

Welsh Government

M4 Corridor around Newport

Environmental Statement Volume 1

Chapter 1: Introduction

M4CAN-DJV-EGN-ZG_GEN-RP-EN-0008

At Issue | March 2016

Contents

	Page	
1	Introduction	1-1
1.1	Introduction	1-1
1.2	Location of the Scheme	1-1
1.3	Context and Scheme History	1-1
1.4	Scheme Objectives	1-2
1.5	Statutory Framework and Purpose of the Environmental Statement	1-5
1.6	Requirement for EIA	1-6
1.7	Scope and Content of the ES	1-6
1.8	Structure of the ES	1-7
1.9	The Assessment Team	1-8
1.10	Publication of the Environmental Statement	1-8
1.11	Next Steps	1-9

1 Introduction

1.1 Introduction

1.1.1 This document is Volume 1 of the Environmental Statement (ES) for the M4 Corridor around Newport (M4CaN). The ES reports the findings of the Environmental Impact Assessment (EIA) process.

1.1.2 In accordance with Regulation 61 of the Conservation of Habitats and Species Regulations 2010, an Assessment of Implications on European Sites (AIES) has also been prepared to consider the possible effects of the Scheme on European sites. The findings of the AIES are reported separately.

1.2 Location of the Scheme

1.2.1 The existing M4 motorway runs between London and South Wales, crossing the River Severn, passing through the Brynglas Tunnels at Newport and terminating to the north west of Swansea at the A48/A483 junction. 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.

1.2.2 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.

1.2.3 The location of the Scheme is shown on Figure 1.1. Further details of the Scheme are provided in Chapters 2 and 3 of this ES.

1.3 Context and Scheme History

1.3.1 The M4 around Newport is a route of strategic importance at international, national, regional and local levels, linking south and west Wales to the south west of England and forms part of strategic routes to Ireland, the Midlands, the south east of England and further to continental Europe.

1.3.2 The M4 is critical to the Welsh economy. It forms part of the Trans-European Transport Network (TEN-T) and is the gateway to Wales, transporting people and goods to homes, industry and employment. It provides access to ports and airports and serves the Welsh tourism industry.

1.3.3 Unreliable journey times and traffic congestion, particularly during peak times, are common occurrences on the M4 around Newport. This is due to the lack of capacity and alternative routes, especially during incidents and accidents. The level of congestion is expected to increase.

1.3.4 The M4 between Junctions 28 and 24 was originally designed as the ‘Newport Bypass’ in the 1960s. The existing M4 between Magor and Castleton does not

meet modern motorway design standards and a greater volume of traffic uses it than it was originally designed for.

- 1.3.5** Some sections have alignments (gradients and bends) that are below current motorway standards and in places there is no hard shoulder. In addition to this, there are frequent junctions, resulting in many weaving movements with vehicles accelerating, decelerating and changing lanes over relatively short distances.
- 1.3.6** Congestion on the existing M4, particularly around Newport, is cited by the business community in South Wales as a barrier to economic growth. Where congestion increases, this imposes costs on businesses, commuters and consumers which in turn affect the economy. For commuters, congestion results in longer journey times to work. This reduces access to employment opportunities.
- 1.3.7** Residents of Newport close to the existing M4 experience poor air quality as a result of motorway traffic. Out of seven Air Quality Management Areas (AQMAs) designated by Newport City Council, four are associated with the M4.
- 1.3.8** Existing problems relate to capacity, resilience, safety and issues of sustainable development. Traffic forecasts show that the problems will worsen in future.
- 1.3.9** Since the early 1990s, much assessment and consultation has been undertaken to develop a preferred solution to the problems on the motorway around Newport, including motorway options. In July 2014, taking into account social, economic and environmental assessment of the options, the Minister for Economy, Science and Transport decided to adopt 'the Plan' for the M4 Corridor around Newport (Welsh Government, 2014), of which the main element would be a new section of motorway to the south of Newport.
- 1.3.10** Further details of the history of the Scheme are set out in Chapter 4 (Scheme Development and Alternatives Considered) of this ES.

1.4 Scheme Objectives

Welsh Government

- 1.4.1** The Wales Transport Strategy 'One Wales: Connecting the Nation' (Welsh Assembly Government, 2008) sets out the following goal:
- '...to promote sustainable transport networks that safeguard the environment while strengthening our country's economic and social life'*
- 1.4.2** The Strategy includes a number of long term social, economic and environmental outcomes to which the transport system contributes. Indicators are provided to track progress against the outcomes.
- 1.4.3** The Wales Transport Strategy includes the following relevant environmental outcomes.
- Outcome 11: The sustainability of the transport infrastructure - Increase the use of more sustainable materials in our country's transport assets and infrastructure.
- Outcome 12: Greenhouse gas emissions - Reduce the impact of transport on greenhouse gas emissions.

- Outcome 13: Adapting to climate change - Adapt to the impacts of climate change.
- Outcome 14: Air pollution and other harmful emissions - Reduce the contribution of transport to air pollution and other harmful emissions.
- Outcome 15: The local environment - Improve the positive impact of transport on the local environment.
- Outcome 16: Our heritage - Improve the effect of transport on our heritage.
- Outcome 17: Biodiversity - Improve the impact of transport on biodiversity.

1.4.4

The aims of the Welsh Government for the Scheme as outlined in The Plan (Welsh Government, 2014) are as follows.

- To make it easier and safer for people to access their homes, workplaces and services by walking, cycling, public transport or road.
- To deliver a more efficient and sustainable transport network supporting and encouraging long term prosperity in the region, across Wales, and enabling access to international markets.
- To produce positive effects overall on people and the environment, making a positive contribution to the overarching Welsh Government goals to reduce greenhouse gas emissions and to making Wales more resilient to the effects of climate change.

Scheme Specific Objectives

1.4.5

The Welsh Government identified 15 goals to address transport related problems in this area (Welsh Government, 2012). These are set out below.

1. Safer, easier and more reliable travel east-west in South Wales.
2. Improved transport connections within Wales and to England, the Republic of Ireland and the rest of Europe on all modes on the international transport network.
3. More effective and integrated use of alternatives to the M4, including other parts of the transport network and other modes of transport for local and strategic journeys around Newport.
4. Best possible use of the existing M4, local road network and other transport networks.
5. More reliable journey times along the M4 Corridor.
6. Increased level of choice for all people making journeys within the transport Corridor by all modes between Magor and Castleton, commensurate with demand for alternatives.
7. Improved safety on the M4 Corridor between Magor and Castleton.
8. Improved air quality in areas next to the M4 around Newport.
9. Reduced disturbance to people from high noise levels, from all transport modes and traffic within the M4 Corridor.

10. Reduced greenhouse gas emissions per vehicle and/or person kilometre.
11. Improved travel experience into South Wales along the M4 Corridor.
12. An M4 attractive for strategic journeys that discourages local traffic use.
13. Improved traffic management in and around Newport on the M4 Corridor.
14. Easier access to local key services and residential and commercial centres.
15. A cultural shift in travel behaviour towards more sustainable choices.

1.4.6

In addition, the Welsh Government identified a number of environmental objectives as follows (Welsh Government, 2013).

- Objective 1: Improved air quality in areas next to the existing M4 around Newport.
- Objective 2a: Reduce greenhouse gas emissions per vehicle and/or person kilometre.
- Objective 2b: Ensure that effective adaptation measures to climate change are in place.
- Objective 3: Reduce disturbance to people from high noise levels, from all transport modes and traffic within the existing M4 Corridor.
- Objective 4: Ensure that biodiversity is protected, valued and enhanced.
- Objective 5: Improved access to all services and facilities and reduce severance.
- Objective 6: Protect and promote everyone's physical and mental wellbeing and safety.
- Objective 7: Reduce transport related contamination and safeguard soil function, quality and quantity.
- Objective 8: Minimise transport related effects on surface and groundwater quality, flood plains and areas of flood risk.
- Objective 9: Ensure the prudent and sustainable use of natural resources and energy.
- Objective 10: Ensure that diversity, local distinctiveness and cultural heritage are valued, protected, celebrated and enhanced.
- Objective 11: Ensure that landscape and townscape is properly valued, conserved and enhanced.

1.4.7

In the Welsh Government's Programme for Government, the aim of the Environment and Sustainability Programme is '*To become a 'one planet nation', putting sustainable development at the heart of government*', with the following commitments made:

- living within environmental limits and acting on climate change;
- protecting healthy eco-systems; and
- creating sustainable places for people.

1.5 Statutory Framework and Purpose of the Environmental Statement

Purpose of EIA

- 1.5.1** EIA is a means of identifying and collating information to inform an assessment of the likely significant environmental effects of a project. The findings of the EIA process are reported in an ES in order to ensure that, when deciding whether to grant consent for a project, the decision maker has access to information regarding the likely significant effects on the environment and takes this into account in the decision making process.

The EIA Directive

- 1.5.2** The legislative framework for EIA is set by European Directive 2011/92/EU, as amended by Directive 2014/52/EU (collectively referred to as the EIA Directive). The Directive requires EIA to be undertaken in support of an application for development consent for certain types of scheme.

- 1.5.3** Directive 2014/52/EU requires Member States to transpose its requirements into national law by 16 May 2017 and sets out arrangements for a transitional period from the regime laid down by Directive 2011/92/EU. These transitional measures require that the provisions of Directive 2011/92/EU apply to schemes for which the EIA process has been initiated or for which the ES has been submitted within the transitional period. Therefore, for the purposes of the Scheme, Directive 2011/92/EU remains the relevant consideration. However, as a matter of good practice, the measures required by the amended Directive (for example, consideration of effects in relation to health and climate change) have been considered where appropriate within this ES.

The EIA Regulations

- 1.5.4** For highways schemes, the requirements of the EIA Directive are currently transposed by the Highways Act 1980, as amended by The Highways (Assessment of Environmental Effects) Regulations 1999 and The Highways (Environmental Impact Assessment) Regulations 2007.

- 1.5.5** A marine license will be required from Natural Resources Wales (NRW) in respect of some elements of the works under the provisions of the Marine and Coastal Access Act 2009. There are separate requirements in respect of EIA in the grant of such licenses set out in the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).

- 1.5.6** Regulation 10 of the Marine Works (Environmental Impact Assessment) Regulations 2007 allows NRW to determine that a separate EIA is not required on the basis that EIA has already been, is being, or is to be carried out by another consenting authority. Since EIA is being carried out under the Highways Act 1980, it is anticipated that Regulation 10 will be invoked by NRW, such that no separate EIA is required in respect of the marine license. As such, this Environmental Statement is prepared in accordance with the requirements of the Highways Act 1980. A request for confirmation has, however, been sent to NRW's marine licensing division. In any event, both the highways and marine works EIA Regulations are based on the requirements of the EIA Directive. There is, therefore, considerable synergy between the two sets of legislation. In

the event that regulation 10 of the 2007 regulations is not invoked, separate EIA in respect of the marine licensing regulations will be prepared at the appropriate time.

1.6 Requirement for EIA

1.6.1 Annex I of the EIA Directive sets out projects for which EIA is mandatory. This includes:

- 7. (b) *‘Construction of motorways and express roads;*
- 7.(c) *Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road or realigned and/or widened section of road would be 10 km or more in a continuous length’.*

1.6.2 The Scheme falls within the above definitions and, therefore, EIA is mandatory.

1.6.3 Guidance in relation to the procedure for determining whether or not EIA is required for highways schemes is set out in the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 3 (HD 47/08) (Highways Agency *et al.*, 2008) and Interim Advice Note (IAN) 126/09(W) (Welsh Assembly Government, 2011). This requires that a ‘determination’ process is followed for certain highways schemes. In accordance with this guidance, no ‘determination’ process is necessary for schemes listed within Annex I for which EIA is mandatory.

1.7 Scope and Content of the ES

1.7.1 Although there is no statutory provision as to the form of an ES, Section 105A of the Highways Act 1980, as amended, requires that the ES must contain the information referred to in Annex IV of the EIA Directive. That information must include at least:

‘(a) a description of the project (comprising information on the site, design and size of the project);

(b) a description of the measures envisaged in order to avoid, reduce, and, if possible, remedy significant adverse effects;

(c) the data required to identify and assess the main effects which the project is likely to have on the environment;

(d) an outline of the main alternatives studied by the Secretary of State and an indication of the main reasons for his choice (taking into account the environmental effects);

(e) a non-technical summary of the information mentioned in paragraphs (a) to (d).’

(Highways Act 1980, as amended, Section 105A)

1.7.2 This ES provides the information set out above, together with other relevant information listed in the EIA Directive and the Marine Works (Environmental Impact Assessment) Regulations 2007, as amended. Together, the information

supplied within this ES is considered to provide a clear understanding of the main or likely significant effects of the Scheme on the environment. Further detail regarding the scope of the ES in relation to legislative requirements is provided in Chapter 5 of this ES.

1.8 Structure of the ES

1.8.1 The ES has been structured in order to allow relevant environmental information to be easily accessible. This volume of the ES (Volume 1) includes the main text of the ES. The description of the Scheme is provided in Chapter 2, with information relating to construction of the Scheme provided in Chapter 3. Information relating to the main alternatives considered during the evolution of the Scheme and the reasons for the choices made is found within Chapter 4. Chapter 5 outlines the approach and methodology adopted during the EIA process. The remainder of Volume 1 contains topic by topic environmental information as shown in Table 1.1.

1.8.2 Figures and appendices to accompany the text of the ES are provided separately in Volumes 2 and 3. Volume 3 includes specialist reports providing relevant background and technical information. A Non-Technical Summary (NTS) of the ES is available as a separate bilingual document.

Table 1.1: Structure of the ES

Structure of ES	
Non-Technical Summary	Summary of the ES using non-technical terminology
Volume 1: Text	
	Glossary
Chapter 1	Introduction
Chapter 2	Scheme Description
Chapter 3	Scheme Construction
Chapter 4	Scheme Development and Alternatives Considered
Chapter 5	Approach to Environmental Assessment
Chapter 6	Legislative and Policy Context
Chapter 7	Air Quality
Chapter 8	Cultural Heritage
Chapter 9	Landscape and Visual Effects
Chapter 10	Ecology and Nature Conservation
Chapter 11	Geology and Soils
Chapter 12	Materials
Chapter 13	Noise and Vibration
Chapter 14	All Travellers
Chapter 15	Community and Private Assets
Chapter 16	Road Drainage and the Water Environment
Chapter 17	Assessment of Cumulative Effects and Inter-relationships
Chapter 18	Environmental Management
Chapter 19	Conclusion
Chapter 20	References
Volume 2: Figures	
Including all figures and drawings to accompany the text.	
Volume 3: Appendices	
Including specialist reports forming technical appendices to the main text.	

1.9 The Assessment Team

1.9.1 The Welsh Government (as the Overseeing Organisation) awarded a Professional Services Contract for the Scheme development and environmental surveys, including publication of the ES and up to 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.

1.9.2 The EIA process has been managed by RPS, taking into account information provided by the Welsh Government and design 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.

Table 1.2: Environmental Statement Authors and Project Team

ES Chapter	Main Author/Contributor
Introductory chapters (Chapters 1-6)	RPS
Air Quality (Chapter 7)	Arup (part of Arup Atkins Joint Venture)
Cultural Heritage (Chapter 8)	RPS
Landscape and Visual Effects (Chapter 9)	Atkins (part of Arup Atkins Joint Venture)
Ecology and Nature Conservation (Chapter 10)	RPS
Geology and Soils (Chapter 11)	RPS
Materials (Chapter 12)	RPS
Noise and Vibration (Chapter 13)	RPS
All Travellers (Chapter 14)	RPS
Community and Private Assets (Chapter 15)	RPS
Road Drainage and the Water Environment (Chapter 16)	RPS
Assessment of Cumulative Effects and Inter-relationships (Chapter 17)	RPS
Environmental Management (Chapter 18)	RPS
Conclusion (Chapter 19)	RPS

1.10 Publication of the Environmental Statement

1.10.1 This ES has been submitted alongside the draft Orders for the Scheme. Statutory Orders are prepared by Welsh Ministers and published in draft. The draft Orders for the Scheme include the following.

- A draft Scheme Order to provide for the new section of motorway and the reclassification of the existing M4 as a trunk road.
- A draft Line Order to provide for new lengths of trunk road required for the Scheme.
- A draft Side Roads Order to deal with local highway issues (including roads, footpaths, bridleways, byways and cycleways) and private access issues. Side Roads Orders can relate to closure, diversion, improvement or new provision.
- A draft Compulsory Purchase Order, which provides for the acquisition of the land and rights required.

- Draft Section 19 Certificates, which provide for replacement Common Land and allotments and extinguish existing rights.

1.10.2 Copies of the draft Orders, the Environmental Statement 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.

1.10.3 Further copies of the Non-Technical 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.

1.10.4 The full Environmental Statement is available to view and download from the Welsh Government website:

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

1.10.5 Electronic copies of the Environmental Statement (on DVD) can be purchased from the above Welsh Government address at a cost of £20 (including postage and packaging).

1.10.6 Paper copies of the Environmental Statement are also available from the above address, although an administrative charge will be made to cover the cost of copying (price on application).

1.11 Next Steps

1.11.1 Following publication of the draft Orders, there will be an opportunity to support, comment or object to the draft Orders, put forward alternative proposals, or comment on the Environmental Statement by writing to the Welsh Government at the address below.

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

1.11.2 All such correspondence should be sent to arrive at the Welsh Government no later than the 4th May 2016.

1.11.3 Welsh Government will consider all of the responses to the draft Orders and then decide whether to hold a Public Local Inquiry. 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 the findings and recommendations to the responsible Welsh Ministers. The Welsh Ministers would consider all issues before deciding whether to proceed with the Scheme and, if so, make the Orders with or without modification.

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

- Publication of draft Orders and Environmental Statement: Spring 2016.
- Public Local Inquiry: Winter 2016/2017.
- Start of construction: Spring 2018.
- Completion of construction of new section of motorway: Autumn 2021.
- Completion of work associated with reclassification of existing motorway: Spring 2022.