

Adran Seilwaith yr Economi  
Department for Economic Infrastructure



Llywodraeth Cymru  
Welsh Government

**THE LONDON TO FISHGUARD TRUNK ROAD (A40) (LLANDDEWI  
VELFREY TO PENBLEWIN IMPROVEMENT AND DE-TRUNKING) ORDER  
201-**

**THE LONDON TO FISHGUARD TRUNK ROAD (A40) (LLANDDEWI  
VELFREY TO PENBLEWIN IMPROVEMENT) (SIDE ROADS) ORDER 201-**

**THE WELSH MINISTERS (THE LONDON TO FISHGUARD TRUNK ROAD  
(A40) (LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENT))  
COMPULSORY PURCHASE ORDER 201-**

**Rebuttal Statement**

**Objection Reference R0040**

Response to Objector's Evidence: Pembrokeshire Friends of the Earth

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## 1. GROUNDS FOR OBJECTION

### Details

- 1.1 Eleanor Clegg on behalf of Pembrokeshire Friends of the Earth has submitted an email dated 20 September 2019 (R0040) and a Statement of Evidence in relation to the draft Orders associated with the Welsh Government's proposals for the A40 Llanddewi Velfrey to Penblewin Improvements, which has been received via the Programme Officer on 13 February 2020.
- 1.2 The email was the subject of a detailed reply dated 12 February 2020 from Mark Dixon on behalf of the Welsh Government (reference - qA1316455 / R0040).
- 1.3 The Welsh Government understands the evidence submitted within the email and statement from Pembrokeshire Friends of the Earth to raise the following issues, arguments and concerns:
  - a) Climate Emergency – the Scheme should be reassessed in the light of the Welsh Government's declaration of a climate emergency (20 April 2019). The A40 improvement proposals have remained mostly unchanged for 2 decades. The Scheme will have a 'moderate adverse' greenhouse gas impact.
  - b) The Well-being and Future Generations (Wales) Act 2015 – the Scheme is incompatible with the Act since it fails to meet objectives 7 and 8 and consequently fails to meet Well-being Goal 7 "A globally responsible Wales".
  - c) The Cost of the Scheme –the Scheme delivers poor value for money and that the money would be better used for improving local transport services.
  - d) Public Transport Consideration –little consideration has been given to public transport in relation to the Scheme and that Rail travel was not considered in the WeITAG Stage 1 Study.

- e) Journey Times – the Scheme would only deliver small journey time savings and that any improvement is very likely to be offset by increased congestion at Haverfordwest and Carmarthen, which would impact on air quality in these more built-up areas. Promoting road transport is contrary to Welsh Government policy to reduce road building and the sustainable transport hierarchy.
- f) Safety - there are other ways of providing improvements to safety rather than building an entirely new road.
- g) Capel Ffynnon to Penblewin – the justification of the section of improvement between Capel Ffynnon and Penblewin and that they do not contribute to the Scheme objective 3.
- h) Environmental Impact – the environmental impacts of the Scheme, including increased emissions, impact on ancient woodland, impact on farms and impact on nationally important species including bats and otters.

## 2. REBUTTAL

2.1 Some of the above points have already been addressed in previous correspondence as listed in Appendix A of this Rebuttal. Other points are dealt with by topic by the relevant witness in the following sections. This is in addition in each case to the witnesses' proofs of evidence, to which readers should also refer in their entirety for a full understanding of the Welsh Government's case.

2.2 For ease of reference, the table below lists the sections where the above points are addressed in this Rebuttal:

Objector's point reference	Rebuttal paragraph reference	Objector's point reference	Rebuttal paragraph reference
a	2.68 to 2.70	e	2.50 to 2.58
b	2.71 to 2.75	f	2.59 to 2.67
c	2.10 to 2.13 2.20 to 2.32	g	2.14 to 2.19 2.76
d	2.33 to 2.49	h	2.78 to 2.81 2.83 to 2.92

2.3 The Objector's points have previously been covered in correspondence and proofs of evidence; these are listed below with specific references. The main points from the proofs of evidence are repeated thereafter.

**Point a** (Climate Emergency) – John Davies' Proof of Evidence, WG 1.7.2 paragraphs 3.21 to 3.27 and 6.2.

**Point b** (Future Generations Act) – John Davies' Proof of Evidence, WG 1.7.2 paragraphs 3.1 - 3.20, 3.28 to 3.30 and 6.3 to 6.4.

**Point c** (Cost of the Scheme) – Mark Dixon's Proof of evidence, WG 12.25 to 12.28 and Philip Thiele's Proof of Evidence, WG 1.2.2 section 7.74 to 7.90.

**Point d** (Public Transport Consideration) – Mark Dixon's Proof of Evidence, WG 1.1.2 section 12.25 to 12.28 and Philip Thiele's Proof of Evidence, WG 1.2.2 section 3.38 and 3.39 (Existing Public Transport).

**Point e** (Journey Times) – Philip Thiele's Proof of Evidence, WG 1.2.2 section 4.7 to 4.12 and 6.19 to 6.21.

**Point f** (Safety) – Philip Thiele's Proof of Evidence, WG 1.2.2 section 3.34 to 3.37 and 7.44 to 7.49.

**Point h** (Environmental Impact) – John Davies' Proof of Evidence, WG 1.7.2 paragraphs 4.29 to 4.53 and 6.7 to 6.8; Andrew Sumner's Proof of Evidence, WG 1.4.2, section 4.36 to 4.37 (nature conservation), section 4.93 to 4.96 (agricultural assessment), section 8.2 to 8.12 (Ancient woodland).

#### **Mark Dixon (Chief Witness)**

2.4 I note from the introduction of the Pembrokeshire Friends of the Earth's Evidence that they oppose dualling of the A40 trunk road. The Welsh Government undertook a study<sup>1</sup> in 2015 which considered improvements

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<sup>1</sup> Welsh Government, A40 St Clears to Haverfordwest Study, Design Options Report, (June 2015)

to the A40 between St Clears and Haverfordwest. This study examined an option for the dualling of the A40, however, this was discounted as an option and a Wide Single 2+1 (WS2+1) configuration was recommended. The study concluded:

*“There remains a good case for proceeding with the A40 Llanddewi Velfrey to Penblewin improvement scheme, using the 2+1 configuration which is currently included in the National Transport Schedule.*

*The scheme includes unambiguous lengths for overtaking, would address community severance in the village of Llanddewi Velfrey and deliver small improvements to journey times, journey reliability and road safety on the A40.”*

- 2.5 Therefore, the Welsh Government does not promote the dualling of the A40.
- 2.6 I also note from the introduction of the Pembrokeshire Friends of the Earth’s evidence that they supported improvements to the A40, such as the Robeston Wathen bypass (A40 Penblewin – Slebech Park Improvement). The proposed Scheme is similar to that of the A40 Penblewin-Slebech Park Improvements, which was completed in 2011.
- 2.7 Pembrokeshire Friends of the Earth recognise the value of the proposed Scheme to many of Llanddewi Velfrey’s residents.
- 2.8 The objector also suggests that the Scheme is likely to go beyond the road improvements in the Welsh Government’s new transport strategy due to be published. However, the Scheme is part of the Welsh Government’s current national transport strategy and is included in the Pembrokeshire County Local Development Plan (Doc 4.01.58). It is correct that the Welsh Government is working on an update to the Wales Transport Strategy and a draft for consultation may be published later this year. However, at the time of this Inquiry, no information is available on the form or content of such a consultation draft, which is likely in any

event to change before its final adoption by the Welsh Government as a replacement for the current Wales Transport Strategy. Decisions on this Scheme must therefore be made on the basis of the Welsh Government's current adopted national transport strategy.

- 2.9 Prior to publishing draft Orders, a Minister's Advice (MA) paper was prepared by the Project Team and considered by the Minister and his advisors. The MA contained Scheme documentation including the Environmental Statement. Following review of the MA, the Minister provided approval to publish draft Orders.

### **Point c – Cost of the Scheme**

- 2.10 In the following paragraphs, I respond to part of point c, which relates to the Scheme funding. Philip Thiele will respond to the concern that the Scheme delivers poor value for money.
- 2.11 The need for the Scheme and improvements to the A40 have been identified within policy, as set out within ES Chapter 5 on Legislation & Policy Context. (Doc. 3.05.01).
- 2.12 Capital costs will be funded jointly by the Welsh Government and the European Regional Development Fund (ERDF). The ERDF will fund approximately two-thirds of the capital cost. Following the acceptance of a Business Case for the Scheme, the Welsh European Funding Office (WEFO) have confirmed that ERDF funding for the Scheme is secured and that the UK's withdrawal from the European Union does not impact on this funding.
- 2.13 Pembrokeshire Friends of the Earth state that the funds would be better used on improving local transport services, including the bus and train network. The two-thirds of the funding from ERDF would not be directly applicable to other projects if it was not utilised on this Scheme. WEFO has issued an approval contract to Welsh Government for this Scheme under Priority 4 of the West Wales and the Valleys Operational Programme under the Specific Objective 'To address issues of

peripherally and improve private investment in local areas through improvements to the functioning of the Trans-European Transport Network (TEN-T)'. This Operational Programme document was approved by the European Commission. If this were not to be utilised for the Scheme, this allocation of funds would be returned to the ERDF via WEFO.

### **Point g – Capel Ffynnon to Penblewin**

2.14 A WelTAG Stage 1 and 2 Appraisal (Doc 4.03.03 and Doc 4.03.05) has been undertaken during the development of the preliminary design to review the problems and objectives and appraises the route options. WelTAG Stage 1 considered an option that provided a bypass of the Llanddewi Velfrey village between Capel Ffynnon and Bethel, with limited intervention between Ffynnon and Penblewin. This was noted as Option 4 (Highway Option B), within the WelTAG Stage 1 Report (Doc 4.03.03). The following paragraphs summarise the findings of the WelTAG Stage 1 appraisal and the reasons why this option was discounted.

2.15 While recognising that there would be some more adverse environmental impacts from the Scheme's inclusion of the section between Capel Ffynnon to Penblewin, it is considered that the proposed Scheme performs best against the Scheme objectives and WelTAG criteria, and best addresses the problems identified.

2.16 It is considered that through the inclusion of the section between Capel Ffynnon to Penblewin, additional benefits would be provided in comparison to the option considered without this section. These include benefits to journey quality, accidents, security, access to services, journey time reliability and the local economy.

2.17 The inclusion of the section between Capel Ffynnon to Penblewin results in the Scheme providing a significantly greater extent of 2+1 carriageway which provides additional safe overtaking opportunities; reducing driver

stress, increasing journey quality, improving journey time reliability, improving access to employment and services, reducing the number of risky manoeuvres on the road and generally contributing to the reduction of potential accidents.

2.18 In relation to the scoring of objective 3 – “to reduce community severance and provide health and amenity benefits”, it is considered the proposed Scheme would contribute significantly to achieving this objective given the removal of strategic traffic through Llanddewi Velfrey. The section between Capel Ffynnon and Penblewin would help to further achieve this objective by providing a safe and convenient route for Walkers, Cyclists and Horse Riders (WCHR) utilising the proposed Public Rights of Way (PRoW) network and the detrunked A40, which would provide health and amenity benefits.

2.19 I confirm that the statement of truth and professional obligations to the Inquiry from my main proof still applies.

### **Philip Thiele (Traffic and Economics)**

#### **Point c – Poor value for money**

2.20 In the following paragraphs, I respond to point c (concerned that the Scheme delivers poor value for money):

2.21 The requirement for a value for money analysis is set out within the Transport Case defined within Welsh Transport Appraisal Guidance (WelTAG). Value for money is expressed through the Benefit Cost Ratio (BCR).

2.22 While the Benefit Cost Ratio (BCR) of 0.13 indicates a poor economic case, there are many non-monetised benefits that either cannot be quantified or have not been quantified, on the basis that the analysis required would be disproportionate to the scale of likely benefits. These include:

- a) Journey time reliability;
- b) Detailed impacts of the overtaking sections (the full interaction between slower and faster moving vehicles on a vehicle-by-vehicle basis);
- c) Seasonality and other periods of high demand;
- d) Driver stress and frustration;
- e) Freight;
- f) Wider economic impacts; and
- g) Other environmental and social impacts such as journey quality, community severance, health and amenity benefits.

2.23 Therefore, qualitative aspects need to be considered in conjunction with the quantitative analysis. The economic appraisal is only one aspect of the overall case for investment and needs to be balanced against other environmental, social and cultural costs and benefits and should be considered in the context of the overall Scheme objectives. Value for money of the Scheme needs to be considered alongside other Welsh Government policies, the impact of which cannot be quantified for inclusion in the BCR; in particular the seven goals in the Well-being of Future Generations (Wales) Act 2015.

2.24 It should also be considered that the Llanddewi Velfrey to Penblewin Improvements need to be seen in the context of the overall A40 corridor improvement, of which it forms an integral component.

2.25 Additional sensitivity tests were also undertaken to assess the impact of alternative future road network configurations on the economic case for the Scheme.

2.26 The first additional sensitivity test was undertaken to assess the impact of an alternative Scheme design. The proposed Scheme includes a roundabout at the Llanddewi Velfrey East Junction. This has a negative

effect on travel time savings as it introduces additional delay to through traffic travelling along the A40 compared to a staggered T-junction in its place.

- 2.27 While a staggered T-junction is compliant with design standards in the DMRB, a roundabout was instead adopted into the Scheme proposals based on the levels of support for it following public engagement as documented in the proof of evidence of Tom Edwards (WG 1.3.2). His proof of evidence also highlights the benefits of a roundabout. An additional benefit of the roundabout in operational terms is that it facilitates easier movements of traffic from Llanddewi Velfrey turning right onto the eastbound A40 because vehicles making this manoeuvre only need to give way to traffic travelling westbound along the A40.
- 2.28 The economic appraisal results of this alternative Scheme option show that user benefits would be around three times higher than the proposed Scheme, indicating that the BCR would be in the order of 0.4. This illustrates that the BCR is very sensitive to relatively small changes in the Scheme design.
- 2.29 A second sensitivity test was undertaken with the impact of traffic on local communities in mind. Based on feedback received at public engagement events, local residents consider traffic to have a negative impact on their quality of life and that there are safety issues with the road as it stands.
- 2.30 In the absence of the Scheme, a possible alternative measure to improve safety would be to reduce traffic speeds through Llanddewi Velfrey and between the village and Penblewin, although the Welsh Government has currently put no such proposal forward. Lower traffic speeds would improve safety at the Penblewin rest area junction and within the village of Llanddewi Velfrey but would do little to address community severance, as the volume of traffic passing through the village would not be affected. It should be noted that this is not being put forward as an alternative to the Scheme, but rather as a measure that

may have to be implemented if the Scheme does not go ahead and therefore would affect the assumptions applied in the 'Do Minimum' scenario.

2.31 We have therefore tested an alternative 'Do Minimum' scenario in which the speed limit is reduced to 50mph between Penblewin and Llanddewi Velfrey and 30mph through the village. Under the 'Do Something' scenario, we have assumed that the speed limit on the proposed section of road would remain at 60mph as the highway would be built to modern standards and the traffic would not be passing through the village.

2.32 When we compare the Scheme Do Something scenario against this alternative 'Do Minimum,' it results in a significantly better economic case for the Scheme. This is because journey time savings would be substantially improved by more than 60 seconds as a result of the lower speeds in the alternative 'Do Minimum'. The result of this would be broadly a fivefold increase in benefits and a BCR of around 0.6, illustrating the sensitivity of the economic case to the speed limit.

#### **Point d – Public transport consideration**

2.33 In the following paragraphs, I respond to point d (concerned that little consideration has been given to public transport in relation to the Scheme and that rail travel was not considered in the WeITAG Stage 1 Study).

2.34 In November 2001, the National Assembly for Wales published the Transport Framework for Wales<sup>2</sup>. This outlined that the east-west transport corridor in West Wales had been the subject of a multi-modal study in the 1990s, which concluded that the A40 west of St Clears was in need of improvements.

2.35 The multi-modal study was carried out considering public transport improvements including rail, bus, freight and integrated bus and rail.

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<sup>2</sup> The National Assembly for Wales, The Transport Framework for Wales, (November 2001)

However, it was concluded that improvements to public transport would not reduce the amount of traffic on the A40 trunk road. The report also found that costs associated with enhanced passenger services were likely to exceed revenue, thus requiring an operating subsidy.

2.36 Within the WelTAG Stage 1, Impact Assessment Report (Doc. 4.03.04) public transport options were again reviewed with specific reference to rail. The following was concluded in paragraph 4.4.22 of the aforementioned report:

*“Taking into account the existing public transport system in and around Llanddewi Velfrey (see Section 3.2), it is clear that any rail related interventions would be likely to be ineffective, given there are no railway stations within the study area and that travel by rail would be dependent upon the highway network to facilitate accessibility to railway stations. Therefore the ability to achieve modal shift by transferring trips along this section of the A40 onto rail is likely to be limited.”*

2.37 The WelTAG study for this Scheme focuses on the A40 section through Llanddewi Velfrey to Penblewin Roundabout. WelTAG guidance advises that a study develops a Case for Change to understand the current situation. Several problems have been identified, including limited and inconsistent overtaking opportunities; convoys of slow-moving vehicles contributing to periods of platooning; severance through Llanddewi Velfrey; a conflict between vehicle traffic and non-motorised users; substandard sections of the existing road; and numerous accesses onto the strategic road network. From these, a number of objectives have been set. It is considered that a rail option would not provide significant benefits to achieving a reduction in the volume of traffic and associated modal shift. This would therefore not offer substantial benefits to the objectives set, including network resilience; accessibility; prosperity; community severance; health; and social inclusion.

2.38 It is also essential to consider the broader economy with tourism recognised as a pivotal contributor to the Pembrokeshire economy and

the County showing a higher than average proportion of working residents in accommodation and food sectors<sup>3</sup>, reflecting the importance of the visitor economy. The level of seasonality in traffic flows also reflects the prominence of Pembrokeshire as a tourism destination, as well as the attractiveness of the National Park, which attracts approximately 4.2 million visitors per annum or 13 million visitor days.

2.39 The perception of remoteness and relative isolation has, however, been seen to act as a barrier to potential markets as stated in the A40 St Clears to Haverfordwest Economic Activity & Location Impacts Study 2015 (Doc. 4.02.11). Tourists often rely on the private car to access tourism destinations in the region, and while Pembrokeshire's low population density and rural nature is often a pull factor for tourism, this means that public transport options are limited.

2.40 For rail journeys, consideration must be given to the journey segment required before and after the rail segment, to take into account access to the departure rail station and onward travel from the arrival station to the ultimate trip destination. In general, for a rail journey to form a viable alternative to car journeys based on overall travel time and cost, the ultimate trip origin and destination must be within a reasonable walking distance of stations. Catchments of 800m are commonly considered for walk access to railway stations<sup>4</sup>. Further analysis of the data shown in Figure 4 of the WelTAG Stage 1 Impact Assessment Report (Doc. 4.03.04) highlights that only 7% of all trips passing through Llanddewi Velfrey have both their origin and destination located within the walking catchment of a station.

2.41 Journey times by rail between Milford Haven or Haverfordwest and Whitland, Carmarthen or Swansea are broadly comparable to those by car. However, for destinations beyond Swansea, journey times by rail tend to be significantly higher than by car. This is because Swansea is a

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<sup>3</sup> Office for National Statistics, Census 2011, Table ID KS605EW to KS607EW

<sup>4</sup> Planning for Walking (Chartered Institution of Highways & Transportation, 2015, section 6.4)

terminus station meaning that there is additional journey time involved in trains having to change direction at the station and double back on themselves for several kilometres.

- 2.42 The time involved in walking from the trip origin and to the ultimate trip destination, as well as wait time at stations, needs to be taken into account as part of the overall journey times by rail. This tends to result in rail journey times being less competitive compared to a car, even where station to station journey times by rail are comparable to a car. Journey times by rail are therefore only actually comparable to car times where both trip ends are located within very close proximity of the nearest railway station. Only 2% of all trips passing through Llanddewi Velfrey were observed to start and end their journey within 400m or broadly 5 minutes' walk of a railway station.
- 2.43 A factor that can increase the attractiveness of rail travel relative to car travel is if there are significant parking constraints (in terms of parking charges or the number of available spaces) or significant road congestion at the destination end of the journey. These types of constraints are not applicable to the vast majority of origins and destinations of journeys passing through Llanddewi Velfrey. They apply to city centre locations in larger cities such as Cardiff, Bristol and London. However, the percentage of trips passing through Llanddewi Velfrey with destinations in city centre locations is very small.
- 2.44 There are currently eight rail services per day connecting Milford Haven or Haverfordwest with Whitland, Carmarthen or Swansea. These rail services all continue on to Cardiff, with five of the eight services providing a direct link through to Manchester. However on average, the rail service frequency is very low at only one rail service every two hours in each direction. Such a low frequency is very restrictive to travellers, especially those who have specific constraints that affect their desired departure or arrival times, for example, due to work shift patterns.

2.45 Therefore, in the context of low frequencies and generally uncompetitive journey times by rail, only a small proportion of the 7% for whom modal shift to rail is feasible would make the switch if rail enhancements were made in this area. Even a doubling of rail frequencies, for example, would not considerably address the issue of low rail frequencies. As such, rail improvements would do little towards addressing the Scheme objectives as the traffic volumes passing through Llanddewi Velfrey would be unlikely to reduce by more than a few percentage points at most.

2.46 With general traffic growth, future traffic volumes are forecast to increase independent of the proposed Scheme being implemented. The low magnitude of feasible modal shift to rail would therefore not result in a long-term reduction in traffic volumes through Llanddewi Velfrey and would consequently not address many of the problems identified in the WelTAG study.

2.47 As stated within the Statement of Case Part A: Policy Statement (WG 1.1.1), improvements to bus services were also considered as part of the WelTAG study by increasing frequency and operating hours. The study area is characterised by a dispersed settlement pattern and low population density, which means that bus stops will service a small number of people who are able to walk to them. This option would be dependent on an operator who is willing to commit additional resources to existing bus routes as well as the availability of increased subsidy and revenue support. The WelTAG Stage 1 report (Doc. 4.03.03) demonstrated that public transport improvements would best be targeted at ongoing regional investment and would not address the problems along the A40.

2.48 The Initial Traffic and Accident Data Report (Doc. 4.05.01) highlights in section 3 that the A40 within the study area has spare capacity and experiences no significant operational problems resulting from over-capacity issues along the road and its junctions. Therefore, the Scheme

does not merely seek to address excessive traffic flows and congestion caused by flows exceeding the available road capacity.

2.49 Despite the lack of capacity-related operational issues, journey times along the A40 within the study area are on average between 15 and 17% higher during daytime hours than during night time hours. The cause for the slower journey times during daytime hours is linked to the formation of platoons behind slow-moving vehicles and a lack of overtaking opportunities to allow these platoons to disperse. The number of properties with direct access onto the A40, further exacerbate these problems. It is clear that these issues, as well as the problem of community severance within Llanddewi Velfrey, would not be addressed by the likely scale of modal shift to public transport indicated in paragraph 2.45.

#### **Point e – Small journey time savings**

2.50 In the following paragraphs I respond to point e (concerned that the Scheme would only deliver small journey time savings and that any improvement is very likely to be offset by increased congestion at Haverfordwest and Carmarthen).

2.51 While the Scheme is marginally longer than the existing route through Llanddewi Velfrey, the speed limit would be higher on the proposed road and the sections of Wide Single 2+1 (WS2+1) standard would provide more opportunity to overtake slower moving vehicles.

2.52 Journey time savings resulting from the Scheme would be in the order of approximately 20 seconds in the eastbound direction and approximately 10 seconds in the westbound direction.

2.53 Given the relatively small scale of time savings that are expected as a result of the Scheme, the likelihood of traffic switching from alternative routes onto the A40 corridor once the Scheme is completed is negligible. This conclusion was drawn based on the analysis of existing traffic

patterns observed on the A40 and A477 corridors through roadside interview surveys carried out for this study in October 2016.

2.54 The traditional methodology for scheme assessment has been to derive forecasts from a traffic model using a 'fixed trip matrix' approach. While this approach makes provision for the predicted growth in travel demand in future years, it assumes that this growth would occur whether or not the improvement is implemented.

2.55 Recent years have seen the development of techniques in modelling variable demand for travel, using as its starting point the principle that any change in transport conditions can cause a change in travel demand. This is aimed at considering the extent of suppressed demand in the 'Do Minimum' case (without Scheme), as well as the potential for induced traffic in the 'Do Something' case (with Scheme). In congested conditions, therefore, an increase in highway capacity can result, in some circumstances, in additional traffic on the network that can add to the congestion, thereby reducing average speeds for all traffic and eroding some of the benefits of the Scheme.

2.56 Section 2.2 of WebTAG unit M2 outlines circumstances under which it is appropriate to apply a 'fixed trip matrix' approach. The guidance states that it may be acceptable to limit the assessment of a Scheme to a fixed demand assessment if the following criteria are satisfied:

a) The Scheme is quite modest either spatially or financially, and is also quite modest in terms of its effects on travel costs; or

b) There is no congestion on the network in the forecast year, in the absence of the Scheme; and

c) The Scheme will have no measurable effect on travel choices (e.g. mode choice or distribution) in the corridor containing the Scheme.

2.57 Spatially, the Scheme is modest, in that it represents a linear improvement to the A40 corridor with little scope for attracting traffic from

other routes. Congestion along this route is currently minimal, and this is not expected to change significantly in the future. Time savings associated with the Scheme are also modest.

2.58 Because of the strategic nature of the route, most traffic using it travels considerable distances. This, together with the isolated rural character of the study area means that the Scheme is not expected to have an appreciable effect on variable demand model responses such as mode switch, destination choice, trip frequency changes or trip retiming. As such, a traffic assignment based on a 'fixed trip matrix' is appropriate for this Scheme; simply put, the Scheme would result in no induced traffic. Accordingly, congestion levels in Haverfordwest and Carmarthen would be unaffected by the Scheme.

#### **Point f – Safety**

2.59 Personal injury accident data along the A40 corridor, obtained from police records, has been reviewed as part of the Scheme appraisal. Between 2006 and 2015, which were the ten most recent years of accident data available at the time of the Scheme appraisal, nine accidents occurred on the section of A40 through Llanddewi Velfrey and a further 13 accidents occurred between Llanddewi Velfrey and Penblewin Roundabout.

2.60 The A40 between Robeston Wathen and Slebech Park has already been upgraded to the WS 2+1 standard proposed for this Scheme. Sections that have been upgraded to WS2+1 standard provide safer overtaking opportunities than single carriageway roads. This results in a lower accident rate on WS2+1 roads.

2.61 Between Haverfordwest and St Clears, the accident rate for WS2+1 roads with a 50 / 60mph speed limit is 36% lower than the equivalent accident rate for single carriageway roads with the same speed limit. The accident rate for WS2+1 roads compares even more favourably

against single carriageway roads with 30 / 40 mph speed limits. The WS2+1 accident rate is 52% lower in this comparison.

2.62 The Scheme would remove the vast majority of traffic from the village of Llanddewi Velfrey, thereby creating a safer environment within the village. The removal of traffic would provide the opportunity to widen footpaths through the village and make walking, cycling and horse riding a more attractive proposition for trips within the village.

2.63 The A40 is a route of national and international strategic importance, forming part of the TEN-T. At a regional and local level, it serves: the county town of Haverfordwest, the tourist economy of central and north Pembrokeshire, the port of Fishguard and the industrial town of Milford Haven to the south.

2.64 The existing section of the A40 through Llanddewi Velfrey is subject to a 40mph speed limit. Traffic calming measures, such as the provision of speed bumps, would require further reduction of the speed limit through the village of Llanddewi Velfrey. Reducing the speed limit further would not contribute to the following Scheme objectives:

O1 - To enhance network resilience and improve accessibility along the east-west transport corridor to crucial employment, community and tourism destinations;

O2 - To improve the prosperity and provide better access to the county town of Haverfordwest, the Haven Enterprise Zone and West Wales ports at Fishguard and Milford Haven.

2.65 Additionally, the reduction of speed through the village would be likely to exacerbate the existing issues related to platooning (when there are convoys of heavy goods vehicles from the ferry ports and slow-moving agricultural vehicles) and would not solve the problems associated with limited and inconsistent overtaking opportunities which lead to journey time unreliability, driver frustration and associated dangerous manoeuvres with severe collision incidents.

**Point g – Capel Ffynnon to Penblewin**

2.66 Maximising the length of WS2+1 carriageway would provide the greatest potential to overcome problems associated with the provision of safe overtaking opportunities. In turn, this would help improve journey time reliability and reduce risky overtaking manoeuvres and driver frustration. A 36% reduction in the number of accidents would be expected on the western section of the proposed WS2+1 road compared to the existing A40 west of Llanddewi Velfrey as explained in paragraph 2.61.

2.67 I confirm that the statement of truth and professional obligations to the Inquiry from my main proof still applies.

**John Davies (Policy and Sustainable Development)****Point a – The Climate Emergency**

2.68 My proof of evidence (WG 1.7.2) acknowledges that the Scheme would increase greenhouse gas (GHG) emissions; this is also set out in Chapter 18 of the Environmental Statement (ES) (Doc 3.18.01). However, when the Welsh Government declared a climate change emergency it did not announce a ban on new road building. The actions which the Welsh Government is taking to tackle climate change are set out in Prosperity for All: A Low Carbon Wales (Doc 4.01.24). The policies and proposals in this document do not include a review of all road-building schemes, which in my view is clear recognition that there will be situations where new road schemes are necessary and justified and that each one should be considered on its merits.

2.69 In this case, the Welsh Government has used the WelTAG 2017 framework, which embeds the principles of sustainable development enshrined in the Well-being of Future Generations (Wales) Act 2015 (WFG Act) (Doc 4.01.10), to identify the problems associated with this section of the A40, evaluate the options for addressing those problems and determine the Scheme as the preferred solution. A considerable body of evidence has been prepared to demonstrate the need for the

Scheme. Therefore, while it is true that the problems on the A40 have been known for many years, it is incorrect to suggest that the proposals have remained mostly unchanged for 20 years. The current Scheme is the result of recent work that adhered to the principles set out in the WFG Act and included extensive collaboration with stakeholders and the local community.

2.70 On the issues of noise and air quality, the ES (Doc 3.01.01) demonstrates that the Scheme would result in significant benefits from reduced noise for residents of Llanddewi Velfrey, including at night time, and no significant adverse noise impacts. Concerning air quality, while existing levels of air pollution are low, the Scheme would improve air quality for the majority of residents. The Scheme would meet the Welsh Government's planning policy objective set out in Planning Policy Wales Edition 10 (PPW10) (Doc 4.01.30) of reducing average population exposure to air and noise pollution.

#### **Point b – The Well-being of Future Generations (Wales) Act 2015**

2.71 The assessment of how well the Scheme performs against the objectives set out in the table in paragraph 4.7.2 of the WelTAG Stage 3 Report (Doc 4.03.07) is 'Neutral' against Objective 7 and 'Slight Adverse' for Objective 8. However, it is incorrect to conclude that the Scheme, therefore, makes no contribution to well-being goal 7 in the WFG Act – 'A globally responsible Wales'. It is necessary to evaluate the Scheme against the national well-being objectives and this evaluation is contained in paragraph 4.8.7 of the WelTAG Stage 3 Report. Preceding this paragraph is Table 1 from the Welsh Government's Well-being Statement 2017, explaining how each of the 12 national well-being objectives contributes to the seven well-being goals.

2.72 The table in paragraph 4.8.7 explains the Scheme's contribution to national well-being objectives 3, 7, 9, 11 and 12, which are the objectives contributing to well-being goal 7 'A globally responsible Wales'. The Scheme would not encourage modal shift and would

increase GHG emissions (objective 3), but it would contribute positively to objectives 7, 9, 11 and 12. The Scheme would, therefore, make a positive contribution to several of the Welsh Government's well-being objectives that are intended to contribute to the achievement of well-being objective 7.

2.73 I recognise that others may disagree with the extent to which the Scheme would contribute positively to the national well-being objectives and place greater emphasis on the failure to encourage modal shift and the increased GHG emissions. Nonetheless, it would be wrong to reject the Scheme based on its inability to contribute to one of the seven well-being goals and ignore its positive contribution to the other goals. The Sustainable Development Report (Doc 4.03.09) explains the positive contributions the Scheme would make to nine of the national well-being objectives and hence to the majority of the well-being goals.

2.74 The WFG Act does not require that every action by the Welsh Government contributes to all of the well-being goals; it would not be practicable to impose such a requirement. Section 3(2)(a) requires that a public body's well-being objectives should maximise '*its*' contributions to achieving the goals so that it is the actions of the Welsh Government collectively rather than the contributions of individual projects that should be considered. A balanced view must be taken that weighs a failure to contribute to one goal against all positive contributions to other well-being goals. The Scheme would contribute to the achievement of the majority of the well-being goals through: improved road safety; increased network resilience; reduced community severance and noise impact, and improved air quality.

2.75 The objector also suggests that the Scheme is likely to go beyond the road improvements in the Welsh Government's new transport strategy due to be published. However, decisions can only be made based on existing strategy and policies. The Scheme is part of the Welsh Government's current national transport strategy and is included in the Pembrokeshire County Local Development Plan (Doc 4.01.58).

**Point e – Journey Times/The Sustainable Transport Hierarchy**

2.76 The objector refers to the sustainable transport hierarchy as part of this objection point and suggests that the Welsh Government policy is to reduce road building. The use of the sustainable transport hierarchy is explained in PPW10 paragraph 4.1.11, which states that it should be used in relation to new development. The hierarchy places private motor vehicles at the bottom with the intention of reducing the need to travel and prevent car-dependent developments in unsustainable locations. It is therefore correct that Welsh Government policy is to locate new development so that the need for new road building is minimised, but this is in relation to new development. This Scheme is intended to address existing transport difficulties and is not associated with new development. It would not generate additional private motor vehicle trips as would new housing, retail or business development. The transport hierarchy hence has no direct application to road schemes of this nature.

**Point g – Capel Ffynnon to Penblewin**

2.77 The objector makes the point that the section of the new road from Capel Ffynnon to Penblewin Roundabout would not contribute to Scheme objective 3: *to reduce community severance and provide health and amenity benefits*. While it is correct that this objective is met by the section of road bypassing Llanddewi Velfrey, the Scheme must be assessed as a whole against all the objectives. The section between Capel Ffynnon to Penblewin is described in further detail in paragraph 2.18 of this Rebuttal. It is wrong and unrealistic to divide the Scheme into sections and base objections on the failure of one section to contribute to an individual objective. It is the performance of the Scheme as a whole against the objectives collectively that must be considered.

**Point h – Environmental Impact**

2.78 The WeITAG Stage 3 (Doc 4.03.07) assessment of the Scheme gives a score of 'Slight Beneficial' for three environmental criteria, 'Slight

Adverse' for four criteria and 'Moderate Adverse' for one criterion. One of the requirements that scored positively was noise. The 'Slight Beneficial' score must be seen in the light of the fact that the WeITAG Stage 3 Impact Assessment Report (Doc 4.03.08) identified significant permanent direct beneficial effects for the community of Llanddewi Velfrey as a result of the Scheme in the short and long term. Many properties close to the existing A40, which are currently exposed to night-time noise above guidance thresholds associated with the onset of nuisance, would see reduced night-time noise levels. Therefore, although traffic noise was not considered to be an issue during the 2006 public consultation, this does alter the fact that many people would see significant benefits from noise reduction because of the Scheme.

2.79 Whilst the effect on air quality is similarly assessed in WeITAG Stage 3 as 'Slight Beneficial', the majority of Llanddewi Velfrey residents would see a significant decrease in levels of NO<sub>2</sub> since traffic would be moved away from the village. Overall there would be improved air quality for the majority of residents in the area, in line with Welsh Government policy of reducing average population exposure to air and noise pollution.

2.80 The objector suggests that the expected transition to electric vehicles would reduce air and noise pollution even if the Scheme were not to proceed. I do not dispute this, but the improvement in air quality and reduction in noise in Llanddewi Velfrey is the result of the fall in daily traffic through the village, 94-95% in the opening year 2021 and 94-96% by 2036. It would be many years after this before the UK Government's ban on the sale of diesel, petrol and hybrid cars would have the same impact on air pollution and noise levels in the village. Bearing in mind that traffic modelling shows an increase in traffic through the village without the Scheme, there would not be the same impact on noise even when all vehicles become electric since a proportion of the noise from road traffic is from tyres on the road surface and not from the engine and exhaust.

2.81 The objector has singled out the negative WeITAG Stage 3 scores for the Scheme and ignored the scores for economic and social criteria, all of which apart from 1 'Neutral' are positive; there is one 'Slight Beneficial' score, 8 'Moderate Beneficial' scores and 3 'Major Beneficial' scores. WeITAG is a tool for assessing problems with the transport system in Wales and appraising options. The scoring system is a means by which options can be evaluated to arrive at a recommended way forward. It would be unrealistic to expect any option to score positively against all the assessment criteria. It is necessary to take an overall view to select the preferred solution and the objector has failed to do this by choosing to consider only those negative scores for the Scheme. Overall, the Scheme's positive scores against WeITAG criteria are considerably over its negative scores.

2.82 I confirm that the statement of truth and professional obligations to the Inquiry from my main proof still applies.

### **Andrew Sumner (Environment)**

#### **Point h – Environmental Impact**

2.83 The ES reports on environmental assessments carried out by qualified professional environmental specialists. The assessments have identified the significance of effects on receptors. With regard to the general point raised about concern over environmental impacts, I refer to the ES for full details of the surveys, assessments and results (Doc. 3.01.01). Also identified are the following points: increased emissions impact on ancient woodland; impact on farms; and impact on nationally important species including bats and otters. I will address each of these specific points in turn.

#### **Impact of increased emissions on ancient woodland**

2.84 Concern has been raised in relation to increased emissions impacts of the road improvements on areas of ancient woodland designations.

There are two areas of restored ancient woodland, one at Ffynnon Wood

(Unique ID 4537) and a second which is a small streamside woodland close to Blaen-Pen-troydin (Unique ID 5801). In the case of Ffynnon Wood, the Scheme would follow a similar alignment to the existing A40. This alignment was chosen to use the existing embankment and watercourse culverts and so minimise the loss of area to the ancient woodland. The amount of traffic using the A40 is not forecast to increase as a consequence of the improvements. In other words, there would be no induced traffic resulting from the Scheme, as stated in paragraph 2.58. Any traffic growth that would occur would be no different from the existing A40. Emissions from vehicles would, therefore, be expected to remain similar to the existing road and to have a similar effect on the ancient woodland.

- 2.85 The Scheme would cross the restored ancient woodland near Blaen-Pen-Troydin (Unique ID 5801) and an area of around 180m<sup>2</sup> would be lost. Recognising the value of ancient woodland, the alignment during the development of the preliminary design was moved as far north as practically possible to avoid crossing the main block of the designation.
- 2.86 The Air Quality Assessment has considered the construction effects of the Scheme and proposes mitigation measures to control the spread of dust during earthmoving activities. The assessment concludes that with mitigation, no significant effects are anticipated during construction. During operation, the assessment concludes that the impact would not be significant even for those receptors close to the Scheme.
- 2.87 Paragraph 13.10.13 of the ES Chapter 13, Air Quality, states that *“there are no exceedances of the annual mean NO<sub>2</sub> objective predicted in any of the scenarios assessed. The majority of receptors experience a large decrease in annual mean NO<sub>2</sub> concentrations as the Scheme moves traffic away from the village of Llanddewi Velfrey. Those receptors closer to the Scheme do experience an increase in annual mean NO<sub>2</sub> concentrations, however, due to their distance from the Scheme, this increase is less than 2% of the annual mean NO<sub>2</sub> objective”*. For comparison, the closest receptor to the area of woodland is Pentroydin

Fawr Farm, which would experience a minor adverse impact. At the woodland, the height of the embankment would raise the carriageway above the canopy of the woodland. Vehicles using the Scheme would, therefore, be releasing emissions into the atmosphere above the woodland rather than under the canopy allowing these gases to be dispersed more readily into the atmosphere.

### **Impact of the Scheme on farms**

2.88 The impact of the Scheme on farms has been assessed in the agricultural assessment, which is reported in ES Chapter 12 (Doc. 3.12.02). The Scheme affects seven farms and takes 27.4 hectares of agricultural land. None of this land is shown to be 'Best and Most Versatile' quality. All seven affected farms would experience significant changes in day-to-day operations, but the viability and continued function of the holdings is not threatened. Accordingly, this is an impact of slight magnitude on a resource of high significance, leading to an overall impact of minor adverse significance.

### **Impact on nationally important species including bats and otters**

2.89 The Scheme passes through habitat that is used by various protected species. Full details of the habitats and species are described in ES Chapter 8 (Doc 3.08.01). Pete Wells has provided a Proof of Evidence (WG 1.5.2), which addressed ecological and nature conservation matters. These species have been considered in both route selection, and the design with mitigation included to allow species to cross the proposed Scheme using underpasses and culverts. Bat hop-overs are proposed in several locations where underpasses cannot be provided. Mammal fencing to exclude badger and otter from the carriageway would be installed and this would be designed to encourage species to use underpasses and culverts.

2.90 Land that is not required for the carriageway is proposed for creating habitat and overall there will be a replacement of woodland, scrub and

hedgerow habitat at a ratio of 2.15 to 1. All the remaining areas, which would form grassland, would be seeded with native flora to establish a more diverse grass sward. This habitat creation would support nature conservation objectives by retaining connectivity across the road for species but also would provide enhanced connectivity along the Scheme.

2.91 Natural Resource Wales (NRW) has been consulted regarding ecology surveys, assessments and mitigation. A conservation strategy has been submitted to this statutory environmental body and this has been accepted resulting in NRW withdrawing its objection to the statutory Orders. The strategy includes details of how mitigation is to be monitored and is included within Pete Wells' Appendices of Ecology Proof of Evidence (WG 1.5.3).

2.92 I confirm that the statement of truth and professional obligations to the Inquiry from my main proof still applies.

### **Tom Edwards (Engineering)**

#### **Amendments to the existing A40**

2.93 The Pembrokeshire Friends of the Earth objection letter (dated 20 September 2019) suggested several amendments which could be made to the existing A40 as an alternative to the proposed Scheme. Paragraph 2.64 and 2.65 of this Rebuttal addresses the proposals of traffic calming measures and further reduction of speed limit through the village. I will deal with the provision of an underpass near the war memorial in the village of Llanddewi Velfrey and pavement widening and provision of new pavements in the following paragraphs:

**Provision of an underpass near the war memorial in the village of Llanddewi Velfrey**

2.94 The provision of an underpass near the war memorial in the village of Llanddewi Velfrey would not meet or contribute to the following Scheme objectives:

O1 - To enhance network resilience and improve accessibility along the east-west transport corridor to key employment, community and tourism destinations.

O2 - To improve prosperity and provide better access to the county town of Haverfordwest, the Haven Enterprise Zone and the West Wales ports at Fishguard, Milford Haven and Pembroke Dock.

O3 - To reduce community severance and provide health and amenity benefits.

O4 - reduce the number and severity of collisions.

2.95 The proposal as shown in the illustration of the objection correspondence (dated 20 September 2019) would require additional land outside of the existing highway boundary.

2.96 The practicality of constructing the underpass would be difficult. Construction of the underpass without disturbing the A40 carriageway would be complex, leading to significant disruption to traffic on the A40 with little measurable benefit from the provision of the underpass. The congested nature of the site within the middle of the village would also cause difficulties during construction.

**Pavement widening and provision of new pavements**

2.97 I have assumed that by 'pavement widening and provision of new pavements' the objector means widening/ provision of new footways and not widening / provision of new highway pavement.

2.98 Sections of the highway layout through Llanddewi Velfrey do not meet current design standards. The horizontal alignment is generally poor, and the road narrows to 6.5m in places. No hard strips are provided, and footways are narrow and below standard.

2.99 As part of the Scheme, the Welsh Government is considering options to improve Active Travel through the village. With the new Scheme in place, the significant reduction in traffic through the village does provide an opportunity to increase the footway pavement width which would encourage walking and cycling through and within the village by improving the perceived safety of the footway.

2.100 I confirm that the statement of truth and professional obligations to the Inquiry from my main proof still applies.

## Appendix A - Correspondence List

Date	In/Out	Author	Email/Post/Meeting
20/09/2019	In	Pembrokeshire Friend of the Earth	Email
23/09/2019	Out	Welsh Government	Email (Acknowledgement letter)
12/02/2020	Out	Welsh Government	Letter (Objection Response)