

Adran yr Economi a'r Seilwaith
Department for Economy and Infrastructure



Llywodraeth Cymru
Welsh Government

The M4 Motorway (Junction 23 (East of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and The M48 Motorway (Junction 23 (East of Magor) Connecting Road) Scheme 201-

The M4 Motorway (Junction 23 (East of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and The M48 Motorway (Junction 23 (East of Magor) Connecting Road) (Amendment) Scheme 201-

The London to Fishguard Trunk Road (East of Magor to Castleton) Order 201-

The M4 Motorway (West of Magor to East of Castleton) and the A48(M) Motorway (West of Castleton to St Mellons)(Variation of Various Schemes) Scheme 201-

The M4 Motorway (Junction 23 (East of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and the M48 Motorway (Junction 23 (East of Magor) Connecting Road) and The London to Fishguard Trunk Road (east of Magor to Castleton) (Side Roads) Order 201-

The Welsh Ministers (The M4 Motorway (Junction 23 (East of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and the M48 Motorway (Junction 23 (East of Magor) Connecting Road) and the London to Fishguard Trunk Road (East of Magor to Castleton)) Compulsory Purchase Order 201-

The M4 Motorway (Junction 23 (East Of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and The M48 Motorway (Junction 23 (East Of Magor) Connecting Road) (Supplementary) Scheme 201-

The Welsh Ministers (The M4 Motorway (Junction 23 (East Of Magor) to West of Junction 29 (Castleton) and Connecting Roads) and The M48 Motorway (Junction 23 (East Of Magor) Connecting Road) and The London to Fishguard Trunk Road (East of Magor to Castleton)) Supplementary Compulsory Purchase Order 201-

Summary Proof of Evidence

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1. Personal Details

- 1.1 My name is Peter Ireland and I am a Senior Director in the Planning and Development Division of RPS Planning and Development. I have been working in environmental impact assessment (EIA) since 1990 during which time I have directed or managed approximately 30 highway or transport related environmental impact assessments (EIAs).
- 1.2 Immediately prior to commencing work on the M4 Corridor around Newport (M4CaN) project or 'Scheme' I was the overall environmental co-ordinator (ECO) and environmental statement co-ordinator for the Welsh Government's project to improve Section 2 of the A465 Heads of the Valleys Road between Gilwern and Brynmawr. That project successfully went through a Public Local Inquiry in 2014 and is now under construction.
- 1.3 My role on Scheme is as the environmental co-ordinator. My evidence is given on behalf of Welsh Government, the scope of which I set out below.

Scope of Evidence

- 1.4 My main and summary evidence is divided into five main parts and a conclusion. The first part describes the process by which the Environmental Statement was prepared and the need for and contents of the supplements published in September 2016 and December 2016. Similarly it describes the requirement and process by which a Habitats Regulation Assessment was undertaken.
- 1.5 The second part provides an environmental overview of the area through which the new section of motorway to the south of Newport would pass. The third part describes the process by which environmental matters would be managed both during construction and in the period after construction once the new section of motorway was open. The fourth part explains essential mitigation and lists those objecting to such land being in the CPO (the reasons for inclusion are included in my main proof). The fifth part provides an account of how the enjoyment of individual properties may change as a consequence of the Scheme, both during construction and operation.

2. Process

- 2.1 The EIA as reported in the M4CaN Environmental Statement (ES) has been undertaken in accordance with the EC Directive 2011/92/EU (Document 3.1.30), the EIA Regulations (Document 3.1.24), DMRB Volumes 10 'Environmental Design' and 11 'Environmental Assessment' (Document 6.1.8) together with relevant Interim Advice Notes (IANs) published by Highways England and best practice guidance as set out in each assessment topic chapter. It also has had regard to EC Directive 2014/52/EU (Document 3.1.29).
- 2.2 The EIA process undertaken has been compliant with the Design Manual for Roads and Bridges (DMRB) Volume 11 on '*Environmental Assessment*', in particular HA204/08 (DMRB 11.2.4; Document 6.1.8) on scoping, HA205/08 (DMRB 11.2.5) on the assessment and management of environmental effects and HD48/08 (DMRB 11.2.6) on reporting of the environmental assessment as well as the most up to date guidance on the individual assessment topics as provided in DMRB 11.3. In addition to the published DMRB, IANs on specific topics, where these have been adopted in Wales or are recognised as best practice, they have been used in this ES and are referenced accordingly. In my opinion, the EIA process and ES fully comply with relevant legislation, and the Welsh Government's official guidance on environmental assessment.

Environmental Statement

- 2.3 The Environmental Statement was published on 10th March 2016 (Document 2.3.2). It comprises a Non-Technical Summary in English and Welsh, a Technical Assessment Report (Volume 1 in 2 folders), a second volume of figures in 3 folders and 21 folders enclosing 92 appendices (Volume 3). Together these form the ES. 35 appendices relate to ecological matters. The ES also includes a Register of Environmental Commitments or 'Commitments Register' which I explain later in this summary.

Environmental Statement Supplements

2.4 Two Supplements to the ES have been prepared and published, the first on 5th September 2016 (Document 2.4.4), the second on 14th December 2016 (Document 2.4.14). The purpose of these supplements is primarily to provide up to date environmental information to the Public Local Inquiry. This is being provided voluntarily. It addresses errata and makes available new information relevant to the understanding of the environment through which the new section of motorway to the south of Newport would pass and further details of the ongoing scheme design.

Assessment of Implications (AIES)

2.5 AIES, the ‘Assessment of Implications (of Highways and/or Roads Projects) on European Sites (including Appropriate Assessment)’ is more widely known as Habitats Regulations Assessment (HRA) under the Habitats Regulations (Document 3.1.22).

2.6 Following DMRB guidance DMRB 11.4.1 (HD44/09) (Document 6.1.8) the first two stages of an AIES, Screening and Appropriate Assessment, have been undertaken for the published scheme in respect of the River Usk Special Area of Conservation (SAC), the Severn Estuary SAC, SPA and Ramsar site, and the Wye Valley and Forest of Dean Bat Sites SAC. This is reported separately from the ES in the Statement to Inform the Appropriate Assessment (SIAA; Document 2.3.4). This is because although AIES is concerned with the same environmental features and/or assets, it is required under separate legislation and requires a different (albeit very similar) and more in-depth examination of the likely effects of a proposed scheme on a European Site.

2.7 The SIAA concluded that the M4CaN would not have an adverse effect on the integrity of the River Usk SAC, Severn Estuary SAC, SPA and Ramsar and the Wye Valley and Forest of Dean Bat Sites SAC, either alone or in combination with other projects and plans.

- 2.8 In its objection letter of 4th May 2016 NRW did not object to the SIAA but requested additional information on four matters: a commitment on restricting piling close to the River Usk, further information on measures to facilitate safe movement of otters, further wintering bird survey data, and further bat survey information. All of that information has been either reaffirmed or supplied to NRW via the ES Supplements.
- 2.9 NRW is considering a Statement of Common Ground on ecology and nature conservation matters that includes the SIAA. I do not believe there to be any disagreement between NRW and the environment team with respect to the SIAA given the additional information now provided, however I have agreed that the SIAA will be updated before the end of the PLI to include reference to the additional information requested by NRW.
- 2.10 In my opinion, for the purposes of Regulation 61 on the Conservation of Habitats and Species Regulations 2010 (Document 3.1.22), the SIAA together with the subsequent survey reporting demonstrates that, beyond reasonable scientific doubt there would be no adverse effect on the integrity of the European Sites considered in the Habitats Regulations Assessment.

3. Environmental Overview

- 3.1 Under the Environment (Wales) Act 2016 and Section 28G of the Wildlife and Countryside Act 1981 (as amended) Welsh Government has a duty to seek and to take reasonable steps to maintain, conserve and enhance biodiversity, not just within the SSSIs of the Gwent Levels but throughout the Scheme footprint and areas affected by the Scheme. Whilst biodiversity is the key environmental asset affected by the Scheme there are many others which are accommodated in the Scheme design.
- 3.2 A summary of the key environmental features through which the new section of motorway to the south of Newport is shown in Appendix A. It shows the location of properties requiring demolition, nationally and locally designated nature conservation sites, key habitats including reens, protected and notable species, designated heritage assets, areas requiring archaeological excavation or evaluation, and areas of potentially contaminated land. Significantly more detail of the baseline conditions based on published sources and surveys undertaken in 2014, 2015 and 2016 is set out in the baseline sections of the March 2016 ES assessment topic chapters and their accompanying appendices.
- 3.3 The interchanges at either end of the Scheme that connect the new section of motorway to the existing motorway network are outside of any SSSI, or locally designated site of importance to nature conservation. However, the part of the proposed Magor Interchange is within the Llanfihangel Conservation Area and immediately adjacent to the Devil's Quoit scheduled monument. The Gwent Levels are noted for its historic landscape. On the Wentlooge Levels the Scheme is within the Gwent Levels Landscape of Outstanding Historic Importance whilst for the most part on the Caldicot Levels the Scheme runs just outside of the northern edge of the registered landscape.
- 3.4 The majority of the existing woodland that would be lost to the Scheme, both broad leaved semi natural woodland and broad leaved plantation woodland is also located on the higher ground where the interchanges are required.

- 3.5 For approximately 9.05 kilometres the Scheme would cross in total four SSSIs of the Gwent Levels (from west to east Gwent Levels – St. Brides SSSI, Gwent Levels – Nash and Goldcliff SSSI, Gwent Levels – Whitson SSSI, and Gwent Levels – Redwick and Llandevenny SSSI). The special features of these SSSIs are their reed and ditch habitats; insects and other aquatic invertebrates, and shrill carder bee. Further details of those special and other notable features of the SSSIs are provided in the ES and in the Proof of Evidence of Mr Keith Jones (WG 1.18.1). The Scheme recognises the importance of the loss of grazing marsh and proposes three areas to mitigate that loss, at Maerdy Farm, Tatton Farm and Caldicot Moor.
- 3.6 Nine Sites of Importance to Nature Conservation (SINCs) designated in the main for their grassland interest are impacted upon to varying degrees by the Scheme.
- 3.7 Within or close to the Scheme footprint across the Gwent Levels signs of otter have been recorded at several locations as well as along Mill Reen, north of Magor. High densities of dormouse have been recorded at the Castleton Junction on the existing M4 and in low numbers to the north of Magor. Bats are common throughout. Reptiles occur frequently and great crested newts have been recorded at a few locations. Habitat capable of supporting water vole occurs throughout the Gwent Levels with particular high densities occurring in the Gwent Levels – Redwick and Llandevenny SSSI.

4. Environmental Management during and after Construction

Construction Environmental Management Plan (CEMP)

- 4.1 Environmental management during construction is implemented via the Construction Environmental management Plan (CEMP). A Pre-CEMP or draft CEMP is provided as Appendix 3.2 of the ES.
- 4.2 The Pre-CEMP sets out the means by which the various construction activities would be managed to comply with the relevant environmental legislation and best practice to minimise effects on local residents and the environment. The Pre-CEMP has updated in the December 2016 ES Supplement and the CEMP would be a 'live' document.
- 4.3 The CEMP would refer to a number of documents that would provide a framework for the construction and environmental management of the scheme. These documents include an Environmental Commitments Register, a register of ongoing environmental monitoring programmes, the Environmental Master Plans, method statements and of the following sub-plans each designed to cater for the specific requirements of individual environmental disciplines.
- 4.4 A draft Environmental Commitments Register (ES Appendix 18.1) and fully formed Environmental Master Plans for the published scheme (ES Figure 2.6) are set out in the ES.

Commitments Register

- 4.5 The Commitments Register is also a live document and was updated in the September 2016 and December 2016 ES Supplements. It will continue to be updated as necessary to record commitments made during the Public Local Inquiry and subsequently during construction should be Scheme proceed.
- 4.6 The Commitments Register is important because under the Highways Act there is no equivalent mechanism such as the ability to enforce conditions in a planning permission. Put simply, the commitments are in lieu of planning conditions and although non-statutory are regarded by the Welsh

Government as binding. It is designed to be monitored and audited during construction of the Scheme. Following construction and the opening of the new section of motorway any continuing and/or outstanding commitments would be taken forward into the document for the ECI contractor's 5 year aftercare period, and following that into the document for longer term highway maintenance that is currently undertaken by SWTRA.

Environmental Co-ordinator

- 4.7 During construction the primary role of ECO would be to co-ordinate the environmental design, and manage the on-site environmental mitigation and monitoring works as set out in the CEMP.
- 4.8 During construction compliance would be monitored by the environmental team under the direction of the ECO. The ECO and his environmental team would, in the unlikely event of the identification of non-compliance, have full authority to immediately stop any non-compliant activities, to suspend construction, or require prompt implementation of additional environmental mitigation measures as necessary.

Construction

- 4.9 Throughout the construction period appropriate environmental resources would be available as required. The core environmental team during construction would comprise the ECO, two Environmental Clerks of Works (ECoW) each assisted by two Assistant Environmental Clerks of Works (AECoW). At least one ECoW and at least two AECoWs would be ecologists by training.
- 4.10 In addition specialist advice and supervision with respect to, for example, protected species (e.g. bats), archaeology, noise, water quality and land quality would be provided by the same experts that contributed to the ES and provided evidence at the Public Local Inquiry. These environmental resources would be in addition to the appointed environmental sub-contractors who would undertake, for example, vegetation clearance or archaeological evaluation.

Post construction

- 4.11 Following the opening of the Scheme it would be the ECI contractor's responsibility to maintain the soft estate, including all elements of the environmental design and mitigation for the first five years. During that period the ECO would continue to manage any environmental issues that may arise and would coordinate the environmental monitoring programme. Appropriate environmental resources, including an ECoW and environmental specialists would be available as required.
- 4.12 Following the 5 year aftercare period responsibility for the management and maintenance of the Scheme's soft estate including all elements of the environmental design and mitigation would revert to Welsh Government.

5. Essential Mitigation

- 5.1 The March 2016 ES (Document 2.3.2) describes in outline the Scheme's mitigation measures and distinguishes between embedded mitigation and additional mitigation. The key environmental mitigation measures incorporated within the design of the Scheme are illustrated on the Environmental Masterplan drawings (ES Figure 2.6).
- 5.2 The overall mitigation strategy has been to optimise and minimise land take and avoid key environmental assets wherever it has been practicable to do so. At the Castleton and Magor ends of the Scheme land most of the land required for essential mitigation is also required in the CPO for engineering and/or buildability reasons. This includes land to provide replacement woodland as well as to provide visual screening and habitat for dormice. On the Gwent Levels additional land for essential mitigation is restricted to the three SSSI Mitigation Land areas (at Maerdy Farm, Tatton Farm and Caldicot Moor) and to small corners of fields that would be uneconomic to farm.
- 5.3 The following individuals and enterprises have objected to land for essential mitigation being included in the Compulsory Purchase Order for the Scheme and to which I have explained the reasoning for inclusion: Mr T G Hicks of Parc Golf Club (OBJ0049); Cargo Services (UK) Ltd (OBJ0137); Mr J & P Watts Baker of Maerdy Farm (OBJ0145); Mrs Alfred, R P Richardson (Gwent) Ltd (OBJ0212); Mr J S and Mrs R E Anstey of Court Farm (OBJ0213); Mrs Susanne Anstey of Old Court Farm (OBJ0214); Mr D Colley of Great House Farm (OBJ0215); Mr Derek David of Fair Orchard Farm (OBJ0216); Mr W T German of Arch Farm (OBJ0218); the executors of D G Harris (OBJ0219); Mr M D W Hazell of Cefn Hallen Farm (OBJ0220); Mr D H James of North Court Farm (OBJ0223); the trustees of F H James Partnership at Penterry Farm (OBJ0224); Mr R M Jenkins of Red House Farm (OBJ0225); Mr C W Jones of Barnetts Cottage (OBJ0226); Messrs R, G, K, M, and R Jones of New Park Farm (OBJ0227); Miss Laura Neville of Cefn Logel Fach (OBJ0230); Mr N Park of Pembroke House and Miss A S Park, Miss S R Park, Miss V I Park and Mr A BT Park of White House Farm, Pembroke House Farm (OBJ0231);

Mr Stephen Philips of Elder Cottage (OBJ0233); Mr Llewellyn Prichard of The Beeches (OBJ0235); Mr William Reece of Highfield Farm (OBJ0236); Mr Alan Williams of Hendrew Farm (OBJ0240); Liberty Steel Newport Ltd (OBJ0308); Technoplan Anstalt (OBJ0317); and Messrs M Williams, M Skinner and C Coulthard of Hollywood Farm (OBJ0322).

6. Enjoyment of Property

- 6.1 The DMRB does not specifically consider enjoyment of property. There is however information within the ES in respect of changes in noise, air quality impacts and visual impacts, both during construction and operation, that together can provide an indication of how the enjoyment of a particular property or location may change as a result of the Scheme.
- 6.2 I recognise that enjoyment of a property is subjective and people will experience the enjoyment of their property in different ways. I also acknowledge that there may be other factors affecting the enjoyment of a particular property that I am not aware of.
- 6.3 As a guide, the environmental assessment does not consider potential noise effects more than 1 km away from the limits of the scheme, whereas the corresponding limit for air quality effects is 350 metres for dust generated during construction and 200 metres for vehicular emissions. There are no set limits for visual impact.
- 6.4 The following individuals and enterprises have objected to the Scheme *inter alia* on the grounds of a loss of enjoyment of their property and to which I have provided an overview of how their property could be affected during construction and operation of the proposed new section of motorway: Bovis Homes (OBJ0103); Mr Nicholas Clarke of Whitecross Farm (OBJ0207); Mr Derek David of Fair Orchard Farm (OBJ0216); Mr R M Jenkins of Red House Farm (OBJ0225); Messrs R, G, K, M, and R Jones of New Park Farm (OBJ0227); Mr John and Mrs Joan Magor of Langley Villa (OBJ0229); Miss Laura Neville of Cefn Logel Fach (OBJ0230); Miss Christine Philips of Green Farm (OBJ0232); Mr Stephen Philips of Elder Cottage (OBJ0233); Mr William Reece of Highfield Farm (OBJ0236) and Mr Lyndon Williams of Upper Grange Farm (OBJ0241).

7. Conclusion

- 7.1 The M4CaN involves the construction and operation of a 24 kilometre length of new three lane motorway, together with two short link roads, associated side roads and two major motorway interchanges. The Welsh Government's preferred route as set out in The Plan which was published in July 2014 (Document 4.5.7) is to the south of Newport. Unavoidably such a route necessitates crossing the Gwent Levels SSSIs to some degree or other.
- 7.2 Extensive environmental surveys were undertaken in 2014, 2015 and 2016 to understand the environmental baseline and to inform the engineering and environmental design of the Scheme. These surveys are summarised in Volume 1 of the ES (Document 2.3.2) and are reported in full in the accompanying appendices to the ES (Volume 3). A thorough and comprehensive environmental impact assessment of the Scheme has been undertaken in accordance with the current EIA Regulations, official guidance in the form of the DMRB and best practice. In my opinion, the EIA process and ES fully comply with relevant legislation, and the Welsh Government's official guidance on environmental assessment. No statutory regulatory organisation has commented adversely on the process by which the EIA was undertaken.
- 7.3 A Statement to Inform an Appropriate Assessment (SIAA) (**Document 2.3.4**) has been undertaken in accordance with legislation and official guidance. This concluded that the M4CaN would not have an adverse effect on the integrity of the River Usk SAC, Severn Estuary SAC, SPA and Ramsar and the Wye Valley and Forest of Dean Bat Sites SAC, either alone or in combination with other projects and plans. Following the provision of further information on the SIAA requested by NRW I believe that there is now no disagreement between NRW and the environment team with respect to the SIAA.
- 7.4 In my opinion therefore, for the purposes of Regulation 61 on the Conservation of Habitats and Species Regulations 2010 (Document 3.1.22), the SIAA together with the subsequent survey reporting demonstrates that,

beyond reasonable scientific doubt there would be no adverse effect on the integrity of the European Sites considered in the Habitats Regulations Assessment.

- 7.5 Under the Environment (Wales) Act 2016 and Section 28G of the Wildlife and Countryside Act 1981 (as amended) Welsh Government has a duty to seek and to take reasonable steps to maintain, conserve and enhance biodiversity, not just within the SSSIs of the Gwent Levels but throughout the Scheme footprint and areas affected by the Scheme. Whilst biodiversity is the key environmental asset affected by the Scheme there are many others which are accommodated in the Scheme design. These are described and assessed in the ES and appropriate mitigation measures are incorporated into the Scheme design.
- 7.6 Building on the work undertaken during the EIA and the preliminary design a draft or Pre-CEMP has been developed and published as part of the ES. The Pre-CEMP includes an Environmental Commitments Register, a register of ongoing environmental monitoring programmes, the Environmental Master Plans, method statements and of the following sub-plans each designed to cater for the specific requirements of individual environmental disciplines. It will continue to be developed and agreed with statutory consultees prior to construction.
- 7.7 The Environmental Commitments Register is important because its commitments are in lieu of planning conditions and are regarded by the Welsh Government as binding. Together with the Commitments Register, prior to construction a management system will be in place, overseen by the environmental co-ordinator, to ensure that sufficient appropriate resources are available throughout the construction period. Those resources will ensure that the environment subjected to construction activities will be proactively protected through careful planning and execution of the works.
- 7.8 The overall mitigation strategy has been to optimise and minimise land take and avoid key environmental assets wherever it has been practicable to do so. Mitigation measures requiring land are primarily for visual screening,

landscape integration, and replacement planting for purposes of biodiversity. In my opinion the level and form of the mitigation measures incorporated into the Scheme at the preliminary design stage are appropriate and proportionate.