

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

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-

Proof of Evidence

Matthew Jones BEng (Hons), CEng, MICE

Welsh Government, Chief Witness

Document Reference: WG 1.1.1

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1. Personal Statement

- 1.1 I am Matthew Richard Jones.
- 1.2 I have an Honours Degree in Architectural Engineering gained in 2003 from Cardiff University. In 2011 I became a Member of the Institution of Civil Engineers as an Incorporated Engineer. In 2013 I became a Chartered Civil Engineer with the Institution of Civil Engineers, winning the Ben Barr award for my Professional Review. I am a member and Vice Chair of the Institution of Civil Engineers Wales Committee.
- 1.3 Following graduation I joined the Cardiff office of Jacobs Engineering (then known as Babtie Group Ltd.) in 2003. I was a consultant Highways Engineer on the Employer's Agent team delivering the Welsh Government's £55m A465 Heads of Valleys Dualling Section 1 project between Abergavenny and Gilwern. I spent 2 years working on outline design, contract production and management and later spent a year as a site agent during construction.
- 1.4 I was Assistant Project Manager on the Contractor's Design Team for one of the first Early Contractor Involvement, or 'ECI', projects in Wales the £74m M4 widening from Castleton to Coryton (J29 to 32). My role, between 2005 and 2006, included managing and co-ordinating design teams and Environmental Statement production. The ECI process contributed to the project being delivered on target and programme.
- 1.5 I joined CH2M Engineering (then known as Halcrow Consulting Ltd.) in 2007 and between then and 2013 was part of the Employer's Agent team on the Welsh Government's £50m A487 Porthmadog, Minffordd and Tremadog Bypass project. I also worked on other projects such as Highways Agency design packages under a managing agent contractor role.
- 1.6 Between 2012 and 2013 I was a Senior Engineer in the Contractor's Design Team for the £220m ECI A465 Heads of the Valleys Section 2 project between Gilwern and Brynmawr, again working on design co-ordination and management.

- 1.7 In 2013 I joined Welsh Government as a Project Engineer working on the development of, and consultation on, the strategic proposals for the M4 Corridor around Newport.
- 1.8 I have managed project development up to and including publication of the draft Statutory Orders, the Environmental Statement and associated reporting in March 2016, as well as matters associated with the subsequent statutory process.
- 1.9 This Proof of Evidence represents my true and professional opinion and is given in accordance with the Institution of Civil Engineer's Code of Professional Conduct.

1.10 I am Matthew Richard Jones. I am a Chartered Civil Engineer with 14 years' experience on major infrastructure projects in Wales. Since 2013 I have been responsible for managing strategic consideration of a solution to the problems associated with the existing M4 around Newport and subsequently managing the preparation and publication of the draft Orders, the Environmental Statement and associated reporting for the M4 Corridor around Newport Project.

2. Scope of Evidence

- 2.1 My Proof of Evidence provides an overview of the Scheme and its development. It also sets out the Welsh Government's reasons for proposing that the published draft Orders should be made (subject to various suggested Modifications).
- 2.2 My Proof of Evidence is presented in the following structure:
 - 1. Personal Statement
 - 2. Scope of Evidence
 - 3. Background
 - 4. Key Design Decisions Prior to March 2015
 - 5. Project Development between March 2015 and March 2016
 - 6. Draft Orders and Environmental Information
 - 7. Traffic Growth Forecasts
 - 8. The Need for the Published Draft Orders
 - 9. Public Transport and the Metro
 - 10. Objectives of the Scheme
 - 11. Contractor Tendering
 - 12. Description of the Scheme
 - 13. Cost and Budgets
 - 14. Environmental Matters
 - 15. Carbon
 - 16. Sustainable Development
 - 17. Construction
 - 18. Land Acquisition and Compensation
 - 19. Newport Docks
 - 20. Other Statutory Undertakers
 - 21. Magor Services
 - 22. Support and Objections
 - 23. Alternatives
 - 24. Conclusions

Appendix A List of Proposed Modifications to the draft Orders

Appendix B Examples of Media Coverage of Incidents and their Implications

- 2.3 I will rely on the following Expert Witnesses to cover their respective specialist fields:
 - a) Mr Bryan Whittaker FCIHT (Traffic) (WG1.2)
 - b) Mr Stephen Bussell BSc (Hons) MIED (Economics) (WG 1.3)
 - c) Mr Ben Sibert BEng CEng FICE MIStructE MCIHT (Engineering) (WG 1.5)
 - d) Mr Barry Woodman BSc (Hons) MBA CEng FICE FIHE MCIHT (Construction) (WG 1.6)
 - e) Dr Peter Ireland MA (Oxon), D.Phil (Environment) (WG 1.7)
 - f) Mr Nicholas Rowson BSc (Hons) Hort BLD CMLI MIHort (Landscape) (WG 1.8)
 - g) Mr Mick Rawlings BA (Hons) MIFA (Cultural Heritage) (WG 1.9)
 - h) Ms Julia Tindale BSc (Hons) MI soil SCI (Land Use, Community and Recreation) (WG 1.10)
 - i) Mr Andy Clifton BSc (Hons) MSc CEng FGS CEnv CSci (Contamination) (WG 1.11)
 - j) Dr Michael Bull BSc DIC PhD CEng CEnv CSci FIAQM MIEnvSc MIChemE (Air Quality) (WG 1.12)
 - k) Mr Tim Chapman FICE FIEI FREng (Carbon) (WG 1.13)
 - I) Mr Phillip Evans BSc (Hons) MSc MIOA FGS (Noise & Vibration) (WG 1.14)
 - m) Mr Richard Graham BSc (Hons) MSc (Water Quality) (WG 1.15)
 - n) Dr Paul Canning BEng (Hons) PhD CEng MICE (Tidal Flooding) (WG 1.16)
 - o) Mr Mike Vaughan BEng (Hons) Exon CEng CWEM MICE MCIWEM (Flood Consequences Assessment) (WG 1.17)
 - p) Dr Keith Jones BSc PhD MRSB CBiol (Ecology and Nature Conservation) (WG 1.18)
 - q) Mr Jonathan Davies BSc MSc MCIEEM CEnv (Ecology Dormice and Water Voles) (WG 1.19)
 - r) Mr Richard Green BSc MCIEEM CEnv SocEnv (Ecology Bats) (WG 1.20)
 - s) Dr Simon Zisman BSc (Hons), MSc, PhD, MCIEEM (Ecology Ornithology) (WG 1.21)
 - t) Mr Jonathan Vine MNI (Shipping) (WG 1.22)
 - u) Mr Andrew Meaney BSc (Hons) MSc (Port Economics) (WG 1.4)
 - v) Mr John Davies MBE BSc MRTPI (Sustainable Development) (WG 1.23)

2.4 My Proof of Evidence provides an overview of the Scheme and its development, also setting out the Welsh Government's reasons for proposing that the published draft Orders should be made (subject to various suggested Modifications).

3. Background

- 3.1 Since the early 1990s, numerous assessments and consultations have been undertaken to develop a solution to the transport related problems associated with the M4 around Newport.
- 3.2 In March 1989, the then Secretary of State for Wales commissioned the South Wales Area Traffic Study (SWATS) to review traffic patterns over part of the trunk road network in South Wales in order to identify problem areas and propose possible solutions.
- 3.3 The SWATS Report (1990) (Document 4.1.1) identified the need for substantial improvement to the M4 to address a growing capacity issue on the motorway, in particular on the section around Newport.
- 3.4 Following public consultations in 1993 and 1994, a Preferred Route for an M4 Relief Road was announced by the then Secretary of State for Wales, on 12 July 1995 (Document 4.1.20). A TR111 Notice was also published on the same day, which protected a corridor for planning purposes (Document 4.1.21). A revised TR111 Notice was published in 1997 to take into account local developments of importance (Document 4.1.23).
- 3.5 Between 1997 and 2006, studies were undertaken to consider other options such as public transport improvements, and a comprehensive route review led to a further revised TR111 Notice being published in 2006 (Document 4.2.4, Document 4.2.5, Document 4.2.6 and Document 4.2.7). The route was modified, aligning it further north, to reduce impact on the Sites of Special Scientific Interest (SSSIs). Further notes on Preferred Route selection, complementary to Section 4 of the ES, is provided in Section 4 of this Proof of Evidence.

- 3.6 In 2009 the Scheme following the 2006 Preferred Route was announced to be unaffordable by the then Deputy First Minister. The M4 Corridor Enhancement Measures (CEM) Programme was subsequently set up to further explore other measures to address issues of capacity, safety and resilience along the M4 corridor in south east Wales.
- 3.7 As part of the M4 CEM Programme, a comprehensive engagement process was launched in September 2010 culminating in a public consultation being held on different options and their associated transport, health, equality and environmental assessments, between March and July 2012 (Document 4.3.7). During this period more than 100 possible measures were considered including network improvements, travel planning, demand management and alternative modes of transport.
- 3.8 The appraisals undertaken indicated that, of the options available, an additional section of dual carriageway road to the south of Newport was the Welsh Ministers' preferred solution to address the identified problems. Analysis carried out during the M4 CEM Programme was brought together and published in a WelTAG Stage 1 (Strategy Level) Report (Document 4.3.15) in June 2013.
- 3.9 Initiatives in 2013, including discussions between the Welsh Government and HM Treasury/Department for Transport, created potential funding opportunities for Welsh Government infrastructure projects. As a consequence, a decision was taken to further reconsider the options available to address the transport related problems on the M4 around Newport.
- 3.10 Further appraisal was undertaken of options that included the M4 CEM options, motorway options, and complementary measures. The Welsh Ministers determined that a new section of dual 3-lane motorway to the south of Newport, in addition to complementary measures, should be progressed (Document 4.3.17).
- 3.11 Appraisal work subsequently informed the development of a strategic draft Plan (Document 4.4.1) and Strategic Environmental Assessment (SEA) Environmental Report (Document 4.4.6), which was subject to public consultation alongside other

- associated reporting (Document 4.4.2, Document 4.4.4, Document 4.4.5 and Document 4.4.12), between September and December 2013.
- 3.12 The draft Plan outlined the Welsh Government's preferred option, alongside two reasonable alternatives (routed further north) and an option to do nothing above what is already planned or committed (the Do-minimum Scenario). A Strategic Environmental Assessment Environmental Report was published in accordance with the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (Document 4.4.6).
- 3.13 In keeping with best practice and the requirements of the 2009 Public Strategic Framework (Our Healthy Future) a series of health and equalities impact assessments were undertaken to inform different stages of the planning and decision making process from the strategic level, down to the shortlisted options and through to the final preferred option (a new section of dual 3-lane motorway to the south of Newport, in addition to complementary measures). These are:
 - a) The 2012 Preliminary Health Impact Assessment (Document 4.3.10);
 - b) The 2012 Preliminary Equality Impact Assessment (Document 4.3.11);
 - c) The 2013 draft Plan Health Impact Assessment (Document 4.4.4);
 - d) The 2013 draft Plan Equality Impact Assessment (Document 4.4.2);
 - e) The 2014 Plan Health Impact Assessment (Document 4.5.8); and
 - f) The 2014 Plan Equalities Impact Assessment (Document 4.5.9).
- 3.14 At this point, in 2013, I joined the Welsh Government, and my involvement in the proposals commenced, prior to the start of public consultation on the draft Plan, SEA and associated reporting.
- 3.15 Taking into account the responses to the consultation (Document 4.5.6 and Document 4.5.10), a Strategic Environmental Assessment Post-Adoption Statement (Document 4.5.13) and associated reporting were published in July 2014.
- 3.16 Taking the responses to the consultation into account, the Welsh Ministers decided to adopt the Plan for the M4 Corridor around Newport (Document 4.5.7) in

- July 2014. A revised TR111 Notice was published (Document 4.6.8) in July 2014 to protect a modified Preferred Route for a new section of motorway to the south of Newport.
- 3.17 Following the adoption of the Plan, Friends of the Earth brought a Judicial Review, which was heard by Mr Justice Hickinbottom in March 2015 (ref CO/4433/2014) (Document 4.5.45).
- 3.18 The claim was issued on 23 September 2014 by Friends of the Earth ('the Claimant'). In the claim it was contended that the adoption of the Plan should be quashed on three grounds, namely:
 - a) The decision-making process that led to the adoption of the Plan was unlawful, in that, in a number of respects, it failed to comply with the Strategic Environmental Assessment Directive ("the SEA Directive"). Several subgrounds were pleaded; but the foundation of the Claimant's case was that the process by which the Plan was adopted failed properly to identify, describe and evaluate all reasonable alternatives (and particularly alternatives that did not involve a motorway being constructed across the protected sites) on a comparable basis to the Plan. This ground raised starkly the issue of what is meant by "reasonable alternatives" in the SEA Directive. In particular the Blue Route, as presented within an IWA paper authored by Professor Stuart Cole (IWA, The Blue Route, December 2013) (Document 4.5.4), was suggested to be a reasonable alternative, and had been put forward as a suggested alternative by environmental non-governmental organisations during the draft Plan consultation.
 - b) Friends of the Earth also argued that, in adopting the Plan, the Minister failed to take reasonable steps, consistent with the exercise of its functions to further the conservation and enhancement of the flora and fauna of the SSSIs over which the proposed route runs, as required by section 28G of the Wildlife and Countryside Act 1981 (Document 3.1.7).
 - c) The Plan failed to take into account the Welsh Government's own policies with regard to reduction of carbon emissions.

- 3.19 During the course of the hearing the third ground was withdrawn and therefore permission was refused to proceed on that ground.
- 3.20 Mr Justice Hickinbottom concluded in relation to Ground 1 that:
 - "[113] ...However, forcefully as these submissions were made, I cannot accept them."
 - "[115] ...the foundation upon which Ground 1 is built is fundamentally flawed. The Minister's approach to the identification of reasonable alternatives was not wrong in law: indeed, it was eminently correct. "

"[114]on the facts, [the Claimant] cannot begin to make good his contention that the Welsh Government failed to include in the 2013 SEA Report and process reasonable alternatives that ought to have been included. They used the correct legal test throughout, choosing the option which they considered best met the TPOs as their preferred option and including other options that they considered capable of meeting the objectives as reasonable alternatives. The decisions they made with regard to selection of objectives, the weight given to each objective chosen and the selection of preferred option and reasonable alternatives were all in accordance with the relevant legal tests, rational and otherwise lawful. They explained, giving at least outline reasons (and, in practice, far more), why they had selected their preferred option and reasonable alternatives......."

"[117] The SEA Report was based on the premise that no option that did not involve a high quality road across the Gwent Levels SSSIs was capable of achieving the TPOs. That premise was not irrational. No other option capable of meeting the objectives has been suggested. The decisions of the Welsh Government in discarding options as not being capable of achieving the plan objectives were based upon WelTAG assessments and (non-SEA) consultation. It is not arguable that they fell outside the band of legitimate decision-making or are otherwise unlawful. Indeed, on the basis of the evidence before them the decisions were not only rational but all but inevitable......"

"[118] The Welsh Government did not simply treat harm to the SSSIs as inherently unavoidable: the conclusion of the process that they adopted was that options that

did not include a high quality highway across the Gwent Levels SSSIs were not capable of achieving the objectives."

"[135] The Minister clearly paid the SSSIs and the desirability of preserving and protecting them the regard required of her....."

"[119] The Welsh Government did not misunderstand the scope of 'reasonable alternatives' for the purposes of article 5(1). It correctly understood that a reasonable alternative was one which was capable of meeting the TPOs. It was only such options that had to be subjected to the SEA process. That does not [as the Claimant suggests], undermine the purposes of the SEA Directive of integrating environmental considerations into strategic planning decision-making, because any options capable of achieving the relevant objectives are subject to SEA assessment on a basis comparable to that upon which the preferred option is evaluated. The SEA does not require such an assessment of options that will not achieve those objectives, because in practice such options are never going to be pursued......."

"[120] The environmental harm that would inevitably result from a high quality highway running across the Gwent Levels SSSIs was not 'assumed': the Welsh Government discarded options that did not involve such a highway, because they rationally considered none would be capable of achieving the TPOs. In the light of the previous assessment that neither of the two main elements of the Blue Route would be anywhere near capable of achieving the TPOs, it was not irrational not to include a combination of those elements as a reasonable alternative in the SEA Report. In any event, assessment of the Blue Route after the publication of the SEA Report confirmed that the Blue Route was not capable of meeting the objectives......"

"[88] The Welsh Government had an obligation to give outline reasons for its selection of the preferred option and reasonable alternatives. It more than adequately explained why it considered other options would not achieve the TPOs

- in short, because none would improve the position with regard to the M4 around Newport which was in essence what the Welsh Government sought to do.

"[124] The Welsh Government concluded on the basis of proper evidence that the effect of public transport measures on the usage of the M4 would be negligible; and the Environment and Sustainability Committee are noted as merely having heard evidence that 'suggested' that there were 'weaknesses' in the methodology, and it made other comments which suggest that it considered the Government may have misinterpreted data (which the Government denies), which cannot possibly render the environment report invalid. The Welsh Government, as advised by Arup, was patently entitled to act on the basis of the evidence it had and the widely-accepted methodology employed."

In summary, Mr Justice Hickinbottom found that on the basis of the evidence before them the decisions taken by the Welsh Ministers were rational and lawful. All grounds of challenge were dismissed. Since that time the focus has been on project development, in accordance with the adopted Plan.

Summary

- 3.21 With the involvement of stakeholders over many years, more than 100 options to address the problems associated with the M4 around Newport have been assessed and consulted upon. These have included demand management, alternative modes of transport and new or improved sections of road on various routes north, south and through Newport.
- 3.22 In 2014 the Strategic Environmental Assessment, as well as habitats regulations, health and equalities impact assessments, informed the Welsh Ministers' decision to adopt a strategic Plan for a new section of motorway south of Newport alongside complementary measures. That decision was subject to a Judicial Review in 2015, examining consideration of alternatives and the SSSIs, and was ruled to be rational and lawful.

4. Key Design Decisions Prior to March 2015

Preferred Route Selection

- 4.1 Key route selection decisions are described in the following paragraphs as a factual note to support and inform my evidence. They also complement chapter 4 of the Environmental Statement.
- 4.2 The Preferred Route was determined by the Welsh Ministers' to be to the south of Newport (rather than to the north) following the route selection process described in the following reports, and documented in the 'M4 Relief Road Magor to Castleton Summary Report, June 1993' (Document 4.1.9) which was published as part of the June 1993 Public Consultation:
 - a) 'The 'Initial Improvement Options Report 1992' (Document 4.1.4)
 - b) The May 1993 'Technical Appraisal Report' (Documents 4.1.13 to 4.1.16), where Volume 4 details the rejection of the best performing northern route options
 - c) The 'Assessment of Discarded Northern Route Options' (Document 4.1.11).
- 4.3 The report 'Statement of Results of Public Consultation' [June 1993] and 'Reasons for Selection of the Preferred Corridor', July 1994 (Document 4.1.17) stated that any route along, or near, the coast should be discarded. This therefore left the red and the purple route options, both passing through the Newport Docks.
- 4.4 The decision to select a route to the north of Magor, rather than the south of Magor was made following the September 1994 Consultation and is explained in the 'Statement of Results of Second Public Consultation and Further examination of Options for Crossing the River Usk and Reasons for Selection of the Preferred Route', July 1995. (Document 4.1.19). At Castleton, the easterly of the two routes presented was adopted, which placed the alignment to the east of the Parc Golf Club.
- 4.5 The 'M4 Relief Road Magor to Castleton Second Public Consultation for Castleton and Magor' (Document 4.1.18) document, September 1994, presented three options for the crossing of Newport Docks. The 'Statement of Results of Second

Public Consultation and Further examination of Options for Crossing the River Usk and Reasons for Selection of the Preferred Route' (Document 4.1.19), July 1995, explained the reasons for the adoption of the option which crossed the cut between the North and South Docks, in the Preferred Route published on 12 July 1995. The reason for discarding a route passing further north than the junction cut was to avoid impacts on the Docks Way Landfill site and other commercial interests on the east bank of the River Usk. Commitment was made to provide a single junction to be located to the east of the River Usk but no details were published.

- 4.6 In April 1997, a modified Preferred Route was published (Document 4.1.23). The modification was to amend the alignment in the Coedkernew area to accommodate the then proposed LG development, and moved the alignment and the crossing of the South Wales Mainline Railway further west than the July 1995 route.
- 4.7 In April 2006, a modified Preferred Route was published (Document 4.2.5). The two modifications made were to a) move the alignment to the north of the Whitson electricity substation and b) move the alignment further east at Coedkernew.
- 4.8 Both amendments were considered to reduce the impact on the Gwent Levels SSSI by keeping as far to the northern edge of the SSSI as practical and the decision to amend was in keeping with, and responded to, the then new duties under Section 28G of the Wildlife and Countryside Act 1981. The Preferred Route Review 2006 (Document 4.2.2) and Junction Strategy Review (Document4.2.3) describe these modifications. The April 2006 Preferred Route also showed an indicative junction location near Pye Corner.
- 4.9 The extant Preferred Route was published in July 2014 (Document 4.6.8). This did not materially change the line of the proposed new motorway from the April 2006 alignment. The modifications were to junctions where the single 2006 Pye Corner junction was replaced with the two intermediate junctions at Docks Way and at Glan Llyn, in order to improve access to Newport. Additional detail was provided on the proposed junction layout and interchange links at Castleton and Magor.

Junction Strategy

- 4.10 The preparation of the original TR111 Preferred Route, published in 1995 and modified in 1997, considered junction options in the Magor area and concluded that, for the route options to the north of Magor, the only viable location for the interchange was that arranged around junction 23A.
- 4.11 The April 2006 TR111 Preferred Route (Document 4.2.5), maintained the principle of the junction strategy at Magor and additionally included west facing slip roads to connect the proposed new section of motorway to a new roundabout on the A4810 south of the Junction 23A roundabout. Interchange link roads provided for connection of the proposed new road to the existing motorway immediately to the west of junction 23A, affording the use of the existing junction 23A east facing slip roads. This arrangement was thus operating similar to a single junction at junction 23A.
- 4.12 The conclusion of the June 2013 WelTAG Stage 1 Appraisal (Strategy Level) Report (Document 4.4.12) was that additional strategic options should be included in the draft Plan including connections between the M4, the M48 and the B4245 between Undy and Rogiet.
- 4.13 The junction layouts in Magor/ Undy/ Rogiet area were re-assessed during the development of the Plan between 2013 and 2014. The July 2014 Junction Strategy Report (Doc. 4.6.4) provides the assessment of junction options considered at the time of publishing The Plan in July 2014.
- 4.14 The addition of the connections between the M4/M48/B4245 to improve motorway resilience between Undy and Rogiet necessitated a change to the April 2006 TR111 junction layout and the recommended option arising from this report, option 4, became the layout chosen for the 2014 TR111 Preferred Route.
- 4.15 The proposed junction at Glan Llyn would provide a full movements connection with the A4810 and thus to the Tata Steel UK (SUP0138) site, and the proposed Eastern Expansion Area identified in the Newport City Council Local Development Plan. This comprises strategic housing and employment development, with associated school sites, in the Llanwern area. The Eastern Expansion Area is being developed by St Modwen Developments Ltd. (SUP0139). The connection to

the A4810 also provides an access point to the motorway network for the south eastern part of Newport and to other businesses in the vicinity, such as those operating from the Gwent Euro Park. The proposed junction is on land at one time identified in the Newport LDP for employment use. Following a review of employment land requirements this allocation was removed from the LDP adopted in 2015, and left unallocated. However, access would be facilitated by the Glan Llyn junction should a future review of the LDP indicate the need to allocate additional employment land.

- 4.16 Further background to the selection of the 2014 Preferred Route can be found in the following reports:
 - a) The WelTAG Stage 1 Appraisal (Strategy Level) Report (Document 4.4.12)
 - b) WelTAG Stage 1 & 2 Appraisal (Scheme Level) Report (Document 4.5.5)
 - c) Design Manual For Roads And Bridges Stage 2 Report Volume I (Document 4.5.18)
 - d) Design Manual For Roads And Bridges Stage 2 Report Volume ii (Document 4.5.19)

5. Project Development between March 2015 and March 2016

- 5.1 Following adoption of the strategic Plan, it was decided that the method of delivering the next stage of project development would be an "Early Contractor Involvement" (ECI) contract. In April 2014 EC Harris and Hyder Consulting (later to merge and now called Arcadis) were appointed to act as Employer's Agent and assist and advise the Welsh Government on contract preparation, contractor tender evaluation and the subsequent project development phase.
- 5.2 In March 2015, Costain/Vinci Joint Venture were appointed under an ECI Contract to develop the proposals up to and through the statutory process and, dependent on the outcome of that process, to design and build the Scheme. Engineering technical and environmental support has been provided to the Contractor by Arup-Atkins Joint Venture and RPS respectively. The entire team of Welsh Government, Arcadis, Costain/Vinci Joint Venture, Atkins, Arup and RPS have co-located in a single office to maximise collaboration.
- 5.3 The project has been developed through engagement, integration and collaboration with a wide range of stakeholders. A series of Public Information Exhibitions were held in Newport and Monmouthshire during September 2015 to engage with stakeholders and discuss the proposals, land and access (Document 2.3.16). Large exhibitions were held at public venues in Castleton, Newport, Nash, Magor and Caerleon. Smaller exhibitions were also held further afield in Carmarthen market, Swansea bus station and a Cardiff shopping centre. These provided the opportunity for other communities to engage with the proposals.
- 5.4 A series of other initiatives to engage, integrate and collaborate with stakeholders has been implemented throughout the development process led by Welsh Government Officials and a dedicated Public Liaison Officer (PLO), including:
 - a) Sharing of information on a project website,
 - Focused meetings with different departments of Welsh and UK Government,
 Newport, Monmouthshire and Cardiff councils, natural Resources Wales
 (NRW) and Cadw,
 - c) Meetings with individual landowners affected by the Scheme,
 - d) Engagement with Sustrans and local access groups,

- e) Meetings with local business forums and individual businesses,
- f) Engagement with local schools,
- g) Engagement with Statutory Undertakers including ABP and Newport Harbour Commissioners,
- h) Engagement with environmental charities.
- 5.5 In addition, two meetings of the Environmental Liaison Group were held on 11 May 2015 and 13 November 2015. This group was established by Welsh Government prior to the ECI contract start and comprises Welsh Government, the Government's advisers, the Contractor's team and statutory consultees, namely NRW, Newport City Council, Cadw, Monmouthshire County Council and Cardiff City Council.
- 5.6 In addition, as explained in the Proof of Evidence of Dr Peter Ireland (WG 1.7.1), since March 2015 numerous meetings have been held on a one-to-one basis with those statutory consultees with a responsibility for the environment.
- 5.7 The Scheme was reviewed by the Design Commission for Wales on four occasions during its development in November 2007 (Document 4.2.15), April 2008 (Document 4.2.16), June 2015 (Document 4.6.9) and October 2015 (Document 4.6.10). Mr Ben Sibert and Mr Nick Rowson describe the comments made and the design response in their Proof of Evidence (WG 1.5.1 and WG 1.8.1). In section 7.3 of my Proof of Evidence I explain how the Welsh Government asked tenderers to address matters of design, such as the River Usk Crossing.
- 5.8 In March 2016 the draft Orders for the Scheme were published, alongside an Environmental Statement, a Statement to Inform an Appropriate Assessment (SIAA), and associated reporting comprising:
 - a) Stage 3 scheme assessment report: which provides an overview of the Scheme.
 - b) **Sustainable development report:** which describes how the Scheme aligns to our sustainable development principles.
 - c) Economic assessment report: which considers the likely costs and benefits of the scheme, providing calculations of value for money.

- d) Wider economic impact assessment report: which considers the likely impacts of the Scheme on the economy, during its construction and operation.
- e) **Non-motorised users context report:** which describes the existing situation for pedestrians, cyclists and equestrians, and considers how the Scheme can make provision for them.
- f) **Traffic forecasting report:** which forecasts the traffic for different future scenarios.
- g) **Local model validation report:** which shows current travel conditions, and is the basis for undertaking traffic forecasting and economic assessment.
- 5.9 In addition to the Welsh Government website, this material was made available at deposit points and exhibitions in Newport and Monmouthshire during periods in March, April and May 2016 (Document 2.2.3). For consistency, the same venues (listed in the ES) were used as for the September 2015 Public Information Exhibitions. These exhibitions were held to make information conveniently available to view, to give people the opportunity to speak with the project team and to explain to people how they should provide any comments in accordance with the statutory process.
- 5.10 Publication of the draft Orders and Environmental Statement provided the opportunity for any person or organisation to object, support, or suggest alternatives to the Scheme or comment on the Environmental Statement.
- 5.11 The objection periods were between 10 March 2016 and 4 May 2016 for the draft Orders and between 24 March 2016 and 4 May 2016 for the draft Compulsory Purchase Order.

5.12 In March 2015, Costain/Vinci Joint Venture were appointed to develop the proposals up to and through the statutory process and, dependent on the outcome of that process, to design and build the Scheme. Engineering technical and environmental support has been provided to the contractor by Arup-Atkins Joint Venture and RPS respectively. The activities of the contractor shall be explained in the Proof of Evidence of Mr Barry Woodman, engineering design by Mr Ben Sibert

- and environment by Dr Peter Ireland, drawing upon other members of the team where necessary.
- 5.13 The Project has been developed through engagement, integration and collaboration with a wide range of stakeholders including Natural Resources Wales, Newport, Monmouthshire and Cardiff councils, Cadw, individual landowners, Sustrans, local access groups, local business forums, individual businesses, local schools, Statutory Undertakers including ABP, Newport Harbour Commissioners, the Design Commission for Wales, environmental charities, local residents and the public.
- 5.14 In March 2016 the draft Orders for the Scheme were published, alongside the Environmental Statement, Statement to Inform an Appropriate Assessment (SIAA), and associated reporting comprising a Stage 3 Scheme Assessment Report, Sustainable Development Report, Economic Assessment Report, Wider Economic Impact Assessment Report, Non-Motorised Users Context Report, Traffic Forecasting Report, and Local Model Validation Report.
- 5.15 Any person or organisation then had the opportunity to object, support, or suggest alternatives to the Scheme or comment on the Environmental Statement.

6. Draft Orders and Environmental Information

6.1 Draft Orders published for the Project are set out in Table 1 below.

Table 1 - Draft Orders for the M4 Corridor around Newport Project

Draft Orders	Publication End of		Reason for draft Order /				
	Date	Objection Period	Modification				
Draft Scheme (Order)							
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- (Document 2.1.1)	10 March 2016	4 May 2016	Original draft Order.				
Modification to the Draft Scheme (Order). (Scheme Mod 1)	5 Sept 2016	N/A	The layout of the Docks Junction and link road arrangement and Glan Llyn Link Road was amended and would now be classified as a trunk road. In the published draft Scheme this was designated as Special Road and is removed by this modification (and added to Line Order).				
Supplement to the Draft Scheme (Order)	5 Sept 2016	17 Oct 2017	This makes provision for temporary restrictions where vessels would, for safety reasons, not be able to navigate under the proposed structures to the navigable channels of the River Ebbw, and the River Usk during construction.				
Amendment to the Draft Scheme (Order)	14 Dec 2016	31 Jan 2017	This allows for a raise to the Usk crossing structure, by 1.54 metres compared to the draft Scheme as published in March 2016.				
Draft Line Order		•					
The London to Fishguard Trunk Road (East of Magor to Castleton) Order 201- (Document 2.1.2)	10 March 2016	4 May 2016					
Modification to the draft Line Order. (Line MOD 1)	5 Sept 2016	N/A	The Docks Junction link road and Glan Llyn Junction link road is now being classified as a trunk road. This modification includes these Link Roads in the draft Line Order (removed from draft Scheme (Order)).				

Draft Side Roads Order								
The M4 Motorway Junction	10 March	4 May	Original draft Order.					
23 (East of Magor) to West	2016	2016	Original draft Order.					
of Junction 29 (Castleton)	2010	2010						
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- (Document								
2.1.3)								
Draft Variation of Scheme (Order)	1						
The M4 motorway (West of	10 March	4 May	No supplements or modifications					
Magor to East of Castleton)	2016	2016	made to date.					
and the A48(M) Motorway								
(West of Castleton to St								
Mellons) (Variation of								
Various Schemes) Scheme								
201- (Document 2.1.4)								
Draft Compulsory Purchase		1						
The Welsh Ministers (The	24 March	4 May	No supplements or modifications					
M4 Motorway (Junction 23	2016	2016	made to date.					
(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- (Document 2.1.5)								
Supplement and	5 Sept 2016	17 Oct	This allows for additional land for a					
modification to the	3 Sept 2010	2017	revised route of Bencroft Lane and					
Compulsory Purchase Order		2017	additional land for a revised route					
Compaisory r dronase Graci			of the drainage outfall pipe from					
			Water Treatment Area 12b.					
			Land no longer required by the					
			Scheme, but included in the draft					
			CPO for the realigned Bencroft					
			Lane and drainage outfall has					
			been removed from the draft CPO					
			through a modification of that					
			Order. See Appendix A for full list.					

- 6.2 To explain their roles, the original draft Orders comprise:
 - a) A draft Scheme Order (Document 2.1.1) to provide a new length of dual 3lane motorway between Magor and Castleton to the south of Newport and its connecting roads including new slip roads. It also provides for bridges passing over navigable waterways;
 - b) A **draft Line Order** (Document 2.1.2) to provide for new lengths of trunk road required for the Scheme;
 - c) A draft Side Roads Order (Document 2.1.3) to stop up, improve or alter some lengths of existing roads, footpaths, cycle routes, byways, bridleways and private means of access, to construct new highways and provide new private means of access;
 - d) A draft Scheme Variation Order (Document 2.1.4) to remove the special road classification from various lengths of the existing M4 motorway between Magor and Castleton and the A48(M) motorway between Castleton and St. Mellons. Although these lengths would cease to be motorways they would continue to be trunk roads;
 - e) A **draft Compulsory Purchase Order** (draft CPO) (Document 2.1.5), which provides for the acquisition of all the land and rights required for the construction, operation and maintenance of the new section of motorway and new trunk road and their associated side road proposals;
 - f) **Draft Section 19 Certificates**, which provide for replacement Common Land and allotments and extinguish existing rights (Documents 2.1.6 and 2.1.7).
- 6.3 An Environmental Statement (ES) (Document 2.3.2) has been published, which identifies the main environmental effects of the Scheme and describes the proposed measures to avoid, remedy or reduce these effects and provide environmental enhancement where practicable. An Environmental Impact Assessment has been carried out in accordance with Section 105A of Part VA of the Highways Act 1980 (as amended) (Document 3.1.5) and Directive 2011/92/EU (Document 3.1.30) and having regard to the requirements of Directive 2014/52/EU (Document 3.1.29).

- 6.4 Information has been published in the form of a draft Statement to Inform an Appropriate Assessment (SIAA) (Document 2.3.4) of the implications of the Scheme on European Designated Sites as required by Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended) (the 'Habitats Regulations') (Document 3.1.22). In line with guidance set out by the Design Manual for Roads and Bridges (DMRB) HD44/09 (Highways Agency, 2009) (Document 6.1.8), that document provides the necessary information for the Welsh Ministers to undertake an Appropriate Assessment.
- 6.5 Both the ES (Document 2.3.2) and SIAA (Document 2.3.4) were published on 10 March 2016 and the period for comments ended on 4 May 2016.
- 6.6 The Scheme has been designed by reference to the relevant legislation and policies, and standards set out in the Design Manual for Roads and Bridges (DMRB) (Document 6.1.8). The use of these standards has informed the preparation of the published draft Orders, ES and the SIAA, alongside other associated reporting. That reporting has also been informed by previous development work and more recent surveys and assessments, including environmental, social, economic and sustainable development matters.
- 6.7 In addition to the draft Orders above, a formal notice was issued (Document 2.1.6) of the intention to acquire common land and rights over common land in order to obtain a certificate in accordance with Section 19 and paragraph 6 of schedule 3 of the Acquisition of Land Act 1981 (Document 3.1.6). A formal notice was also issued of the intention to acquire allotment land (Document 2.1.7) in order to obtain a certificate in accordance with Section 19 of the Acquisition of Land Act 1981 (Document 3.1.6). Both notices were published on 24 March 2016 and their objection period ended on 4 May 2016.
- 6.8 Public Notices that accompanied the draft Orders and ES are contained within the following deposit documents:
 - a) The Public Notice announcing the publication of both the above draft Scheme, Line, Side Roads and Variation Order (Documents 2.2.4 and 2.2.6)

- b) The Public Notice announcing the publication of the above draft Compulsory Purchase Order (Document 2.2.5)
- c) The Public Notice announcing the publication of the ES and SIAA (Document 2.2.7).
- 6.9 The following documents were also published on 10 March 2016:
 - a) An Explanatory Statement for the draft Orders (Document 2.2.2)
 - b) A Statement of Reasons for the draft Compulsory Purchase Order (Document 2.2.1).
- 6.10 All these documents will be accessible to all in paper copy at a library within the Inquiry venue during the course of the proceedings at the Lysaght Institute, 445 Corporation Rd, Newport NP19 0RA.
- 6.11 Documents are also being published online at the M4 Corridor around Newport Inquiry website¹.
- 6.12 Key documents² have also been placed on deposit at the following locations and can be accessed during normal working hours:
 - Newport Central Library, John Frost Square, Newport NP20 1PA; and
 - b) Innovation House, Wales1 Business Park, Magor NP26 3DG.
- 6.13 Following the draft Orders and the ES being published, Project team liaison with those potentially affected by the draft Orders has resulted in new information, and some proposed changes to the Scheme, that could have a bearing on the Environmental Impact Assessment as reported in the ES. Therefore an Environmental Statement Supplement (Document 2.4.4 and summary at Document 2.4.10) was published on 5 September as an aid to the Inquiry by:
 - a) giving greater clarity to some environmental aspects of the Scheme;
 - b) making minor corrections or providing new information and/or data; and

¹ http://m4-newport.persona-pi.com

² The draft Statutory Orders, Environmental Statement and Associated Reporting. Supplementary Orders and associated supplementary Environmental Statement. Summary brochures and the Welsh Government Statement of Case.

- c) providing an environmental assessment of Scheme changes requiring a supplementary draft Order or a significant modification to an existing draft Order.
- 6.14 The supplement was issued to all consultees of the published ES and placed on deposit with a response period until 18 October 2016. The Public Notice announcing the publication of the Supplement was published in the press on the same day.
- 6.15 Modifications and supplements to the draft Side Roads Order and draft
 Compulsory Purchase Order were also required. These generally relate to
 resolving Private Means of Access issues and alternative arrangements for land
 take such as essential landscaping and planting mitigation areas. Changes to the
 draft Side Roads Order were also suggested by the Local Authorities relating to
 Public Rights of Way, Private Means of Access and extents of local highway.
 Relevant parties with interests in these changes have been consulted. For
 example, Bencroft Lane is proposed to be realigned to both improve the
 arrangement of the proposed new junction at the eastern end of the Scheme and
 provide a more appropriate access route for the affected landowner. This solution
 requires additional land and is the subject of a draft Supplementary Compulsory
 Purchase Order (Document 2.4.3). Agreement to these modifications is being
 sought where necessary. A current list is provided in Appendix A but discussions
 will be ongoing. Modifications will be presented to the Inspectors at the Inquiry.
- 6.16 A supplementary draft Scheme Order in relation to navigation rights during construction (Document 2.4.7) was published on 5 September 2016. This allows for the temporary restriction of shipping movements beneath the new bridge deck when it is being put in place. Restrictions are limited to a maximum of 48 hours, and would be expected to be far less. Stakeholders would be liaised with on the timing of restrictions so as to minimise disruption.
- 6.17 A further supplementary draft Scheme Order (Document 2.4.16) was published on 13 December 2016 to raise the height of the River Usk bridge over the navigable waterways of the docks by approximately 1.54m to take into account future

- changes in retained water level within the docks due to climate change and a reconsideration of the navigation safety zone.
- 6.18 Modifications have been proposed regarding the layout of Docks Way junction and the Glan Llyn junction link along with a change of their designation from Special road to Trunk road. The changes are within land set out in the current draft Compulsory Purchase Order and modifications have been proposed to the respective draft Scheme, Side Road and Line Orders. Re-designation of these links is to accommodate a new access to Tata and to allow for a potential future additional access point to Newport Docks. The change also allows greater flexibility in the class of vehicles that may use the links (for example, learner drivers). This was published and no comments were received.
- 6.19 Through correspondence and meetings the Welsh Government has been informed of changes to details of occupiers, tenancies, leases, addresses, plot numbering, access rights, land interests and land owners. Furthermore, changes in the details of property ownership have been updated. Discussions regarding these modifications are ongoing with landowners where necessary and progress will be reported at the PLI.
- 6.20 The Welsh Government gave notice of its intention to hold a Public Inquiry on 30 June 2016 (Document 2.2.9 and Document 2.2.10) and a Pre-Inquiry Meeting was held on 18 July 2016 in accordance with The Highways (Inquiries Procedure) Rules 1994 and The Compulsory Purchase (Inquiries Procedure) (Wales) Rules 2010. The Inquiry was, at that time, expected to commence on 1 November 2016. For the reasons explained in Section 7 of my Proof of Evidence the Inquiry start date was revised to 28 February 2017, with a Pre Inquiry Meeting on 27 January 2017.

6.21 Draft Orders set out the necessary rights and land needed for Welsh Government to implement the Scheme, including reclassifying the existing M4. The Environmental Statement identifies the main environmental effects of the Scheme and describes the proposed measures to avoid, remedy or reduce effects and provide environmental enhancement where practicable.

- 6.22 Both the draft Orders and Environmental Statement have been supplemented and modified where necessary following changes arising through involvement of stakeholders.
- 6.23 Following consideration of responses, in June 2016 Welsh Government gave notice of its intention, at that time, to hold a Public Local Inquiry commencing on 1 November 2016.

7. Traffic Growth Forecasts

- 7.1 A Transport Model has been developed to appraise the Project. Within the Model, demand growth over time for car drivers and passengers is derived from the National Trip End Model (NTEM) dataset using software called TEMPRO.
- 7.2 On 28 July 2016 the Department for Transport's National Trip End Model (NTEM) growth forecasts were updated and released as TEMPRO 7.0 which included updates regarding population, dwellings, employment and worker numbers by region.
- 7.3 Project work which culminated in the reporting published in March 2016 (and additional supplements in September 2016) was based on TEMPRO 6.2. Whilst this matter and its implications for the Scheme in traffic terms will be dealt with in the Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1), and the implications in economic terms in the Proof of Evidence of Mr Stephen Bussell (WG 1.3.1), I provide here a summary of events.
- 7.4 The Department for Transport guidance sets out that:
 - "... analytical work should make use of the latest NTEM data-set for forthcoming decisions. However, there may be occasions where it would not be proportionate to update analysis that is based on the previous NTEM data-set (i.e. it would take significant resource and delay transitioning to the new data-set and it is judged that there will not be a significant impact on the analysis)..."
- 7.5 A decision by the Cabinet Secretary for Economy and Infrastructure on how to proceed was announced on Monday 3 October 2016, stating:
 - "Assessments indicate that our proposed M4 Project is the only reasonable solution, but it is only right and proper that the proposals are scrutinised robustly, transparently and openly in an inquiry and that we test the project in light of the most up-to-date information available to ensure that we deliver the right choice for the people in Wales... It is essential that we, and others who wish to submit evidence to the public inquiry, now take time to fully review these new Department for Transport figures before the inquiry begins."

- 7.6 The public inquiry that was due to commence on 1 November 2016 was therefore put on hold so that the new data could be considered.
- 7.7 A review of the planning data identified that TEMPRO 7.0 inaccurately represented the planned location and number of new dwellings in Wales and hence the distribution of population growth in South Wales. This was predominantly because the data sources used in the development of Tempro 7.0 were historic, superseded and/or incomplete, and were not representative of the adopted relevant Local Development Plans in south Wales.
- 7.8 It was decided that the Project modelling, and associated reporting, should be revisited to take into account both the changes in trip rates used in TEMPRO 7.0 and the most up to date South Wales Local Development Plan data regarding dwellings which in turn affects the local population growth distribution. The DfT endorsed this approach and arranged for their consultants to re-run the National Trip End Model using the Local Development Plan dwelling forecasts for South Wales and other corrections to the input data for the National Trip End Model that affected data used across England, Wales and Scotland. The DfT published these traffic growth forecasts as Interim for Wales Tempro 7.1 on their website in December 2016. The results of this analysis showed a reduction in the level of expected future traffic growth when compared to the previous forecasts, albeit there would still be growth. The changes in forecast traffic levels were not so great as to cause the Scheme to be redesigned. This will be explained further by Mr Bryan Whittaker and Mr Ben Sibert.
- 7.9 The Revised Economic Appraisal Report concludes that the Scheme would continue to provide value for money. The core scenario is based on the central (or most likely) traffic growth forecasts and assumes that the tolls on the Severn Crossings are half their current level. Under this scenario, the Scheme has an initial benefit to cost ratio (Initial BCR) of 1.62, considering only the direct economic benefits of the Scheme. When wider, indirect, economic benefits are included, the BCR is 2.23. This will be explained further by Mr Stephen Bussell.
- 7.10 The Revised Traffic Forecasting Report continues to demonstrate that congestion, with frequent incidents, is a daily occurrence here with flows exceeding 80% of

- capacity. Future traffic growth will worsen these problems. Existing and predicted traffic levels are described in more detail in the Traffic Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
- 7.11 The Revised Traffic Forecasting Report, Revised Economic Assessment Report and Revised Wider Economics Impact Assessment (Documents 2.4.13, 2.4.12 and 2.4.11) were published on 14 December 2016 to allow all interested individuals and organisations reasonable time to consider their findings.
- 7.12 Environmental matters such as air quality, carbon and noise were reviewed in light of the latest traffic data and it was considered that the changes did not significantly affect the overall conclusions of the Environmental Statement. A second Environmental Statement supplement (Document 2.4.14) was published on 14 December 2016 to take into account the latest traffic modelling results and some other matters. This will be explained by Dr Peter Ireland (WG 1.7.1).
- 7.13 On 14 December 2016 the Cabinet Secretary for Economy and Infrastructure announced, in light of the results of the review, to proceed to hold a Public Inquiry commencing on 28 February 2017. A Pre Inquiry meeting was scheduled for 27 January 2017.

- 7.14 In July 2016 the Department for Transport updated their growth forecasts and the Project modelling was subsequently revisited. This showed a slight reduction in the level of expected future traffic growth when compared to the previous forecasts, albeit there would still be growth.
- 7.15 Taking into account the latest and most up to date traffic forecasts the Benefit to Cost (BCR) ratio of the Scheme is 1.62 for direct benefits, increasing to over two to one taking into account wider benefits. Essentially economic appraisal shows that the Scheme offers value for money. Environmental matters such as air quality, carbon and noise were reviewed in light of the latest traffic data and it was considered that the changes did not significantly affect the overall conclusions of the Environmental Statement.

- 7.16 This matter will be explained in more detail in the traffic Proof of Evidence of Mr Bryan Whittaker, the design Proof of Evidence of Mr Ben Sibert, the environmental Proof of Evidence of Dr Peter Ireland and the economic Proof of Evidence of Mr Stephen Bussell.
- 7.17 On 14 December 2016 it was announced that the Public Local Inquiry would commence on 28 February 2017 and updated reporting was published including a Revised Traffic Forecasting Report, Revised Economic Assessment Report, Revised Wider Economics Impact Assessment and a second Environmental Statement Supplement. A Pre Inquiry meeting was scheduled for 27 January 2017.

8. The Need for the Published Draft Scheme

- 8.1 The M4 is a route of strategic importance and is critical to the Welsh economy. It forms part of the Trans European Transport Network Route E30 from Cork to Omsk (Russia), connecting Fishguard to Felixstow in the UK, 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.
- 8.2 However, the existing M4 between Magor and Castleton does not meet modern motorway design standards and a greater volume of traffic uses it than that for which it was originally designed.
- 8.3 The M4 between Junctions 28 and 24 was originally designed as the 'Newport Bypass' in the 1960s. 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. Whilst measures have been taken over a period of many years to improve the situation, e.g. the Variable Speed Limit system, a longer term approach is required.
- 8.4 The most heavily trafficked section of the M4 around Newport is between Junctions 27 and 29, with between 4,300 and 5,300 vehicles travelling in each direction during the peak hours and around 100,000 vehicles per day.
- 8.5 The traffic flow forecasts compared to the capacity of the road provides an indication of the level of service on the motorway network. When the ratio reaches 100%, it is estimated that congestion will occur in approximately half of the weekday peak periods, in the peak direction. At 80% of capacity operational problems can be expected and congestion begins to be experienced. Congestion, with frequent incidents, is currently a very common occurrence on the existing M4 between Brynglas Tunnels and Junction 29 where traffic flows are approaching peak hour capacity. Without the Scheme, congestion would be expected to worsen. Higher traffic flows will also lead to unstable conditions where a higher number of incidents and accidents are likely to occur, which in turn may produce increasing stop-start conditions on the motorway on a more regular basis, leading

- to a further deterioration of journey time reliability. Therefore a solution is required not just now, but also for prevention of worsening problems in the future.
- 8.6 Traffic forecasts have been produced for the forecast years of 2022 (when the new section of motorway would be open), 2037 (the 'design year') and 2051 (Documents 2.3.10 and Document 2.4.5). The methodology used in developing the forecasts is in accordance with Welsh Government's WelTAG guidance (Document 6.1.4) which in turn refers to the Department for Transport's WebTAG modelling guidance (Document 6.1.9).
- 8.7 WebTAG guidance takes into account the Department for Transport's forecasts for the impacts of some technological changes such as uptake of ultra-low and zero emission vehicles. The Welsh and UK Governments are also supporting research, development and demonstration of other technological changes such as alternative fuel source and connected and autonomous vehicles (CAVs). However, given the uncertainty of the implementation of CAVs, they are not taken into account in WebTAG and it is not expected that their implementation will have sufficient impacts to alleviate the need for the Scheme by the Design Year of 2037.
- 8.8 It should be noted that the traffic model represents typical operating conditions of a normal day. It does not demonstrate conditions on occasions when an incident occurs on the network and the resultant disruption, increasing congestion and increased journey times that arise. During these times, the need for a solution to the identified problems is even greater. Furthermore, whilst also not taken into account in traffic modelling, some consideration must be given to the ability of the network to accommodate major cultural events such as sporting events, concerts and transport demands during public holidays.
- 8.9 Traffic congestion also has serious consequences on the local highway network, including public transport users. Incidents on the M4 around Newport often result in significant delays, with associated economic, social, cultural and environmental impacts.
- 8.10 Safety on the existing M4 has been identified by stakeholders as a particular concern. Between 2002 and 2012 the accident rate compared very poorly to the

UK motorway average, peaking at around 185% of the UK motorway average on the sections around the Brynglas Tunnels. Between 2009 and 2011, major roadworks on the M4 around Newport were undertaken and in June 2011 the Welsh Government commenced the operation of the Variable Speed Limit (VSL) system between M4 Junctions 24 and 28 to help improve safety. A reduction in the collision rates has occurred following the introduction of the VSL in 2011.

- 8.11 However, the VSL system does not resolve the safety problems associated with the horizontal and vertical alignment of the existing M4 around Newport, which does not meet modern motorway standards, and the many lane-gain and lanedrops along the route. As a consequence of the ongoing safety, capacity and resilience problems, the VSL system often requires traffic to operate with reduced speed limits, resulting in variations in journey times.
- 8.12 Whilst detailed consideration of accidents is given in published traffic and economic reporting and the Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1), it is notable that only incidents resulting in personal injury, derived from police 'Stats 19' data, are taken into account in modelling. In addition to personal injury accidents, non-injury incidents also have significant impacts. Appendix B of my Proof of Evidence provides a sample of media, and social media, coverage of incidents on this section of the M4. This demonstrates not just the impact on the motorway arising from incidents but also the effects on local roads and public transport services within Newport.
- 8.13 By providing a new motorway to the south of Newport, strategic traffic would be able to make their journeys on a stretch of road designed to current standards of safety, with free flow conditions. The Scheme would provide a safe road, with appropriate continuous hard shoulders. The Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1) explains that it is, conservatively, estimated that the Scheme would save 300 accidents over the 60 year appraisal as compared to the do minimum situation.
- 8.14 Furthermore, the reclassification of the existing M4 around Newport would allow the layout of the existing road to be modified to improve safety by making alterations to junction layouts, whilst traffic could move freely as around half of all

- vehicles (and up to three quarters of HGVs) transfer onto the new road. This would make travel safer, easier and more reliable.
- 8.15 Matters of design safety will be addressed by Mr Ben Sibert in his Proof of Evidence (WG 1.5.1). The impacts on traffic and accidents with and without the Scheme will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1). The monetary implications of accidents will be addressed by Mr Stephen Bussell in his Proof of Evidence (WG 1.3.1).
- 8.16 Further details on the existing and predicted traffic conditions for the route as well and collision data are described in more detail in the Traffic Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
- 8.17 Congestion on the existing M4, particularly around Newport, is cited by the business community in Wales as a barrier to economic growth. Where congestion increases, this imposes costs on businesses, commuters and consumers which in turn affects the economy. For commuters, congestion results in longer and unreliable journey times and reduced access to employment opportunities.
- 8.18 Tolls are currently levied on the Severn Crossings, governed by the Severn Bridges Act 1992. The Act sets out the conditions under which tolls may be levied during both the concession period and following the end of the concession. The concession period is expected to come to an end either at the end of 2017 or early 2018 and, under the Severn Bridges Act, the Secretary of State's powers to levy tolls will expire at the end of 26th April 2027.
- 8.19 The traffic modelling that informed the publications in March 2016 assumed as the core scenario that the Severn Crossing Tolls would be removed. Following the publishing of draft Orders, the UK Government announced in its 2016 Budget that it intends to continue the tolls on the Severn Crossings indefinitely at half their current level. The Department for Transport are now consulting on this matter until 10 March 2017³. The revised traffic modelling, published in December 2016, is therefore based upon the tolls continuing at half their current level.

³ https://www.gov.uk/government/consultations/severn-crossings-proposed-toll-reductions

- 8.20 The economic appraisal (Document 2.3.7) indicates that the economic benefits of the Scheme exceed the costs, such that the Scheme represents value for money. When taking into account wider economic benefits (Document 2.3.8), the benefits of the Scheme are expected to outweigh the costs by a ratio of over two to one. However, importantly there are also a range of other economic benefits that are not quantifiable. The Scheme would also result in improved journey time reliability and reduce the costs of delays due to traffic incidents.
- 8.21 The construction of a Scheme of this scale would have economic impacts in its own right, and whilst the employment effects of the construction phase would be temporary, the investment in training associated with the Scheme would be expected to have a lasting impact on the economy of the region, with linked social and health benefits.
- 8.22 In operation, the Scheme would result in reduced transport costs for businesses and increased access to employment opportunities by improving journey times and journey time reliability. The Scheme would also enhance transport links to key employment sites, improving perceptions of Wales as a place to visit and do business and stimulating new investment.
- 8.23 Further details on the existing and predicted economic issues are described in more detail in the Economic Proof of Evidence by Mr Stephen Bussell (WG 1.3.1) and aspects relating to the port by Mr Andrew Meaney (WG 1.4.1).
- 8.24 Residents of Newport close to the existing M4 currently 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.
- 8.25 Further details on the existing and predicted air quality conditions are described in more detail in the Air Quality Proof of Evidence by Dr Michael Bull (WG 1.12.1).
- 8.26 Traffic growth along the existing M4 around Newport has also contributed to noise pollution, affecting neighbouring residential communities. Newport has various designated Noise Action Planning Priority Areas (NAPPAs) including along the M4.

- 8.27 Further details on the existing and predicted noise conditions are described in more detail in the Noise and Vibration Proof of Evidence by Mr Phil Evans (WG 1.14.1).
- 8.28 Without significantly reducing the quantity of petrol and diesel engine vehicles, or without transferring significant levels of traffic away from the existing M4 around Newport, the identified current air quality problems will remain and are expected to worsen with future traffic growth and capacity problems. The expected exacerbation of operational problems on the M4 around Newport will also contribute to increased noise issues.
- 8.29 With the Scheme, traffic redistribution and reduction in congestion would lead to air quality within four of Newport's AQMAs improving significantly. On a wider regional scale air quality is also predicted to improve, despite some local increases in air pollutants along the route of the proposed Scheme (acknowledging that pollutant concentrations would remain well within the relevant air quality objectives and predicted increases in nitrogen deposition on habitats would not be significant).
- 8.30 Based on the predicted noise changes, a greater number of receptors are likely to experience a noise decrease rather than a noise increase as a result of the Scheme.
- 8.31 The relevant policy context for the Scheme in relation to transport is set out in Chapter 4 of the Environmental Statement (Document 2.3.2) and reflected on in the Statement of Case (Document 2.4.6).
- 8.32 On 20th September 2016 the First Minister of Wales set out the Welsh Government's five year plan⁴, to 'deliver more and better jobs through a stronger, fairer economy, improve and reform public services, and build a united, connected and sustainable Wales'. The First Minister stated that the five year plan aims to create a Wales which is 'prosperous and secure, healthy and active, ambitious and learning, united and connected.' Alongside the South Wales Metro, the M4 Project has been identified as a key component of the Welsh Government's five year plan for a long-term, integrated and sustainable transport network for Wales.

⁴ http://gov.wales/newsroom/firstminister/2016/160920takingwalesforward/?lang=en).

8.33 Further review of the Scheme in the wider context of policy and legislation is provided in the Proof of Evidence of Mr John Davies MBE (WG 1.23.1).

- 8.34 The M4 is a route of strategic importance and is critical to the Welsh economy.

 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.
- 8.35 Congestion, with frequent incidents, is a daily occurrence here with flows exceeding 80% of capacity. The restricted capacity of the Brynglas Tunnels forms a regular bottleneck on the motorway at peak times. As well as the motorway, this has serious consequences for the local highway network, with associated economic, social and environmental impacts. Noise impacts are described in more detail in the Proof of Evidence of Mr Phil Evans (WG 1.14.1) and air quality in the Proof of Evidence by Dr Michael Bull (WG 1.12.1). Future traffic growth will worsen these problems. Existing and predicted traffic conditions as well as collision data are described in more detail in the Traffic Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
- 8.36 Economic appraisal (Document 2.3.7) has indicated that the economic benefits of the Scheme exceed the costs, such that the Scheme represents value for money. When taking into account wider economic benefits (Document 2.3.8), the benefits of the Scheme are expected to outweigh the costs by a ratio of over two to one. Economic issues are described in more detail in the Proof of Evidence by Mr Stephen Bussell (WG 1.3.1) and aspects relating to the port by Mr Andrew Meaney (WG 1.4.1).
- 8.37 On 20th September 2016 the First Minister of Wales set out the Welsh Government's five year plan, to 'deliver more and better jobs through a stronger, fairer economy, improve and reform public services, and build a united, connected and sustainable Wales'. The First Minister stated that the five year plan aims to create a Wales which is 'prosperous and secure, healthy and active, ambitious and learning, united and connected.' Alongside the South Wales Metro, the M4

- Project has been identified as a key component of the Welsh Government's five year plan for a long-term, integrated and sustainable transport network for Wales.
- 8.38 The relevant policy context for the Scheme in relation to transport is set out in Chapter 4 of the Environmental Statement (Document 2.3.2) and reflected on in the Statement of Case (Document 2.4.6). Further review of the Scheme in the wider context of policy and legislation is within the Proof of Evidence of Mr John Davies MBE (WG 1.23.1).

9. Public Transport and the Metro

- 9.1 As set out within Chapter 4 of the M4 Corridor around Newport Environmental Statement (Document 2.3.2); public transport studies have shown that new or improved public transport services would only have minimal impact in terms of reducing traffic on the M4. Around the time of the M4 Corridor around Newport Strategic Environmental Assessment in 2013, a public transport appraisal (Document 4.3.16) considered a wide range of possible public transport and Metro measures that had potential to relieve M4 motorway traffic. The appraisal showed around 3% of motorway traffic would transfer, and that even a doubling of public transport usage in the Newport area would only achieve up to a 5% reduction in motorway traffic. This analysis informed Welsh Government decision making to adopt its strategic Plan for the M4 Corridor around Newport in July 2014.
- 9.2 In combination with the Scheme, Welsh Government is progressing with a Cardiff Capital Region Metro (Documents 6.1.6, 6.3.4 and 6.3.6). This investment in public transport measures achieves wider benefits for the region than relieving motorway traffic.
- 9.3 The Welsh Government's November 2015 'Rolling out our Metro' public engagement document explains how the Metro is a long-term incremental programme to improve accessibility to public transport and cater for increasing demand for public transport. Other objectives for the Metro include supporting the economic function of the region and reducing the impact of transport on the environment. Similarly to the M4 Scheme, an overarching objective for the Metro is to deliver a high-quality, reliable, efficient, economically sustainable transport network. The M4 and Metro proposals are clearly complementary in helping the Welsh Government achieve its aspirations for an integrated and sustainable transport network that aims to transform the economic and social prospects of South East Wales and the country as a whole. Both projects would help achieve the Welsh Government's aims and objectives by addressing different problems. Whilst the Metro would not address the transport related problems associated with the M4 around Newport, it would enhance connectivity across the region, provide easier access to employment across the region, offer development and regeneration benefits on key corridors and around key stations, as well as support

population growth and tackle increasing road congestion in the Cardiff area. As stated in the 'Rolling out our Metro' document:

"The Metro proposals complement the Welsh Government's M4 'Corridor around Newport' project, which will address the long-standing problems on the motorway gateway to Wales. The M4 project will improve access to international markets and, through carefully planned junctions, link with Metro to provide an efficient integrated transport system that improves our nation's economic competitiveness and encourages jobs and growth."

9.4 Welsh Economy and Infrastructure Secretary Ken Skates said when announcing the Public Inquiry into the M4 proposals (21 June 2016):

"Alongside infrastructure improvements to the North, Mid and West Wales, the M4 Project and the Metro are hugely important to our vision for an efficient, integrated transport system for Wales".⁵

- 9.5 The Metro is seeking to improve accessibility to local employment sites, educational facilities and services within the Cardiff City Region and is complementary with the Scheme, which aims to improve access for Welsh goods and services to markets in South East Wales and beyond. The two projects are being progressed by Welsh Government and developed in integration. For example, the proposed new Glan Llyn junction has been sited to link the new section of motorway to the new 4000 home, 6000 job community being planned on former steelworks land, a potential METRO park and ride rail facility and the new junction arrangement at Magor/Undy improves access to the Severn Tunnel Railway station.
- 9.6 Whilst the exact measures that will be implemented under the Metro are not yet confirmed, traffic modelling for the Scheme takes into account the relevant public transport measures that are planned or committed. This matter is covered in more detail in the Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
- 9.7 In light of our most recent progress with the Metro, a December 2016 Updated
 Public Transport Overview Report again considered the potential impacts of public

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⁵ http://gov.wales/newsroom/transport/2016/160621-m4-public-inquiry/?lang=en

transport investment on the need for the Scheme (Document 2.4.19). The results reiterate that public transport measures, including those of the Metro, could not sufficiently address the problems associated with the M4 around Newport, only reducing the traffic flows on the motorway by less than 4%.

- 9.8 In combination with the Scheme, Welsh Government is progressing with a Cardiff Capital Region Metro (Documents 6.1.6, 6.3.4 and 6.3.6).
- 9.9 Around the time of strategic considerations in 2013, a public transport appraisal (Document 4.3.16) considered a wide range of possible public transport and Metro measures that had potential to relieve M4 traffic. That appraisal showed that even a doubling of public transport usage in the Newport area would only achieve up to a 5% reduction in motorway traffic. Investment in public transport measures achieves wider benefits for the region than relieving motorway traffic.
- 9.10 In light of our most recent progress with the Metro, a December 2016 Updated Public Transport Overview Report again considered the potential impacts of public transport investment on the need for the Scheme (Document 2.4.19). The results reiterate that public transport measures, including those of the Metro, could not sufficiently address the problems on the M4 around Newport, only reducing traffic flows by less than 4%.

10. Objectives of the Scheme

- 10.1 In accordance with Welsh Transport Planning and Appraisal Guidance (WelTAG), at the planning stage, an objectives-led approach has been adopted. This means that planning starts by identifying problems and opportunities and defining what is to be achieved. The ultimate desired outcomes are expressed as 'transport planning objectives'. As a result of consultation and previous development workshops, problems were identified and aims and objectives set for the M4 Corridor around Newport (Document 4.5.5).
- 10.2 The Welsh Government has looked in detail at what travel related problems are associated with the M4 around Newport, and asked the public, other stakeholders and those involved in managing transport in and around Newport what they considered the problems to be. This process identified 17 problems, relating to capacity, resilience, safety and sustainable development issues. They are:
 - a) A greater volume of traffic uses the M4 around Newport than it was designed to accommodate, resulting in regular congestion at peak times over extended periods.
 - b) The M4 around Newport is used as a convenient cross town connection for local traffic, with insufficient local road capacity.
 - c) HGVs do not operate efficiently on the motorway around Newport.
 - d) There is insufficient capacity through some of the Junctions (e.g. 3 lane capacity drops to 2 lane capacity).
 - e) The 2-lane Brynglas tunnels are a major capacity constraint.
 - f) The M4 cannot cope with increased traffic from new developments.
 - g) Difficulties maintaining adequate traffic flows on the M4 and alternative highway routes at times of temporary disruption; alternative routes are not able to cope with M4 traffic.
 - h) The road and rail transport system in and around the M4 Corridor is at increasing risk of disruption due to extreme weather events.
 - i) When there are problems on the M4, there is severe disruption and congestion on the local and regional highway network.

- j) The M4 requires essential major maintenance within the next 5-10 years; this will involve prolonged lane and speed restrictions, thus increasing congestion problems.
- k) There is insufficient advance information to inform travel decisions when there is a problem on the M4.
- I) The current accident rates on the M4 between Magor and Castleton are higher than average for UK motorways⁶.
- m) The existing M4 is an inadequate standard compared to modern design standards.
- n) Some people's driving behaviour leads to increased accidents (e.g. speeding, lane hogging, unlicensed drivers).
- There is a lack of adequate sustainable integrated transport alternatives for existing road users.
- p) Traffic noise from the motorway and air quality is a problem for local residents in certain areas.
- q) The existing transport network acts as a constraint to economic growth and adversely impacts the current economy.
- 10.3 The M4 Corridor around Newport Plan (Document 4.5.7) and associated reporting (Documents 4.5.5, 4.5.8, 4.5.9 and 4.4.6) set out that the Welsh Government's aims to:
 - Make it easier and safer for people to access their homes, workplaces and services by walking, cycling, public transport or road;
 - 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; and
 - c) To produce positive effects overall on people and the environment, making a positive contribution to the over-arching Welsh Government goals to reduce greenhouse gas emissions and to making Wales more resilient to the effects of climate change.

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⁶ Accident rates are explained further in the evidence of Mr Bryan Whittaker (WG 1.2.1).

- 10.4 As outlined in the 2011 Review of Problems and Goals document (Document 4.3.2), the aims were derived from strategic objectives which were first outlined for the public in a brochure distributed in April 2006 (Document 4.2.8), and reworded into plain English. The strategic objectives were developed aiming to address the three pillars of sustainability adopted by the Welsh Assembly Government in its sustainability programme of that time. The objectives were subject to further consultation at a workshop in 2007 (Document 4.2.9). The strategic aims were developed taking on board comments raised through stakeholder engagement, and have been presented in subsequent appraisal documents and associated consultation documents.
- 10.5 The M4 Corridor around Newport Plan sets out how the Welsh Government seeks to achieve or facilitate these aims as part of its wider transport strategy for Wales, as outlined within the National Transport Finance Plan.
- 10.6 15 transport planning objectives were identified and agreed with the public and other stakeholders. Welsh Government gives these objectives equal weighting and they are not ranked. The objectives for the M4 Corridor around Newport Plan, and its Scheme, are to help achieve:
 - a) Safer, easier and more reliable travel east-west in South Wales.
 - b) 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.
 - c) 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.
 - d) Best possible use of the existing M4, local road network and other transport networks.
 - e) More reliable journey times along the M4 Corridor.
 - f) 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.
 - g) Improved safety on the M4 Corridor between Magor and Castleton.
 - Improved air quality in areas next to the M4 around Newport.

- Reduced disturbance to people from high noise levels, from all transport modes and traffic within the M4 Corridor.
- j) Reduced greenhouse gas emissions per vehicle and/or person kilometre.
- k) Improved travel experience into South Wales along the M4 Corridor.
- I) An M4 attractive for strategic journeys that discourages local traffic use.
- m) Improved traffic management in and around Newport on the M4 Corridor.
- n) Easier access to local key services and residential and commercial centres.
- o) A cultural shift in travel behaviour towards more sustainable choices.
- 10.7 The initial review of the problems, aims and objectives for the M4 Corridor around Newport can be viewed in the Stage 1 Review of Problems and Goals report for the M4 Corridor Enhancement Measures, 2011 (Document 4.3.2). The 2013 Stage 1 (Strategy) WelTAG (Document 4.4.12) and the 2014 Stage 1 & 2 (Scheme) appraisals (Document 4.5.5) for the M4 Corridor around Newport confirms that they have been reviewed and subject to consultation during development work, and that:

"For the current circumstances, the objectives as previously proposed are considered to remain wholly relevant to the M4 transport corridor around Newport and, as such, represent a good framework within which to appraise the relative performance of strategic options for improvement of operating conditions/transport provision within the M4 Corridor around Newport."

- 10.8 The history of the identification, consultation, review and assessment of the Scheme against the problems, aims and objectives is set out within the various WelTAG appraisals for the Scheme, its Plan and previous development work. This work showed that the Scheme would best address the identified problems and achieve the objectives.
- 10.9 The WelTAG appraisals as to how the M4 Corridor around Newport proposals would achieve the Transport Planning Objectives remain true. Taking into account the design development that has taken place since the publication of the latest WelTAG reporting in July 2014, most notably the inclusion of intermediate junctions at Glan Llyn and Docks Way, it is evident that the Scheme would achieve the identified objectives as follows:

- 1) Safer, easier and more reliable travel east-west in South Wales.
- 10.10 By providing for a new motorway to the south of Newport, strategic traffic would make their journeys on a stretch of road designed to current standards of safety, with free flow conditions. The reclassification of the existing M4 around Newport would allow the layout of the existing road to be modified to improve safety by making alterations to junction layouts which are presently substandard, whilst traffic could move freely with around half of the vehicles currently using it (and up to three quarters of HGVs) transferring onto the new road. This would make travel safer, easier and more reliable. Matters of design safety will be address by Mr Ben Sibert in his Proof of Evidence (WG 1.5.1). The impacts on traffic and accidents with and without the Scheme will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1).
 - 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.
- 10.11 The M4 around Newport is a route of strategic importance and forms part of the Trans European Transport Network Route E30 from Cork to Omsk (Russia), connecting Fishguard to Felixstow in the UK, and is the gateway to Wales. The Scheme would provide for easier and more reliable journeys along the existing and new section of the M4 motorway, improving accessibility along this important part of the transport network. The reduction in traffic along the existing M4 would also make road traffic journeys between the Midlands via the A449 and the M50 more reliable. The impact of the Scheme on traffic will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1).
 - 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.
- 10.12 The reclassification of the existing M4 to the north of Newport, together with the transfer of traffic onto the new motorway, would allow Junction 25 at Caerleon to be reopened to full movement connections. This would make more effective use of the existing transport network and improve accessibility to communities, jobs and services in northern Newport. The Scheme's junction strategy would also

improve connections to the A48 and A4810, serving the city centre and Glan Llyn strategic development, where there is a proposed Metro park and ride rail facility. At Magor, Undy and Rogiet, the proposed connection between the B4245, M48 and the motorway network at Junction 23 would provide an additional connection to the strategic road network and improve local accessibility, including to the Severn Tunnel Railway station.

- 10.13 The Scheme also takes into account and is complementary to the Welsh Government's proposals for improvements at M4 Junction 28, the dualling of the A465 between Abergavenny and Hirwaun and Network Rail's electrification of the mainline railway, to provide an efficient and integrated transport network for local and strategic journeys around Newport. Further information on traffic will be provided in the Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
- 10.14 Measures have been incorporated into the design of the Scheme to help ensure that there would be no significant adverse effects on all travellers, whilst some new lengths of cycleways, bridleways and footpaths seek to encourage non-motorised modes of transport for local journeys. For example, five new public bridleways and one new public footpath would be created, including one providing an off-road link between National Cycle Network Route 4 and Magor. Further information relating to all travellers will be provided in the Proof of Evidence of Ms Julia Tindale (WG 1.10.1).

4) Best possible use of the existing M4, local road network and other transport networks.

10.15 Reclassification of the existing M4 as a trunk road, or 'A' road, would allow changes to be made to enable traffic management, safety and revised access arrangements. Reclassification would include works to reopen the west facing slip roads of Junction 25 (Caerleon), improving access to Caerleon and St. Julian's areas. This would improve accessibility to northern Newport. The existing Variable Speed Limit would continue to operate when required along the reclassified M4 between Junction 24 (Coldra) and Junction 28 (Tredegar), with a maximum speed limit of 60 miles per hour imposed at the Brynglas Tunnels for safety reasons (as opposed to 70mph elsewhere).

10.16 The Scheme's junction strategy would also improve accessibility to existing and planned public transport connections at Severn Tunnel, Glan Llyn and Newport Central. The South Wales Metro is seeking to improve accessibility to local employment sites, educational facilities and services within the Cardiff City Region and is complementary with the proposals for the M4 Corridor around Newport. Furthermore, the walking, cycling and bridleway measures seek to improve accessibility to public transport services and enhance non-motorised transport networks.

5) More reliable journey times along the M4 corridor.

- 10.17 By addressing the traffic congestion problem, the Scheme would result in improved journey time reliability and would reduce the costs of delays due to traffic incidents. Further information on traffic will be provided in the Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1).
 - 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.
- 10.18 The Metro is the Welsh Government's long-term incremental programme to improve accessibility to public transport and cater for increasing demand for public transport. The M4 and Metro proposals are complementary in helping the Welsh Government achieve its aspirations for an integrated and sustainable transport network that will together enhance choice for all people making journeys across the region.

7) Improved safety on the M4 Corridor between Magor and Castleton.

10.19 The new section of motorway would be designed to current standards of safety, with free flow conditions. This would address the traffic congestion problem, which in turn reduces the risks of incidents and accidents. The reclassification of the existing M4 around Newport would also allow the layout of the existing road to be modified to improve safety by making alterations to junction layouts which are presently substandard.

10.20 Matters of design safety will be address by Mr Ben Sibert in his Proof of Evidence (WG 1.5.1). The impacts on traffic and accidents with and without the Scheme will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1).

8) Improved air quality in areas next to the M4 around Newport.

10.21 The Scheme would transfer a large proportion of traffic from the existing M4, between Junctions 23A and 29, onto the new section of motorway to the south of Newport. As a result, some areas would experience a large improvement in air quality concentrations, most notably in urban areas adjacent to the existing M4 corridor. All Air Quality Management Areas in the study area are predicted to experience improvements in concentrations. A regional assessment shows that the Scheme would result in a decrease in emissions of oxides of nitrogen and particulate matter on a regional scale. Further information on air quality impacts will be provided in the Proof of Evidence of Dr Michael Bull (WG 1.12.1).

9) Reduced disturbance to people from high noise levels, from all transport modes and traffic within the M4 corridor.

10.22 During operation, both significant beneficial and adverse noise effects are predicted in the short and long term. However, the new section of motorway would reduce congestion on and noise effects from the existing M4. Based on the predicted noise change, a greater number of receptors are likely to experience a noise decrease rather than a noise increase. Further information on noise and vibration impacts will be provided in the Proof of Evidence of Mr Phillip Evans (WG 1.14.1).

10) Reduced greenhouse gas emissions per vehicle and/or person kilometre.

10.23 The reduction of stop-start traffic conditions as well as a 2.8km reduced journey length and a flatter alignment on the new section of motorway would provide benefits to vehicle emissions. Great attention has also been devoted to minimising construction capital carbon during the development of the Scheme. Assessment demonstrates that Scheme would make a positive contribution towards a reduction in net carbon emissions. The proposed Scheme therefore fits within the legislative and wider context of Welsh Government policy to reduce carbon. Further information on carbon will be provided in the Proof of Evidence of Mr Tim Chapman (WG 1.13.1).

11) Improved travel experience into South Wales along the M4 corridor.

- 10.24 The Scheme would provide an improved travel experience for road users through the benefits of reduced driver stress, improved journey times and improved journey reliability associated with addressing the traffic congestion problem.
- 10.25 There would also be changes in the landscape and townscape, resulting in both negative and positive impacts depending on the location and perception of the receptor. For example, the new River Usk bridge crossing would form a new feature in the landscape and feature in views ranging from close proximity to distant views. Once the Scheme is open and the landscape design proposals have taken effect, significant effects would remain at some locations. These would include the Wentlooge Levels and the Caldicot Levels, which are mostly designated as a Special Landscape Area.
- 10.26 The Scheme components that would generate the greatest visual effects include the locations of significant earthworks, such as the Castleton Interchange, the River Ebbw and River Usk Crossings, the Nash Road Overbridge, Docks Junctions and locations where raised embankments, water treatment areas and the motorway itself would be in close proximity to places from where people could see them. Further information on landscape and visual impact will be provided in the Proof of Evidence of Mr Nick Rowson (WG 1.8.1).

12) An M4 attractive for strategic journeys that discourages local traffic use.

10.27 The proposed new motorway is designed as a strategic route for the M4 motorway that would attract all through traffic to transfer from the existing M4 onto the new section of motorway. The Scheme benefits from two intermediate junctions serving Newport Docks and the City centre, and the Glan Llyn development. These junctions seek to improve accessibility to the motorway and areas of employment, attracting strategic journeys. With the traffic congestion problem addressed and reclassification measures improving accessibility along the existing M4, there will be benefits to local traffic, together with improvements for those making strategic journeys between the M4 and the A449/M50 to the Midlands. The impact of the Scheme on traffic will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1).

13) Improved traffic management in and around Newport on the M4 corridor.

10.28 The Scheme would provide improved resilience to the road network on the M4 Corridor around Newport by providing more options for alternative routes for traffic management in the event of incidents or accidents on either the proposed new motorway or the existing M4, which would be reclassified. The two intermediate junctions on the proposed new motorway would improve connectivity and assist with traffic management when required. Reclassification of the existing M4 around Newport would also allow changes to enable traffic management, safety and revised access arrangements.

14) Easier access to local key services and residential and commercial centres.

- 10.29 The two intermediate junctions along the new section of motorway would improve accessibility to key services, commercial centres and communities at Newport Docks, the City centre, and the Glan Llyn development.
- 10.30 At Magor, Undy and Rogiet, the proposed connection between the B4245, M48 and the motorway network at Junction 23 would provide an additional connection to improve local accessibility to the east of Newport.
- 10.31 Reclassification of the existing M4 around Newport would allow the Welsh Government to reopen the west facing slip roads of Junction 25 (Caerleon), improving access to the residential areas in northern Newport, and to tourist sites at Caerleon.
- 10.32 The impact of the Scheme on traffic and accessibility will be addressed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1), whilst the benefits to journey times and associated accessibility to key services and employment opportunities will be addressed by Mr Stephen Bussell in his Proof of Evidence (WG 1.3.1).

15) A cultural shift in travel behaviour towards more sustainable choices.

10.33 As part of the Scheme, new lengths of cycleways, bridleways and footpaths would help to encourage people to use non-motorised modes of transport for local journeys.

- 10.34 The proposed new Glan Llyn junction has been sited to link the new section of motorway to the strategic development site including a potential Metro park and ride rail facility. Furthermore, the new junction arrangement at Magor and Undy would improve access to the Severn Tunnel Railway station.
- 10.35 The Metro is the Welsh Government's long-term incremental programme to improve accessibility to public transport and cater for increasing demand for public transport. The M4 and Metro proposals are complementary in helping the Welsh Government achieve its aspirations for an integrated and sustainable transport network that will together enhance choice for all people making journeys across the region.
- 10.36 In summary, it is my opinion that the Scheme would achieve all but possibly one of the objectives set. The objective which may not be met is the objective to achieve a cultural shift in travel behaviour towards more sustainable choices. However, as I have explained, the M4 proposals take into account and are being progressed alongside the Welsh Government's Metro proposals, which together seek to provide an efficient, integrated and sustainable transport network. In addition, the location of the intermediate junction locations in the vicinity of existing and potential public transport measures would contribute towards meeting this objective.
- 10.37 Overall the Scheme performs strongly in meeting the identified objectives for the M4 around Newport.

- 10.38 The Welsh Government has looked in detail at what travel related problems exist on the M4 around Newport, and involved the public and other stakeholders to identify 17 problems, relating to capacity, resilience, safety and sustainable development issues and develop 3 aims and 15 objectives for a solution.
- 10.39 The history of the identification, consultation, review and assessment of the Scheme against the problems, aims and objectives is set out within the July 2014 WelTAG appraisals for the Scheme (Documents 4.4.12 and 4.5.5), its Plan and previous development work. This work showed that the Scheme would best address the identified problems and achieve the objectives.

10.40 The judgements made in the July 2014 WelTAG appraisals remain true in light of subsequent design development and the Scheme performs strongly in meeting the identified objectives.

11. Contractor Tendering

- 11.1 Through use of an Early Contractor Involvement (ECI) contract to prepare draft
 Orders, an Environmental Statement and associated reporting, the Welsh
 Government steered the development of the proposed Scheme in accordance with
 its relevant duties and responsibilities.
- 11.2 Before selecting a team the Welsh Government asked tenderers to describe their proposed management structure and the relationships between key members of their team. To help better understand potential collaborative working opportunities, the Welsh Government asked tenderers to also define the roles and responsibilities of their team. The Welsh Government asked tenderers to describe the processes that would be used to obtain an aesthetically pleasing structure crossing the River Usk that minimises the environmental and visual impact on the Special Area of Conservation (SAC). Tenderers were asked to consider the construction issues and risks which could be inherent in such a structure and how they would be dealt with.
- 11.3 The Welsh Government explained to tenderers how the construction of the Project would involve significant movement of earthworks material, including treatment of contaminated land. Tenderers were asked how they would minimise the environmental impact, including reduction in the carbon footprint, by innovative means.
- 11.4 The Welsh Government explained that there are a number of challenges to the delivery of this project beyond those highlighted above. The tenderer was asked to identify their top 5 challenges and describe how they would be dealt with in each of the Key Stages to ensure the project is delivered to time and budget.
- 11.5 These questions demonstrate how the Welsh Government has been focused on achieving collaborative ways of working for the project, and working to ensure that impacts such as those on the environment, protected sites and carbon are in the forefront of the minds of those developing it. The tender questions aimed to help ensure that all parties clearly understood and considered the challenges to be overcome during development, design, construction and operation, and to ensure

the duties under S28G of the Wildlife and Countryside Act were at the forefront of their minds.

11.6 The Welsh Government prioritised quality in its assessment, strengthening the importance for tenderers to carefully consider the questions posed. The appointed project team demonstrated in its answers its understanding of environmental risks, including biodiversity and carbon reduction targets. Mr Barry Woodman (WG 1.6.1), Mr Ben Sibert (WG 1.5.1) and Dr Peter Ireland (WG 1.7.1) will explain how the proposals include measures taken to respond to the key challenges of the project as identified initially through the tendering process. For example the design response to limit land take and provide reen enhancement where possible in the Gwent Levels SSSIs.

- 11.7 Through use of an Early Contractor Involvement (ECI) contract to prepare draft Orders, the Environmental Statement and associated reporting, the Welsh Government steered the development of the Scheme in accordance with its relevant duties and responsibilities.
- 11.8 The Welsh Government prioritised quality in its assessment, strengthening the importance for tenderers to carefully consider questions posed on the River Usk and other protected sites, earthworks, contamination land, carbon and other key challenges.

12. Description of the Scheme

- 12.1 The proposed new section of motorway would be approximately 23 kilometres (km) in length between connections to the existing motorway and would provide three lanes in both directions.
- 12.2 The proposed new section of dual 3-lane motorway would depart from the line of the existing motorway north of Magor (Junction 23a) passing to the south of Newport across a new River Usk bridge crossing (440m main span), to connect with the existing junction at Castleton (Junction 29).
- 12.3 Approximately half of the route would pass through several Sites of Special Scientific Interest (SSSI) on the Caldicot and Wentlooge Levels known as the Gwent Levels SSSIs. The route would also cross the River Usk which is an SSSI and also designated as a Special Area of Conservation (SAC). In fulfilling its duties under Section 28G of the Wildlife and Countryside Act 1981, the Welsh Government has ensured that the SSSI's have been central to the design and mitigation approach for the proposed new motorway.
- 12.4 There would be modified junctions at the western end of the Scheme at Castleton and at the eastern end at Magor. Two new junctions would be provided along the new section of motorway at Newport Docks and at Glan Llyn.
- 12.5 Three lanes and a hard shoulder would generally be provided in each direction, separated by a central reserve (including concrete safety barrier). Drainage channels and fencing would be provided beyond the hard shoulder, with safety barriers where appropriate. This typical profile would vary at junctions (where merge and diverge slip roads would be provided).
- 12.6 Road drainage would be provided through a combination of concrete channels and piped systems, outside of the Gwent Levels, and impermeable membrane/grass lined channels within the Gwent Levels. These would all discharge into a series of twelve water treatment areas, each with an associated reed bed. These water treatment areas would attenuate and treat the collected surface water prior to discharging it into existing watercourses.

- 12.7 The proposals for the new section of motorway have been designed with a mandatory 70mph speed limit. The speed limits at either end of the new section of motorway are generally 70mph, with the exception of the toll booth area associated with the Second Severn Crossing.
- 12.8 Due to the transfer of traffic onto the proposed new section of motorway, the existing M4 between Magor and Castleton would be reclassified. Whilst no longer a motorway it would continue to be a trunk road operated and maintained by the Welsh Government. The A48(M) between Castleton and St. Mellons would change in the same way. These changes would allow additional classes of vehicle (such as learner drivers) to use the roads. 'A' road classification would also be much more befitting to the existing M4's vertical and horizontal alignment and the number and proximity of its junctions. It would also be more akin to how the road was originally planned to operate.
- 12.9 Works on the existing M4, following the removal of its special road classification, would comprise the installation of traffic control measures, such as changes to traffic signs and to road markings, as well as minor amendments to junctions to realise operational and safety benefits.
- 12.10 Works on the existing M4 would also include the reconfiguration of Junction 25 at Caerleon and associated works to reopen access to the existing M4 in both directions.
- 12.11 The existing Variable Speed Limit would continue to operate along the existing M4 between J24 (Coldra) and J28 (Tredegar), but with a maximum speed limit of 60 miles per hour imposed at the Brynglas Tunnels.
- 12.12 New or diverted lengths of highway, public rights of way and private means of access would be provided to replace those affected by the Scheme. This would require new, improved or extended overbridges and underbridges. Five new public bridleways and one new public footpath would be created. Ms Julia Tindale will explain further in her Proof of Evidence (WG 1.10.1).

12.13 The Scheme Assessment Report (SAR) (Document 2.3.6) further summarises the proposals and likely impacts in non-technical language, whilst Mr Ben Sibert (WG 1.5.1) provides a more detailed design description in his Proof of Evidence.

- 12.14 The new section of 3 lane motorway would be approximately 23 kilometres (km) in length between connections to the existing motorway at Magor (Junction 23a) and Castleton (Junction 29) with intermediate junction at Glan Llyn and Docks Way. The route would pass to the south of Newport with approximately half passing through the Gwent Levels Sites of Special Scientific Interest. It would cross the River Usk Special Area of Conservation on a cable stay bridge.
- 12.15 The existing M4 between Magor and Castleton would be reclassified as a trunk road, still operated and maintained by Welsh Government. The A48(M) between Castleton and St. Mellons would change in the same way. 'A' road classification would; allow additional classes of vehicle (such as learner drivers) to use the roads, be much more befitting to the existing M4's alignment as well as the number and proximity of junctions it has, be more akin to how the road was originally planned to operate and would allow the reopening of Junction 25 at Caerleon.
- 12.16 New or diverted lengths of highway, public rights of way and private means of access would be provided to replace those affected by the Scheme. This would require new, improved or extended overbridges and underbridges. Five new public bridleways and one new public footpath would be created. Ms Julia Tindale will explain further in her Proof of Evidence (WG 1.10.1).
- 12.17 The Scheme Assessment Report (SAR) (Document 2.3.6) further summarises the proposals and likely impacts in non-technical language, whilst Mr Ben Sibert (WG 1.5.1) provides a more detailed design description in his Proof of Evidence.

13. Cost and Budgets

- 13.1 The cost estimate for the Scheme was published with the draft Orders in March 2016, based upon Quarter 4 2015 prices excluding VAT and inflation. A breakdown of the £1,093m cost estimate has been published in the Revised Economic Appraisal Report (Document 4.6.5) which also identified £22m for Key Stage 4 Costs (preparation of draft Orders, ES etc) and £16.2m for reclassification works to the existing M4 and A48(M).
- 13.2 The cost estimate was developed in light of extensive ground investigation, environmental surveys, stakeholder consultation and general development work undertaken in collaboration with the ECI contractor, designers and employer's agent.
- 13.3 Since publication of the draft Statutory Orders the following significant changes have been made to the scope of the Project:
 - a) Addition of a retaining wall in the vicinity of the Industrial Automation and Control Factory on Meadows Road.
 - b) Addition of an additional access point to TATA land from the Glan Llyn junction connector road.
 - c) Addition of a retaining wall in the vicinity of the LDH building within the Docks.
 - d) An increase in the height of the River Usk crossing by 1.54m.
 - e) Additional/larger culverts for improved access.
 - f) A reduction in the size of the Caldicot moor mitigation area following discussion with NRW.
 - g) A reduction in the height of the proposed Junction 23 resulting from a change to the Bencroft Lane realignment.
- 13.4 The cost implications of the above increases and decreases in scope result in a £5.9m net cost increase with an associated, similar reduction in risk allowances. The current estimate, in the same format as that presented with the Scheme Assessment Report (Document 2.3.6), is set out below.

Component	Estimate (£millions)
Preliminaries including Traffic Management	£212m
Roadworks	£268m
Structures	£297m
Landscaping and environmental works	£45m
Contractor's Risk	£41m
Total construction cost	£863m
Works by other authorities	£38m
Land and Compensation costs	£92m
Risk and Optimism Bias	£100m
Project Estimate excluding VAT and Inflation	£1,093m

13.5 Funding for the delivery of the Project has been explicitly identified and provision set aside within the Welsh Government's published capital plans for the next four years. Allocations are not made beyond a 4 year period but suitable forecasts are in place to enable assurance to be given that the full funding requirements associated with the Project are available within a reasonable timescale should the decision be taken to proceed.

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14. Environmental Matters

- 14.1 The assessment of environmental impacts and effects of the Scheme, including consideration of the construction phase, are reported in detail in the ES together with mitigation measures.
- 14.2 A Non-Technical Summary (NTS) of the Environmental Impact Assessment is included in Volume 1 of the ES and as a free-standing document (Document 2.3.3). This describes environmental matters in easy to understand language.
- 14.3 The development of appropriate mitigation measures has been an integral part of development of the Project and the subject of regular meetings and dialogue with representatives of Natural Resources Wales, Cadw, the relevant Local Authorities, and other stakeholders.
- 14.4 Particular consideration has been given to potential impacts on the Gwent Levels Sites of Special Scientific Interest (SSSIs), the River Usk Special Area of Conservation (SAC) and the Severn Estuary SAC, Special Protection Area (SPA) and Ramsar site. This recognises duties including Section 28G of the Wildlife and Countryside Act, the Natural Environment and Rural Communities (NERC) Act and the Habitats Regulations.
- 14.5 Further details on the environmental engagement as well as the process of assessing the effects on the different aspects of the environment, the proposals for suitable mitigation and the overall conclusion of the effects of the Scheme will be described in more detail by Dr Peter Ireland's Proof of Evidence (WG 1.7.1).
- 14.6 The Welsh Government recognises that, with the enactment of the Environment (Wales) Act 2016 (Document 3.1.16), the Welsh Ministers are required to prepare a national natural resources policy for Wales⁷ and to take all reasonable steps to implement that policy.
- 14.7 The Scheme would result in a number of environmental benefits on the existing M4, but would also introduce a variety of adverse environmental impacts along the

⁷ http://gov.wales/docs/desh/publications/150914-natural-resources-policy-statement-en.pdf

- proposed new section of motorway. Those impacts have been mitigated as far as practicable to avoid, reduce or remedy the effects.
- 14.8 The air quality effects of the Scheme will be detailed by Dr Michael Bull (WG 1.12.1).
- 14.9 The noise and vibration effects of the Scheme will be detailed by Mr Phillip Evans (WG 1.14.1).
- 14.10 The cultural heritage effects of the Scheme will be detailed by Mr Mick Rawlings (WG 1.9.1).
- 14.11 The landscape and visual effects of the Scheme will be detailed by Mr Nick Rowson (WG 1.8.1).
- 14.12 The nature and conservation effects of the Scheme will be detailed by Dr Keith Jones (WG 1.18.1) and others as set out below. This will include consideration of relevant duties and effects on protected and designated sites.
- 14.13 The Welsh Government has had particular regard to the duty imposed on all public bodies by Section 28G of the Wildlife and Countryside Act 1981 to "take reasonable steps, consistent with the proper exercise of its functions, to further the conservation and enhancement of the features that make the SSSIs of special interest". As mentioned earlier, the interpretation of this duty was considered in the judicial review brought by Friends of the Earth in respect of the Welsh Government's decision to adopt the M4 Corridor around Newport Plan. Mr Justice Hickinbottom held that the development of the Plan had demonstrated how the Welsh Government had considered the potential harm to the Gwent Levels SSSIs and the mitigation of that harm, for example by revising the route of the new section of motorway as far north as possible to minimise impacts on the SSSI.
- 14.14 The Welsh Government also recognises that Section 6 of the Environment (Wales) Act 2016 imposes a consistent duty "to seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales and in so doing to

- promote the resilience of ecosystems, so far as is consistent with the proper exercise of those functions."
- 14.15 Having consulted with NRW, strategies have been developed, for example regarding drainage and reen mitigation, to minimise impacts on the SSSIs and a range of mitigation measures have been proposed. These measures are either integral to and embedded within the Scheme design or would be provided as additional mitigation. Such matters will be detailed by Dr Peter Ireland (WG 1.7.1) and Mr Richard Graham (WG 1.15.1).
- 14.16 The Proof of Evidence of Mr John Davies MBE (WG 1.23.1) sets out how the Welsh Government has taken reasonable steps (consistent with the proper exercise of its functions as required by Section 28G) to seek to maintain and enhance the features by reason of which the SSSIs are of special interest and to maintain and enhance biodiversity (in the exercise of its functions required by Section 6 of the Environment (Wales) Act) given that the route requiring land within the Gwent Levels is the only reasonable one that would meet the objectives and relieve the problems on the M4 around Newport.
- 14.17 Dr Keith Jones (WG 1.18.1) will also present Proof of Evidence that the Scheme has regard for conserving biodiversity as provided for by the Natural Environment and Rural Communities Act 2006 (NERC) (Document 3.1.13).
- 14.18 Further specific Proof of Evidence has been prepared on the following matters of Ecology:
 - a) Dormouse and Water Vole Mr Jonathan Davies (WG 1.19.1);
 - b) Bats Mr Richard Green (WG 1.20.1); and
 - c) Ornithology Dr Simon Zisman (WG 1.21.1).
- 14.19 Mr Andy Clifton (WG 1.11.1) will detail how areas of potential land contamination land within the Scheme have been identified and would be mitigated. The land use, community and recreation effects of the Scheme, including agricultural land matters, will be detailed by Ms Julia Tindale (WG 1.10.1).

- 14.20 The water quality effects of the Scheme will be detailed by Mr Richard Graham (WG 1.15.1).
- 14.21 The fluvial and pluvial flooding effects of the Scheme will be detailed by Mr Mike Vaughan (WG 1.17.1).
- 14.22 The tidal flooding effects of the Scheme will be detailed by Dr Paul Canning (WG 1.16.1).
- 14.23 Mr John Davies MBE (WG 1.23.1) will, drawing upon the technical Proof of Evidence of Dr Paul Canning (WG 1.16.1) and Mr Mike Vaughan (WG 1.17.1), detail the planning policy context of the Scheme relative to Technical Advice Note (TAN) 15 regarding Flood Risk.
- 14.24 It is notable that there are planned improvement works to existing flood protection measures at Stephenson Street that are partially within the footprint of the Project. It is understood that if these works were not done before the Project is in place there could be some detriment in flood risk as a result of the Project. This could be of the order of a 0-0.2m increase in flood depth for approximately 10 properties during a 1 in 1000 year (0.1%AEP) flood event. This would constitute a non-compliance with TAN15 until the works were completed, at which point potential for detriment would be removed.
- 14.25 Regardless of the Scheme, the Stephenson Street works have been identified as a priority by Welsh Government and NRW and has funding available in financial year 2018/19 through the Coastal Risk Management Programme, albeit dependent on contribution being raised by Newport City Council. The Welsh Government and the Project team are liaising with Natural Resources Wales and Newport City Council to consider interfaces of these works with the Project with a view to finding efficiencies for all parties.
- 14.26 NRW have also recently identified 'low spot' works in the wider area at Goldcliff Pill and Coldharbour Pill to Sudbrook Point that require improvement to retain existing levels of protection of the Gwent Levels. Similar to the approach taken with Stephenson Street, the Project team are liaising with NRW to model these areas in further detail but any temporary detriment arising as a result of the

- Scheme is likely to be minimal due to the Scheme's location on the periphery of their zone of influence.
- 14.27 The Welsh Government has demonstrated commitment to maintenance of the Gwent Levels flood defences, both in the short and long term. The Welsh Government committed to a policy of "Hold the Line" in the Severn Estuary Shoreline Management Plan (SESMP2) and identified priority schemes in the Severn Estuary Flood Risk Management Strategy (SEFRMS) which have been progressed, such as the Stephenson Street works. Most recent commitments are within the Programme for Government and Welsh Government objectives under the Well Being of Future Generations Act. These commitments provide reasonable assurances that the new section of motorway would comply with the requirement of Planning Policy Wales and TAN15 in the long term to not increase the potential impact of a flood event elsewhere and that the possible minimal increased risk in the short term will be addressed. These commitments are unsurprising in light of the significant risks to strategic infrastructure from tidal flooding, regardless of whether the Scheme proceeds.
- 14.28 The Welsh Government considers that that the Scheme is sustainable in respect of flood risk even if minimal potential levels of temporary detriment arise through delay in implementation of the Stephenson St or any other staged improvement works to the Gwent Levels flood defences. This view is taken in light of the recognition that such works are required regardless of the new road, with wider commitments to maintain flood defences in the area. Any temporary detriment must be considered in the context of the need for this nationally important piece of infrastructure. Nevertheless, the Welsh Government is continuing to liaise with NRW and Newport City Council on this matter to reduce or avoid any temporary detriment occurring.

Summary

14.29 The assessment of environmental impacts and effects of the Scheme, including consideration of the construction phase, are reported in detail in the ES together with mitigation measures.

- 14.30 The development of appropriate mitigation measures has been an integral part of project development and the subject of regular meetings and dialogue with representatives of Natural Resources Wales, Cadw, the relevant Local Authorities, and other stakeholders.
- 14.31 Particular consideration has been given to potential impacts on the Gwent Levels Sites of Special Scientific Interest (SSSIs), the River Usk Special Area of Conservation (SAC) and the Severn Estuary SAC, Special Protection Area (SPA) and Ramsar site. This recognises duties including Section 28G of the Wildlife and Countryside Act, the Natural Environment and Rural Communities (NERC) Act and the Habitats Regulations.
- 14.32 Further details on the environmental engagement as well as the process of assessing the effects on the different topics of the environment, the proposals for suitable mitigation and the overall conclusion of the effects of the Scheme will be described in more detail by Dr Peter Ireland (WG 1.7.1) who will in turn refer to specialist inputs of:
- a) Dr Michael Bull on air quality.
- b) Mr Phil Evans on noise and vibration.
- c) Mr Mick Rawlings on cultural heritage effects.
- d) Mr Nick Rowson on landscape and visual effects.
- e) Dr Keith Jones on nature and conservation effects.
- f) Mr Jonathan Davies on dormouse and water vole.
- g) Mr Richard Green on bats.
- h) Mr Simon Zisman on ornithology.
- i) Mr Andy Clifton on contaminated land.
- j) Ms Julia Tindale on land use, community and recreation effect.
- k) Mr Richard Graham on water quality.
- I) Mr Mike Vaughan on fluvial and pluvial flooding.
- m) Dr Paul Canning on tidal flooding.
- n) Mr John Davies MBE on the planning policy context of Section 28G of the Wildlife and Countryside Act 1981 and Technical Advice Note (TAN) 15 regarding Flood Risk.

15. Carbon

- 15.1 Carbon emissions, as a result of both construction and the future operation of the highway network with and without the Project in place have been carefully considered in the context of relevant policy and legislative requirements.
- 15.2 As set out in the published Carbon Report within the ES (Document 2.3.2), the emissions estimated for the construction of the Scheme (522,500 tCO2e) are a small fraction (1%) of the total emissions associated with the South Wales highway network by 2037, including those of vehicles using it.
- 15.3 Modelling indicates that the total annual user carbon emissions on the south Wales highway network would reduce, albeit by less than 1% in 2022, as a result of the Scheme. Whilst there would be increased levels of traffic on the network at that time the reduction of stop-start traffic conditions as well as reduced journey lengths on the new section of motorway, would make those trips more efficient.
- 15.4 Mr Ben Sibert's design Proof of Evidence and Mr Barry Woodman's construction Proof of Evidence show that Capital Carbon reduction was actively considered in the development of the Scheme, so that Capital Carbon has been reduced. For example, minimising imported materials; minimising waste; minimising the overall quantities of earthworks and maximising the use of material generated on-site including the safe re-use of contaminated soils. These measures would significantly reduce the number of movements by construction vehicles on local roads with carbon, as well as other social and health, benefits.
- 15.5 There is a need to achieve a trajectory of overall emissions reduction, as established for the UK by the Climate Change Act 2008 (Document 3.1.14) and most recently for Wales by the Environment (Wales) Act 2016.
- 15.6 Part 2 of the Environment (Wales) Act 2016 places a duty on Welsh Ministers to ensure a reduction of 80% in net Welsh greenhouse gas emissions by 2050. Whilst neither Act requires specific projects to be subject to these targets, assessment demonstrates that the Scheme would make a positive contribution towards a reduction in user carbon emissions. This also accords with objective 10

- of the M4 proposals which was 'Reduced greenhouse gas emissions per vehicle and/or person kilometre'.
- 15.7 Welsh Ministers are also required to establish carbon budgets and interim emissions reduction targets through secondary legislation. 'Pinchpoint' highway improvements (for the same reasons as evident on the M4) can play a necessary part in transport networks reducing their net emissions alongside technological improvements such as ultra low and zero emission vehicles. This is demonstrated in the published Highways England 'Carbon Routemap'⁸.

 Transport related measures cannot be considered in isolation from wider measures to achieve reductions in carbon emissions.
- 15.8 A Carbon Report for the Scheme is in Appendix 2.4 of the ES and the methodology shall be discussed further by Mr Tim Chapman (WG 1.13.1) relying on the traffic Proof of Evidence of Mr Bryan Whittaker (WG 1.2.1). Measures to minimise construction carbon will be detailed by Mr Barry Woodman (WG 1.6.1). Further consideration of policies relevant to carbon will be detailed by Mr John Davies MBE (WG 1.23.1).

- 15.9 Carbon emissions, as a result of both construction and the future operation of the highway network with and without the Project in place, have been carefully considered in the context of relevant policy and legislative requirements.
- 15.10 Modelling indicates that the total annual user carbon emissions on the south Wales highway network would reduce, albeit by less than 1% in 2022, as a result of the Scheme. Despite increased levels of traffic on the network at that time, the reduction of stop-start traffic conditions as well as reduced journey lengths on the new section of motorway would make those trips more efficient.
- 15.11 A Carbon Report for the Scheme is in Appendix 2.4 of the ES and the methodology shall be discussed further in the Proof of Evidence Mr Tim Chapman (WG 1.13.1) relying on the traffic Proof of Evidence of Mr Bryan

⁸ http://assets.highways.gov.uk/specialist-information/knowledge-compendium/2013-2014-knowledge-programme/HACR_Infographic.pdf

Whittaker (WG 1.2.1). Measures to minimise construction carbon will be detailed by Mr Barry Woodman (WG 1.6.1). Further consideration of policies relevant to carbon will be detailed by Mr John Davies MBE (WG 1.23.1).

16. Sustainable Development

- 16.1 The Welsh Government is subject to the duties relating to sustainable development set out in the Well-being of Future Generations Act 2015 (Document 3.1.18).
- 16.2 The Well-being of Future Generations (Wales) Act 2015 (the 2015 Act) is about improving the social, economic, environmental and cultural well-being of Wales. It makes the public bodies listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach. The 2015 Act defines sustainable development as the process of improving the economic, social, environmental and cultural well-being of Wales by taking action in accordance with the sustainable development principle, aimed at achieving the seven well-being goals as set out in the Act. Section 5 of the 2015 Act defines five ways of working that make up the sustainable development principle.
- 16.3 The M4 Corridor around Newport Plan, and much of the subsequent development of the Scheme, predated publication of the Welsh Government's Well-being objectives under the 2015 Act. Nonetheless, the three pillars of sustainable development policy at that time the economy, the environment and society have been integral to the development of the Plan and Scheme, as demonstrated by the WelTAG appraisal process that helped inform Welsh Ministers in their decision making that led to the adoption the Plan and modified Preferred Route.
- 16.4 Since 2008 when WelTAG (Document 6.1.4) was first published by the Welsh Government, WelTAG appraisal has been undertaken, with problems being identified and objectives being agreed. With stakeholder participation a comprehensive series of alternatives were then appraised against the identified objectives, in addition to the Welsh Impact Areas that relate to the Welsh Government's three pillars of sustainable development the economy, the environment and society.

- 16.5 The WelTAG process is detailed within Chapter 4 of the ES. In summary, as part of the WelTAG process associated with the M4, reports have been prepared on the likely environmental, social and economic impacts of the Scheme, together with Health Impact Assessments and Equality Impact Assessments of the proposals. A separate Environmental Report was also undertaken in accordance with the SEA Directive. These reports were integral to the WelTAG appraisal, thus ensuring that the Plan (and subsequent Scheme) adopted by the Welsh Government resulted from an integrated approach that considered all aspects of sustainable development. Route options for the Scheme were then considered and assessed as part of DMRB Stage 2 technical and environmental reports (Documents 4.5.18 and 4.5.19) that were also produced, in accordance with the Design Manual for Roads and Bridges guidance (Document 6.1.8). This assessment further took into account multi-criteria assessment, which included engineering, environment, traffic and economic considerations.
- 16.6 The 2016 Integrated Health and Equalities Impact Assessment (Document 2.3.2, Appendix 5.4) considered how the Scheme could influence public health and wellbeing in the areas surrounding the proposed new section of motorway and the existing M4 around Newport through environmental and socio-economic pathways. It concluded that the Scheme would have small quantifiable net positive health impacts due to changes in environmental noise and air pollution exposure, together with likely health and wellbeing benefits from employment, training and investment associated with the Scheme. No significant permanent adverse health and wellbeing impacts due to changes in access to services, recreation/physical activity or community severance or other relevant social pathways were identified.
- 16.7 Those most vulnerable to air pollution (such as those with respiratory conditions, older people, and those with existing burdens of poor health which in some cases may be associated with lower socio-economic status) would benefit more from the improvements in air quality around the existing M4. The nature of the Scheme itself is not such that any specific disproportionate impact on individuals

- or groups based on their gender, race, ethnicity, religion, sexual orientation or sexual preference is anticipated.
- 16.8 The core guidance on the Well-being of Future Generations (Wales) Act 2015 (Document 5.2.4) in respect of collaboration advises on how the arrangements put in place with other organisations, particularly in the private sector, could encourage public bodies, including the Welsh Government, to contribute to the Well-being goals and take account of the five ways of working. The Welsh Government decided to follow an Early Contractor Involvement (ECI) method to procure and progress the proposed Scheme and the tender documents for the Scheme asked a number of questions regarding the management of the project; how the environmental impacts would be addressed and minimised; how the carbon footprint would be reduced; and how the main challenges would be dealt with.
- 16.9 This was taken forward by the Contractors that were awarded the contract by modifications to the design, for example to address the environmental impact of the Scheme and reduce its carbon footprint (as detailed by Mr Barry Woodman (WG 1.6.1)). The early involvement of the contractor at the design stage with the ECI contract enabled the design and construction methods to be developed in a collaborative manner that addressed the impact on the SSSIs together with all other environmental, economic and social impacts in a comprehensive and integrated manner. As explained in more detail by Mr John Davies MBE (WG 1.23.1), through the procurement arrangements and early involvement of the contractor, the Welsh Government influenced the way the Scheme was developed in line with the sustainable development principle and maximised its contribution to the well-being goals.
- 16.10 A Sustainable Development Report (Document 2.3.11) has been published, which describes how the proposed Scheme aligns to the goals of the Wellbeing 2015 Act. The Proof of Evidence of Mr John Davies MBE will consider the application of the Sustainable Development principle during development of the project and also alignment with the recently published Welsh Government objectives under the Wellbeing 2015 Act.

- 16.11 One way sustainability has been independently tested is via 'CEEQUAL' accreditation. CEEQUAL is an award scheme designed to promote, record and recognise improvements in sustainability and environmental performance in civil engineering projects. In June 2016 the Scheme received an 'Excellent' rated 'Sustainability Performance Assessment' with a 78.8% score for work undertaken by the Welsh Government and the project team through to the completion of the outline design.
- 16.12 The award illustrates the detailed review and consideration of options across the project, at the development and outline design stages, so that impacts to the environment and local community have been minimised where possible, and opportunities for improvements maximised. In particular, the CEEQUAL assessment confirmed that there is evidence that the Client and Designer have actively adopted the principles of sustainable development in the planning and development of the project.
- 16.13 The Welsh Government has applied a Sustainable Development approach throughout developing a solution to the problems associated with the M4 around Newport. Early strategic work considered all social and environmental factors and involved stakeholders to identify aims and objectives. A long term approach has been taken to considering the transport and wider needs of future generations. Option assessment considered preventative packages of measures seeking to reduce demand on the network before identifying the need for a new section of road. The proposed Scheme has been designed in collaboration with public transport enhancements including electrification of the mainline railway and Metro, enhancing access to existing and potential public transport measures. The new section of motorway and reclassification of the existing M4, in combination with Metro is a hugely important part of the Welsh Governments vision for an efficient, integrated transport system for Wales.

Summary

16.14 The Welsh Government has applied a Sustainable Development approach throughout developing a solution to the problems associated with the M4 around Newport. Early strategic work considered all social, environmental and

environmental factors and involved stakeholders to identify aims and objectives. A long term approach has been taken to considering the transport and wider needs of future generations. Option assessment considered preventative packages of measures seeking to reduce demand on the network before identifying the need for a new section of road. The proposed Scheme has been designed in collaboration with public transport enhancements including electrification of the mainline railway and Metro, enhancing access to existing and potential public transport measures. The new section of motorway and reclassification of the existing M4, in combination with Metro is a hugely important part of the Welsh Governments vision for an efficient, integrated transport system for Wales.

16.15 The Proof of Evidence of Mr John Davies will consider the application of the Sustainable Development principle during development of the project and also alignment with the recently published Welsh Government objectives under the Wellbeing Act.

17. Construction

- 17.1 Subject to satisfactory completion of the statutory procedures, the Early Contractor Involvement (ECI) team would proceed to detail design and construction of the Scheme. Construction could commence in Summer 2018 and would be expected to take approximately forty two months.
- 17.2 The early appointment of an ECI team has contributed to iterative improvement of the design, environmental mitigation strategies and construction methodology. The construction scenario presented in the Buildability Report (Appendix 3.1 to the Environmental Statement) provides an example of the level of detail that has been achieved. The ECI team bring robust experience in all construction and technical fields and experience of large scale projects.
- 17.3 ECI has allowed the team to challenge each other to make optimal use of all land impacted by the Scheme and selecting it with a holistic perspective of environmental, SSSI, social, economic and technical impacts, with a particular focus on environmental mitigation, earthworks strategy, temporary works, temporary land and major bridge construction.
- 17.4 ECI has resulted in the design being reviewed by a team of experienced construction engineers coordinating the technical decisions to a coherent design suitable for implementing modern, state of the art and economical construction techniques with appropriate environmental management.
- 17.5 As detailed by Dr Peter Ireland (WG 1.7.1), environmental constraints and challenges were, and remain, a key consideration during the development of the Scheme. Mr Ben Sibert (WG 1.5.1) will explain how the alignment of the route was established taking into consideration the sensitive environmental designations and features of national and international importance. Land take has been optimised and key environmental assets avoided wherever it has been practicable to do so. Evidence will demonstrate how the landscape character is reflected in the design of the published Scheme and how the landscape, biodiversity and cultural heritage resources of the Gwent Levels have been respected. Evidence will also demonstrate how the effects on agricultural interests has been minimised.

- 17.6 As detailed by Dr Peter Ireland (WG 1.7.1), the ES identifies the need for an Environmental Co-ordinator (ECO) during construction and sets out the key role and responsibilities of that position. It also (at ES paragraph 18.5.3) states that the ECO would be supported by Environmental Clerks of Works and by the Contractor's Site Environmental Manager. There would, therefore, be at least three employees focused on environmental management during the construction of the scheme.
- 17.7 As detailed by Mr Barry Woodman (WG 1.6.1), one of the advantages of the Welsh Government's Early Contractor Involvement approach has been that whilst undertaking the preliminary design the contractor and designer has been able to develop a better understanding of the potential environmental impacts which may occur during construction and appropriate mitigation measures have been identified to help address risks, and inform the Environmental Statement accordingly. For example, the contractor has identified potential construction impacts and helped develop proposed mitigation for subjects such as noise, vibration, dust, water, archaeology, ecology, waste management pollution control and emergency procedures. This shows how the construction and design team have been able to work collaboratively for the good of the Scheme and those likely to be affected.
- 17.8 In addition, the ECI approach has better allowed for an understanding of construction issues and risks through all stages of the design, which is of particular relevance where complex technical solutions and specialist construction methods would be required. For example, the need to limit the Scheme footprint in the SSSI areas, and avoiding work in the wetted river channel and appropriate plant selection and methods of work to minimise vibration impact of fish in the River Usk SAC. Again, this will be detailed by Mr Barry Woodman (WG 1.6.1) as part of his Proof of Evidence.
- 17.9 As will be detailed by Mr Barry Woodman (WG 1.6.1), an integrated Health,
 Safety and Environmental Management Plan would be prepared for the Scheme
 to manage during the construction works: general issues; health and safety
 issues; and environmental issues. At this time, i.e. pre-construction phase, the

- environmental section of the plan has been prepared. This document is referred to as the Pre Construction Environmental Management Plan (CEMP) and is contained at Appendix 3.2 of the Environmental Statement.
- 17.10 As will be detailed by Dr Peter Ireland (WG 1.7.1), the CEMP, as set out in ES paragraph 18.1.5, helps not only to record environmental risks and identify how they would be managed during the construction period, but provides a framework to ensure that all parties are aware of their responsibilities, including the Welsh Government. It also serves to help ensure the requirements of the Assessment of Implications on European Sites (AIES), the Environmental Statement and the Project Commitments Register are met.
- 17.11 Although these commitments are non-statutory, the Welsh Government treats them as binding. The contractor would be responsible for the implementation of the Management Plan(s) and ensuring that all members of the project team, including subcontractors, comply with the stated procedures and commitments. The Welsh Government's Employer's Agent also has a responsibility for ensuring compliance with these commitments.
- 17.12 The CEMP identifies potential construction impacts and proposed mitigation for subjects such as noise, vibration, dust, water, archaeology, ecology, waste management pollution control and emergency procedures. The plan would be updated prior to commencement of the construction phase and periodically throughout the construction phase. Dr Peter Ireland (WG 1.7.1) will provide further detail on the preparation and content of the CEMP.
- 17.13 Relevant construction activities would be subject to appropriate assessment and Section 61 agreements with the Environmental Health Officers representing Newport City Council and Monmouthshire County Council, subject to onsite monitoring and review of mitigation measures as appropriate. Mr Barry Woodman (WG 1.6.1) will detail the good construction practice that has been identified for the Scheme, such as providing temporary screening or bunding where appropriate, and the use of dust capture and suppression for all cutting, sawing and demolition with appropriate plant and equipment.

17.14 Further details on the construction aspects of the Scheme are described in more detail by Mr Barry Woodman (WG 1.6.1).

Summary

- 17.15 Subject to satisfactory completion of the statutory procedures, the Early
 Contractor Involvement (ECI) team would proceed to detail design and
 construction of the Scheme. Construction could commence in Summer 2018 and
 would be expected to take approximately forty two months.
- 17.16 The early appointment of an ECI team has contributed to iterative improvement of the design, environmental mitigation strategies and construction methodology. The construction scenario presented in the Buildability Report (Appendix 3.1 to the Environmental Statement) provides an example of the level of detail that has been achieved. The ECI team bring robust experience in all construction and technical fields and experience of large scale projects.
- 17.17 Further details on the construction aspects of the Scheme are described in more detail by Mr Barry Woodman (WG 1.6.1).

18. Land Acquisition and Compensation

- 18.1 Relevant to the draft Compulsory Purchase Order (Documents 2.1.5 and 2.4.3) is the need to also act in accordance with the Human Rights Act 1998 (Document 3.1.11) and take into consideration The National Assembly for Wales Revised Circular on Compulsory Purchase Orders (NAFWC 14/2004). A Compulsory Purchase Order should only be made where there is a compelling case in the public interest. An acquiring authority, including Welsh Ministers, should be sure that the purposes for which it is making a Compulsory Purchase Order sufficiently justify interfering with the human rights of those with an interest in the land affected, having regard, in particular, to the provisions of Article 1 of The First Protocol to the European Convention on Human Rights and, in the case of a dwelling, Article 8 of the Convention.
- 18.2 The Welsh Government considers that there is a compelling case for the Scheme and that the public interest necessitates temporary and permanent acquisition of land and rights. As aforementioned, the Scheme is considered to be the sustainable, long term solution to the social, environmental and economic problems associated with the main gateway into South Wales.
- 18.3 The land-take and rights to be acquired as shown in the draft Compulsory Purchase Order are the minimum necessary to construct, mitigate, operate and maintain the proposed Scheme. Land required only during the construction period for temporary works such as traffic diversions has been separately identified on the Land Referencing Plans, made available to the public as part of the publication of the draft Compulsory Purchase Order. Mr Ben Sibert (WG 1.5.1) and Mr Barry Woodman (WG 1.6.1) will respectively identify why certain land is required permanently and temporarily during the construction period. Dr Peter Ireland (WG 1.7.1) will explain why land is required for essential environmental mitigation.
- 18.4 The provisions of the Acquisition of Land Act 1981 (Document 3.1.6) would apply as explained in the Public Notice relating to the publication of the draft Compulsory Purchase Order (Documents 2.2.5 and 2.4.2).

- 18.5 The new section of motorway would run through a mix of agricultural land, industrial land, woodland, and residential land, and would require approximately 721 hectares of land in total (including temporary land for construction and environmental mitigation). This includes areas of environmental and historical interest.
- 18.6 The Scheme would have effects upon SSSI sites on both the Caldicot and Wentlooge Levels, the River Usk (Lower Usk) SSSI and the River Usk SAC. The development of the proposals has sought to minimise the area of land required. SSSI mitigation land would be provided as part of the Scheme mitigation measures to offset the loss of grazing marsh. This would facilitate ecological conservation and also provide a degree of enhancement.
- 18.7 Exchange land would be provided for the small areas of common land and allotments that would be required.
- Twelve residential buildings would require demolition as a result of the Scheme, five of which are already in Welsh Government ownership, including one Grade II listed building namely Woodland House (known locally as 'the Vicarage') in Magor. Consideration of impact on Woodland House was taken into account during strategic determination of the need for the Preferred Route to be within this area. Its location is closely bounded by numerous significant constraints including the A4810, existing M4 J23A, Wales1 Business Park and Magor Brewery to the West and densely populated areas of Magor to the East. For this reason its demolition is not reasonably avoidable and must be considered against the wider justifications for the Scheme.
- 18.9 Prior to the Public Local Inquiry, the Welsh Ministers made an application for listed building consent to Monmouthshire County Council under section 10 of the Planning (Listed Buildings and Conservation Areas) Act 1990 (Document 3.1.8) for the demolition of Woodland House. The application was validated on 3rd October 2016 and has been called in by the Welsh Ministers for determination in light of its interrelationship with the Project. The Planning Inspectorate have been

- requested by the Welsh Ministers to jointly consider the matter in the Public Local Inquiry.
- 18.10 In advance of, and during, the statutory process Welsh Government and our representatives in the employer's agent team and the Project team, have engaged with businesses in order to understand and, where necessary and appropriate, mitigate potential impacts of the Scheme on their operations. These businesses include ABP and their tenants, Roadchef, Marshalls, Birdport, AIC, Parc Golf Club, Air Products, TATA and numerous farmers.
- 18.11 For example, it was identified that the Scheme would require relocation of the Marshalls production facility off Corporation Road. The River Usk pylon construction would need to commence here early in the programme. If the company waited until the making of Orders to start planning relocation they would inevitably experience significant financial, and potentially job, losses. The Welsh Government has supported Marshalls in searching for and identifying a potential local relocation site and are providing technical support regarding development appraisal. The site is on Welsh Government owned land and the flexibility of development work on it is being maximised to allow sale to another party if necessary, so minimising abortive costs should the Scheme not proceed for any reason.
- 18.12 Particular aspects of entitlement to and quantum of compensation are not for consideration at the Public Inquiry. These matters would be dealt with if the Welsh Ministers, after considering the Inspectors' Report, decide to make the Orders, and serve Notices to Treat and Enter onto land. Compensation would then be negotiated by the Valuation Office Agency, which acts on behalf of the Welsh Government. If agreement could not be reached, affected parties could refer their case to the Upper Tribunal (Lands Chamber) for determination. There are also rights of appeal thereafter.
- 18.13 As part of the engagement with those affected by the draft Compulsory Purchase Order the Welsh Government has already provided information on proposed boundary treatments and access track construction to various

landowners/tenants and/or their Agents. This has resulted in modifications to the draft Orders being sought, with the agreement of those affected. Liaison with those affected by the draft Compulsory Purchase Order will continue. Welsh Government are open to discussions with affected parties in relation to matters of accommodation works and will continue to be during detailed design and construction.

- 18.14 The Welsh Government's approach relating to acquisition of land is:
 - a) To apply the relevant legislation and policy consistently and fairly
 - b) To protect, as far as is reasonably possible, the rights of those affected.
- 18.15 The National Assembly for Wales Revised Circular on Compulsory Purchase Orders NAFWC14/2004 (DD523) provides advice to acquiring authorities in Wales that make compulsory purchase orders (CPO) to which the Acquisition of Land Act 1981 applies.

Summary

- 18.16 The Welsh Government considers that there is a compelling case for the Scheme in the public interest that necessitates temporary and permanent acquisition of land and rights.
- 18.17 The land-take and rights to be acquired as shown in the draft Compulsory Purchase Order are the minimum necessary to construct, mitigate, operate and maintain the proposed Scheme. Mr Ben Sibert (WG 1.5.1) and Mr Barry Woodman (WG 1.6.1) will respectively identify why certain land is required permanently and temporarily during the construction period. Dr Peter Ireland (WG 1.7.1) will explain why land is required for essential environmental mitigation.
- 18.18 The development of the proposals has sought to minimise the area of land required from environmentally protected areas. SSSI mitigation land would be provided as part of the Scheme mitigation measures to offset the loss of grazing marsh. This would facilitate ecological conservation and also provide a degree of enhancement.

- 18.19 Exchange land would be provided for small areas of common land and allotments that would be required.
- 18.20 Twelve residential buildings would require demolition as a result of the Scheme, five of which are already in Welsh Government ownership, including one Grade II listed building namely Woodland House (known locally as 'the Vicarage') in Magor, in respect of which an application for Listed Building Consent has been made and is being considered jointly at the Public Local Inquiry.
- 18.21 In advance of, and during, the statutory process the Welsh Government and our representatives have engaged with businesses with a view to understanding and, where necessary and appropriate, mitigating potential impacts of the Scheme on their operations. These include ABP and their tenants, Roadchef, Marshalls, Birdport, AIC, Parc Golf Club, Air Products, TATA and numerous farmers.
- 18.22 Particular aspects of entitlement to and quantum of compensation are not for consideration at the Public Local Inquiry. These matters would be dealt with if the Welsh Ministers, after considering the Inspectors' Report, decide to make the Orders, and serve Notices to Treat and Enter onto land. Compensation would then be negotiated by the Valuation Office Agency.

19. **Newport Docks**

General

- 19.1 The Scheme would pass over Newport Docks, which are owned and operated by Associated British Ports (ABP). The proposed viaduct would allow access beneath it for land and water based port operations. A new junction would be provided in the vicinity of the docks, linking to the A48 Newport Southern Distributor Road. ABP are a statutory undertaker and the competent harbour authority for Newport Docks and have lodged an objection under Section 16 of Acquisition of Land Act and have various duties under the Transport Act 1981.
- 19.2 Design, including that of the route, viaduct and junction are described in the Proof of Evidence of Mr Ben Sibert (WG 1.5.1) and the construction methodology for the works are described by Mr Barry Woodman (WG 1.6.1).
- 19.3 The impacts on shipping are described by Mr Jonathan Vine (WG 1.22.1) and the impacts of the Scheme on port economics by Mr Andrew Meaney (WG 1.4.1).

Explosives and Hazardous Substances Licenses

- 19.4 Appropriate consideration has been given to revisions to existing hazardous substance consents and explosives licences within the Docks (and elsewhere) necessary as a result of the Scheme. A full assessment of the impact of the Scheme is within the Hazardous Installations Report at Appendix SS2.2 of the December 2016 ES Supplement (Document 2.4.14). The Health and Safety Executive (HSE) have also been consulted.
- 19.5 ABP holds an explosives licence issued by the HSE. HSE has stated in a letter dated 9 May 2016 (paragraph 5.2.10 of Appendix SS2.2 of the December 2016 ES Supplement (Document 2.4.14)) that revised limits of explosive quantities would need to be placed on this explosives licence in order to accommodate the Scheme. This would mean smaller consignments of explosives would be allowed at a berth in the port.
- 19.6 The Welsh Government has liaised with the Ministry of Defence (MoD) regarding the reduced explosives handling capacity of Newport Docks as a result of the

Scheme. The Welsh Government understands that, given that the MoD has access to other ports elsewhere in the UK, a reduced explosives handling capacity of Newport Docks would not significantly affect the MoD's ability to import and export munitions to and from the UK. A letter from the Defence Infrastructure Organisation dated 10 January 2017 has confirmed that the Scheme falls outside of MOD safeguarding areas and the MOD, therefore, has no safeguarding objections to the Scheme. Therefore, the Welsh Government considers that any reduction in explosives handling quantities at the Docks is not a significant issue in terms of national security.

19.7 ABP holds a hazardous substance consent associated with the operations of Origin UK Operations Ltd in Shed 9 and 9a. The consent allows the co-storage of ammonia nitrate and urea. Origin's operations are classed as a lower tier Control of Major Accident Hazard (COMAH) establishment by the HSE. There are currently few operating restrictions placed on this consent and it therefore has a large consultation distance meaning the HSE would 'advise against' the Scheme without mitigation. As such, if the Scheme were to proceed without mitigation, the hazardous substance consent would be revoked by Newport City Council meaning Origin could not operate at its current location (paragraphs 5.2.2 to 5.2.5 of Appendix SS2.2 of the December 2016 ES Supplement (Document 2.4.14)). Assessment by the Project development team has identified that Origin could reasonably be relocated further south in the Docks to a location that the HSE would not 'advise against' in relation to the Project, allowing a new hazardous substance consent to be obtained by ABP and business operations to continue.

History of Vertical clearance at Newport Docks

19.8 The Design Manual for Roads and Bridges (Document 6.1.8) defines the requirements for UK highway structures, including the process to be followed when determining the required headroom. It explains in BD 2/12, Technical Approval of Highway Structures, paragraph 2.17, that "In cases where a structure is in the ownership of the Overseeing Organisation but accommodates a highway, railway, waterway or other infrastructure that is the responsibility of

⁹ Consented 19 March 1996 Application Number 96/0240/HSC

another owner, authority or Third Party, the Designer or Assessor must consult the party concerned and seek its comments on, and if possible, acceptance of the Proposal. This should be recorded in the AIP [Approval in Principle document]." I also note that TD27/05, Cross-Sections and Headrooms, states in paragraph 6.1.8 "The Headroom provision at Underbridges for trunk roads passing over other authorities' facilities must be agreed with the relevant highway, railway or water authority (road, rail, navigation or river authority in Scotland)."

- 19.9 The DMRB therefore does not prescribe requirements for headroom beneath bridges, such as the River Usk Crossing over Newport Docks, and instead requires a process of consultation and agreement where possible with other authorities.
- 19.10 Dialogue between Associated British Ports (ABP) and the Welsh Government regarding clearance between the proposed new bridge structure and the impounded water level of the docks has been ongoing since the early 1990s but has not reached a position of agreement on the effects of the structure on the passage of ships beneath the bridge and in to North Dock.
- 19.11 Following the second public consultation in July 1994, a further written consultation regarding the alignment and crossing height over the Newport docks was undertaken with those statutory authorities which had an interest in this section of the Scheme, including ABP.
- 19.12 At a meeting on 2 December 1994 between ABP, the Welsh Government and its advisors and the relevant statutory authorities a range of structure heights was discussed for the three docks crossing alignments under consideration at that time: routes X, Y and Z (Refer to consultation plan Document 4.1.18). High, Medium and Low level heights were discussed for Route Y at 44m, 26m, 6m [over the Docks] and 44m, 26m and 8m [over the River Usk] respectively. Route Y corresponds closely to the current proposals published as the draft Orders. ABP stated that their air draft (vertical clearance from the water level) requirement for any new structure on Route 'X' (which crossed the dock in the

- vicinity of the main lock) was 61m based on a widened sea lock. Their present air draft limitation, as a result of an existing power cable crossing the entrance to South Dock, was reported to be 51m (46m + 10%).
- 19.13 The first Preferred Route was published on 12th July 1995 along route Y across the Junction Cut. Paragraph 8.4.3 of the report Statement of Results of Second Public Consultation and Further Examination of Options for Crossing the River Usk and Reasons for Selection of Preferred Route 1995 (Document 4.1.19), stated that a height of "between about 20m and 30m would appear to enable a balance to be struck between the competing factors of navigation clearance and limiting the effect on land based activities on one hand and visual intrusion on the other."
- 19.14 An Eagle Lyon and Pope (ELP) Shipping report, November 1998 made no formal recommendations but concluded with a schedule of possible clearance height options ranging from 45m down to 15m. Section 6 Option 3 reported 'A clearance of the order of 25 metres would accommodate nearly all of the recent shipping with the principal exception of Baileys Dry dock. For other North Dock and River Usk users some adjustments to the present pattern of ship types and sizes should be possible with minimal expectation of commercial disadvantage.'
- 19.15 This report also recommended (in section 3.3) an air draft safety margin of 0.5m from the top of a vessel to the bridge soffit (the lowest point of the structure).
- 19.16 At that time, ABP had not confirmed in writing to the Welsh Government the impounded water level in the Newport Docks and so the following paragraphs explained the derivation of levels from published data.
- 19.17 The water level in the Newport Docks varies and paragraph 3.3 of the 1998 ELP report acknowledges this in recommending that "...for the purposes of determining the datum for water level for the bridge height, the convention of Mean High Water Springs is adopted".

- 19.18 ABP states on their web site¹⁰: "The dock level cannot be guaranteed but will generally be held at the average level of 11.74m[ACD]". Further clarification of this matter was obtained after the publishing of draft Orders in March 2016.
- 19.19 With reference to Admiralty chart #1176 (no. 11 dated February 2016)
 (Document 7.1.15) and the Admiralty Tide Tables (pg 428, NP201, UKHO, 2016)
 (Document 7.1.16), Chart Datum (CD) for Newport (Alexandra) Docks is 5.81m
 below Ordnance Datum.
- 19.20 The average level of water in the Newport Docks was thus deduced to be 5.93mAOD (Above Ordnance Datum) from these references.
- 19.21 The Mean High Water Springs (MHWS) level at Newport defined in the Admiralty chart #1176 and the Admiralty Tide Tables (pg 428, NP201, UKHO, 2016) (Document 7.1.16) is +12.3mACD or +6.49mAOD, which is 0.56m above ABP's quoted average level.
- 19.22 The Highest Astronomical tide (HAT) at Newport Docks is quoted by the Environment Agency as +13.36mACD or +7.55mAOD on their web site¹¹.
- 19.23 The Admiralty Tide Tables (Document 7.1.16) give the value of +13.7mACD, and +7.9mAOD.
- 19.24 Notwithstanding the technical advice of Eagle Lyon and Pope the November 1998 report advising of MHWS as a reference for bridge clearances, since the mid 1990s a level of +7.56mAOD has been consistently used as the dock water reference level by the Welsh Government in developing the proposals for the new section of motorway. This approximates to the HAT quoted by the Environmental Agency. Bridge clearances are now quoted using HAT by convention on Admiralty Charts. This is made explicit on Admiralty Charts such as Admiralty Chart #1176 (no. 11 dated February 2016) (Document 7.1.15).

¹⁰ http://www.southwalesports.co.uk/Port_Information/Newport/Newport_Ship_Acceptance_Table/

http://apps.environment-agency.gov.uk/river-and-sea-levels/riverstation.aspx?StationId=4240&CatchmentId=163&AreaId=25&RegionId=1

- 19.25 Studies on the effects of the Scheme on the passage of ships were undertaken by Eagle Lyon and Pope in 1994, 1998, 2001 and 2006 and on-site shipping surveys were carried out in 2006 and 2007. However, during the historical development of the Scheme, the Welsh Government and ABP did not reach agreement on the data on shipping nor the impacts on ship movements.
- 19.26 In 2014, the Plan (Document 4.5.7) and the Preferred Route (Document 4.6.8) did not define the Welsh Government's proposals for the clearance over the junction cut and in the 2014 Stage 2 Scheme Assessment Report (S2SAR) (Document 4.5.18), the options for the height of the crossing were presented, albeit without any particular option being recommended. It should also be noted that in the S2SAR, horizontal alignment options to route the proposed new motorway to the northern extents of the Newport Docks were considered and rejected due to environmental, engineering design, construction, junction strategy and contaminated land issues, and the estimated additional costs in excess of £100M to deal with waste material arising as a result of the route passing through the Docks Way Landfill site.
- 19.27 Only in the above mentioned report, entitled 'the Statement of Results of Second Public Consultation and Further Examination of Options for Crossing the River Usk and Reasons for Selection of Preferred Route 1995' (Document 4.1.19), did the Welsh Government state publically details of clearances over the Newport Docks for the River Usk Crossing until publishing draft Orders in March 2016 in the Scheme Order Schedule 3 Plan of Bridge (Document 2.1.1).
- 19.28 The Welsh Government considered the balance of the competing factors which influence the decision making on the height of the River Usk Crossing: cost and complexity of construction, impact on the operations of Newport Docks and visual impacts. Clearances of 14.5m, 25.5m, 40m and 60m were appraised during Stage 2 in 2014 which concluded additional costs of £90m and £220m for the 40m and 60m clearance options compared to the 25.5m clearance option (excluding a Docks Way junction). The addition of the Docks Way junction would significantly increase these estimates due to the additional viaducts that would be required.

- 19.29 Having considered these factors, the Welsh Government determined that a 25.5m clearance over the Junction Cut provided an appropriate balance of these factors and proceeded to publish draft Orders on this basis.
- 19.30 At meetings in July 2016 ABP advised that new outer lock gates are to be installed in Summer 2017 with a top level of 14.21m ACD (8.4mAOD). Air draft safety clearance was also discussed and ABP explained the rational for a 1.0m margin, which the Welsh Government has accepted the need for. The Welsh Government advised ABP in a letter of 16 September 2016 that they would be taking these factors into account and subsequently, in December 2016, issued an Amendment Scheme Order (Documents 2.4.16 and 2.4.20) for a clearance of 26.2m.
- 19.31 Further explanation of dock water levels and clearances, and their impact on shipping, is provided in the Proof of Evidence of Mr Jonathan Vine (WG 1.22.1)

Bridge Protection Measures

- 19.32 The potential need for additional protection measures for the bridge was discussed at a meeting between the Welsh Government and ABP in May 2016. This was discussed further at a meeting in July 2016 involving Welsh Government's shipping expert and ABP's marine operations manager and it was agreed that a risk assessment was required. The first stage of which is the identification of shipping types and geometric assessment as to how errant ships could impact on the bridge. The result of the first assessment were discussed with ABP at a meeting in September 2016 and ABP requested the risk assessment be extended to consider war ships, a cruise ship, an 8,000 DWT cargo ship and a 47,000 DWT cargo ship, which was subsequently done.
- 19.33 The Welsh Government consider that additional physical works will be required in the south dock to prevent larger ships getting close to the viaduct and ensure suitable protection of the bridge.
- 19.34 On 17 January 2017, the Welsh Government wrote to ABP to seek their opinion on works options being explored by the Welsh Government and liaison is ongoing. It is likely that a supplementary CPO will be prepared to deliver the

protection measures. If so, it shall be published in due course to inform the Inquiry. Costs associated with these measures will need to be considered in terms of whether they may be covered through current risk allocations or additional Scheme budget.

Overall Impacts

- 19.35 Avoidance and minimisation of negative impacts on the docks, and maximisation of positive impacts, have long been a consideration in development of the proposals. The Welsh Government and ABP have held a series of technical meetings discussing a range of topics relating to the interface of the Project and port operations.
- 19.36 The route purposefully avoids significant footprint within the busier south dock and would have an air draft of 26.2m above a future retained dock water level of 8.4mAOD at 'Junction Cut', the entrance to north dock, allowing the vast majority of ships to carry on unimpeded.
- 19.37 The new motorway junction directly adjacent to the port would undoubtedly improve highway network logistics and connectivity to and from the port, its users and the wider commercial, industrial and residential areas in the South of Newport.
- 19.38 The Welsh Government has gained a good understanding of the workings of the Port of Newport. Following assessments by shipping experts, the facts appear to be that the majority of current shipping will be able to continue to use North Dock and there is capacity within South Dock to take almost all shipping that may be impacted upon the vast majority of the time. Furthermore on those few occasions that a vessel journey would be restricted by the new bridge, alternative ships with a lower air draft are available for charter. This matter is explained further by Mr Jonathan Vine (WG 1.22.1). Landside, Welsh Government has engaged with ABP and it is evident that, with provision of additional cranes to mitigate restriction on movement of existing cranes, ABP will be able to reorganise to maintain port operations.

19.39 Welsh Government considers that there is no serious detriment to the port undertaking arising from the Scheme. As responsibility for ports is not devolved, the UK Government Secretary of State for Transport (SoST) would need to be satisfied of no serious detriment before issuing a certificate confirming as such under Section 16 of the Acquisition of Land Act 1991. In June 2016 the SoST confirmed to the Welsh Ministers that the appointed Inspectors were also to report to him on this matter.

Summary

- 19.40 The Scheme would pass over Newport Docks, which are owned and operated by Associated British Ports (ABP). The proposed viaduct would allow access beneath it for land and water based port operations. A new junction would be provided in the vicinity of the docks, linking to the A48 Newport Southern Distributor Road.
- 19.41 Design, including that of the route, viaduct and junction are described in the Proof of Evidence of Mr Ben Sibert (WG 1.5.1) and the construction methodology for the works are described by Mr Barry Woodman (WG 1.6.1). The impacts on shipping are described by Mr Jonathan Vine (WG 1.22.1) and the impacts of the Scheme on port economics by Mr Andrew Meaney (WG 1.4.1).
- 19.42 The Welsh Government has gained a good understanding of the workings of the Port of Newport. Following assessments by shipping experts, the facts appear to be that the majority of current shipping will be able to continue to use North Dock and there is capacity within South Dock to take almost all shipping that may be impacted upon the vast majority of the time. Furthermore on those few occasions that a vessel journey would be restricted by the new bridge, alternative ships with a lower air draft are available for charter. This matter is explained further by Mr Jonathan Vine (WG 1.22.1). Landside, Welsh Government has engaged with ABP and it is evident that, with mitigation in the form of further cranes, ABP will be able to reorganise to maintain port operations.
- 19.43 The Welsh Government considers that there is no serious detriment to the port undertaking arising from the Scheme. As responsibility for ports is not devolved,

the UK Government Secretary of State for Transport (SoST) would need to be satisfied of no serious detriment before issuing a certificate confirming as such under Section 16 of the Acquisition of Land Act 1991. In June 2016 the SoST confirmed to the Welsh Ministers that the appointed Inspectors were also to report to him on this matter.

20. Other Statutory Undertakers

- 20.1 The Welsh Government has engaged with the utility companies, and other Statutory Undertakers (SUs) having similar equipment, over a number of years. The Project team have also met with these companies in order to understand the potential impact of the Scheme on their apparatus and to amend the Scheme to avoid or reduce those impacts where practical.
- 20.2 The Project team follows the New Roads and Street Works Act 1991 (NRSWA)

 Diversionary Works and the associated Code of Practice ("the Code") dated June
 1992. The Code recommends procedures for dealing with diversionary works and
 the various stages of the planning and implementation of major highway works
 affecting the undertaker's apparatus. The NRSWA process is established for use
 within existing highway boundaries and all parties are familiar with the steps within
 it. The Welsh Government considers it beneficial to, in so far as possible, apply
 these procedures to all of the Statutory Undertakers apparatus affected by the
 Scheme, even where the affected apparatus is not deemed to be within a
 maintainable highway as defined in the NRSWA and the Code.
- 20.3 Following the publication of draft Orders, objections were received from Statutory Undertakers including Welsh Water, Western Power Distribution, Surf Telecommunications, National Grid and Network Rail. Meetings have been held with each of the Statutory Undertaker objectors to understand their concerns and Welsh Government is progressing formal agreements with them. The Welsh Government has instructed Capital Law Cardiff office to represent them in the drafting and negotiation of these agreements.

Summary

20.4 The Welsh Government considers that appropriate engagement is taking place with the utility companies, and other Statutory Undertakers (SUs) having similar equipment, to put in place formal agreements for dealing with the potential impact of the Scheme on their apparatus.

21. Magor Services

- 21.1 Objections have been received from Roadchef, the operators of Magor Services at Junction 23A, and from Rontec, the landowners. Their objections relate to access and egress to and from the Services in relation to the new section of Motorway. The Proof of Evidence of Mr Ben Sibert (WG 1.5.1) describes how the Scheme makes provision for access to rest areas on the motorway and trunk road network.
- 21.2 All motorists travelling westbound from the toll plaza will have a direct, free-flow route to the J23A Services. Leaving the Services they will remain able to use the existing road as they do now, to travel North or carry on westbound and vice versa for eastbound, apart from having to pass through the new Junction 23 arrangement (being signalised rather than free-flow). In addition, journey times along this route will be more reliable and shorter than at present due to the alleviation of congestion. Therefore, the Scheme itself does not significantly alter the existing access and egress of the Services.
- 21.3 Notwithstanding the above, the Welsh Government does acknowledge that users of the new section of motorway would have a longer travel time and distance to use the Services than they would using the existing road. Following liaison with stakeholders, including Roadchef, a free-flow connection westbound from the toll plaza was added to the scope of the Project (rather than passing via a signalised junction). Further consideration is being given to provision of an additional eastbound offslip from the new section of motorway in the vicinity of the Services. This would improve access to the Services for users travelling eastbound on the new section of motorway. Should the decision be taken to promote this measure, supplementary draft Orders and an Environmental Statement Supplement would be published to inform the Inquiry. Costs associated with this measure would need to be considered in terms of whether they may be covered through current risk allocations or require additional Scheme budget.
- 21.4 Despite the requests of Roadchef the Welsh Government is not considering any additional west bound onslip. The Scheme already includes a free-flow

westbound access and, whilst the length of the signposted route to rejoin the new section of motorway on exiting may disincentivise some users making the stop, it is considered that disbenefits arising from this are insufficient to justify the economic, social and environmental implications of any additional onslip. The Welsh Government has also been influenced by the availability of existing Services at Junction 30 (Cardiff Gate) within 26km westbound, and the reduction in journey time to that point arising from the Project relative to the existing arrangement.

Summary

21.5 Further consideration is being given to provision of an additional eastbound offslip from the new section of motorway in the vicinity of the Services. This would improve access to the Services for users travelling eastbound on the new section of motorway. Should the decision be taken to promote this measure, supplementary draft Orders and an Environmental Statement Supplement would be published to inform the Inquiry.

22. Support and Objections

- 22.1 Publication of draft Orders provided the opportunity for any person or organisation to object, support, or suggest alternatives to the Scheme. In summary, at the time of writing:
 - a) 199 unique correspondence letters or emails have been received that clearly express support for the Scheme;
 - b) 343 unique objections to the Scheme have been received, of which 70 have been classed as being from statutory objectors;
 - c) 5,922 objections have been registered through campaigns (discounting duplicates, those registered with incorrect or non-existent email addresses and those that have responded advising no knowledge of use of their email address):
 - d) 30 objections have since been withdrawn by the respective consultees and 4
 were incorrectly classified as an objector; and
 - e) There were 141 instances where alternatives were mentioned, sometimes with more than one alternative being suggested within individual correspondence.

Support

22.2 199 unique correspondence letters or emails have been received that clearly express support for the Scheme. Of these, 59 appear to have been written on behalf of a company or organisation. The company/organisation responses include a range of businesses, property agents, utilities bodies and community groups. Supporters include officers of Newport City Council, officers and members of Monmouthshire County Council, members of Rhondda Cynon Taf County Borough Council, officers of Caerphilly County Borough Council, CBI, South Wales Chamber of Commerce, the Institute of Directors Wales, the Institution of Civil Engineers Wales, Newport Civic Society, Tata Steel, Wales & West Utilities, the Road Haulage Association, Port of Milford Haven, Acorn, EnviroWales Limited, ECO2 Ltd, South Wales Forgemasters, Biffa, QRL Radiators, Penderyn Whiskey, Renishaw plc, St Mowden, Owens Group UK, Ffos Las Rasecourse, Hicks Logistics, Welsh Football Trust, Welsh Rugby Union, Fletcher Morgan, Symmons

- Madge Associates, Curzon Real Estate, Walters Group, Cooke & Arkwright and Jones Lang LaSalle (JLL).
- 22.3 Of the 199 supporters, 162 provided a contact address. From those providing an address, 26% of correspondents are situated in Cardiff, 16% Newport, 10% Rhondda Cynon Taf and 8% Monmouthshire. The other 40% of responses providing an address are located elsewhere in Wales or England (11% of supporters provided an address outside of Wales).
- 22.4 Those responding with letters or emails of support have generally expressed the view that the proposed Scheme would address the transport related problems on the M4 around Newport and that the Scheme is critical for the Welsh economy in terms of reducing barriers to movement, and attracting investment.

Objections

- 22.5 343 unique objections to the Scheme have been received. Whilst a deadline of 4 May 2016 was identified for the receipt of support or objection statements, responses submitted after this date have been accepted by the Welsh Government. Of the unique objections 70 were identified as statutory objectors, either statutory consultees or those named in the draft Compulsory Purchase Order.
- 22.6 Of the 343 unique objections, 200 provided postal addresses. From the postal addresses it can be seen that 35% are from Monmouthshire, 26% Newport, 11% Cardiff and 3% Caerphilly. The other 25% of objections providing a postal address are from elsewhere in Wales, England and Scotland.
- 22.7 Of the objections 63 were identified as being from a company or organisation. The company/organisation objection responses included Natural Resources Wales (NRW), land owners including ABP, the owners and operators of Magor Services, Friends of the Earth Cymru, RSPB, Gwent Wildlife Trust, the Woodland Trust, other environmental non-governmental organisations, Network Rail, Newport Harbour Commissioners, Marshalls, Parc Golf Club and other businesses, utilities bodies, Rogiet Community Council, Magor with Undy Community Council and other community groups.

- 22.8 Natural Resources Wales (NRW) have registered an objection regarding three areas of concern potential adverse effects on European Protected Species and Water Voles; potential adverse effects on the Gwent Levels Sites of Special Interest; and policy compliance with Technical Advice Note 15 regarding development and flood risk. The Welsh Government and its Project team are liaising with NRW regarding their concerns and a statement of common ground is being developed in the event that they are not resolved prior to the Inquiry. This first two of these points are detailed in the Proof of Evidence of Dr Keith Jones (WG 1.18.1) and the third in the Proof of Evidence of Dr Paul Canning (WG 1.16.1) and Mr John Davies MBE (WG 1.23.1).
- 22.9 In addition to unique responses from companies and organisations, campaigns have been identified with identical or near-identical responses as part of coordinated campaigns by: RSPB; Woodland Trust; Wildlife Trust Wales; Gwent Wildlife Trust; and there was also coordinated correspondence from the residents of Common y Coed (although the latter has not been treated as a campaign).
- 22.10 Campaign responses total 6,555 emails or letters, with the majority sourced to the UK-wide RSPB campaign, which generated 5,399 email responses. Whilst Welsh Government has taken into account all objections, a number of signatories have responded advising that they had no knowledge of the use of their email to register an objection, whilst a number of emails responding to or acknowledging objections have failed to deliver as a result of either incorrect or non-existent email addresses being provided. This totalled 454 responses. Within the campaigns, 179 responses / signatories were duplicates. Following a discount for the above reasons, a total of 5,922 objections have been registered through the campaigns.
- 22.11 At the time of writing, 30 objections have been withdrawn by the respective individual or organisation and 4 were incorrectly classified as objectors.
- 22.12 Whilst not exhaustive, the following types of issues have been raised:

- a) Stakeholder issues included concerns about the consideration of previous consultations, the length of the draft Orders period for objections, availability of detailed drawings and plans, usability of the Welsh Government's website, and impact on property and land.
- b) Policy issues included concerns and suggestions about sustainable development, active travel, consideration of public transport and the Cardiff Capital Region Metro, cost, funding and value for money, encouraging car use, impact on the Port of Newport, use of the variable speed limit on the existing M4, and the need for the Scheme.
- c) Environmental issues included concerns over noise, air quality, visual impacts, climate change and carbon emissions, ecology and wildlife, the Gwent Levels SSSIs, historic environment, ancient woodland, flooding, water quality, and the earlier Strategic Environmental Assessment process.
- d) Engineering issues included concerns about access to areas surrounding the development during and post construction, in particular at Magor and Magor services, along the A48 and the use of Ifton quarry. A range of concerns about the construction phase, in terms of local disruption and temporary effects on local residents have also been expressed.
- 22.13 The Welsh Government has taken into account all objections and has provided a notification of receipt, and later a full reply to their points raised in a Welsh Government signed letter. Written responses provided clarification of any matters if needed, and/or set out the Welsh Government's position on their points raised.
- 22.14 Copies of letters of support and objections have been made available to the Inspectors and will be available for all to view as part of the Inquiry Library.
- 22.15 An overview of the Welsh Government's response to objections was provided in the Statement of Case (Document 2.4.6), published on 15 August 2016. This document omitted reference to an objection of behalf of Bovis Homes. The Welsh Government subsequently wrote to the Inspectors notifying them of this objection.

- 22.16 Objections from individual landowners are addressed in the Proof of Evidence of Mr Ben Sibert and Ms Julia Tindale. I do, however, address the objections from ABP and Roadchef/Rontec at sections 19 and 21 respectively.
- 22.17 Since that time there have been some developments and, in the Proof of Evidence of Welsh Government's Expert Witnesses, issues raised in objections are dealt with on a topic by topic basis. I respond to the general objections that are matters for the Welsh Government to address, such as the need for the Scheme, funding, and Welsh Government policy. Mr John Davies MBE (WG 1.23.1) will detail responses to objections with regard to planning policy and sustainable development, and as far as possible I try to avoid duplication in our evidence. However, there are some issues that require more than one expert to address them in their Proof of Evidence. I deal with each theme of objection relevant to my Proof of Evidence in turn below.

Objections based on concerns about how the Scheme aligns to the principles of sustainable development, and/or the objectives of the Wellbeing of Future Generations Act 2015.¹²

22.18 The Welsh Government is subject to the duties relating to sustainable development set out in the Well-being of Future Generations Act 2015 (Document 3.1.18). A Sustainable Development Report (Document 2.3.11) has been prepared, which describes how the proposed Scheme aligns to the Welsh Government's sustainable development principle. Mr John Davies MBE in his Proof of Evidence (WG 1.23.1) explains how the Welsh Government and M4 project team has taken reasonable steps in accordance with the relevant duties, including how the Scheme aligns to the Welsh Government's well-being objectives.

¹² OBJ0018, OBJ0024, OBJ0044, OBJ0066, OBJ0070, OBJ0074, OBJ0087, OBJ0102, OBJ0106, OBJ0111, OBJ0129, OBJ0136, OBJ0141, OBJ0150, OBJ0154, OBJ0165, OBJ0168, OBJ0185, OBJ0194, OBJ0298, OBJ0204, OBJ0243, OBJ0244, OBJ0248, OBJ0263, OBJ0282, OBJ0284, OBJ0288, OBJ0307, OBJ0310, OBJ0314

Objections relating to concerns about the cost, value for money and/or alleged economic benefits of the Scheme.¹³

- 22.19 The project has been estimated to cost £1,093m excluding VAT and inflation. It would be funded through a combination of UK Government borrowing and Welsh Government Transport capital budgets.
- 22.20 It is anticipated that three quarters of the costs of the project would be spent within the Welsh supply chain, with the remainder being spent on specialist products and services not currently available locally.
- 22.21 The economic performance of the Scheme has been assessed by comparing the costs with the benefits that would be achieved. The costs include both the construction costs and the future maintenance costs. The benefits considered include journey time savings, vehicle operating costs and changes in accident costs.
- 22.22 Economic appraisal (Document 2.4.12) has indicated that the economic benefits of the Scheme exceed the costs, such that the Scheme represents value for money. When taking into account wider economic benefits (Document 2.4.11), the benefits of the Scheme are expected to outweigh the costs by a ratio of over two to one. However, importantly there are also a range of anticipated economic benefits that are not quantifiable and these must also be considered.
- 22.23 It should be noted that the conventionally assessed transport benefits underestimate the total impact of the Scheme. The construction of a scheme of this nature would have economic impacts in its own right, and whilst employment effects of the Scheme are temporary, the investment in training associated with

¹³ OBJ0017, OBJ0045, OBJ0092, OBJ0135, OBJ0162, OBJ0163, OBJ0164, OBJ0168, OBJ0181, OBJ0188, OBJ0192, OBJ0203, OBJ0206, OBJ0243, OBJ0258, OBJ0259, OBJ0262, OBJ0314, OBJ0335, OBJ0092, OBJ0265, OBJ0292, OBJ0018, OBJ0024, OBJ0125, OBJ0154, OBJ0307, OBJ0310, OBJ0314, OBJ0338, OBJ0026, OBJ0139, OBJ0150, OBJ0167, OBJ0177, OBJ0185, OBJ0247, OBJ0108, OBJ0283, OBJ0263, OBJ0264, OBJ0285, OBJ0286, OBJ0300, OBJ0081, OBJ0149, OBJ0251, OBJ0290, OBJ0031

- the Scheme is expected to have a lasting impact on the construction sector in the region.
- 22.24 In addition, during the operational phase, the Scheme is expected to result in reduced transport costs for businesses and increased access to employment opportunities by improving journey times and improved access to key employment sites. The anticipated effects of this have been quantified. The Scheme would also result in improved journey time reliability and would reduce the costs of delays due to traffic incidents. The effects of this are not quantifiable but are expected to be of significant benefit to the Welsh economy.
- 22.25 Overall, the Scheme is expected to improve perceptions of South Wales as a place to visit and do business, and stimulate new investment.
- 22.26 Such matters of economic assessment, impacts and value for money will be detailed in the Proof of Evidence of Mr Stephen Bussell (WG 1.3.1).
 - Objections based on assertions that rather than invest in roads, Welsh Government money should instead be invested in other regions and services including health, education and industry.¹⁴
- 22.27 Such contentions are beyond the scope of this Inquiry. It is for the Welsh Government to decide how to allocate its resources, both geographically and in respect of the services it provides.

¹⁴ OBJ0002, OBJ0032, OBJ0096, OBJ0251, OBJ0286, OBJ0300, OBJ0164, OBJ0284, OBJ0328

Objections based on assertions that rather than invest in roads, Welsh Government money should instead be invested in public transport and/or other forms of travel.¹⁵

- 22.28 Such contentions are beyond the scope of this Inquiry. It is for the Welsh Government to decide how to allocate its resources, both geographically and in respect of the services it provides.
- 22.29 As set out within Chapter 4 of the Environmental Statement (Document 2.3.2); studies have shown that new or improved public transport services would only have minimal impact in terms of reducing traffic on the M4 (Document 4.3.16). Investment in public transport measures is therefore aimed at achieving wider benefits to the region than relieving motorway traffic. However, potential future public transport enhancement measures are considered to be complementary to a motorway solution. Public transport enhancement measures are being progressed by Welsh Government to develop proposals for a Cardiff Capital Region Metro system.
- 22.30 An updated public transport study was undertaken in 2016 to further appraise the potential impact and effects of public transport and the Metro on traffic. This reconfirmed that the identified problems on the M4 around Newport would not be addressed by public transport improvements. These are matters detailed by Mr Bryan Whittaker in his Proof of Evidence (WG 1.2.1).

<sup>OBJ0014, OBJ0023, OBJ0039, OBJ0040, OBJ0043, OBJ0044, OBJ0050, OBJ0060, OBJ0065,
OBJ0073, OBJ0074, OBJ0083, OBJ0085, OBJ0086, OBJ0087, OBJ0091, OBJ0093, OBJ0094,
OBJ0096, OBJ0096, OBJ0105, OBJ0106, OBJ0111, OBJ0113, OBJ0126, OBJ0129, OBJ0132,
OBJ0142, OBJ0150, OBJ0155, OBJ0170, OBJ0179, OBJ0180, OBJ0181, OBJ0185, OBJ0186,
OBJ0191, OBJ0194, OBJ0203, OBJ0243, OBJ0244, OBJ0246, OBJ0247, OBJ0248, OBJ0253,
OBJ0258, OBJ0259, OBJ0263, OBJ0265, OBJ0266, OBJ0274, OBJ0282, OBJ0283, OBJ0284,
OBJ0288, OBJ0290, OBJ0307, OBJ0310, OBJ0323, OBJ0328, OBJ0330, OBJ0335, OBJ0073, OBJ0275</sup>

Objections based on concerns about the need for the Scheme, with suggestions that the identified problems could instead be addressed by demand management and/or policies to reduce car travel.¹⁶

- 22.31 Between 2010 and 2013 more than 100 possible measures were considered, including network improvements, network management, demand management, alternative modes of transport and smarter sustainable choices. Some of the measures considered avoided road building. These were subject to consultation. The conclusion of Welsh Government was that a new section of motorway to the south of Newport was the sustainable, long term solution that would address the problems. This preferred strategy was set out in the draft Plan for the M4 Corridor around Newport which was consulted upon in 2013 (Document 4.4.1). The Plan was adopted in July 2014 (Document 4.5.7), following the consideration of consultation responses (Document 4.5.10). Following the adoption of the Plan, Friends of the Earth brought a Judicial Review to the High Court of Justice Queen's Bench Division Planning Court in Wales, which was heard in March 2015 (Document 4.5.45). All grounds of challenge were dismissed. Since that time the focus has been on design development.
- 22.32 As part of the development work that led to the M4 Corridor around Newport Plan, a wide range of transport options were considered and appraised. This included the consideration of a measure to 'Promote local and regional car share schemes'. Whilst the appraisal did not lead to this option being progressed, it has been shared with local authorities and other stakeholders as part of an engagement exercise and the Welsh Government is supportive of car sharing as part of its wider transport strategies.

Objections concerned about a detrimental effect on greenhouse gas emissions, the Welsh Government's commitment to tackling climate

¹⁶ OBJ0001, OBJ0091, OBJ0008, OBJ0059, OBJ0275

change and taking into account advice from Climate Change Commission Wales.¹⁷

- 22.33 A Carbon Report has been produced for the Scheme and this is included as part of the Environmental Statement (ES) as Appendix 2.4.
- 22.34 The analysis acknowledges the impact of carbon generation during construction. An element of construction carbon is inherent in the government policy commitment to improving the strategic transport network. During preparation of the published Scheme great attention has been devoted to minimising levels of construction carbon.
- 22.35 With the Scheme the total user carbon emissions on the South Wales network would marginally reduce, even though the number of vehicle trips would increase. This is due the Scheme being approximately 2.8km shorter than the existing M4, the reduction of the occurrence of 'stop-start' traffic conditions and smoother, more efficient traffic flow.
- 22.36 I have outlined in my Proof of Evidence how the Scheme would not conflict with Welsh Government carbon reduction targets, or commitments to reducing greenhouse gas emissions. Further evidence on the likely impacts on carbon will be detailed in the Proof of Evidence of Mr Tim Chapman (WG 1.13.1), whilst Mr John Davies MBE will give his opinion on the Scheme taking into account relevant carbon policies (WG 1.23.1).

Objections based on concerns that the Scheme might increase taxes. 18

- 22.37 The Scheme would be funded through a combination of UK Government borrowing and Welsh Government Transport capital budgets.
- 22.38 Policies related to transportation taxes and associated legislative powers are not devolved matters, being formulated and implemented at the UK level. The

¹⁸ OBJ0006

OBJ0013, OBJ0024, OBJ0125, OBJ0142, OBJ0185, OBJ0248, OBJ0258, OBJ0275, OBJ0295, OBJ0297, OBJ0307, OBJ0134, OBJ0330, OBJ0332, OBJ0335

promotion and consultation on the current Scheme is not the occasion or mechanism for questioning the merits of Government policy at a UK or Welsh level. The proposals for the M4 Corridor around Newport have been developed in the context of the current policy framework.

Objections based on concerns about how the Scheme aligns to the **Environment Wales Act 2016 and commitments to protect the natural** environment, including the Habitats Directive. 19

- 22.39 The Welsh Government clearly recognises that with the enactment of the Environment (Wales) Act 2016 (Document 3.1.16) the Welsh Ministers are required to prepare a national natural resources policy for Wales and to take all reasonable steps to implement that policy. Similarly Welsh Ministers will continue to honour their ongoing commitments to international environmental conventions via the UK Government.
- 22.40 The environmental legislative and policy context for the Scheme, and how the Scheme design has taken these into account relating to biodiversity in accordance with the Welsh Government's duties, will be detailed by Dr Peter Ireland (WG 1.7.1) in his Proof of Evidence.

Objections based on concerns that the Scheme would not support an integrated transport policy.²⁰

22.41 The M4 Corridor around Newport forms an essential part of the Welsh Government's vision for an efficient integrated transport system in Wales. In parallel with the Scheme, the Welsh Government is taking forward a Cardiff Capital Region Metro (Documents 6.1.6, 6.3.4 and 6.3.6). The Metro is seeking to improve accessibility to local employment sites, educational facilities and services with-in the region and is complementary to the Project.

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¹⁹ OBJ0204, OBJ0244, OBJ0284, OBJ0255, OBJ0328

²⁰ OBI0275

Objections based on assertion that there is no need for the Scheme.²¹

- 22.42 Chapter 2 of the Scheme Assessment Report (SAR) (Document 2.3.6) provides a summary of the background and need for the Scheme. Chapter 3 of the SAR outlines existing conditions.
- 22.43 The need for a solution to the identified transport related problems on the M4 around Newport is well established, and the Scheme is the result of comprehensive development work, consultation and design development.
- 22.44 The Scheme is considered to be the sustainable, long term solution to the social, environmental and economic problems associated with the main gateway into South Wales.

Summary

- 22.45 Publication of draft Orders provided the opportunity for any person or organisation to object, support, or suggest alternatives to the Scheme. 192 unique correspondence letters or emails have been received that clearly express support for the Scheme; 331 unique objections to the Scheme have been received, of which 68 have been classed as from statutory objectors and 6,012 objections have been registered through campaigns.
- 22.46 Organisational supporters include officers of Newport City Council, officers and members of Monmouthshire County Council, members of Rhondda Cynon Taf County Borough Council, CBI, South Wales Chamber of Commerce, the Institute of Directors Wales, the Institution of Civil Engineers Wales, Newport Civic Society, Tata Steel, Wales & West Utilities, the Road Haulage Association, Port of Milford Haven.
- 22.47 Organisational objectors include Natural Resources Wales, land owners including ABP, owners and operators of Magor Services, Friends of the Earth Cymru, RSPB, Gwent Wildlife Trust, the Woodland Trust, other environmental non-governmental organisations, Network Rail, Newport Harbour Commissioners,

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²¹ OBJ0059

- Marshalls, Parc Golf Club and other businesses, utilities bodies, Rogiet Community Council, Magor with Undy Community Council and other community groups.
- 22.48 Campaign objections received initially totalled around 6,554. 112 have been identified as duplicates and 430 have been identified as either registered without the email owners consent or registered using incorrect or non-existent email addresses.
- 22.49 32 objections have since been withdrawn by the respective consultees or were incorrectly classified as an objection.
- 22.50 The Welsh Government has taken into account all objections and has provided a notification of receipt, and later a full reply to their points raised in a Welsh Government signed letter.
- 22.51 Copies of letters of support and objections have been made available to the Inspectors and will be available for all to view as part of the Inquiry Library.

23. Suggested Alternatives

- 23.1 Chapter 4 of the Environmental Statement sets out the history of development work and consideration of many alternatives. Some of the suggested alternatives mentioned in objections to the draft Orders have previously been addressed as summarised in Table 4.1 of Chapter 4 of the Environmental Statement (Document 2.3.2). Consideration of public transport as an alternative has been covered in Section 8 of my Proof of Evidence and is not repeated here.
- 22.4 Of those who objected to the Scheme at the time of writing, there were 140 instances where suggested alternatives were mentioned, sometimes with more than one being mentioned within individual correspondence.
- 22.5 Most suggested alternatives involved works to other existing roads or new routes.

 Others did not include road building such as public transport investment and the

 Cardiff Capital Region Metro, traffic management along the existing M4, as well
 as combinations of suggested alternatives.
- 23.6 The Welsh Government has responded to objectors in writing to explain where a suggested alternative has been previously considered, or if not, given a further response and asked whether they would wish to promote their suggested alternative at the Inquiry.
- 23.7 Under the directions given at the pre inquiry meeting held on 18 July 2016, objectors have until 2 weeks prior to the commencement of the Inquiry to confirm whether they wish to promote their suggested alternative. Should they wish to do so and it is sufficiently developed it will be assessed by the Welsh Government. A summary brochure shall be published by the Welsh Government around the start of the Inquiry setting out its assessment of the alternatives. There will then be a period for potentially affected parties to support or counter-object to suggested alternatives. Responses will inform consideration by the Welsh Government and the Inspectors. At the time of writing the following 13 suggested alternatives

have been put forward for consideration during the Inquiry:

- a) Objectors' Suggested Alternative Blue Route
- b) Objectors' Suggested Alternative North and West of Wilcrick Route;
- c) Objectors' Suggested Alternative M48 / B4245 / Severn Tunnel Junction Station Connection:
- d) Objectors' Suggested Alternative Move Part of J23 between Rogiet and Caldicot:
- e) Objectors' Suggested Alternative West of Wilcrick Route and M48 / B4245 Connection;
- f) Objectors' Suggested Alternative Direct Access to Severn Tunnel Junction Station from J23;
- g) Objectors' Suggested Alternative Free-flow Connections between M4 and M48 at J23;
- h) Objectors' Suggested Alternative Move Main Alignment South at Meadows Road;
- Objectors' Suggested Alternative Free-flow J23 and Connection at J23A;
- j) Objectors' Suggested Alternative Online widening of the existing M4 including at the Brynglas Tunnel;
- k) Objectors' Suggested Alternative Tunnel from Magor to Castleton;
- Objectors' Suggested Alternative South of Magor Route; and
- m) Objectors' Suggested Alternative Closure of one or more Existing M4
 Junctions between Magor and Castleton.
- 23.8 The following 6 potential suggested alternatives are the subject of ongoing discussions between Welsh Government and the potential proposers:
 - a) Objectors' Suggested Alternatives (3 no.) Northern Dock Routes;
 - b) Objectors' Suggested Alternatives (3 no.) Access to Magor Services Routes.
- 23.9 A further detailed level of assessment was undertaken of the 'Blue Route' suggested alternative (Document 6.2.35). This was published on 14 December

2016 to inform stakeholders in advance of consideration of suggested alternatives through the Inquiry process.

Summary

- 23.10 As part of the current statutory process, suggested alternatives can be put forward by any individual or organisation to the Welsh Government and Inspectors to consider.
- 23.11 A further detailed level of assessment was undertaken of the 'Blue Route' suggested alternative (Document 6.2.35). This was published on 14 December 2016 to inform stakeholders in advance of consideration of suggested alternatives through the Inquiry process.
- 23.12 A summary brochure is published around the start of the Inquiry, allowing a period for potentially affected parties to support or counter-object to suggested alternatives. Responses will inform consideration by the Welsh Government and the Inspectors.
- 23.13 It is not the role of the Inspectors to make a recommendation in favour of a suggested alternative. However, the Inspectors will need to consider whether they appear to be worth further investigation.

24. Conclusions

- 24.1 For many years, traffic congestion has been a common occurrence for those using the existing M4 around Newport and living in the area. Journey times are often unreliable, making it difficult to access job opportunities or services including education. Without intervention, these problems are expected to worsen.
- 24.2 The need for a solution to the identified transport related problems on the M4 around Newport is clear, and the Scheme is the result of comprehensive stakeholder involvement, collaboration and development work.
- 24.3 The Scheme is in accordance with the Welsh Government's priorities for transport. It would improve accessibility for people as well as Welsh goods and services to domestic and international markets. It would increase accessibility by improving both journey times and journey time reliability and improving access to key residential and employment sites. In collaboration with our proposals for the Metro, the Welsh Government is seeking to develop a long-term, sustainable and integrated transport system for Wales.
- 24.4 There is a strong economic case for the Scheme. Direct transport benefits and wider economic benefits outweigh the Scheme costs by a ratio of over two to one. More broadly the Scheme is expected to improve perceptions of Wales as a place to visit and do business, stimulating new investment and a sustained economy.
- 24.5 Aside from economic benefits, there is a social, cultural and environmental case for the Scheme:
 - a) The reclassified M4 would serve local residents and tourists far more effectively, operating akin to the Newport ring road it was originally planned as.
 - b) There would be accident savings through journeys taking place on a highway designed to modern standards.
 - c) Air quality within four of Newport's Air Quality Management Areas (AQMAs) would improve significantly, and on a regional scale air quality would improve.
 - d) There would be a net benefit in terms of noise.
- 24.6 The ES and ES Supplements (Documents 2.3.2, 2.4.4 and 2.4.14) highlight adverse and beneficial impacts and residual effects associated with the Scheme under a number of environmental topic headings. They also describe how any adverse effects would be

- mitigated through extensive works integrated into the Scheme. For example; 100 hectares of new woodland planting, large areas of replacement SSSI and saltmarsh and the cable stay bridge over the River Usk's foundations (avoiding footprint in the Special Area of Conservation).
- 24.7 Any remaining negative environmental effects would be outweighed by the significant social, economic, environmental and cultural benefits that the Scheme would bring to Newport, the wider region and to Wales as a whole.
- 24.8 Taking into account the rights of those with an interest in the land affected, the Welsh Government recognises that the Scheme would have an impact on a number of residential dwellings, farms and local businesses as well the local environment. The Welsh Government has clearly set out the extent of, justified the need for, and explained the intended use of the land it intends to acquire, both temporarily and permanently to deliver the Scheme. The associated impacts on those with an interest in the land needs to be considered against the local, regional and national benefits the Scheme would deliver as described above.
- 24.9 Funding for the delivery of this project has been explicitly identified and provision set aside within the Welsh Government's published capital plans for the next four years. Allocations are not made beyond a 4 year period but suitable forecasts are in place to enable assurance to be given that the full funding requirements associated with the project are available within a reasonable timescale should the decision be taken to proceed.
- 24.10 Welsh Government considers that there is no impediment to the Scheme being implemented.
- 24.11 As discussed in the Proof of Evidence of Mr John Davies MBE (WG 1.23.1), whilst the Scheme is in conflict with certain national planning policies, the benefits it would bring, by relieving the problems associated with the existing M4 motorway, provide a compelling case in its favour that outweighs the cumulative policy conflicts.
- 24.12 Project development has been aligned to contribute to the overarching goals of the Wellbeing of Future Generations Act and it performs strongly against the Welsh Government's own recently set objectives under the Act.

- 24.13 Appropriate consideration has been given, and action taken, in accordance with all legislative requirements including the Wildlife and Countryside Act, the Environment Wales Act and Active Travel Act.
- 24.14 All objections have been considered and responses presented on each point raised. Welsh Government have, where practicable, taken steps to mitigate impacts.
- 24.15 Statutory objection by ABP has been carefully considered and Welsh Government considers that the Scheme has been developed appropriately so that there is no serious detriment to the port undertaking. Arrangements have been made with the Department for Transport for the matter to be considered through the Scheme inquiry process.
- 24.16 The need for demolition of the Grade II listed Woodland House has been taken into account and the necessary steps have been taken for this matter to be considered in parallel with the Scheme inquiry process.
- 24.17 The Scheme is considered by Welsh Government to be the long term, sustainable solution to the serious problems experienced on the M4 around Newport. In collaboration with our proposals for a South Wales Metro, it forms a vital part of our vision for an efficient and integrated transport network for Wales. There is a compelling case in the public interest for the Scheme to proceed.

Summary

- 24.18 In conclusion, for many years, traffic congestion has been a common occurrence for those using the existing M4 around Newport and living in the area. The need for a solution to the identified transport related problems on the M4 around Newport is clear.
- 24.19 The Scheme is considered by Welsh Government to be the long term, sustainable solution to the serious problems experienced on the M4 around Newport. In collaboration with our proposals for a South Wales Metro, it forms a vital part of our vision for an efficient and integrated transport network for Wales.
- 24.20 As set out in my Proof of Evidence, and the Proof of Evidence of my expert witnesses, the Welsh Government considers that there is no impediment to the Scheme being implemented. There is a compelling case in the public interest for the Scheme to proceed.

Appendix A

List of Proposed Modifications to the draft Orders

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of Scheme Order for Docks Junction and Glan Llyn Link amendments (currently considered at modifications)	Scheme Order Site Plans 4&5		SCHEME MOD 1	Docks way junction- The arrangement has been amended. The Eastbound on slip alignment has been modified and the docks way link road has been removed from the Scheme (as it is now included in the Line Order as a trunk road) Glan Llyn Link Road - To be removed from the Scheme Order and included in the Line Order.
Modification of Line Order for Docks way and Glan Llyn Line Order (currently considered at modifications)	Line order Site Plans 4&5		Line MOD	Docks Way Link - The alignment has been amended from the published draft Scheme. The link has been removed from the Scheme and has now been included in the Line Order (as a trunk road). Glan Llyn Link Road - Included in the Line Order (Removed from the Scheme Order)
Modification of CPO for General plan and schedule amendments	Various Sheets	CPO MOD 1		After publication of draft orders, drafting / labelling errors were noted on the drawings which have since been modified.

Title	Reference to	СРО	SRO / Line	Description
	CPO/SRO Plan as	Ref	/ Scheme Ref	
	published		Ittol	
Modification of CPO for ABP Plot Ownership	CPO Sheet 7 - Plot 7/3 sequence	CPO MOD 2		Project Team received Land Questionnaire from ABP during the publication process of the draft Orders. Amendments required to separate plots for different land interests and to account for changes in tenancies and leases. Land Designation
Madification of				amendments required based on the amendments to the structural arrangement and to the slip road alignment (see Scheme and Line Modification 1). The new layout is within the footprint of the land shown within the published draft CPO. A new line and scheme order are required for the new layout of the junction, and to change the designation of the Docks link from a special road to a trunk road.
Modification of CPO to Combine Plots 16/7 and 16/8	CPO Sheet 16 - Plot 16/7 & 16/8	CPO MOD 3		Landowner had been given different Land Referencing plot numbers on the same sheets. Plots affected are 16/7 and 16/8. Modification is to change the plot numbers to follow first plot sequence and exclude last numbers as plots not used.
n/a		CPO MOD 4		n/a

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO for 18/5 plot - Stephen Phillips Occupier	CPO Sheet 18 - Plot 18/5	CPO MOD 5		Mike Davies, the Land Agent of Christine Phillips, notified the project team in a meeting that Stephen Phillips is an occupier on the land. A modification is required to amend plot sequence 18/5 to display Stephen Phillips as an occupier.
Modification of CPO for Care Home change of address	CPO Sheet 1 - Plot 1/8	CPO MOD 6		Through correspondence with Gareth Jones (Welsh Government Orders Branch) the project team became aware of a different address for the Care home. Modification required to change address details within CPO Schedule. Plot sequence affected 1/8.
Modification of CPO for Table 2 Ty'n y Brwyn.	CPO Sheet 2 - Plot 2/18b and 2/18e	CPO MOD 7	9/	Residents with access rights in the vicinity of Ty'n y Brwyn to be added to Table 2. Amend schedule to include additional interests.
Modification of CPO for Plot 2/12 gardens (OBJ0257)	CPO Sheet 2 - Plot 2/12	CPO MOD 8		Land owner requested that the essential mitigation for the drainage of the WTA be moved south of current position in order to stay outside of the garden of the landowner. This is linked to Objection number OBJ0257.
Modification of CPO for Change of Address - Susan Martin	CPO Sheet 23 - Plot 23/2	CPO MOD 9		CPO Package returned. Package send to Mrs S Martin at address of 3 Yew tree close. Team advised by Mrs Martin's sister of correct address to use.

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO for Returned package. No longer at location- civil and marine	CPO Sheet 11 - Plot 11/2u, v & x	CPO MOD 10		CPO Package returned. Civil & Marine (Slag Cement Limited) are no longer at this location. Remove Civil and Marine from Plots 11/2u,v & x.
Modification of CPO for Change of Address. Cetnik Executor	CPO Sheet 2 - Plots 2/a and 2/4a	CPO MOD 11		CPO Package returned. Advised by Richard Spencer Lewis (Executor) at DOE change of address. Update CPO Schedule Plots 2/4 & 2/4a
Modification of CPO for Land at Docks Way / SDR Junction	CPO Sheet 7 - Plot 7/2u	CPO MOD 12		The highway embankment land is currently in CPO but is essential licence. Work will be required to construct a new structure on this land to accommodate the proposed junction arrangement. A modification is required to update the CPO schedule.
Modification of CPO for Change of Address	CPO Sheet 15 - Plot 15/5- 15/5g	CPO MOD 13		CPO Package returned. Change to home address as advised by Mr Richard Bowkett. Plots 15/5,15/5a-g amend address and add as modification.
Modification of CPO for Mortgage - Table 2	CPO Sheet 5 - Plots 5/3 sequence CPO Sheet 20 - Plot 20/2	CPO MOD 14		CPO Package returned - Telephone conversation with NatWest and A Baker to confirm correct mortgage address (historic address previously provided)

Title	Reference to CPO/SRO Plan as	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO for Change of address - Hanson Quarry Products. Table 2 interest	Published CPO Sheet 8 - Plots 8/3 & 8/3a	CPO MOD 15		CPO Package returned. Advised by The Crown Estate of lease address. Hanson Quarry Products Europe Ltd. Hanson House 14 Castle Hill Maidenhead FL6 4JJ Plots 8/3 & 8/3a Remove Aberdare address- update with latest. Update Table 2 of CPO with correct information.
Modification of CPO for Plot sequence 9/2 Sustrans interest (OBJ0148).	CPO Sheet 9 - Plots 9/2c - j	CPO MOD 16		Howard Jones of Railway Paths Limited has raised that Sustrans have an interest in plots 9/2c, 9/2e, 9/2f, 9/2g, 9/2j. In addition to the plots that they already have an interest in. CPO Modification produced to suit land interest information provided.
Modification of CPO and SRO for Gwaunshonbrown Farm PMA and footpath along existing Poundhill.	SRO Sheet 2 - PMA Ref. 2/7a	CPO MOD 17	SRO MOD	Newport City Council requested that Pound hill road be connected with the proposed footpath running along the northern batter of the proposed M4 motorway. This utilises the stopped up pound hill and is shared with a PMA. During the draft Orders exhibition the owners of Gwanshonbrown requested the PMA running to the south of their property is realigned to follow the existing Poundhill road (which is to be stopped up).

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO and SRO for Footpath Extension Ty'n y Brwyn & Ty'n y Brwyn Access Arrangements (OBJ 003,	CPO Sheet 2 - Plot 2/18b SRO Site Plan 2	CPO MOD 18	SRO MOD 2	Newport City Council requested that the Footpath 390/12 is connected to the A48 via the access leading to the properties at Ty'n-y-Brwyn. This modification creates new footway of this length of track.
OBJ256, OBJ273, OBJ330)				A number of concerns have been raised by local residents about the access arrangements for the PMA leading to Ty'n y Brwyn. Four objections have been raised during the objection period. Following review in lieu of comments and objections, an alternative access proposal has been developed, which would involve modifying the east access, that is currently stopped-up, to enable future use.
Modification of CPO and SRO for PMA provision and Highway stopping up at Nash Road	CPO Sheet 9 - Plot sequence 9/10 SRO Site Plan 8 - PMA Ref. 8/3	CPO MOD 19	SRO MOD	Through discussions with Newport City Council, the extents of the stopping up of Nash Road (and provisions of PMA) is to be modified in the CPO and SRO. Alan R Jones and Sons requested an additional PMA to their yard as they operate a one way system within their yard. Also, Newport expressed interest in stopping up the remaining highway of Nash Road and reproviding as PMA to the remaining interests.

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO and SRO for Extension of Tatton Farm PMA	CPO Sheet 10 SRO Site Plan 9	CPO MOD 20	SRO MOD 4	Through correspondence with Newport City Council, they noted that the PMA to Tatton farm should be to the extents of the adopted highway as the current section of road might not have required rights. A new SRO and CPO modification is required to show this extension of the PMA.
Modification of CPO for Tatton Farm mitigation land	CPO Sheet 10	CPO MOD 21		Additional mitigation land at Tatton farm required for environmental mitigation. This is being done as a modification as Tatton Farm is already owned by the Welsh Government.
Modification of CPO for Change of Address for plots 1/4 series.	CPO Sheet 1 - Plot 1/4 series	CPO MOD 22	9/	CPO Package returned. Mark Williams package sent Cotton Court. Agent is informing of latest address. Plots 1/4a - h & 1/4 -k.
Modification to CPO for listing of grazier on Mrs Daphne Alred's land	CPO Sheet 5 - plot 5/9 sequence	CPO MOD 23		Derek David is listed as an occupier on the plots but is in fact a grazier. Listing to be changed.
n/a		CPO MOD 24	SRO MOD 6	n/a
Modification to CPO for Change of lessee on NCC land	CPO Sheet 8 - plot 8/12	CPO MOD 25		CPO lists that plot 8/12 is owned by NCC but is vacant. Noel Fitzpatrick are lessees on part of this plot. ACE Portable Accommodation Ltd are the lessee's of another part of this plot. Plan and schedule to be updated.

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification of CPO for Susan Anstey land in CPO Schedule	CPO Sheet 23 - Plot 23/7	CPO MOD 26		(Meeting with Mike Davies Land Agent) Field in the ownership of Susan Anstey is show in the CPO as in the ownership of the adjoining land owner (Christopher Jones). Schedule to be updated.
Modification of CPO for Landscaping - New Park Farm (OBJ0227)	CPO Sheets 1 & 2 - Plots 1/3p, 2/2c, 2/2j	CPO MOD 27		In a meeting, the landowners requested reduction and modification to landscaping on their land. This is being done as a modification to the CPO. Objection OBJ0227.
Modification of CPO for Mrs Barbara Joan Ward	CPO Sheet 15 - Plot 15/26	CPO MOD 28		CPO Package returned - from Ms Barbara Joan Ward 30 Bennett Park Blackheath London SE3 9RB. Rang contact number and she is no longer at that address. Land Registry still shows the address in database and in Land Registry. (Plot 15/26).
Modification of CPO for Landscaping - Golf Club. (OBJ049)	CPO Sheet 3 - Plot 3/2b	CPO MOD 29		In a meeting, landowners requested reduction and modification to landscaping on their land. This is being done as a modification to the CPO. Objection OBJ 049.
Modification of CPO and SRO for Fair Orchard Farm (OBJ216)	CPO Sheet 6 SRO Site Plan 5 - PMA 5/11a	CPO MOD 30	SRO MOD 7	A modified access to Fair Orchard Farm has been proposed for the landowner, from lighthouse road to his farm. This is to be confirmed at a meeting with the owner that has been organised for 21/07/2016. Linked to

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description Objection 216.
n/a		СРО		
n/a		MOD 31 CPO		
		MOD 32		
Modification of CPO and SRO for Orchard Farm (OBJ238)	CPO Sheet 16 - Plot 16/17c SRO Site Plan 15 - PMA Ref. 15/11a	CPO MOD 33	SRO MOD 8	Land was acquired in the published CPO for planting of trees for screening purposes. Mr Smith objected due to the property itself being a farm outbuilding, and Mr Smith has requested that he keep the land for use for pasture. Mr Smith also requested a change of layout for his PMA in order to reduce the land take on his property. Modification to the CPO and SRO required to allow for these changes.
Modification of CPO and SRO for Langley Villa Bridleway Amendment (OBJ229)	CPO Sheet 16 - Plot 16/6d SRO Site Plan 15 - Highway Ref. 15/E	CPO MOD 34	SRO MOD 9	The owners of Langley Villa have requested that the bridleway proposed outside their property be moved to the other side of the Water Treatment Area in the adjoining field for privacy. A modification is required to the SRO and CPO to show this change. Objection Number OBJ0229)
Modification to CPO for Blight - White Cottage	CPO Sheet 2 - Plots 2/3 & 2/3a	CPO MOD 35		White Cottage has been purchased by Welsh Government - change of ownership in CPO Schedule Required.

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
Modification to CPO for Blight - The Glen	CPO Sheet 2 - Plot 2/7	CPO MOD 36		The Glan has been purchased by Welsh Government - change of ownership in CPO Schedule Required.
Modification to CPO for Blight - San Remo	CPO Sheet 2 - Plot 2/6	CPO MOD 37		San Remo has been purchased by Welsh Government - change of ownership in CPO Schedule Required.
n/a	n/a	CPO MOD 38	^ ^	
Modification to CPO for Blight - Spring Cottage	CPO Sheet 1 - Plots 1/17 & 1/17a	CPO MOD 39		Spring Cottage has been purchased by Welsh Government - change of ownership in CPO Schedule Required.
Blight - Quarry Cottage	CPO Sheet 2 - Plot 2/10 and 2/10a	CPO MOD 40		Blight application in progress- update CPO with details upon completion
Modification to CPO for Blight - Moorland View	CPO Sheet 2	CPO MOD 41		Discretionary blight application accepted by Welsh Government but awaiting owner's decision - update CPO with details upon completion
Modification to CPO for Blight - Dunline	CPO Sheet 16 - Plots 16/10 sequence	CPO MOD 42		Blight application in progress- update CPO with details upon completion
Modification to CPO for Solicitors no longer address.	CPO Sheet 1 - Plots 1/5c and 1/5d	CPO MOD 43		CPO Package returned. John Horrigan c/o John Bell Solicitors named as a caution in favour on Plots 1/5c & 1/5d, as per title register. John Bell Solicitors no longer appears to exist. Possibly merged with another company no listing under solicitors.
Modification to CPO for Residual Land mineral	CPO Sheet 18 - Plot 18/10	CPO MOD 44		Letter received from Residual lands detailing land that they have an

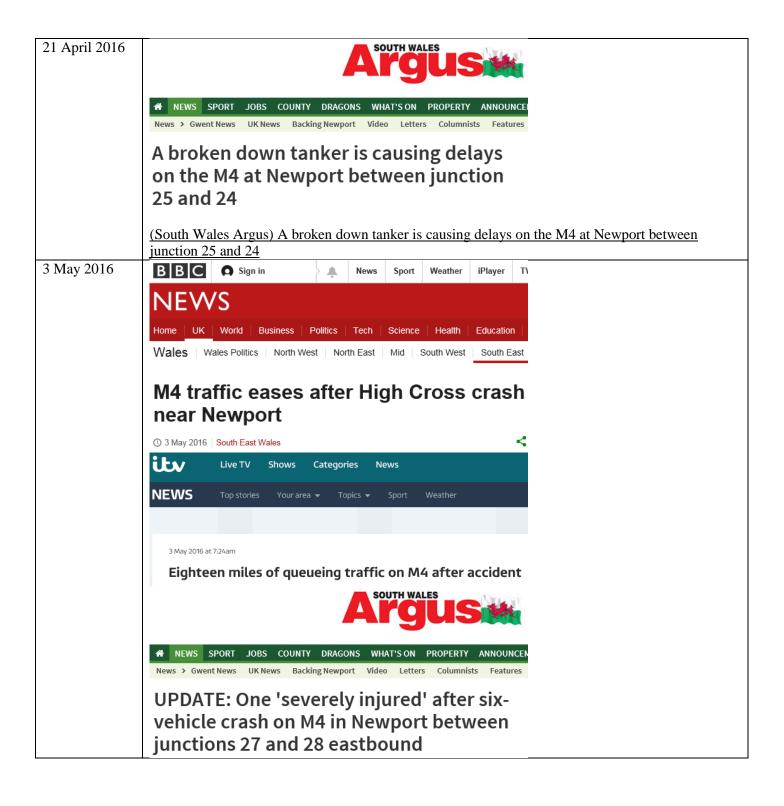
Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
rights				interest in the minerals over. (Plot 18/10) They also state that there maybe more plots. Update CPO schedule table 2 with Residual lands details information.
n/a		CPO MOD 45		n/a
Modification to CPO for Pond Modification - Arch Farm (OBJ0218)	CPO Sheet 10 - Plot 10/5	CPO MOD 46		Through an objection, Mr German asked that the shape of the pond and access track be modified to avoid severed areas of land and therefore make best use of the remaining land. A modification is required to the CPO on agreement with the principle with the agent/landowner.
Modification to CPO for New Dairy Farm - severed plot (OBJ0217)	CPO Sheet 6 - Plot 6/9ar	CPO MOD 47		The owners of New Dairy Farm have made the project team aware that there is a severed plot with no access due to the works. A modification to the CPO would be required. Linked to Objection OBJ0217.
Modification to CPO for Mr Colley land interest in plot (OBJ0215)	CPO Sheet 22 - Plot 22/2	CPO MOD 48		Plot 22/2 is thought to be in the ownership of Mr Colley (Great House Farm) not RES, as advised by Mike Davies (land agent). Awaiting confirmation of this from the agent.
Modification to CPO for Tarmac - Glan Llyn Link	CPO Sheet 11	CPO MOD 49		An option is being investigated to reduce the land take around Tarmac plant at Glan Llyn Link. A modification will be prepared when the detail of the amendments have

Title	Reference to CPO/SRO Plan as published	CPO Ref	SRO / Line / Scheme Ref	Description
				been confirmed.
Modification to CPO for Industrial Automation Ltd (OBJ0068)	CPO Sheet 10 - Plot 10/1cx	CPO MOD 50		Following an objection, a retaining wall will be required in order to retain land for Industrial Automation Ltd. A new right for the Welsh GovernmentG will be required in order to provide access for maintenance of the retaining wall. This is to be done as a modification to the CPO.
Modification to CPO and SRO for PMA provision for to fields for Pencarn Farm fields (OBJ0019)	CPO Sheet 5 - Plot 5/6 sequence SRO Site Plan 4 - PMA Ref. 4/3	CPO MOD 51	SRO MOD 10	Objection letter regarding access to fields requires geometry of provided PMA to be amended.
Modification to CPO and SRO for PMA provision for Tata access	CPO Sheet 11 SRO Site Plan 10	CPO MOD 52	SRO MOD 11	Access provision off the Glan Llyn link road into Tata's land.
Modification to CPO for reduction in land associated with SUP 1	CPO Sheet 18	CPO MOD 53		Reduction in land take on Mr Phillips' land in association with SUP 1
Modification to CPO for change of ownership of land adjacent to Green Lane (Network Rail)	CPO Sheet 5 - plots5/5/b,c,f,g	CPO MOD 54		Network Rail informed project team that they acquired land adjacent of Green Lane for access to a proposed sub-station. Modification needed to show land ownership change, and also ensure adequate PMA.

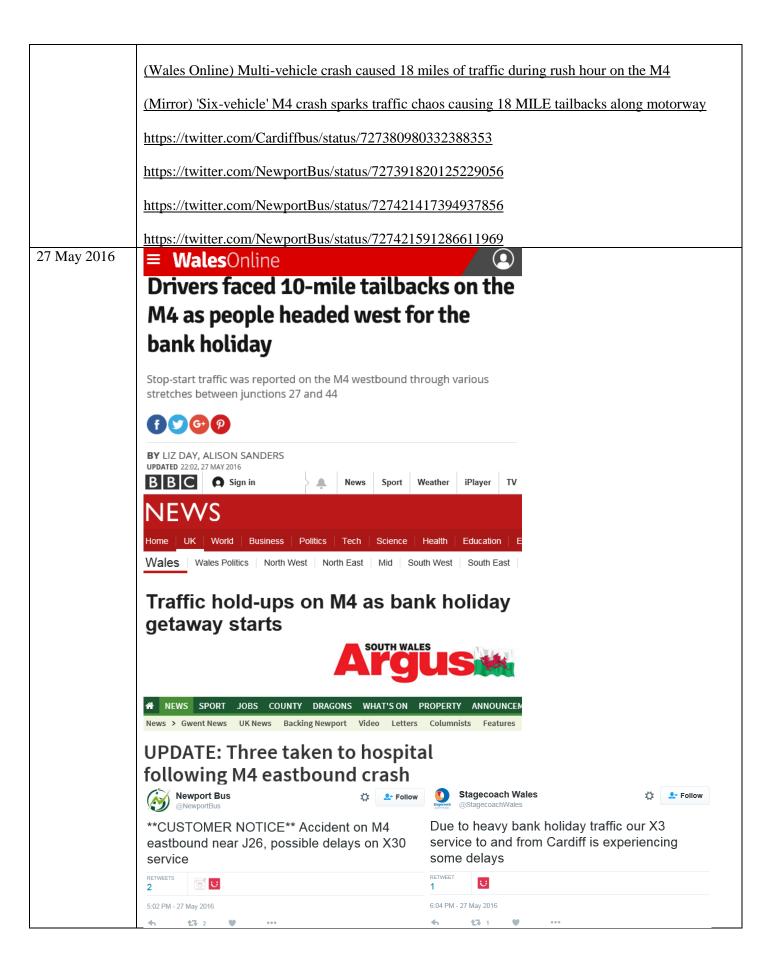
Appendix B

Examples of Media Coverage of Incidents and their Implications

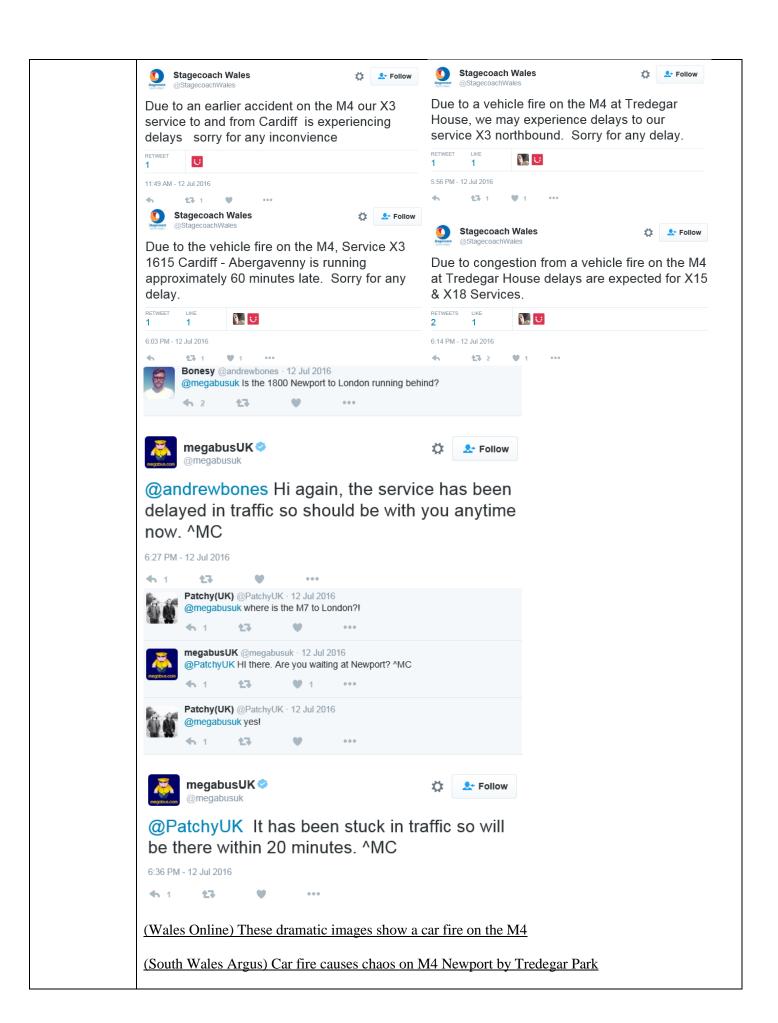


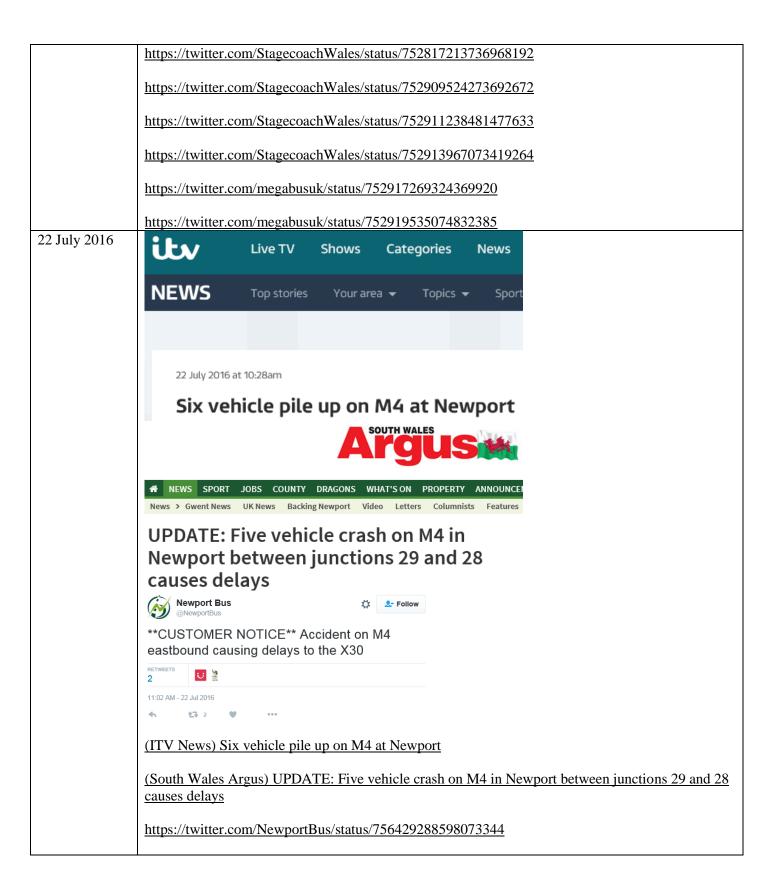


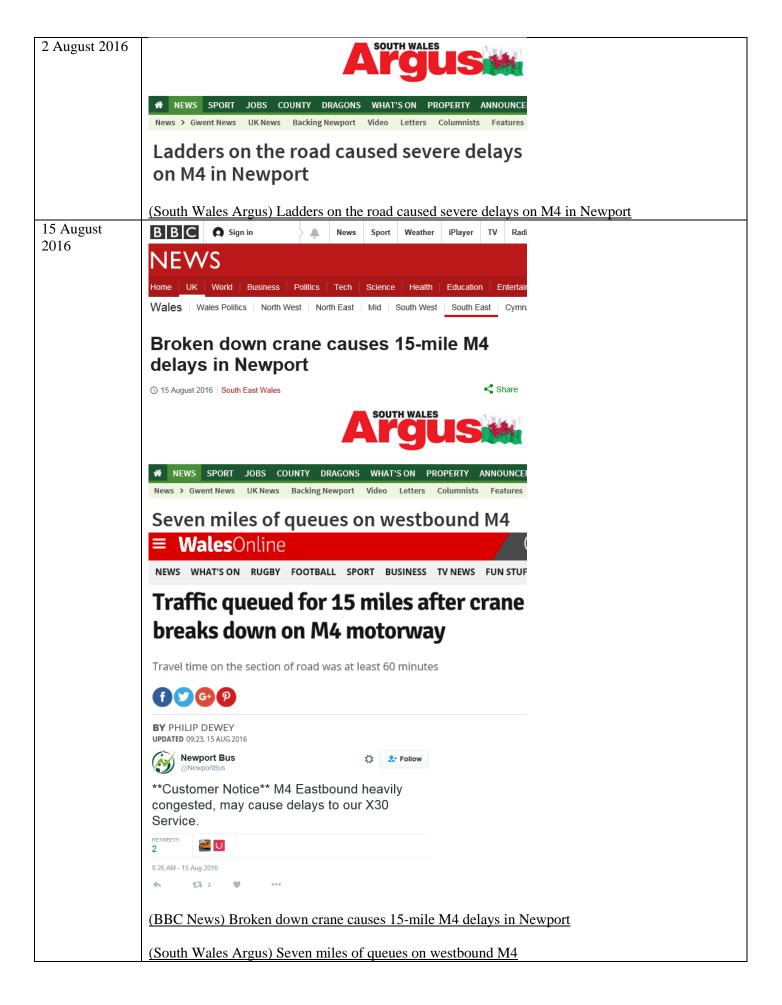


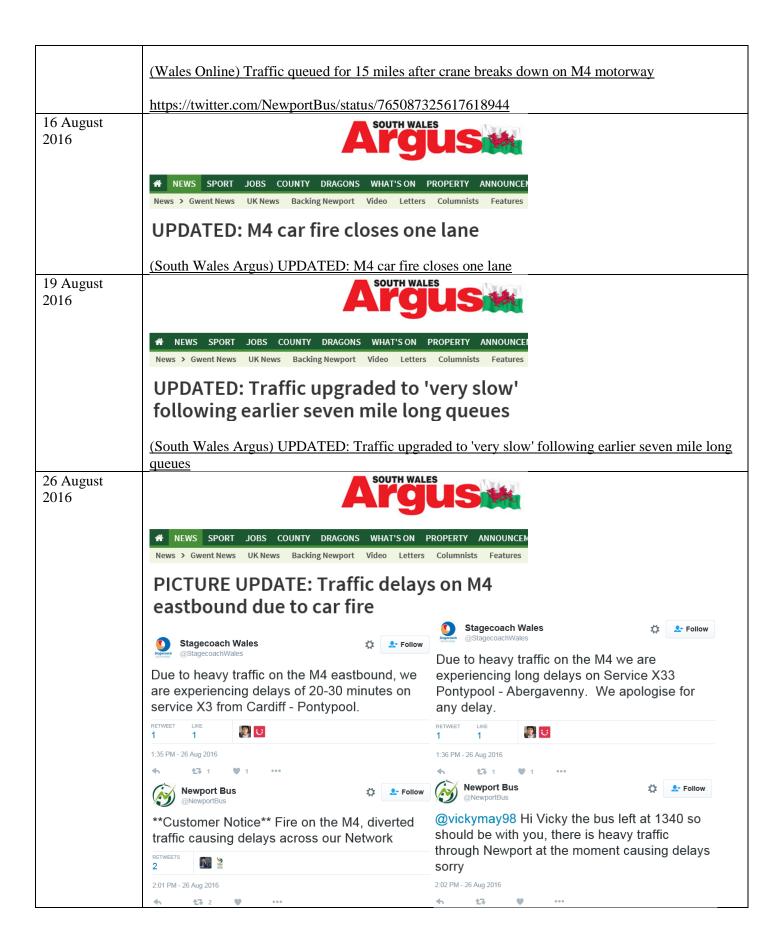


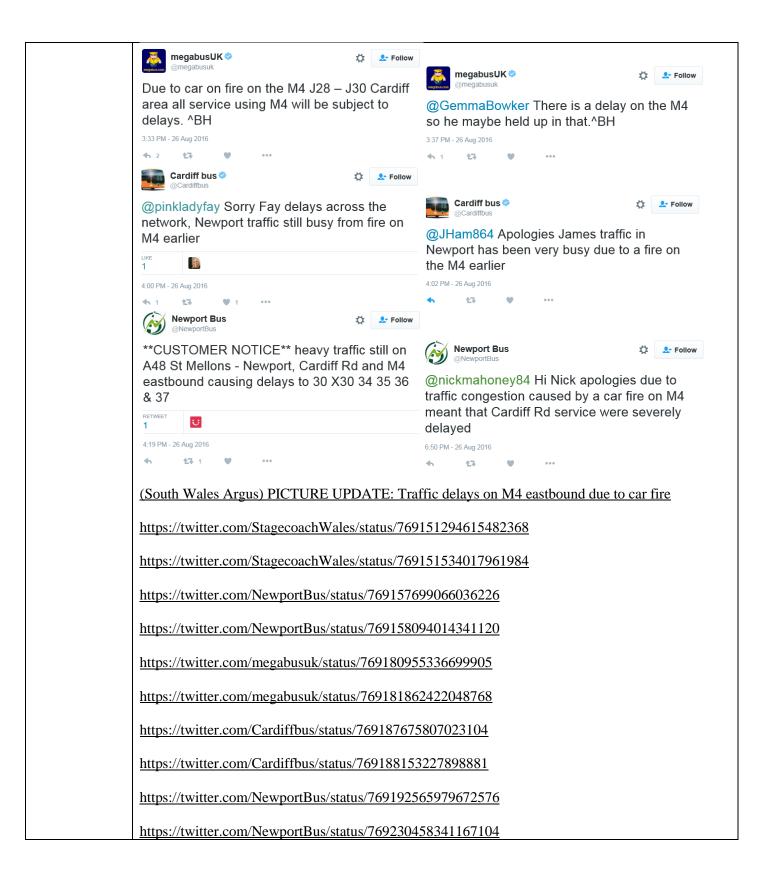


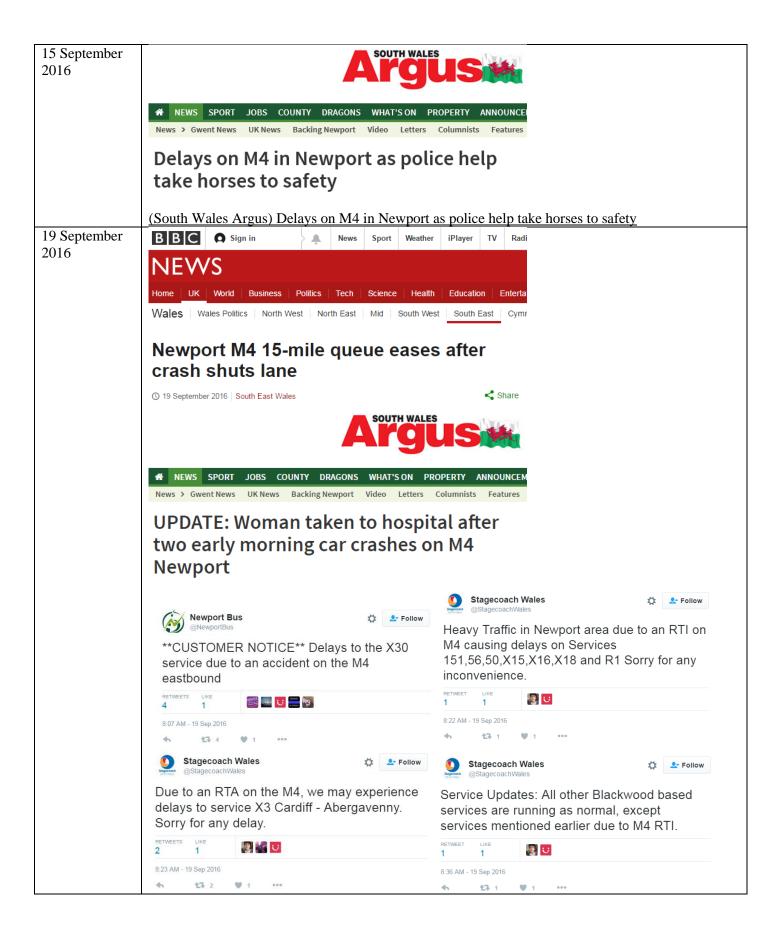


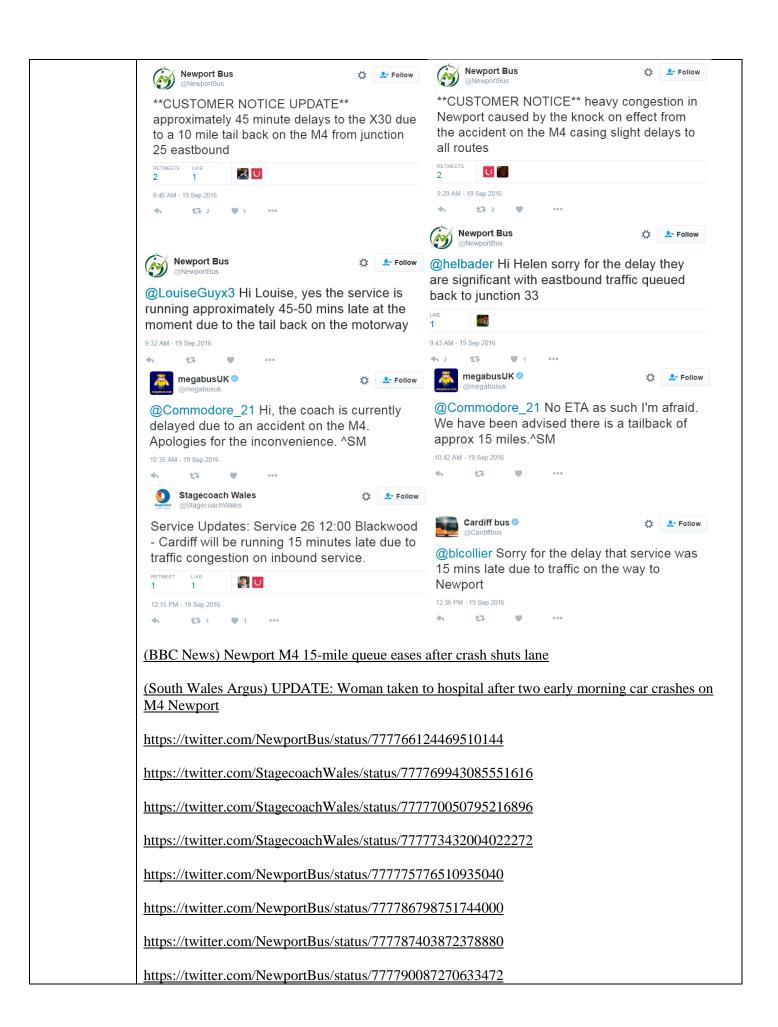














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26 September 2016

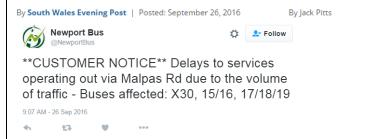




UPDATED: Lane re-opens following three vehicle incident on M4 in Newport between junction 28 Tredegar House and junction 27 High Cross



Traffic backs up 12 miles after three-vehicle M4 crash



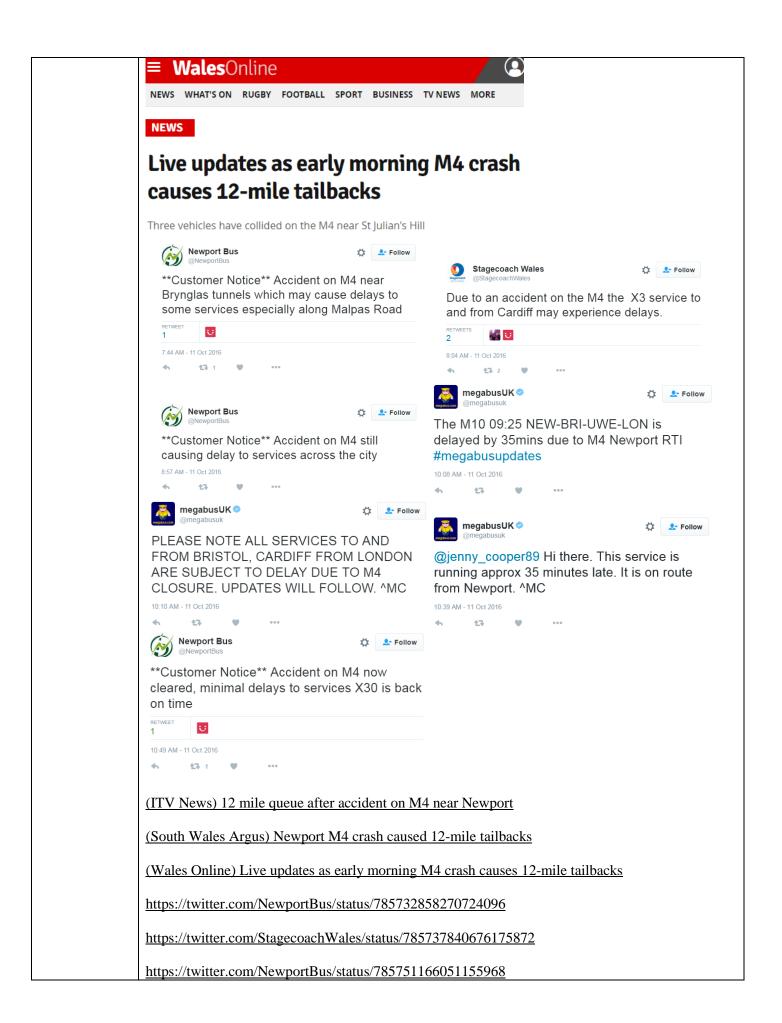
(South Wales Argus) UPDATED: Lane re-opens following three vehicle incident on M4 in Newport between junction 28 Tredegar House and junction 27 High Cross

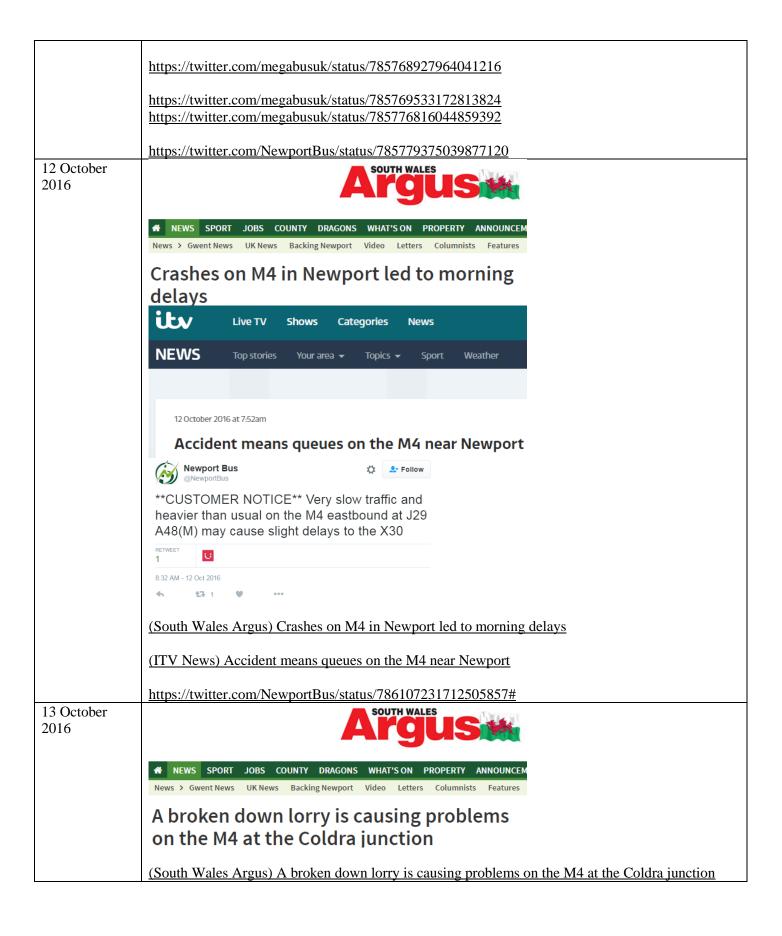
(South Wales Evening Post) Traffic backs up 12 miles after three-vehicle M4 crash

https://twitter.com/NewportBus/status/780317968286777345

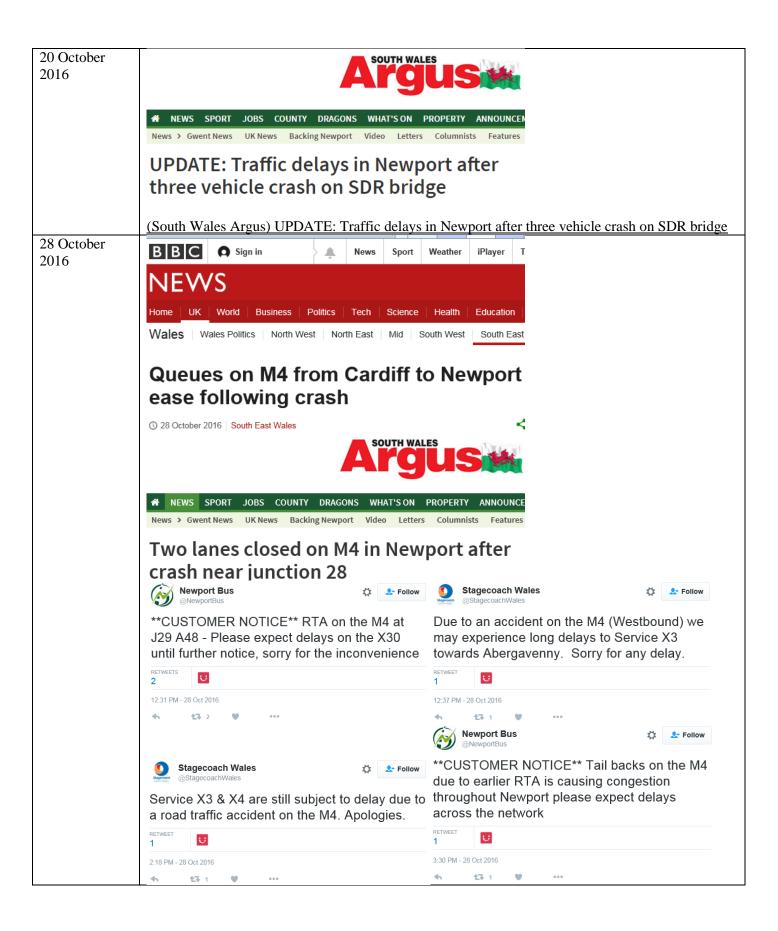


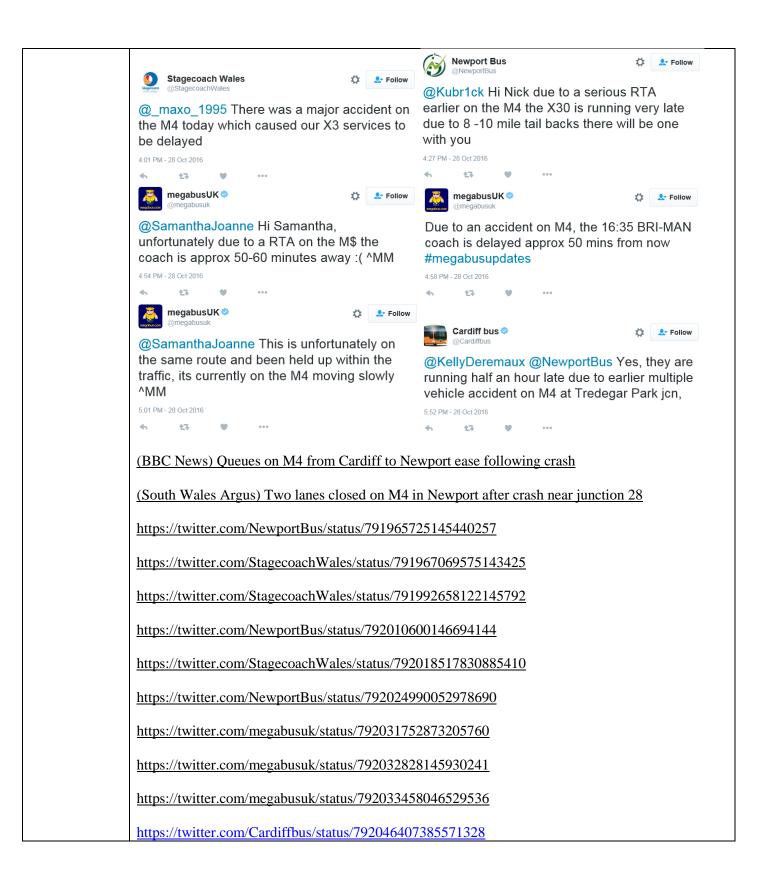




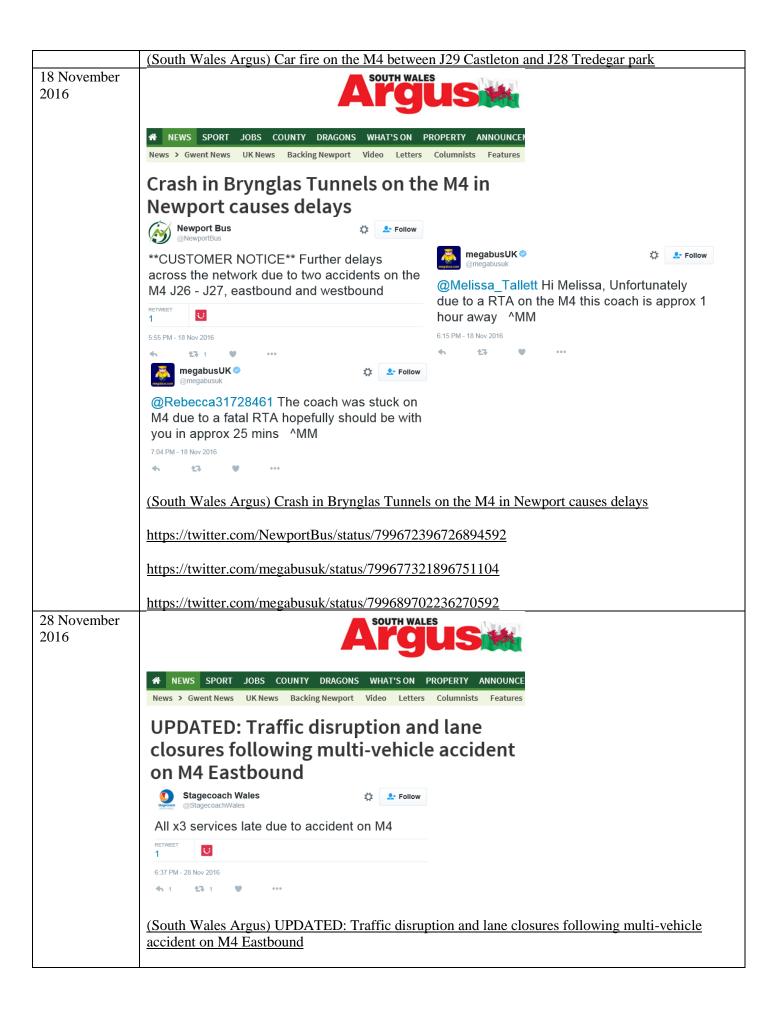


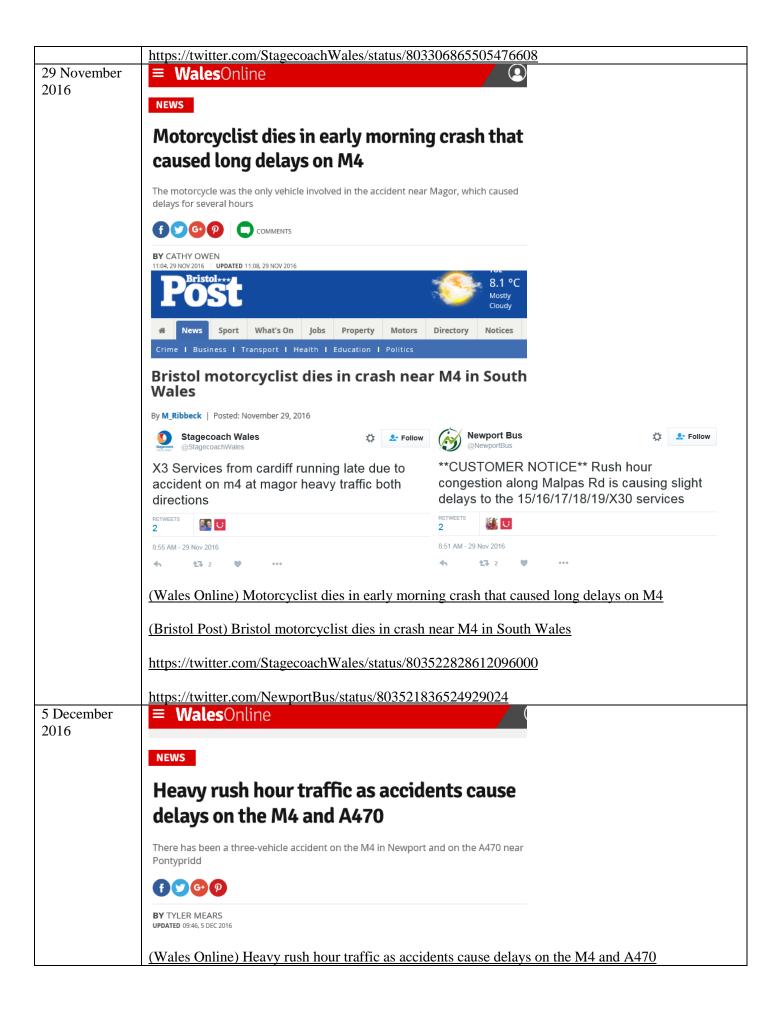




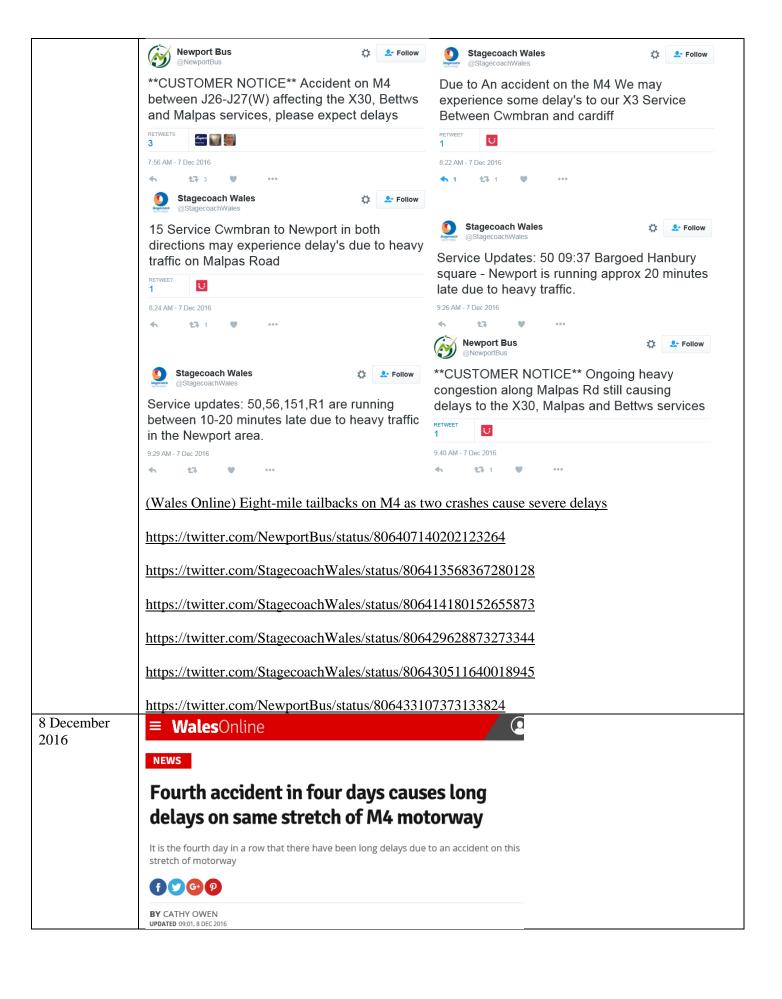


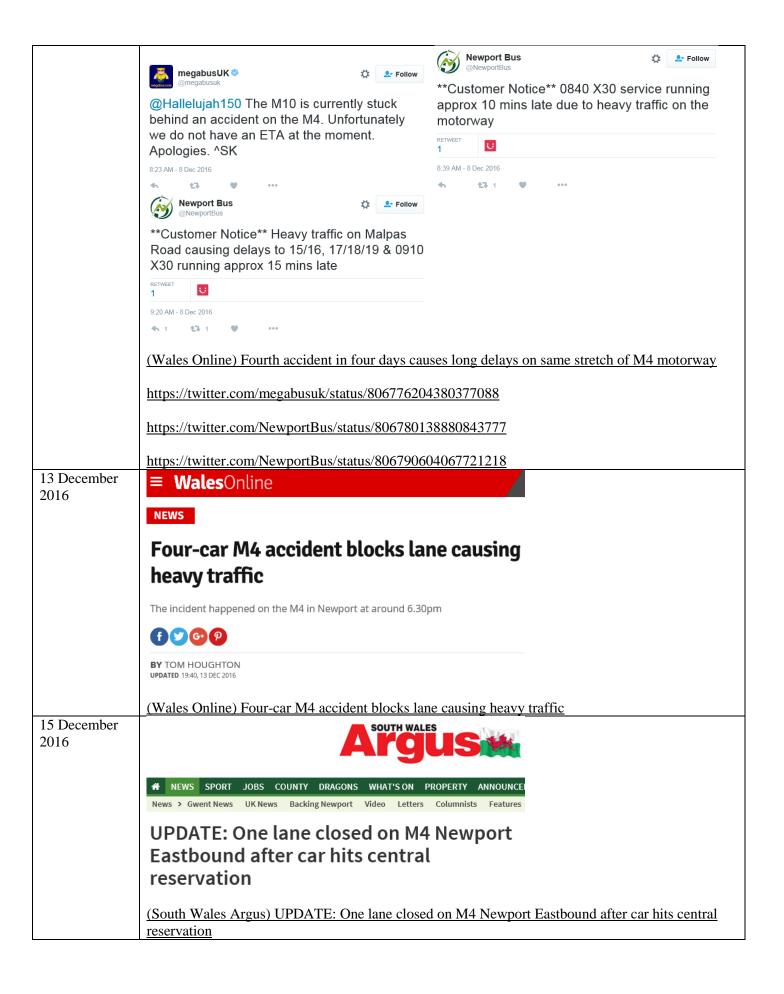


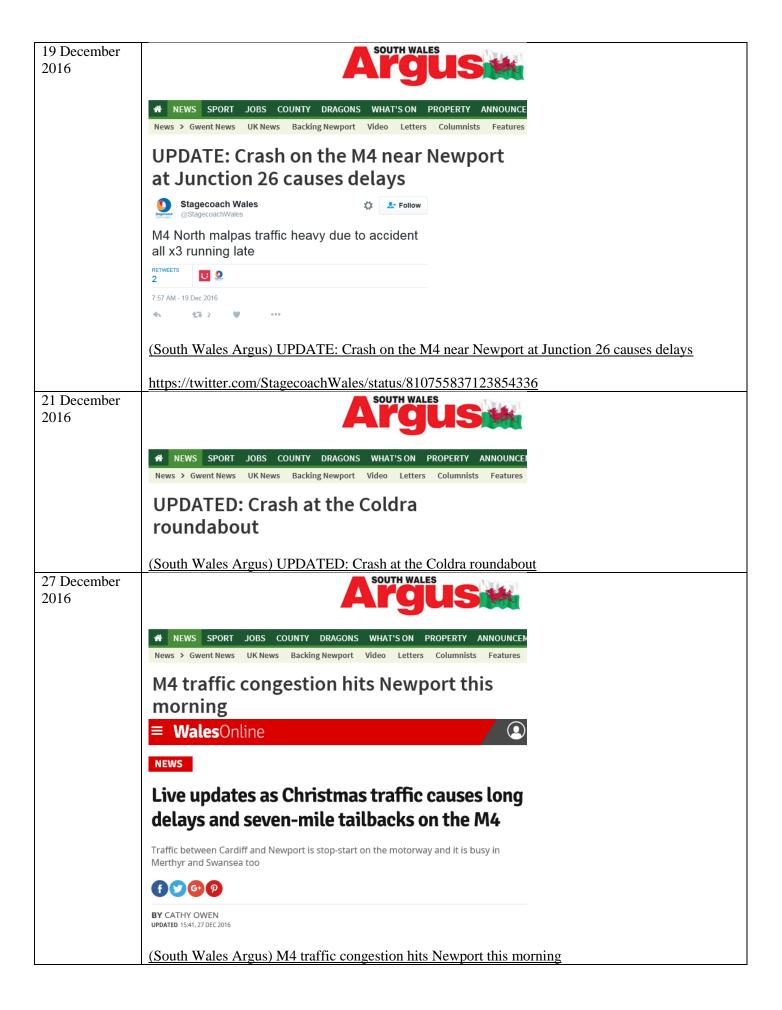














(Wales Online) Tailbacks of 11 miles on the M4 after multi-vehicle accident

(BBC News) M4 traffic queues near Newport ease after crash

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