



Llywodraeth Cymru
Welsh Government

www.cymru.gov.uk

M4 Corridor around Newport

March 2017 Environmental Statement Supplement



Welsh Government

M4 Corridor around Newport

March 2017 Environmental
Statement Supplement
Main Text

M4CaN-DJV-EGN-ZG_GEN-RP-EN-0044

At Issue | March 2017

Contents

	Page
Non-Technical Summary	ii
1 Introduction	1
1.1 Introduction	1
1.2 Scope and Content of the ES Supplement	2
1.3 The Assessment Team	3
1.4 Publication of the ES Supplement	4
1.5 Next Steps	5
2 Design Modifications	6
2.1 Supplementary Compulsory Purchase Order	6
2.2 Magor Eastbound Offslip	6

Figures

Figure TSR2.4 (sheets 11, 12 and 13)	General Arrangement Plans
Figure TSR2.5 (sheets 12 and 13)	Highway Drainage and Reen Mitigation
Figure TSR2.6 (sheets 12 and 13)	Environmental Management Plans.
Figure TSR2.7i (sheet 9)	Indicative Landscape Sections
Figure TSR9.21 (sheets 12 and 13)	Existing Vegetation and Clearance Drawings

Appendices

Appendix TS2.1	Operation Traffic Data (Extract from Revised Traffic Forecasting Report Supplement 2017)
Appendix TS7.1	Air Quality Operational Assessment Results

Glossary

AADT:	Annual Average Daily Traffic
AQMA:	Air Quality Management Area
CL:	Contaminated Land
CPO:	Compulsory Purchase Order
DMRB:	Design Manual for Roads and Bridges
EIA:	Environmental Impact Assessment
EMP:	Environmental Management Plans
ES:	Environmental Statement
ESS:	Environmental Statement Supplement
FCA:	Flood Consequence Assessment
IEMA:	Institute of Environmental Management and Assessment
M4CaN:	M4 Corridor around Newport
NMU:	Non-Motorised Users
NRW:	Natural Resources Wales
NSR:	Noise Sensitive Receptors
OYDS:	Opening Year Do Something
SSSI:	Site of Special Scientific Interest

Non-Technical Summary

1. Draft Orders for the proposed M4 Corridor around Newport (M4CaN) were published by Welsh Government in March 2016, together with an Environmental Statement (ES) and associated reports.
2. M4CaN (referred to in this document as 'the Scheme') includes a proposed new section of three lane motorway between Castleton (Junction 29 of the existing M4) and Magor (Junction 23 of the existing M4) to the south of Newport in South Wales, together with a number of Complementary Measures on the existing M4 between the same junctions.
3. In September 2016 an Environmental Statement Supplement (ESS) was published (the September 2016 ESS) which provided errata; clarified some aspects of the cultural heritage assessment, and impacts during construction; provided the results of some of the 2016 ecological surveys; and provided updated or additional information to a number of appendices, including the Register of Environmental Commitments.
4. The final part of the September 2016 ESS described and assessed a number of modifications to the Scheme design since the publication of the draft Orders and consequential modifications to the Environmental Management Plans. The more significant design modifications were at the Magor Interchange where Bencroft Lane was realigned and at Docks Way junction.
5. A further supplement to the ES was published in December 2016 which provided errata, supplementary information which became available since the publication of the September 2016 ESS and an assessment of the modifications of the Scheme design. The Scheme design changes assessed within the December 2016 ESS included; changes to future year road traffic forecasts, vertical height adjustments of the Usk Crossing, changes to the retaining structures of the Docks Way Link Road, and an additional borrow pit at Magor.
6. None of the additional data provided in the September 2016 ESS or the December 2016 ESS materially altered the assessment and conclusions of the March 2016 ES.
7. Since December 2016 a further modification to the design has been made. This is reported in a third Environmental Statement Supplement (the March 2017 ESS) which should be read alongside the published March 2016 ES, the September 2016 ESS and the December 2016 ESS.
8. The design modification is in respect of an additional eastbound off-slip at Magor and that requires a modification to the published draft Statutory Orders..
9. Copies of the modified Orders, this ES Supplement and Summary, and supporting information are available to view during normal office hours at the locations below.
 - Orders Branch, Transport, Department of Economy Science and Transport, Welsh Government, Cathays Park, Cardiff, CF10 3NQ.
 - Newport City Council, Civic Centre, Godfrey Road, Newport, NP20 4UR.
 - Monmouthshire County Council, County Hall, Rhadyr, Usk, NP15 1GA.
 - Monmouthshire County Council, Innovation House, Wales 1 Business Park, Magor, Monmouthshire, NP26 3DG.
 - Newport Central Library, John Frost Square, Newport, NP20 1PA.

10. Further copies of the ES Supplement Summary can be obtained free of charge from the Welsh Government in Cardiff at the following address.

Orders Branch
Transport
Department of Economy, Science and Transport
Welsh Government
Cathays Park, Cardiff
CF10 3NQ.

11. The ES Supplement and Summary (together with the full March 2016 ES, the September 2016 ESS and the December 2016 ESS) are available to view and download from the Welsh Government website:
12. <http://www.wales.gov.uk/m4newport>
13. Electronic copies of the March 2016 ES and three ES Supplements (on DVD) can be purchased from the above Welsh Government address at a cost of £20 (including postage and packaging).
14. Paper copies of the March 2016 ES and three ES Supplements are also available from the above address, although an administrative charge will be made to cover the cost of copying (price on application).

1 Introduction

1.1 Introduction

1.1.1 M4 Corridor around Newport (M4CaN) (referred to in this document as ‘the Scheme’) includes a proposed new section of three lane motorway between Castleton (Junction 29 of the existing M4) and Magor (Junction 23 of the existing M4) to the south of Newport in South Wales.

1.1.2 The Scheme would also include a range of Complementary Measures. These are measures that would assist in alleviating travel related problems on the existing M4. The measures include reclassification of the existing M4 as a trunk road between Castleton and Magor, relief to Junction 23A with a new M4/M48/B4245 connection and provision of cycle and walking friendly infrastructure. These measures are complementary to the provision of the new section of motorway but would not by themselves alleviate the travel related problems on the existing M4.

1.1.3 Draft Orders for the proposed M4CaN were published by Welsh Government in March 2016, together with an Environmental Statement (ES) and associated reports.

1.1.4 In September 2016 an Environmental Statement Supplement (ESS) was published (the September 2016 ESS) which in Part A corrected a number of factual errors, inconsistencies and omissions primarily related to baseline information. Part B clarified aspects of the cultural heritage survey work and proposed mitigation, the marine historic environment, aspects of the landscape and visual assessment during construction, the impact on Barecroft Fields which is part of the Magor Marsh nature reserve, and the impact during construction on the Cardiff to Newport cycleway (NR88). Part C provided updated or additional information in the form of an updated Drainage Strategy, an updated Reen Mitigation Strategy, additional information on the Pye Corner WWII Barrage Balloon Tethers site, the results of the 2015 – 2016 Wintering Bird Survey, the 2016 Breeding Bird Survey, the 2016 Great Crested Newt Survey and the 2016 Bat Hibernation Roost Survey. Interim statements with regard to the Dormouse Survey 2016 and the Bat Emergence Survey 2016 were also included.

1.1.5 Part C also updated Appendix 11.1 of the March 2016 ES and its supporting Contaminated Land (CL) annexes. It also provided the results from further rounds of quarterly surface water monitoring and provided an update to the Flood Consequences Assessment (FCA, ES Appendix 16.1). Appendix 17.2 (Planning Applications (for cumulative assessment)) and Appendix 18.1 (Register of Environmental Commitments) were also updated.

1.1.6 None of the additional data provided in the September 2016 ESS materially altered the assessment and conclusions of the March 2016 ES.

1.1.7 Part D of the September 2016 ESS described and assessed a number of modifications to the Scheme design since the publication of the draft Orders and consequential modifications to the Environmental Management Plans (EMP). The design modifications were at the Magor Interchange where Bencroft Lane was realigned and at Docks Way junction. Minor modifications were made to the Glan Llyn Junction and between M4 J23 and J23a.

- 1.1.8** A further supplement to the ES was published in December 2016 which provided errata in Part A and clarification on the Buildability report and the Pre-Construction Environmental Management Plan in Part B. Part C included supplementary information which became available since the publication of the September 2016 ESS. A Navigation Risk Assessment was undertaken in November 2016 and reported on in the December 2016 ESS, identifying the main risks to navigation in the River Usk as a result of the construction and operation of the Usk Crossing. Mitigation measures were proposed which included the provision of warnings, active river traffic management, pollution control and the preparation of a marine safety management plan.
- 1.1.9** An assessment of the hazardous installations affected by the Scheme was undertaken and presented in Part C along with further information on the inter-annual variability for the chosen meteorological station used in the Air Quality assessments.
- 1.1.10** Protected species mitigation strategies were presented within the December ESS for Dormouse, Bat, Great Crested Newt and Water Vole as well as a Special Site of Scientific Interest (SSSI) Mitigation Strategy. In addition the following ecological surveys were undertaken in 2016 and the survey reports were appended to the December ESS:
- Hazel Dormouse
 - Bat Tree Survey
 - Bat Building and Structure Survey
 - Breeding Crane Survey
- 1.1.11** Part D of the December 2016 ESS described and assessed a number of Scheme design changes. These included changes to the Future Year Road Traffic Forecasts, the increased vertical height of the Usk Crossing, changes to the retaining structures of the Docks Way Link Road and an additional borrow pit at Magor.
- 1.1.12** None of the additional data provided in the December 2016 ESS materially altered the assessment and conclusions of the March 2016 ES.
- 1.1.13** Since December 2016 there has been a further change to the Scheme design. This change has been described and assessed here in a third Environmental Statement Supplement (the March 2017 ESS) which should be read alongside the published March 2016 ES, the September 2016 ESS and the December 2016 ESS.

1.2 Scope and Content of the ES Supplement

- 1.2.1** This ES Supplement is concerned with a design change that provides an eastbound off slip at Magor to connect with the A4810 at a roundabout with the B4245 Newport Road. This requires a modification to the published draft Statutory Orders.
- 1.2.2** A non-technical summary of this ES Supplement is provided at the beginning of this document and is also available as a separate bilingual document.

1.2.3 Table 1.1 sets out the structure of this ES Supplement. Figures and appendices within this ES Supplement have been referenced as follows.

- New figures or appendices (not previously forming part of the March 2016 ES, September 2016 ESS or December 2016 ESS) are numbered according to their March 2016 ES chapter number and then in numerical order e.g. 10.1, 10.2 etc. To distinguish such new documents from the figures and appendices published in the ES and the subsequent supplements, these new figures and appendices are pre-fixed with TS.
- Figures or appendices that formed part of the March 2016 ES, September 2016 ESS or December 2016 ESS but have been updated or replaced retain their previous ES or ESS figure/appendix number but are pre-fixed with an ‘TSR’ to distinguish them from the previous version(s).

ES Supplement Table 1.1: Structure of the December 2016 ES Supplement

Structure of ES Supplement	
Main Text	Glossary
	Non- Technical Summary
	Design modifications: Details of changes to the Scheme since publication of the December 2016 ESS.
Figures	
Updated figures and drawings to accompany the text.	
Appendices	
New specialist reports forming technical appendices to the text.	

1.3 The Assessment Team

1.3.1 The Welsh Government awarded a Professional Services Contract for the Scheme development and environmental surveys, including publication of the March 2016 ES and up to and including any Public Local Inquiry. The contract was awarded to a Joint Venture of Costain, Vinci and Taylor Woodrow with a consultant joint venture of Arup and Atkins, supported by environmental sub-consultant RPS.

1.3.2 The Environmental Impact Assessment (EIA) process has been managed by RPS, taking into account information provided by the Welsh Government, design and consultant team. RPS is a registrant of the Institute of Environmental Management and Assessment (IEMA) Quality Mark. Details of the EIA project team are provided in Table 1.2.

ES Supplement Table 1.2: EIA Topic Specialists

Topic	Main Author/Contributor
EIA project management	RPS
Air Quality	Arup (part of Arup Atkins Joint Venture)
Cultural Heritage	RPS
Landscape and Visual Effects	Atkins (part of Arup Atkins Joint Venture)
Ecology and Nature Conservation	RPS
Geology and Soils	RPS
Materials	RPS
Noise and Vibration	RPS
All Travellers	RPS
Community and Private Assets	RPS
Road Drainage and the Water Environment	RPS

Topic	Main Author/Contributor
Assessment of Cumulative Effects and Inter-relationships	RPS
Environmental Management	RPS

1.4 Publication of the ES Supplement

1.4.1 This ES Supplement is submitted to accompany the publication of Supplementary Orders for the Scheme.

1.4.2 Copies of the Supplementary Orders, this ES Supplement and supporting information are available to view during normal office hours at the locations below.

- Orders Branch, Transport, Department of Economy Science and Transport, Welsh Government, Cathays Park, Cardiff, CF10 3NQ.
- Newport City Council, Civic Centre, Godfrey Road, Newport, NP20 4UR.
- Monmouthshire County Council, County Hall, Rhadyr, Usk, NP15 1GA.
- Monmouthshire County Council, Innovation House, Wales 1 Business Park, Magor, Monmouthshire, NP26 3DG.
- Newport Central Library, John Frost Square, Newport, NP20 1PA.

1.4.3 In addition, copies of the draft Orders, the March 2016 ES and associated reporting published in March 2016, the September 2016 ESS and the December 2016 ESS are available in the same locations.

1.4.4 Further copies of the Non-Technical Summary (which is available as a separate bilingual document) can be obtained free of charge from the Welsh Government in Cardiff at the following address.

Orders Branch
Transport
Department of Economy, Science and Transport
Welsh Government
Cathays Park, Cardiff
CF10 3NQ.

1.4.5 The full March 2016 ES, September 2016 ESS, December 2016 ESS and March 2017 ESS are available to view and download from the Welsh Government website.

<http://www.wales.gov.uk/m4newport>

1.4.6 Electronic copies of the March 2016 ES and ES Supplements (on DVD) can be purchased from the above Welsh Government address at a cost of £20 (including postage and packaging).

1.4.7 Paper copies of the March 2016 ES and ES Supplements are also available from the above address, although an administrative charge will be made to cover the cost of copying (price on application).

1.5 Next Steps

1.5.1 Welsh Government is currently holding a Public Local Inquiry (commenced in February 2017). Such Inquiries are held before an independent Inspector who would hear and consider the evidence both for and against the published Scheme and subsequently report their findings and recommendations to the Welsh Ministers. The Welsh Ministers would consider all issues, including any new information arising, before deciding whether to proceed with the Scheme and, if so, make the Orders with or without modification.

1.5.2 Subject to the above process, the approximate key dates for progressing the M4 Corridor around Newport are as follows.

- Completion of the Public Local Inquiry: Summer 2017.
- Start of construction: Spring/Summer 2018.
- Opening of new section of motorway: by the end of 2021.
- Completion of work associated with reclassification of existing motorway: by the end of 2022.

2 Design Modifications

2.1 Supplementary Compulsory Purchase Order

2.1.1 Following further Scheme development a third draft Supplementary Compulsory Order (draft Supplementary (No. 2) CPO) is required to include an additional eastbound off-slip at Magor. The proposed alignment and re-alignment of the side roads would require additional land take not included within the draft CPO.

Changes to Chapter 2 of the Environmental Statement

2.1.2 The traffic model has been revised to take into account the design modifications to the Scheme. A supplement to the Traffic Forecasting Report has been produced which assess the change in traffic flows compared to the published data in the December 2016 ESS which has occurred as a result of the design modifications. The forecast annual average daily traffic flows for the strategic road network for the years 2022, 2037 and 2051 are provided in Appendix TS2.1. This data is intended to be read in conjunction with the data presented in Appendix SR2.1 of the March 2016 ESS.

2.1.3 Compared to the original Scheme in the December 2016 ESS, the revised modelling found that a maximum increase of 4,400 vehicles per day would occur in 2037 on the proposed new motorway east of the Glan Llyn Junction. The report found that trip patterns along the B4245 would also change, leading to an increase in traffic entering Magor from the west and a decrease in traffic entering Undy from the east.

Changes to Plans Supporting Chapter 2 of the March 2016 ES

2.1.4 The following plans supporting Chapter 2 of the ES have been updated as a result of the Scheme design changes.

- Figure TSR2.4 (sheets 11, 12 and 13) - General Arrangement Plans
- Figure TSR2.5 (sheets 12 and 13) – Highway Drainage and Reen Mitigation.
- Figure TSR2.6 (sheets 12 and 13) - Environmental Management Plans.
- Figure TSR2.7i (sheet 9) – Indicative Landscape Sections
- Figure TSR9.21 (sheets 12 and 13) – Existing Vegetation and Clearance Drawings

2.2 Magor Eastbound Offslip

2.2.1 A new eastbound offslip would be provided, leaving the M4 west of Magor and joining the re-aligned Newport Road roundabout.

2.2.2 Newport Road Roundabout has been amended to incorporate a slip road off the proposed M4 mainline.

2.2.3 The proposed amendment would involve the introduction of an additional slip road off the main carriageway in the vicinity of the InBev Brewery and associated changes to the junction with the A4810 and B4245. A small area of additional land would be incorporated into the scheme boundary which currently comprises

mature trees and scrub that form part of the wooded boundary to the brewery site.

- 2.2.4** An assessment of the effects of the additional land take, construction and operation of this design change in relation of the topics covered within the ES is provided in the following sections.

Air Quality

Construction

- 2.2.5** The construction of the Magor eastbound off-slip does not significantly change the outcome of the assessment of construction impacts reported in the March 2016 ES and September 2016 and December 2016 ESS'. The outcome of the assessment and recommended mitigation measures detailed in the March 2016 ES would also apply to the Magor eastbound off-slip.

Operation

- 2.2.6** The revised set of traffic forecasts for the operational phase, including the Magor eastbound off-slip, have been reviewed with regard to changes in traffic flows across the study area of the air quality assessment. The revised traffic forecasts result in reassignment of trips across the network which results in a slight reduction in vehicles using the existing M4 corridor and an increase in vehicles using the proposed new section of motorway in the Do Something scenario. The results presented in the December 2016 Environment Statement Supplement will therefore generally slightly underestimate the improvement in air quality along the existing M4 corridor but conversely slightly underestimate the increases in pollutant concentrations along the new section of the motorway.
- 2.2.7** This increase in vehicles on the proposed new section of motorway has been reviewed against predicted flows for the published scheme and flows increase by more than 1,000 Annual Average Daily Traffic (AADT), which is the change criteria applied from the Design Manual for Roads and Bridges (DMRB) HA207/07, on the eastbound carriageway of the proposed new section of motorway. As a result the air quality modelling has been repeated using the revised set of traffic forecast including Magor eastbound off-slip. This has followed the same methodology as outlined in the March 2016 Environmental Statement and December 2016 ESS.
- 2.2.8** Detailed results of the updating modelling are presented in Appendix TS7.1 which replaces Tables 7.3.4 to 7.3.8 of Appendix SR7.3 of the December ESS. Pollutant concentrations at the majority of human health receptors remain as set out previously however there are some imperceptible ($<0.1\mu\text{g}/\text{m}^3$) increases at some properties in close proximity to the proposed new section of motorway. The revised Scheme does not affect predicted pollutant concentrations within the Air Quality Management Areas (AQMAs) assessed. The revised Scheme changes predicted pollutant concentrations at designated sites adjacent to the existing M4 corridor and proposed new section of motorway. It remains that the location with the largest improvement in annual mean NO_x concentrations is at Langstone Llanmartin Meadows ($-11.9\mu\text{g}/\text{m}^3$) and the predicted increase in NO_x concentrations are similar to those previously detailed in the ES at the four Sites of Special Scientific Interest (SSSI) in the Gwent Levels, Gwent Levels - Whitson SSSI ($10.4\mu\text{g}/\text{m}^3$) with similar increases at Gwent Levels - Nash & Goldcliff SSSI,

Gwent Levels - St Brides SSSI and Gwent Levels - Redwick and Llandeenny SSSI.

2.2.9 This revised scheme design does not change the conclusions set out in the March 2016 Environmental Statement.

2.2.10 The revised scheme does not significantly affect the conclusions of the regional air quality and greenhouse gas emissions assessment.

Cultural Heritage

2.2.11 The eastbound offslip will have no significant change on the assessment of cultural heritage.

Landscape

2.2.12 The eastbound offslip will have no significant change on the assessment landscape.

2.2.13 An additional area of mature linear woodland belt would be removed, although as many as the existing mature trees as possible would be retained. New native shrub planting with occasional trees is proposed in this area as part of the Scheme.

2.2.14 The site of the Scheme design change is located within the Magor and Undy Local Character Area. The proposed changes to the Scheme in this area would alter the detail and layout of some of the elements being introduced into this character area, but does not involve the addition of completely new elements or a substantial change in the scale of the Scheme.

2.2.15 The site of the Scheme design change is visually contained by existing woodland belts, the existing highway network and other proposed elements of the Scheme. The proposed changes to the Scheme in this area would alter the detail and layout of some of the proposed elements but does not involve the addition of completely new elements or a substantial change in the scale of the Scheme.

Ecology

2.2.16 The eastbound offslip will have no significant change on the assessment ecology.

2.2.17 The area of woodland to be lost is not designated as an ecologically important site and is not included on the ancient woodland inventory. Trees and scrub are of potential value to breeding birds and therefore clearance of vegetation would be undertaken outside of the bird-breeding season or following a survey to confirm no bird nests are present.

Geology and Soils

2.2.18 The eastbound offslip will have no change on the assessment of geology and soils.

Materials

2.2.19 There is an additional area for construction of 2,842 m². The materials that would be required are similar to materials already identified for use in the Scheme. The

anticipated changes to material volumes would result in a relatively small change to the expected earthworks volumes.

2.2.20 The eastbound offslip would not result in a significant change from the conclusions of the March 2016 ES and ES Supplements in September and December 2016 with respect to materials.

Noise

2.2.21 A new set of traffic data which takes into account the eastbound offslip has been generated. This data has been reviewed to determine the implications on predicted noise emissions.

2.2.22 A qualitative assessment of traffic flows on the following road links was undertaken:

- eastbound offslip,
- eastbound M4 carriageway (before and after the offslip);
- westbound M4 carriageway

2.2.23 An assessment of the traffic flow data is provided in Table 2.1.

2.2.24 Compared to the published Scheme the noise emissions are considered to change by less than 0.1 dB at the nearest noise sensitive receptors (NSRs).

2.2.25 West of the proposed M4 the nearest property is Three Gates, Llandevey. Given that the M4 south of the slip junction is closer to the property than the slip and the contribution from the proposed M4 does not change significantly, the contribution from the slip would be negligible compared to the proposed M4.

2.2.26 Similarly the contribution from the proposed east bound offslip would be around 10 dB less than that from the A4810 confirming the slip's contribution to Three Gates and Llandevey would be negligible.

2.2.27 Therefore, the eastbound offslip would not result in a significant change from the conclusions of the March 2016 ES and ES Supplements in September and December 2016.

All Travellers, Community and Private Assets

2.2.28 The eastbound offslip will have no significant change on the assessment of all travellers, community and private assets. It will however be no longer possible to utilise the diverted alignment of the B4245 from the west of Magor towards the brewery as an off-road non-motorised users (NMU) facility with the inclusion of the eastbound offslip.

2.2.29 The new arrangement would include a cycleway and footway along the diverted section of the B4245 crossing the eastbound offslip and the A4810 via signalised crossings. The route then continues westwards towards the brewery.

2.2.30 Whilst there would no longer be a continual off-road route, the provision of the segregated facility, in accordance with relevant design guidance, would enable cyclists and pedestrians to access the brewery and other facilities to the west of the A4810 from Magor.

Road Drainage and Water

- 2.2.31** The eastbound offslip will have no significant change on the assessment of road drainage and water.
- 2.2.32** Surface water run-off from the east bound offslip at Magor would be captured by conventional drainage systems comprising concrete channels, gullies, carrier pipes and filter drains. Flows from the tarmacadam running surface would be captured separately to the cutting drainage. Flows from the highway would be conveyed to Water Treatment Area 10 for attenuation and treatment. Flows from the cutting are routed to watercourses within the catchment.

ES Supplement Table 2.1: Traffic Flow Data – Noise Assessment

Road	Link	2022OYDS – published scheme				2022OYDS – Magor slip alternative				dB change	Change summing e/b slip and e/b M4 north of slip
		18hr	%HGV	Spd (km/hr)	dB ref.	18hr	%HGV	Spd (km/hr)	dB ref.		
E/B slip	60337223	-	-	-	-	4,060	0.3	41.9	61.6	-	-
e/b M4, north of slip	60336040	29,443	12.4	104.9	78.8	28,872	12.6	105.1	78.7	-0.04	0.05
e/b M4, south of slip	60526033	29,443	12.4	104.9	78.8	3,2932	11.1	102.0	78.9	0.09	-
w/b M4	60396034	25,998	13.2	104.8	78.3	25,986	13.2	104.8	78.3	0.00	-
A4810 Steelworks Road up	28123087	5,738	28.1	62.6	-	5,772	28.0	62.6	-	-	-
A4810 Steelworks Road down	30872812	5,435	29.8	63.0	-	4,600	35.0	63.7	-	-	-
A4810 Steelworks Road 2-way	30872812	11,172	29.0	62.8	73.4	10,372	31.5	63.1	73.4	-0.05	0.2

- * Unmitigated noise levels at 10m carriageway edge

Changes to Reports Supporting Chapter 3 of the March 2016 ES

- 2.2.33** The following details are provided to supplement the Buildability Report provided at Appendix SR3.1 of the December 2016 ESS.
- 2.2.34** The eastbound offslip would require additional land take to construct, which would accommodate a realigned section of the A4810. The reconfigured junction arrangement also requires additional temporary land to relocate the proposed Newport Road Section Compound.
- 2.2.35** Due to the realigned section of the A4810 the updated junction arrangement would require the relocation of the existing Gas Governor. This was retained in the previous junction arrangement. Until the detailed design is undertaken it is not clear whether the existing Transmission Station would need to be relocated too. If this was the case then there is potential that it could be relocated close to the existing communications jointing compound located near the top of the existing J23a west bound diverge slip.
- 2.2.36** The proposed gyratory will involve piecemeal construction including utility diversions, some of which may require temporary connections. A temporary mini roundabout would be constructed on a locally widened section of carriageway on the A4810 to avoid the need for temporary traffic signals during the works. Once the Newport Road Overbridge has been constructed, the utilities have been diverted across the deck and opened to traffic, the earthworks would continue with the infilling of the disused B4245 up to the new permanent levels of the A4810 / B4245 gyratory. A section of temporary carriageway will be constructed across the middle of the proposed gyratory once filled to level to accommodate the A4810. This will allow the demolition of the existing A4810 Overbridge that spans the B4245 to proceed. The existing bridge cannot be demolished until the new Newport Road Bridge is open to traffic, the utilities diverted within the deck and the A4810 has been realigned away from the disused bridge.
- 2.2.37** Once the bridge has been demolished, the earthworks to complete the gyratory would proceed. This material is likely to be sourced from new eastbound diverge cutting.
- 2.2.38** The remainder of the gyratory would be completed and open to A4810 and B4245 traffic. The temporary carriageway would be removed and the centre of the gyratory landscaped. The proposed M4 Eastbound diverge slip would remain closed until the new M4 is open to traffic.
- 2.2.39** The proposed construction sequence has been developed and is included within this document.