARY

KEY PLAN



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
NONE

Maintenance / Cleaning
NONE

Use
NONE

Decommissioning / Demolition
NONE

Rev.	Date	Description	By	Chk'd	App'd
P01	11/11/15	FIRST ISSUE	GMS	DCW	ADK
P02	28/01/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P03	10/03/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P04	29/03/16	PROFILES UPDATED	AjD	CCR	KEN
P05	01/08/16	UPDATED EASTBOUND SLIP ROAD	SBW	CCR	AJJ
P06	17/03/17	EB Off Slip Added	AjD	CCR	SM

Drawing Status: FOR COSTING
Suitability: D1

Project Team

Client: Llywodraeth Cymru Welsh Government

Project Title: M4 CORRIDOR AROUND NEWPORT

Drawing Title: PLAN AND PROFILE J23 TO J23A TRUNK ROAD LINK EB SLIP ROAD AND WB SLIP ROAD - SHEET 2 OF 6

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	AjD	CCR	SM	SM

Original Size	Date	Date	Date	Date
A1	10/03/17	10/03/17	17/03/17	17/03/17

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Revision: P06

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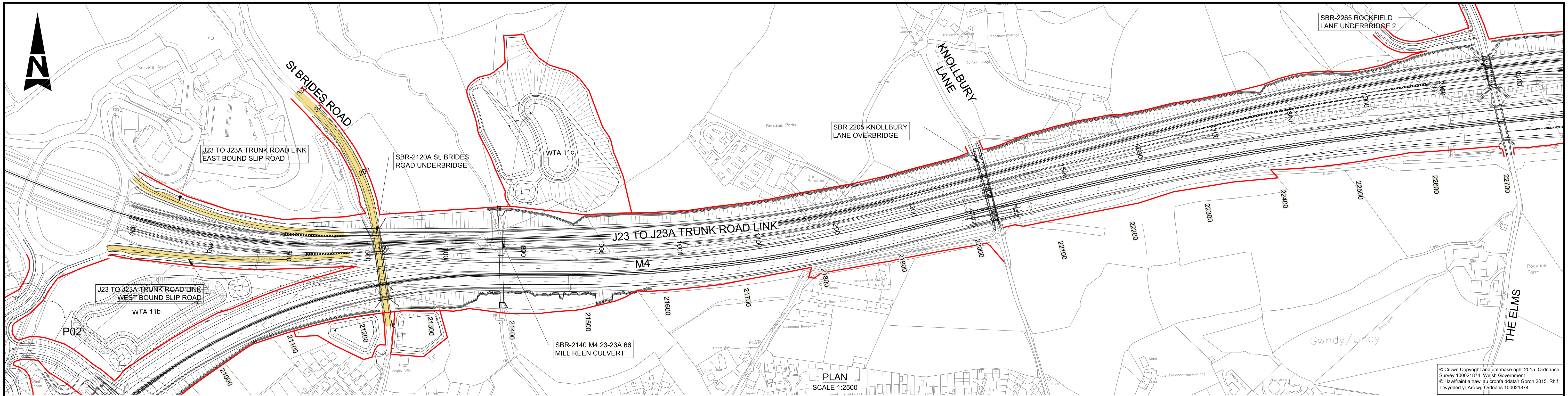

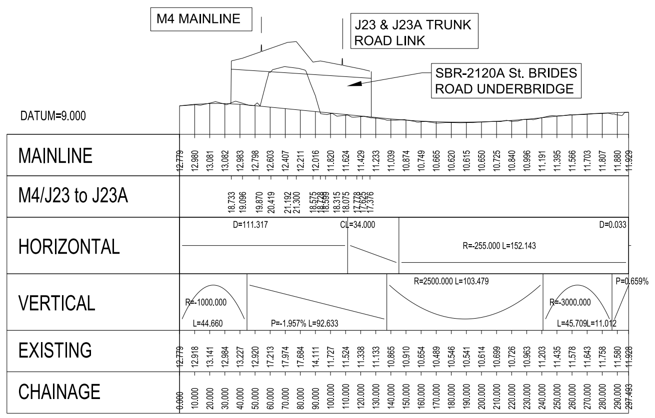

ST BRIDES RD PROFILE

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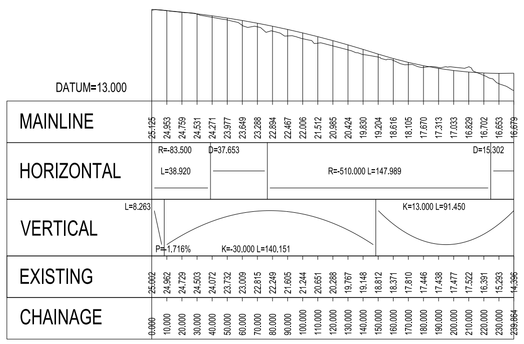
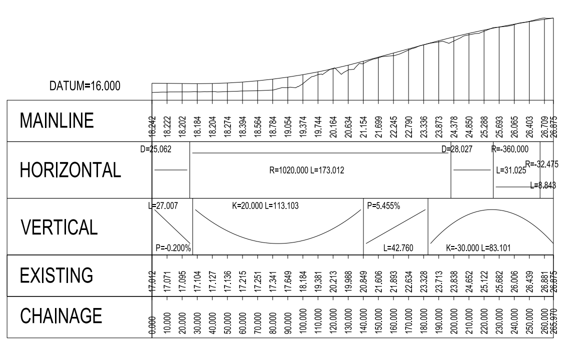


J23 TO J23A TRUNK ROAD LINK EB SLIP ROAD PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL



J23 TO J23A TRUNK ROAD LINK WB SLIP ROAD PROFILE

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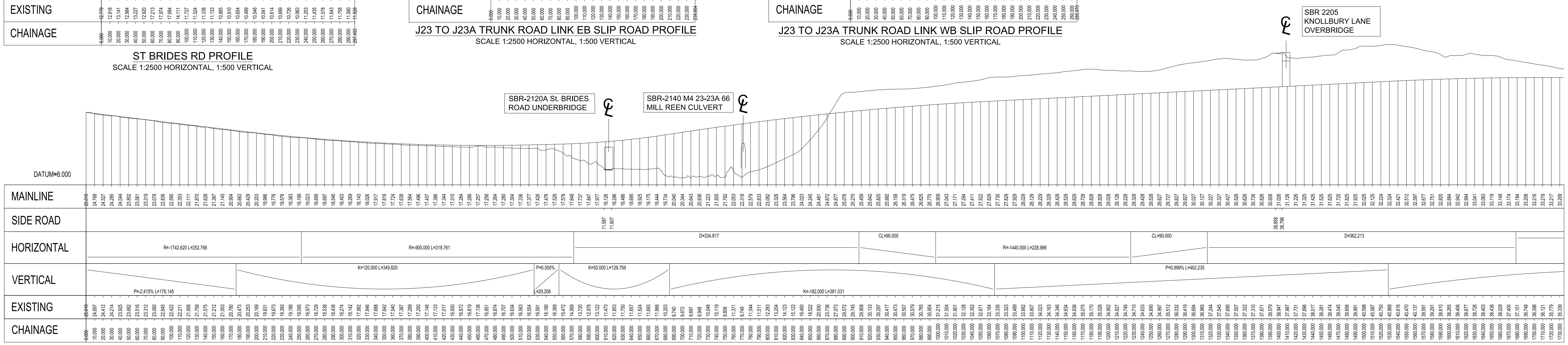

J23 TO J23A TRUNK ROAD LINK PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL

GENERAL NOTES:

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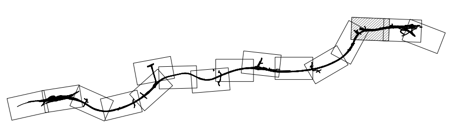
LEGEND:

HIGHWAY BOUNDARY

KEY PLAN



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
NONE

Maintenance / Cleaning
NONE

Use
NONE

Decommissioning / Demolition
NONE

Rev.	Date	Description	By	Chk'd	App'd
P01	01/06/16	First Issue	AjD	CCR	AJJ
P02	17/03/17	EB Off Slip Added	AjD	CCR	SM

Drawing Status: FOR COSTING

Suitability: D1

Project Team

Client

Llywodraeth Cymru
Welsh Government

Project Title: M4 CORRIDOR AROUND NEWPORT

Drawing Title: PLAN AND PROFILE J23 TO J23A TRUNK ROAD LINK EB SLIP ROAD AND WB SLIP ROAD

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	AjD	CCR	SM	SM
Original Size	Date	Date	Date	Date
A1	10/03/17	10/03/17	17/03/17	17/03/17

Drawing Number (Project | Originator | Volume | Location | Type | Role | Number): M4CaN - DJV - HGN - ZG_GEN - DR - CH - 0111

Revision: P02

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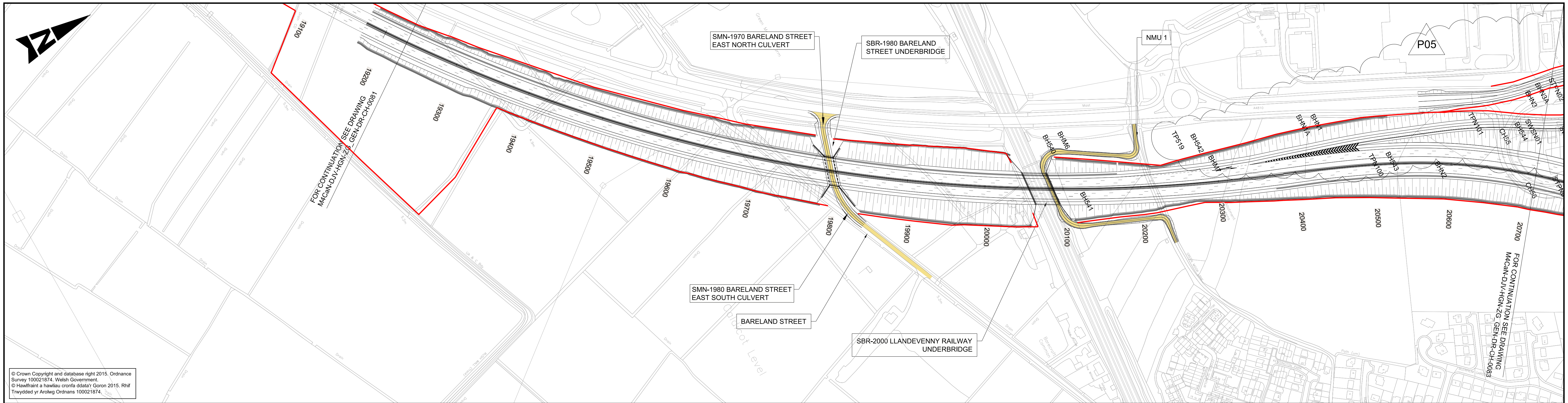

PLAN

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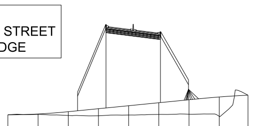


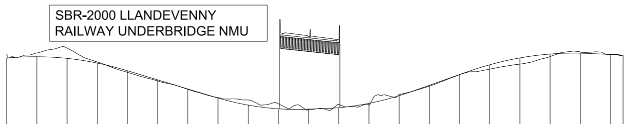
CHAINAGE	Mainline	EXISTING
0.000	4.628	4.652
20.000	4.744	4.688
40.000	5.048	4.545
60.000	5.442	4.500
80.000	5.835	4.603
100.000	6.229	4.686
120.000	6.623	4.715
140.000	6.991	4.435
159.070	7.228	7.228

HORIZONTAL: D; R=100.000 L=70.596; D=54.396; R

VERTICAL: R=2400 L=40.00; P=1.969% L=87.927; R=120 L=32.43; P

BARELAND STREET PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL



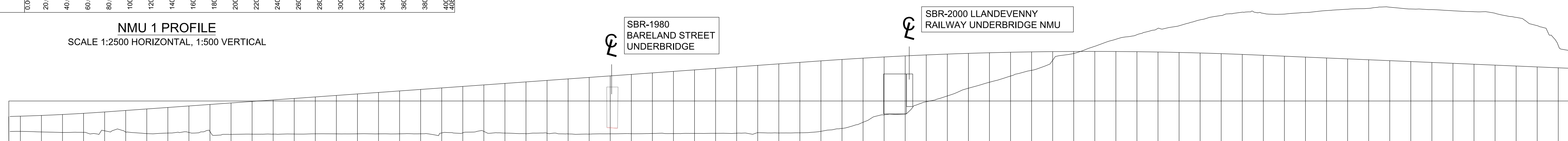
CHAINAGE	MAINLINE	EXISTING
0.000	15.940	16.513
20.000	16.118	16.624
40.000	15.897	17.263
60.000	15.275	15.420
80.000	14.254	14.042
100.000	13.040	12.894
120.000	11.827	11.778
140.000	10.616	10.665
160.000	9.680	10.354
180.000	9.189	9.851
200.000	9.140	9.050
220.000	9.333	9.755
240.000	9.910	9.690
260.000	10.932	11.079
280.000	12.319	12.206
300.000	13.742	13.738
320.000	15.046	14.469
340.000	15.961	15.135
360.000	16.476	16.145
380.000	16.591	16.754
400.000	16.417	16.417
408.326	16.339	16.339

HORIZONTAL: D; R; D=88.739; R=-20.000 L=42.100; R; D=47.633; R=-30.000 L=38.175; D=96.577; R; D

VERTICAL: R=-1000.000 L=79.601; L=57.917 P=-6.068%; R=900.000 L=61.035; P; R=900.000 L=57.605; P=7.114% L=36.547; R=-1000.000 L=80.522; P

NMU 1 PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL



CHAINAGE	MAINLINE	SIDE ROAD	EXISTING
19230.000			4.545
19240.000	7.959		5.070
19260.000	8.100		4.952
19280.000	8.280		4.857
19300.000	8.500		4.882
19320.000	8.760		5.178
19340.000	9.046		4.938
19360.000	9.332		4.640
19380.000	9.618		4.749
19400.000	9.904		4.870
19420.000	10.190		5.047
19440.000	10.476		4.497
19460.000	10.762		4.536
19480.000	11.048		4.540
19500.000	11.334		4.559
19520.000	11.620		4.602
19540.000	11.906		4.593
19560.000	12.192		4.602
19580.000	12.478		4.591
19600.000	12.764		4.601
19620.000	13.050		4.608
19640.000	13.336		4.769
19660.000	13.622		4.792
19680.000	13.908		5.065
19700.000	14.194		4.742
19720.000	14.480		4.623
19740.000	14.766		4.714
19760.000	15.052		4.582
19780.000	15.338		4.546
19800.000	15.624	5.786 5.668	4.598
19820.000	15.910		4.621
19840.000	16.196		4.673
19860.000	16.482		4.647
19880.000	16.768		4.682
19900.000	17.054		4.699
19920.000	17.340		4.723
19940.000	17.626		4.822
19960.000	17.912		4.755
19980.000	18.198		4.792
20000.000	18.483		5.072
20020.000	18.753		5.631
20040.000	19.001		6.796
20060.000	19.228		8.211
20080.000	19.432		8.363
20100.000	19.614		10.707
20120.000	19.774		11.806
20140.000	19.912		13.278
20160.000	20.029		14.420
20180.000	20.123		15.591
20200.000	20.195		16.678
20220.000	20.246		18.599
20240.000	20.274		19.874
20260.000	20.280		21.253
20280.000	20.265		22.593
20300.000	20.227		23.457
20320.000	20.168		24.670
20340.000	20.086		25.155
20360.000	19.982		26.286
20380.000	19.857		27.111
20400.000	19.709		27.741
20420.000	19.542		27.520
20440.000	19.372		27.377
20460.000	19.202		27.680
20480.000	19.032		28.049
20500.000	18.862		28.305
20520.000	18.692		28.469
20540.000	18.522		28.694
20560.000	18.352		28.350
20580.000	18.182		28.234
20600.000	18.012		28.010
20620.000	17.842		27.832
20640.000	17.672		27.536
20660.000	17.502		26.753
20680.000	17.332		25.172
20700.000	17.162		21.418
20710.000	17.077		

HORIZONTAL: R=-2000.000 L=1079.125; CL=75.000; CL=175.000; R=720.000 L=150.863

VERTICAL: R=10000.000 L=96.258; P=1.430% L=672.633; R=-18200.000 L=414.960; P=-0.850% L=301.206

MAIN LINE M4 PROFILE

SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL

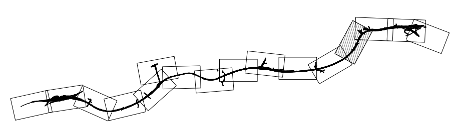
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.
3. FOR MAINLINE AND OTHER JUNCTION PLAN AND PROFILES SEE DRAWING REFERENCES M4CaN-DJV-HGN-ZG_GEN-DR-CH-0071 TO HGN-ZG_GEN-DR-CH-0107.

LEGEND:

HIGHWAY BOUNDARY

KEY PLAN



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
NONE

Maintenance / Cleaning
NONE

Use
NONE

Decommissioning / Demolition
NONE

Rev.	Date	Description	By	Chk'd	App'd
P01	11/11/15	FIRST ISSUE	GMS	DCW	ADK
P02	28/01/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P03	10/03/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P04	29/03/16	Profile Updated	AjD	CCR	KEN
P05	17/03/17	EB Off Slip Added	AjD	CCR	SM

Drawing Status: FOR COSTING

Suitability: D1

Project Team

Client: Llywodraeth Cymru Welsh Government

Project Title: M4 CORRIDOR AROUND NEWPORT

Drawing Title: PLAN AND PROFILE MAINLINE AND BARELAND ST SHEET 12 OF 15

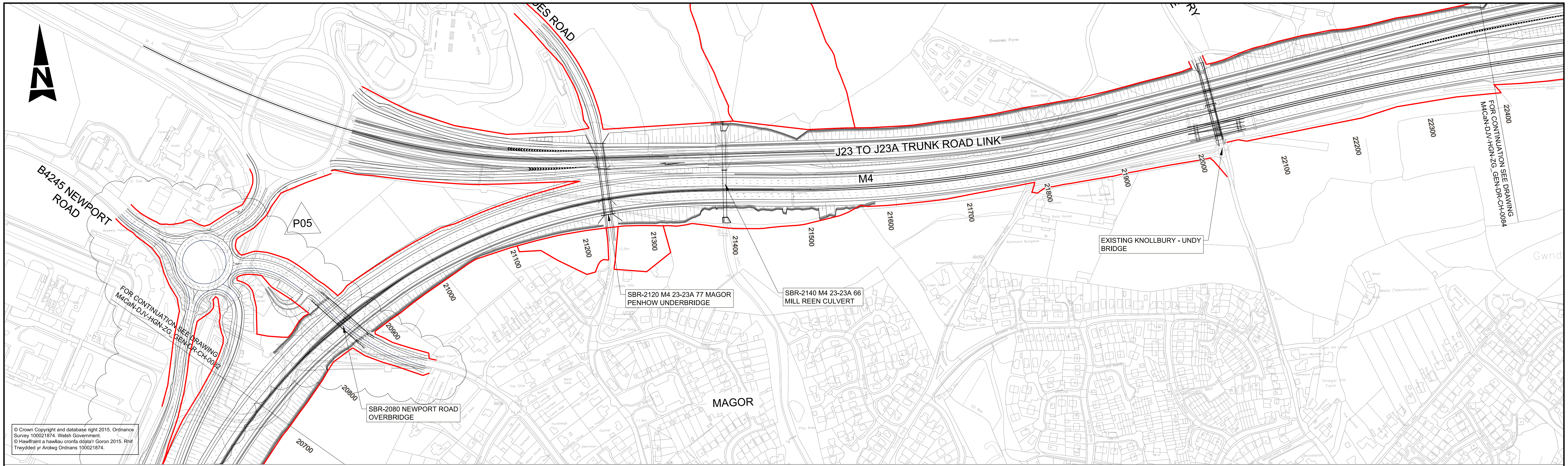
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	AjD	CCR	SM	SM

Original Size	Date	Date	Date	Date
A1	10/03/17	10/03/17	17/03/17	17/03/17

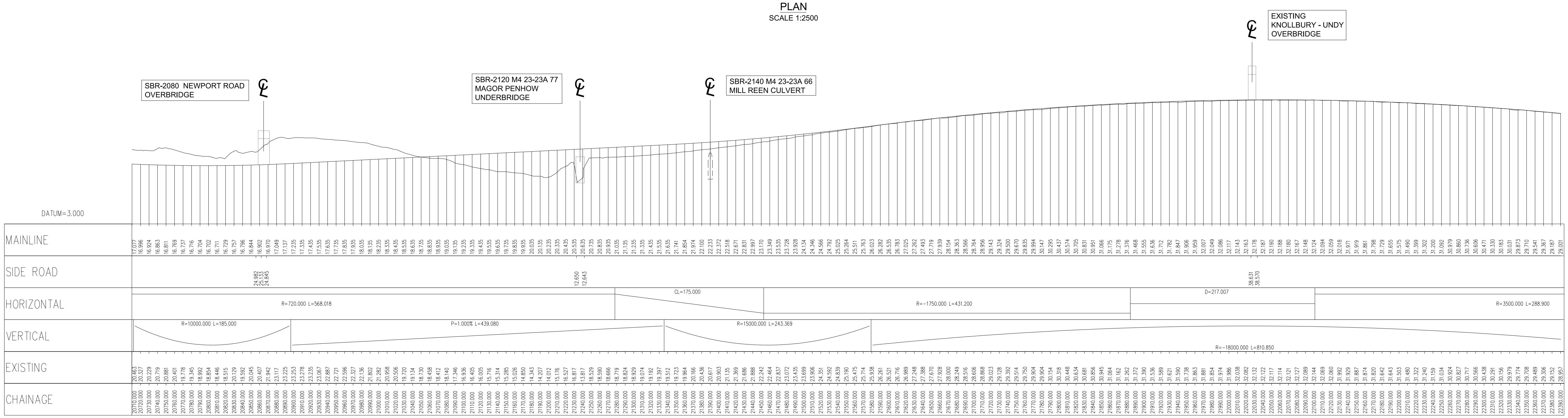
Drawing Number (Project | Originator | Volume | Location | Type | Role | Number): M4CaN - DJV - HGN - ZG_GEN - DR - CH - 0082

Revision: P05

DO NOT SCALE



PLAN
SCALE 1:2500



MAIN LINE M4 PROFILE
SCALE 1:2500 HORIZONTAL, 1:500 VERTICAL

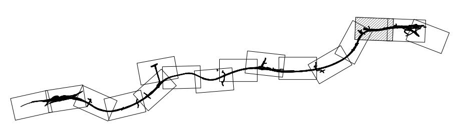
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. ONLY WRITTEN DIMENSIONS SHALL BE USED, DO NOT SCALE.
3. FOR MAINLINE AND OTHER JUNCTION PLAN AND PROFILES SEE DRAWING REFERENCES M4CaN-DJV-HGN-ZG_GEN-DR-CH-0071 TO HGN-ZG_GEN-DR-CH-0107.

LEGEND:

HIGHWAY BOUNDARY

KEY PLAN



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
NONE

Maintenance / Cleaning
NONE

Use
NONE

Decommissioning / Demolition
NONE

Rev.	Date	Description	By	Chk'd	App'd
P01	10/11/15	FIRST ISSUE	GMS	DCW	ADK
P02	28/01/16	FINAL ISSUE TO WG	AjD	CCR	KEN
P03	29/03/16	Profile Updated	AjD	CCR	KEN
P04	01/08/16	No change	CCR	CCR	AJJ
P05	17/03/17	EB Off Slip Added	AjD	CCR	SM

Drawing Status: FOR COSTING
Suitability: D1
Project Team
Client: Llywodraeth Cymru Welsh Government

Project Title: M4 CORRIDOR AROUND NEWPORT

Drawing Title: PLAN AND PROFILE MAINLINE SHEET 13 OF 15

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	AjD	CCR	SM	SM
Original Size	Date	Date	Date	Date
A1	10/03/17	10/03/17	17/03/17	17/03/17

Drawing Number (Project / Originator / Volume / Location / Type / Role / Number): M4CaN - DJV - HGN - ZG_GEN - DR - CH - 0083

Revision: P05

Appendix B – Traffic Figures

Supplementary Orders scenario (with eastbound off-slip at Magor) - Hourly traffic flows (in units of vehicles)

			2022		2037	
			AM	PM	AM	PM
Glan Llyn	Eastbound diverge	Upstream New M4	2,248	2,232	3,015	2,726
		Off slip	185	116	440	301
		Downstream New M4	2,063	2,116	2,575	2,425
	Eastbound merge	Upstream New M4	2,063	2,116	2,575	2,425
		On slip	352	343	757	678
		Downstream New M4	2,414	2,459	3,330	3,103
Magor	New Eastbound diverge	Upstream New M4	2,414	2,459	3,330	3,103
		Off slip	225	323	444	440
		Downstream New M4	2,189	2,136	2,886	2,663
Junction 23	Eastbound diverge	Upstream New M4	2,189	2,136	2,886	2,663
		Off slip	443	549	606	717
		Downstream New M4	1,747	1,586	2,281	1,946
	Eastbound merge	Upstream New M4	1,747	1,586	2,281	1,946
		On slip	1,550	849	1,390	1,068
		Downstream M4 Second Severn Crossing	3,296	2,436	3,671	3,014
	Westbound diverge	Upstream M4 Second Severn Crossing	2,660	3,488	3,320	3,760
		Off slip	990	1,595	1,337	1,472
		Downstream New M4	1,670	1,893	1,983	2,288
	Westbound merge onto New M4	Upstream New M4	1,670	1,893	1,983	2,288
		On slip	498	469	691	716
		Downstream M4 Second Severn Crossing	2,168	2,362	2,674	3,002
	Westbound merge onto Reclassified Existing M4	Upstream Reclassified Existing M4	539	748	661	909
		On slip	918	1,483	1,255	1,432
		Downstream Reclassified Existing M4	1,457	2,230	1,916	2,335
Junction 23A	Westbound diverge	Upstream Reclassified Existing M4	1,457	2,230	1,916	2,335
		Off slip	366	440	606	511
		Downstream Reclassified Existing M4	1,091	1,790	1,310	1,824
	Eastbound merge	Upstream Reclassified Existing M4	1,371	738	1,616	1,047
		On slip	327	373	447	494
		Downstream Reclassified Existing M4	1,698	1,111	2,064	1,542