

Welsh Government

**A40 Llanddewi Velfrey to Penblewin
Improvements**

Environmental Statement Chapter 15: All
Travellers

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Contents

	Page
15 All Travellers	1
15.1 Introduction	1
15.2 Legislation and context	1
15.3 Assessment Methodology	4
15.4 Baseline Environment	17
15.5 Mitigation Measures Forming Part of the Scheme Design	24
15.6 Assessment of Potential Land Take Effects	24
15.7 Assessment of Potential Construction Effects	31
15.8 Assessment of Potential Operational Effects	38
15.9 Additional Mitigation and Monitoring	42
15.10 Assessment of Land Take Effects	44
15.11 Assessment of Construction Effects	44
15.12 Assessment of Operational Effects	45
15.13 Assessment of Cumulative and Inter-Related Effects	46
15.14 Summary of Effects	46

Tables

Table 15.1 Site Survey and Visit Dates	7
Table 15.2 Consultation Responses Relevant to this chapter	8
Table 15.3 Definitions of Sensitivity or Value for All Travellers	11
Table 15.4 Definitions of Impact Magnitude for All Travellers	12
Table 15.5 Significance of Effect for All Travellers	13
Table 15.6 Significance of Effect Categories for All Travellers	13
Table 15.7 Single Carriageway Roads	17
Table 15.8 Traffic flows (including HGVs) on roads adjoining the proposed new section of highway.	23
Table 15.9 PRoWs within Permanent Land Take	25
Table 15.10 PRoWs Temporarily Affected During Construction.	32
Table 15.11 Summary of Likely Environmental Effects on All Travellers	49

Figures (unless otherwise stated these are provided in Volume 2)

15.1A Existing Public Rights of Way and Other Routes Used by Walkers, Cyclists and Horse riders (WCHRs)	
15.1B Existing Public Rights of Way and Other Routes Used by Walkers, Cyclists and Horse riders (WCHRs)	
15.2A Public Rights of Way and Other Routes Used by WCHRs Permanently or Temporarily Stopped Up and/or Diverted	
15.2B Public Rights of Way and Other Routes Used by WCHRs Permanently or Temporarily Stopped Up and/or Diverted	

Appendices (unless otherwise stated these are provided in Volume 3)

15.1 WCHR Assessment Report

15 All Travellers

15.1 Introduction

- 15.1.1 This chapter of the Environmental Statement (ES) describes the assessment of effects for All Travellers resulting from the proposed new A40 bypass of Llanddewi Velfrey and the new section of the A40 Trunk Road from Ffynnon Wood to Penblewin Roundabout. All Travellers include walkers, cyclists and horse-riders (WCHRs). This assessment considers proposed changes and improvement measures for WCHRs and the opportunities provided by detrunking the existing length of the A40 (which will be bypassed by the proposed new section of A40).

15.2 Legislation and context

Relevant Legislation

- 15.2.1 Chapter 5 Legislation and Policy Content provides the legislative context for this Environmental Impact Assessment. Relevant legislation to this All Travellers assessment includes the Active Travel (Wales) Act, 2013. This legislation requires

‘...Welsh Ministers and local authorities to take reasonable steps to enhance the provision made for, and to have regard to the needs of, walkers and cyclists; for requiring functions under the Act to be exercised so as to promote active travel journeys and secure new and improved active travel routes and related facilities; and for connected purposes’.

- 15.2.2 The Active Travel Act is supported by the proposed Active Travel Action Plan (Welsh Government, 2014a). The Transport Act 2000 (as amended by the Transport (Wales) Act 2006) is also relevant.

Planning Policy Context

- 15.2.3 Chapter 5 Legislation and Policy Content provides an overarching policy context for the Scheme. In addition, this assessment takes into account local policy documents relevant to provision for WCHRs. It should be noted that whilst these documents provide context, they are not determinative.

- 15.2.4 The following national and local policy documents are relevant to this All Travellers assessment:

National Policy

- 15.2.5 **Prosperity for All: The National Strategy (2017):** The strategy supports the Programme for Government up to 2021 and sets out the Welsh Government's commitment to deliver improvements to the A40.
- 15.2.6 **Planning Policy Wales Edition 10 (2018)** emphasises the need to prioritise the safeguarding and delivery of active travel networks as part of development schemes. The fundamental aim should be to create walkable neighbourhoods, where streets are safe, comfortable and enjoyable to walk and cycle. A range of facilities should also be within walking distance. Active travel networks can also help to mitigate the impact of new development, by providing an alternative mode of travel to the private car, particularly for shorter journeys.
- 15.2.7 Developments should be designed in accordance with the sustainable transport hierarchy of which places walking and cycling at the top followed by public transport, ultra-low emissions vehicles, and finally other private motor vehicles. It is nonetheless acknowledged that different approaches to sustainable transport will be required for rural areas in particular, and that proposals will need to reflect local circumstances. Additional car movements should not be encouraged by transport proposals or contribute to neighbourhood severance.
- 15.2.8 **National Transport Plan and Finance Plan (2010 and 2015):** The plan sets out investment for transport and services from 2015 and beyond. Scheme Ref R15 commits to improvements to the A40 Llanddewi Velfrey to Penblewin.
- 15.2.9 **Sport, Recreation and Open Space Technical Advice Note (TAN) 16 (2009):** The TAN discusses development management issues regarding the design of facilities and spaces, and noise and accessibility. It also considers how planning agreements can help to ensure the provision and maintenance of facilities.
- 15.2.10 **Transport Technical Advice Note (TAN) 18 (2007):** The TAN includes advice on walking and cycling, public transport, planning for transport infrastructure, assessing impacts and managing implementation.

- 15.2.11 **One Wales: Connecting the Nation (2008):** This is the Wales Transport Strategy and it sets out how the Welsh Government aims to provide sections of segregated cycleway next to the A40 in West Wales.

Local policy

- 15.2.12 **Pembrokeshire County Council Local Development Plan (LDP) (2013):** The Plan establishes a vision based development strategy and policies to guide the development and use of land in Pembrokeshire from adoption to 2021. The Pembrokeshire Coast National Park is subject to a separate LDP that is the responsibility of the National Park Authority. It provides the policy context for directing development to appropriate locations, conserving the natural, built and historic environment and providing a basis for rational and consistent decision-making on planning applications. The vision of the plan is:

“To ensure that Pembrokeshire is prosperous and that it remains vibrant and special by creating: a network of strong urban and rural communities in Hub Towns, Service Centres, Service and Local Villages supported by a robust, sustainable, diverse high value-adding economy underpinned by the Area’s unique environment, maritime access to the Milford Haven Waterway and Fishguard Harbour and internationally important energy and tourism opportunities.”

- 15.2.13 **The Joint Transport Plan for South West Wales (2015-2020):** This Local Transport Plan (LTP) replaces the Regional Transport Plan up to 2015 and the four authorities in South West Wales have worked collaboratively to create an overarching City Region LTP, with four local programmes of projects.
- 15.2.14 **Pembrokeshire Rights of Way Improvement Plan (2008):** Pembrokeshire County Council and the Pembrokeshire Coast National Park Authority agreed to prepare jointly the Rights of Way Improvement Plan for Pembrokeshire (ROWIP). The plan identifies, prioritises and plans for improvements to the rights of way network in Pembrokeshire. It also addresses the need to improve access opportunities for groups with special needs.

15.3 Assessment Methodology

Scope of the Assessment

- 15.3.1 This All Travellers assessment considers the effects on the following resources.
- Public rights of way (footpaths, bridleways and restricted byways).
 - Cycle routes.
 - Permissive walking, cycling and horse-riding (WCHR) routes.
 - Public highways.
 - Public transport.
 - Overbridge and underpass crossings.
- 15.3.2 And the assessment takes into account the following matters:
- Permanent land take required for the Scheme.
 - Construction of the proposed new section of trunk road.
 - Operation of the proposed new section of trunk road.
 - Detrunking of the existing A40 trunk road, both during construction and operation.
- 15.3.3 In addition, changes in amenity, effects on community severance, and driver stress are described.
- 15.3.4 The assessment of effects on ‘Views from the Road’ is set out in Chapter 9 Landscape and Visual Effects.

Relevant Guidance

- 15.3.5 The following guidance documents are relevant to this assessment:
- Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Part 5, HA 205/08** (Highways Agency et al., 2008);
 - DMRB Volume 11, Section 3, Part 8 ‘Pedestrians, Cyclists, Equestrians and Community Effects’** (Highways Agency, 1993a) in respect of the potential effects on pedestrians, cyclists and equestrians;
 - DMRB Volume 11, Section 3, Part 9 ‘Vehicle Travellers’** (Highways Agency, 1993b) in respect of the potential effects on driver stress; and

- d) **DMRB Interim Advice Note 125/09(W) Supplementary guidance for users of DMRB Volume 11 ‘Environmental Assessment’ (Wales Only)** (Welsh Assembly Government, 2009).

15.3.6 With respect to walkers, cyclists and horse-riders the requirements of the DMRB Volume 11, Section 3, Part 8 (Highways Agency, 1993a) are as follows.

- a) Provide a qualitative assessment of the existing provision of, and proposals for, walking, cycling and horse-riding facilities which may be affected by the Scheme, including the existing usage of these facilities.
- b) Provide a qualitative assessment of the potential changes in the type and level of provision of walking, cycling and horse-riding facilities as a result of the Scheme.
- c) Provide a qualitative assessment of the effects on non-vehicular movements resulting from the Scheme, including any changes to journey lengths, amenity or safety, and any likely changes to community severance.

15.3.7 For the purposes of this assessment, amenity is defined as the relative pleasantness of the environment or journey. Various criteria are employed to assess the effect on amenity including levels of visual intrusion and noise, which are assessed in detail in Chapter 9 Landscape and Visual Effects, and 14 Noise and Vibration. In accordance with DMRB methodology in relation to changes in amenity, a commentary of the relevant sections of those assessments is set out in relation to changes in amenity for All Travellers during construction and operation of the Scheme.

15.3.8 Community severance is defined as ‘the separation of residents from the facilities and services they use within their community’ (DMRB Volume 11, Section 3, Part 8 (Highways Agency, 1993a, paragraph 5.2)).

Study Area

15.3.9 DMRB Volume 11, Section 3, Parts 8 and 9 (Highways Agency 1993a, 1993b) do not specify a study area for the assessment of effects on walkers, cyclists, horse-riders and vehicle travellers, although Part 8 references the need to identify existing and proposed Public Rights of Way (PRoWs) that may be affected by the route corridor, particularly those used for visiting important community facilities (paragraph 9.4(i)).

- 15.3.10 The All Travellers study area for the Scheme therefore includes those routes in the area between Penblewin Roundabout and east of Llanddewi Velfrey, as shown on Volume 2 Figure 15.1.

Approach to Identification of Baseline Conditions

- 15.3.11 A desk-based study to identify baseline conditions has been undertaken to establish the existing provision of walking, cycling and horse-riding facilities, vehicle routes and the existing travel patterns and use of these resources. This has utilised the following data sources:

- a) Walking, Cycling and Horse Riding Assessment Report. (Extract provided at Volume 3 Appendix 15.1)
- b) Ordnance Survey (OS) mapping.
- c) OS MasterMap Address Layer data.
- d) Definitive map of PRoWs.
- e) OS Points of Interest data.
- f) Pembrokeshire County Council at www.pembrokeshire.gov.uk.
- g) Sustrans web-based data at www.sustrans.org.uk.
- h) Data from public transport operators.
- i) Recreational data available from local authority and web resources.

- 15.3.12 The walking, cycling and horse-riding baseline conditions have also been established by undertaking site visits and PRoW condition and user surveys. The user surveys provided data on WCHR flows and the nature of WCHRs, which is set out in the Walking, Cycling and Horse Riding Assessment Report for the Scheme (Volume 3 Appendix 15.1).

- 15.3.13 A number of site surveys and visits were undertaken in 2017, as listed in Table 15.1 below.

Table 15.1 Site Survey and Visit Dates

Date	Purpose
17 May 2017	To carry out a WCHR User Survey.
18 May 2017	To carry out a WCHR User Survey.
20 May 2017	To carry out a WCHR User Survey.
21 st May 2017	To carry out a WCHR User Survey.
24 May 2017	To carry out a WCHR User Survey.
25 May 2017	To carry out a WCHR User Survey.
21 November 2017	To assess the condition of existing PRoWs.

15.3.14 The purpose of these surveys and visits was to ascertain the nature and condition of the routes crossing or proximate to the Scheme and to check for obstructions and indications of evidence and level of use. Discrepancies regarding the alignment of routes or incidences where there is no evidence of the route on the ground were also noted and subsequently discussed with Pembrokeshire County Council.

15.3.15 The PRoW user survey was undertaken during 2017 to ascertain the level of walking, cycling and horse-riding use of the PRoWs and other linear resources within the study area. This survey was undertaken on two separate occasions that included weekdays and weekends, so that a fair estimation of public use could be made.

15.3.16 The following survey locations were selected taking account of popular walking, cycling and horse-riding routes. These are shown on Volume 2 Figure 15.1.

- a) Site 1 - Penblewin Roundabout (National Grid reference (NGR 211996, 216658).
- b) Site 2 – Footpath SP 19/31/3 Bounty Manor (National Grid reference (NGR 212566, 217046).
- c) Site 3 – Trefangor Burial Ground access road at junction with Footpath SP 19/36/3 (National Grid reference (NGR 213244, 217095).
- d) Site 4 - Ffynnon Chapel on footpath SP19/37/1 (National Grid reference (NGR 213657, 216874).
- e) Site 5 - Pen-troydin-fach Farm, at junction between footpaths SP19/37/2, SP 19/38/2 and SP19/38/1 (National Grid reference (NGR 214292, 217144).
- f) Site 6 – Public Footpath SP19/1/1 (National Grid reference (NGR 215128, 217201).

- g) Site 7 – Public Footpath SP19/2/2 at junction SP19/3/1, SP19/3/2, SP19/2/1. (National Grid reference (NGR 215456, 217177).
- h) Site 8 – Public Footpath SP19/4/5 at junction with the A40 (National Grid reference (NGR 215745, 216949).
- i) Site 9 – A40 layby adjacent to Bethel Chapel (National Grid reference (NGR 215951, 216975).
- j) Site 10 - A40-Llanfallteg Road Junction (National Grid reference (NGR 214762, 216892).

Consultation

15.3.17 A summary of consultations with stakeholders and consultees is provided in Table 15.2.

Table 15.2 Consultation Responses Relevant to this chapter

Date	Consultation and Issue Raised	How/Where Addressed
2017	Scoping report sent to consultees. Responses received but none relating to All Travellers.	No action required.
2017	Public Information Exhibition (PIE) April 2017 The feedback identified that WCHR provision was of interest to a number of local residents with many interested in how the old A40 could be modified to improve connectivity and WCHR recreational use.	These matters are dealt with in the Land Take, Construction and Operational Effects section of this chapter.
2017	A British Horse Society Representative visited the PIE. The feedback was that the proposed Equestrian Underpass provides an important link for the bridleways in the area.	These matters are dealt with in the Land Take, Construction and Operational Effects section of this chapter.
2017	Public Information Exhibition (PIE) October 2017 – concerns were raised over the need for the equestrian underpass due to little minimal usage of existing bridle path and no local horse clubs	The horse underpass has been relocated to Ffynnon Wood to maximise its use by pedestrians. The British Horse Society has been consulted with on the revised proposal with the response being positive.

Date	Consultation and Issue Raised	How/Where Addressed
2017	Pembrokeshire County Council 1 st meeting. Design should retain and enhance convenience and amenity for users. Initial layouts were presented- consideration of the eastern junction form was discussed with respect to WCHRs.	Maintenance of the PRoW network arising from the Land Take, Construction and Operation of the Scheme are covered in those sections of this chapter. Issues associated with amenity are covered under Construction and Operational Effects sections of this chapter.
2017	Design Commission for Wales “An integrated approach to detailed design should include consideration of underpass design for footpaths etc...” They encourage a positive vision for village and existing road.	These matters are dealt with in the Land Take, Construction and Operational Effects section of this chapter.
2017	Llanddewi Velfrey Community Council. The community council raised concerns over the potential option of providing a T Junction arrangement at the eastern junction. It was felt that users, often large agricultural vehicles would struggle with the layout. A common movement is also turning right out of the village towards St. Clears, which it was felt a roundabout would be easier to make this manoeuvre.	The Community Council’s views were taken into account in the decision-making process of the junction form at the Llanddewi Velfrey Eastern Junction.
2017	Pembrokeshire County Council 2 nd meeting A meeting to present the Scheme proposals and to discuss measures to be incorporated into the Scheme to ensure that connectivity of the highway network (including PRoWs and other WCHR routes) was maintained during construction and operation. Discussion on the provision of the Detrunked Carriageway showed the importance of the consideration of the options.	These matters are dealt with in the Land Take, Construction and Operational Effects section of this chapter.
2017	Public Information Exhibition (PIE) October 2017 Upon presenting the scheme proposals to the public, the suitability of the location of the equestrian underpass near Henllan Lodge raised. WCHR provision was also raised, with the provision of new routes to encourage WCHR use, especially in relation to the detrunked A40, considered important.	The underpass has been moved away from near Henllan Lodge and is now located at the intersection of SP19/30/1 and SP19/37/1. WCHR provision has formed the core of the detrunking proposals, with a new shared pedestrian and cycle track proposed through Llanddewi Velfrey.

Date	Consultation and Issue Raised	How/Where Addressed
2018	<p>Pembrokeshire County Council 3rd meeting.</p> <p>A meeting to present the latest Scheme proposals, with a particular focus on the detrunking design.</p> <p>The designs were well received with no issues raised.</p>	No action required.

Assessment Criteria and Assignment of Significance

- 15.3.18 A qualitative assessment of impacts on All Travellers based on professional judgement has been undertaken to indicate the significance of effects on identified receptors, based on the value or sensitivity of the receptor and the magnitude of the predicted impact.
- 15.3.19 The significance of a potential effect is a function of the value or sensitivity of the resource or receptor and the magnitude of the impact (including the timescale involved - permanent or temporary). The criteria for assessing the significance of environmental effects on all travellers take account of the guidance that is provided on this topic in the DMRB Volume 11, Section 2, Part 5 (HA 205/08) (Highways Agency et al., 2008) as set out in Chapter 4 Environmental Impact Assessment Methodology.

Receptor Sensitivity

- 15.3.20 The receptors relevant to the All Travellers assessment comprise the walking, cycling and horse-riding facilities that may be affected by the Scheme, the users of those facilities, and vehicle travellers along the existing A40, the proposed new section of trunk road and other roads within the area.
- 15.3.21 The value or sensitivity of these receptors relates to the importance of the resource, facility or receptor together with its sensitivity to change, and the All Travellers assessment uses the categories of sensitivity/value (i.e. high, medium, low or negligible) in Table 15.3 and as set out in Chapter 4 Environmental Impact Assessment Methodology.

Table 15.3 Definitions of Sensitivity or Value for All Travellers

Value (sensitivity)	Typical Descriptors
Very high	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution.
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low (or Lower)	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

15.3.22 The sensitivity/value of each resource, facility or receptor is set out in the assessment section of this chapter. For example, local PRoWs would generally be of ‘low’ importance and therefore ‘low’ sensitivity. However, where such routes are promoted regionally or nationally, such as a National Cycle Route, they would have an increased level of importance/sensitivity.

Magnitude of Impact

15.3.23 The magnitude (or scale) of change (adverse or beneficial) on All Travellers resources or receptors is described using the levels of impact in Table 15.4 and as set out in Chapter 4 Environmental Impact Assessment Methodology.

Table 15.4 Definitions of Impact Magnitude for All Travellers

Magnitude of Impact	Typical Criteria Descriptors
Major	Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements (Adverse).
	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality (Beneficial).
Moderate	Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements (Adverse).
	Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality (Beneficial).
Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements (Adverse).
	Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	Very minor loss or detrimental alteration to one or more characteristics, features or elements (Adverse).
	Very minor benefit to or positive addition of one or more characteristics, features or elements (Beneficial).
No Change	No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Significance of Effect

15.3.24 The sensitivity of the receptor and the magnitude of impact have been identified separately and contribute to the evaluation of the likely significance of the effect. The evaluation of significance is based on the All Travellers objectives for the Scheme, outcomes of consultations to date and professional judgement, and has been assessed in accordance with the approach recommended by the DMRB Volume 11, Section 2, Part 5 (HA 205/08) (Highways Agency et al., 2008) and supplementary advice in Interim Advice Note 125/09(W) (Welsh Assembly Government, 2010) as presented in Chapter 4 Environmental Impact Assessment Methodology. That uses the following terminology: Very Large, Large, Moderate, Slight and Neutral, as set out in the significance matrix in Table 15.5.

Table 15.5 Significance of Effect for All Travellers

Value/ Sensitivity	Magnitude of Impact				
	No Change	Negligible	Minor	Moderate	Major
Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight
Low	Neutral	Neutral or slight	Neutral or slight	Slight	Slight or Moderate
Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or Large
High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
Very high	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large

15.3.25 Those levels of significance apply to both adverse and beneficial effects during the construction period and arising from the operation of the Scheme. For the All Travellers topic these take account of the guidance set out in Table 2.3 of the DMRB Volume 11, Section 2, Part 5 (HA 205/08) (Highways Agency et al., 2008) as set out in Chapter 4 Environmental Impact Assessment Methodology and Table 15.6.

Table 15.6 Significance of Effect Categories for All Travellers

Significance category	Typical Descriptors of Effect
Very Large	Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	These beneficial or adverse effects may be important but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	These beneficial or adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are important in enhancing the subsequent design of the project.
Neutral	No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

- 15.3.26 For the purposes of this assessment those effects identified as being of ‘Moderate’ significance or greater are regarded as being significant in EIA terms. Effects of ‘Slight’ or lesser significance have been identified but are not considered significant in EIA terms.

Changes in Amenity

- 15.3.27 Amenity is defined in DMRB Volume 11, Section 3, Part 8 (Highways Agency, 1993a) as ‘the relative pleasantness of a journey’ (paragraph 4.1) and changes to the amenity of journeys undertaken by pedestrians, equestrians and cyclists may include exposure to and distance from traffic, visual and noise intrusion, together with the quality of WCHR routes including street furniture, planting and signage.
- 15.3.28 In accordance with the methodology set out in the DMRB, a description of the overall change in amenity for WCHR journeys is provided taking account of the assessments set out in Chapter 9 Landscape and Visual Effects and Chapter 14 Noise and Vibration.

Community Severance Assessment

- 15.3.29 Community severance is defined in DMRB Volume 11, Section 3, Part 8 (Highways Agency, 1993a) as ‘the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows’.
- 15.3.30 The methodology adopted for the assessment of community severance follows the guidance set out in this section of the DMRB. The DMRB Volume 11, Section 3, Part 8 states that the assessment of community severance should be undertaken for the opening year of the Scheme and should take into account the following.
- a) The direct effects of the Scheme and any increases in traffic levels on other roads.
 - b) The number of people whose journey will be affected, their location and the community facilities from which they will be severed.
 - c) The presence of particularly vulnerable groups such as children, the aged and the disabled.
 - d) The type of road involved.
 - e) The provision of mitigation.

- 15.3.31 These guidelines apply specifically to any increases in the length of journeys of pedestrians. The DMRB states that ‘cyclists and equestrians are less susceptible to severance because they can travel more quickly than people on foot, although they may still be deterred from making journeys which require them to negotiate additional roads and especially junctions’.
- 15.3.32 The guidance states that new severance should be described using a three-point scale of Slight, Moderate or Severe severance as follows:
- a) *Slight*: In general, the current journey pattern is likely to be maintained, but there will probably be some hindrance to movement.
 - b) *Moderate*: Some residents, particularly children and elderly people, are likely to be dissuaded from making trips. Other trips will be made longer or less attractive.
 - c) *Severe*: People are likely to be deterred from making trips to an extent sufficient to induce a re-organisation of their habits. This would lead to a change in the location of centres of activity or in some cases to a permanent loss to a particular community. Alternatively, considerable hindrance will be caused to people trying to make their existing journeys.

View from the Road Assessment

- 15.3.33 The assessment of ‘View from the Road’ which the DMRB defines as ‘the extent to which travellers, including drivers, are exposed to different types of scenery through which a route passes’ is set out in Chapter 9 Landscape and Visual Effects, of this ES.

Driver Stress Assessment

- 15.3.34 The methodology adopted for the assessment of driver stress follows the guidance provided in the DMRB Volume 11, Section 3, Part 9 (Highways Agency, 1993b).
- 15.3.35 Driver stress is defined for the purposes of environmental assessment as ‘the adverse mental and physiological effects experienced by a driver traversing a road network’ (Highways Agency, 1993b, paragraph 3.1).
- 15.3.36 A variety of factors including traffic speed and flow, road layout, signage, and evenness of road surfacing can influence stress levels and induce ‘feelings of discomfort, annoyance, frustration or fear

culminating in physical and emotional tension that detracts from the value and safety of a journey’ (Highways Agency, 1993b, paragraph 3.1).

15.3.37 The DMRB states that driver stress has three main components:

1. Frustration;
2. Fear of potential accidents; and
3. Uncertainty relating to the route being followed.

15.3.38 The definitions of these terms and some of the criteria contributing to them, as stated in the DMRB (Highways Agency, 1993b), are as follows:

1. ‘Frustration is caused by a driver’s inability to drive at a speed consistent with his or her own wishes in relation to the general standard of the road. It increases as speed falls in relation to expectations and may be due to high flow levels, intersections, roadworks or difficulties in overtaking slower traffic. Congestion can lead to frustration by creating a situation in which the driver does not feel in control.....’
2. Fear of potential accidents results from the ‘presence of other vehicles, inadequate sight distances and the likelihood of pedestrians stepping out into the road’. Additional factors such as ‘inadequate lighting, roadworks, narrow roads and poorly maintained surfaces’ are also contributing factors. According to the DMRB fear is highest where traffic speeds, flows and the percentage of HGVs are all high and these factors are of more importance during adverse weather conditions. A new scheme may increase driver stress because of increased traffic speeds and flows, although the superior driving standards of a new scheme often offset this.
3. Uncertainty is defined by DMRB as being primarily caused by signing ‘that is inadequate for the individual’s purposes’.

15.3.39 The DMRB maintains that ‘available research evidence does not permit the use of finely graded assessments of driver stress’. Consequently, as an indicator of driver stress, the DMRB tabulates the relationship between average peak hourly vehicle flow per lane and average journey speed in kilometres per hour to describe levels of driver stress on a three-point descriptive scale: Low, Moderate or High.

15.3.40 The DMRB (Highways Agency, 1993b) provides separate guidance depending on the design standard of the road being assessed. Guidance relevant to single carriageway roads is set out in Table 15.7.

Table 15.7 Single Carriageway Roads

Average peak hourly flow per lane, in flow Unit*/1 hour	Average Journey Speed (kph)		
	Under 50	50 to 70	Over 70
Under 600	High**	Moderate	Low
600 to 800	High	Moderate	Moderate
Over 800	High	High	High

15.3.41 The DMRB requires an assessment to be made for the existing situation and also for the worst case in the fifteen years after opening. Traffic data for the year 2015 has been used to assess the degree of driver stress in the existing situation between Penblewin Roundabout and Llanddewi Velfrey. Predicted traffic flows and design speeds for 2035 have been used to assess the situation in the fifteenth year after the opening of the Scheme.

Limitations of the Assessment

15.3.42 The assessment relies, in part, on data provided by third parties (e.g. local authorities) which are the most up to date available at the time of the assessment. No significant changes or limitations in these datasets have been identified that will affect the robustness of the assessment for EIA purposes.

15.4 Baseline Environment

15.4.1 The proposed new section of trunk road is located within the administrative area of Pembrokeshire County Council. Outside of the settlement of Llanddewi Velfrey, the land is mainly farmland and woodland. The area is sparsely populated with small community of Ffynnon to the west of Llanddewi Velfrey.

PRoWs

15.4.2 In addition to the road network linking the small settlements of Llanddewi Velfrey, Ffynnon and Penblewin, pedestrians, cyclists and equestrians have access to a network of PRoWs. These predominantly comprise public footpaths, with fewer public bridleways and no restricted byways as shown on Volume 2 Figure 15.1.

15.4.3 These PRoWs are predominantly used for informal recreation, as well

as for providing WCHR access within and between settlements and to the adjacent countryside. Some already cross the existing highway network, at at-grade crossings. Some of these allow for a variety of circular walks of varying distances.

Public Footpaths

- 15.4.4 The following public footpaths either cross the proposed scheme or directly link with it, as shown on Volume 2 Figure 15.1: SP19/31/3; SP19/37/1; SP19/30/1; SP19/38/1; SP19/38/2; SP19/1/1; SP19/2/2; SP19/3/2; SP19/4/5; SP19/4/7; and SP19/17/1.
- 15.4.5 The following public footpaths are in the close vicinity of the proposed trunk road and link to the footpaths noted above:
- a) SP19/36/3 – North of the A40 and links to the unnamed Public Road that leads from the existing A40 to Trefangor Burial Ground;
 - b) SP19/37/2 - Runs parallel with the proposed Scheme and links to footpaths SP19/38/1 and SP 19/38/2 that are affected by the proposed Scheme; and
 - c) SP19/4/6 – to the north of the proposed Scheme, links footpaths SP19/4/5 and SP19/4/7 that are affected by the proposed Scheme.

Public Bridleways

- 15.4.6 No public bridleways cross the proposed new section of trunk road.
- 15.4.7 The following public bridleways are in the close vicinity of the Scheme, but are not directly affected by the proposals:
- a) Bridleway SP19/34/4 is north of the existing A40 and links to the unnamed Public Road that leads from the existing A40 to Trefangor Burial Ground.
 - b) Bridleway SP19/29/3 is south of the existing A40 and links to the unnamed Public Road that leads from the existing A40 to Henllan Farm and Llanddewi Velfrey.

Restricted Byways

- 15.4.8 No Restricted Byways cross the proposed new section of trunk road.

Long Distance Paths

- 15.4.9 No long-distance paths cross the proposed new section of trunk road or are in the vicinity of the scheme.

Cycle Routes

- 15.4.10 No cycle routes cross the proposed new section of trunk road or are in the vicinity of the scheme.

Other Routes Used by WCHRs

- 15.4.11 There are a number of unclassified county roads, together with undesignated informal routes within the study area that are used or could be used by walkers, cyclists and horse-riders as follows:
- a) Unnamed Public Road that leads from the existing A40 to Trefangor Burial Ground;
 - b) Unnamed Public Road that leads from the existing A40 to Henllan Farm and Llanddewi Velfrey;
 - c) Layby and access to Ffynnon, forms part of the A40 Trunk Road; and
 - d) Unnamed road that leads from Llanddewi Velfrey to Llanfallteg.

PRoW Surveys

- 15.4.12 Surveys were carried out to determine the usage of PRoWs surrounding the site. Survey locations were chosen based upon the new Scheme highway alignment, and are shown on Volume 2 Figure 15.1, with more information available in the WCHR Assessment Report found in Volume 3 Appendix 15.1.
- 15.4.13 The PRoW surveys identified that none of the surveyed routes were well used. In the majority of cases no counts were recorded. The results of the survey can be found in the WCHR Assessment Report at Volume 3 Appendix 15.1.
- 15.4.14 The surveys were undertaken in May 2017 to observe trends in WCHR activity within the vicinity of the proposed new section of trunk road for a variety of route types, including trunk road, local roads and PRoWs. Each route was surveyed on a single weekday, and a Sunday, between 0700 and 1900.

- 15.4.15 The WCHR Assessment Report concludes that, based on the results of the surveys, it can be observed that there is minimal WCHR activity on all routes. This corresponds with information gathered at Public Information Exhibitions and through discussions with the local land owners.

Public Highways

- 15.4.16 The local highway network between Penblewin and Llanddewi Velfrey is limited. The main route is the existing A40 Trunk Road. Small unnamed local routes have been described in the “Other WCHR Routes Used by WCHR’s”.
- 15.4.17 The existing A40 Trunk Road is a two-lane single carriageway, generally subject to the national speed limit. However, this reduces to 40mph within the village of Llanddewi Velfrey. There are no restrictions for any user groups.
- 15.4.18 Generally, there are grass verges on either side of the carriageway and several public footpaths connect to the A40 carriageway. Connectivity between these public footpaths requires crossing the carriageway with no formalised crossing points.
- 15.4.19 The existing A40 that passes through the village of Llanddewi Velfrey has a footway on the southern verge. This extends from the junction between the A40 and “Llanfallteg Road” to the top of Fron Hill. The footway is very narrow in places and not inviting for users. There is a single uncontrolled pedestrian crossing located near to the war memorial.
- 15.4.20 Land adjacent to the highway is generally used for farming, with a number of farm accesses joining the carriageway. Some residential and commercial properties also front the carriageway.

Overbridge and Underbridge Crossings

- 15.4.21 There are no Public Highways and PRow’s crossing the existing A40 between Penblewin Roundabout and Llanddewi Velfrey on overbridges or underpasses.

Public Transport and Bus Stops

Local Buses

- 15.4.22 There is one bus service that stops at Llanddewi Velfrey. The 322 service operates six days a week from Monday to Saturday and travels between Haverfordwest and Carmarthen. The bus stops at the War Memorial at the junction between the A40 and “Llanfallteg Road”. The bus stops have shelters.
- 15.4.23 First Cymru, Edwards Coaches, Alun Phillips and Taf Valley Coaches currently operate the local bus services in and around south-east Pembrokeshire. Services operate six days a week.
- 15.4.24 Pembrokeshire County Council, in conjunction with several other organisations, operate a “Bwcabus” demand responsive service within central and north Pembrokeshire. The bus service interchanges at Clunderwen to connect with strategic route service 430 and the National Rail network. Bwcabus services operate between Monday – Friday, 0700 - 1430 and Saturday 0900 - 1700.
- 15.4.25 Bus stops in and around south-east Pembrokeshire generally have no cycle parking facilities nearby. Some have shelters, but most are a standard pole and flag bus stop. None have real time travel information displays and timetable display boards are attached to the poles. Buses also do not permit the carriage of cycles.

National Rail

- 15.4.26 Rail services are available from the following stations in and around the study area:
- a) Whitland;
 - b) Narberth; and
 - c) Clunderwen.
- 15.4.27 All of these stations offer direct rail services to Carmarthen along the South Wales mainline. Whitland serves direct trains travelling to Pembroke Dock, Milford Haven and Fishguard Harbour. Many services connect to Carmarthen where additional services to Swansea, Cardiff, Bristol, South West England and Manchester are available.

Traffic Data

- 15.4.28 A Transport Model has been produced to prepare traffic forecasts for the Scheme. A base year SATURN traffic model representing 2016 was developed based on traffic counts and roadside interview data. Traffic forecasts were then prepared using traffic growth projection from Department for Transport's National Trip End Model (NTEM) for cars and the National Transport Model (NTM) for goods vehicles. These are further documented in the Traffic Forecasting Report.
- 15.4.29 The model represents the AM, inter peak and PM peak periods on an average weekday for the opening year of 2021 and the design year of 2036, as follows:
- a) The peak hour (0800 – 0900);
 - b) The average Inter Peak hour (1000 – 1600); and
 - c) The PM peak hour (1700 – 1800).
- 15.4.30 The peak hourly flows for the design year are set out under the Assessment of Operational Effects below.
- 15.4.31 The model also considers the 12-hour, 18-hour, Average Annual Weekday Traffic (AAWT) and Average Annual Daily Traffic (AADT) flows on roads adjoining the proposed new section of highway, with the latter (including HGVs) presented in Table 15.8.

Table 15.8 Traffic flows (including HGVs) on roads adjoining the proposed new section of highway.

Location	2-Way AADT			
	Base Year (2016)	Design Year (2036)		
		Do Minimum	Do Something	Difference
Existing A40 between Penblewin and Rest Area	11,520	14,390	1150	-92%
Existing A40 between Rest Area and Henllan Lodge	11,150	14,180	130	-99%
Existing A40 East of Llanfallteg Road	10,940	13,780	520	-96%
Proposed A40 Between Penblewin Roundabout and Llanddewi Velfrey West Junction	-	-	14,070	-
Proposed A40 Between Llanddewi Velfrey's eastern and western junctions	-	-	13,300	-

Future Baseline Conditions

- 15.4.32 The following baseline scenarios have been taken into consideration during the assessment of the Scheme, where appropriate.
- Construction stage: The start of construction – Spring 2020.
 - Operational stage: A future year when the new A40 route will be open to traffic – Winter 2021.
 - A design year, 15 years after opening – Spring 2036.
- 15.4.33 Potential changes to the baseline conditions may arise, for example, from changes to the definitive maps of PRowS in Pembrokeshire, initiatives coming forward arising from the Active Travel (Wales) Act 2013, other public transport proposals and new walking, cycling and horse-riding routes incorporated into new development schemes.
- 15.4.34 As discussed fully in Chapter 2 The Project, the additional flow due to construction traffic is expected to be an average of 28 vehicles per day.

15.5 Mitigation Measures Forming Part of the Scheme Design

- 15.5.1 As set out in Chapter 2 The Project and in Section 15.6 below, the Scheme includes permanent diversions for a number of routes that will be affected by the proposed new section of trunk road. In addition, two new public bridleways and two new public footpaths will be created as part of the Scheme. A new bridleway will be created that will run from the public highway leading to Trefangor Burial Ground, east along the highway boundary to Ffynnon Chapel, where it intersects with footpath SP19/30/1. At this location, the new northern bridleway will pass beneath the proposed A40 in a new underpass.
- 15.5.2 A new combined equestrian, cycling and pedestrian link will be provided along the southern highway boundary of the A40, running east from just south of Henllan Lodge to meet the detrunked A40 at Llanddewi Velfrey Western Junction. This route will link to the proposed bridleway described in the previous paragraph.
- 15.5.3 Measures such as junction arrangements, signage and lighting form part of the design of the Scheme to minimise driver stress. The measures forming part of the Scheme (embedded mitigation) to maintain connectivity are described in Chapter 2 The Project and in Sections 15.6, 15.7 & 15.8 below.
- 15.5.4 Landscape and visual mitigation has been addressed as part of an iterative design and assessment process for the Scheme (e.g. woodland planting and other vegetation, boundary treatment.). This is assessed in Chapter 9 Landscape and Visual Effects.

15.6 Assessment of Potential Land Take Effects

- 15.6.1 The assessment of effects provided in this section takes into account the mitigation measures that are integral to the design of the Scheme, including the embedded mitigation measures described in this section.

PRoWs

- 15.6.2 The following PRoWs, or sections thereof, that fall within the permanent land take area for the proposed new section of trunk road will be permanently stopped up (see Table 15.9). This will be

undertaken during the construction stage, with diversions that have been developed as part of the design of the new section of trunk road put in place to maintain the connectivity of the local network (see Volume 2 Figures 15.2A and 15.2B). These diversions have been developed in consultation with Pembrokeshire County Council.

Table 15.9 PRowS within Permanent Land Take

PRow Reference	Location	Land Take Effect
SP19/31/3	Bounty Farm Access Road	A section of this public footpath will be stopped up. A new public highway is proposed to run parallel with the proposed new trunk road. The footpath will link to this route to maintain connectivity.
SP19/30/1	Ffynnon Wood. South of A40.	A section of this public footpath will be within an area of earthworks and will be stopped up. A diversion will be put in place, running along the southern toe of the embankment in an easterly direction to tie-in with the de-trunked section of carriageway.
SP19/38/1	Pen-troydin-fach Farm. North of the A40.	A section of the footpath will be stopped up from its junction with footpaths SP19/372 and SP19/38/2 to the southern boundary of the proposed trunk road. A diversion will be put in place to with the new footpath running along the southern boundary of the new highway in an easterly direction. It will pass under the proposed trunk road through a new underpass and tie-in to footpath SP19/38/2, to the east of Pen-troydin-fach Farm.
SP19/38/2	South of Pen-troydin-fawr Farm. West of Llanfallteg Road.	A section of this public footpath will be stopped up as it is under the footprint of the proposed trunk road. A short diversion will run the footpath along the northern highway boundary to its junction with Llanfallteg Road.
SP19/1/1, SP19/2/2 & SP19/3/2	North of Blaen-pentroydin	Sections of these public footpaths will be stopped up as they are under the footprint of the proposed carriageway. Diversions along the northern and southern boundaries of the proposed highway will lead to a new pedestrian underpass to the east of the stopped-up footpath. This underpass will provide connectivity for all the stopped-up footpaths. The footpath diversions will provide circular walking routes to both the north and south of the proposed A40 Trunk Road.
SP19/4/5	North of A40, west of Bethel Chapel.	Footpath SP19/3/5 will be stopped up in its entirety. This footpath provides a link between the A40 and a farm lane, footpath 19/4/6. No diversion is proposed.
SP19/17/1	South of Bethel Chapel, south of the A40.	A section of this public footpath will be within an area of earthworks and will be stopped up. This footpath will tie-in to a new footpath to be provided along the southern boundary of the proposed highway.

PRoW Reference	Location	Land Take Effect
Footway alongside A40.	A40 between proposed tie-in of new side road and the eastern tie-in of the scheme.	The footway that runs along the southern side of the A40 will be stopped up. No new footway along the new side road, roundabout or new trunk road is proposed. A new footpath that partly utilises the detrunked carriageway will be provided. This will provide the same extents as the existing footway.

15.6.3 In addition to these permanent diversions, the following new routes will be created as part of the Scheme as an overall improvement of active travel measures:

- a) A new bridleway will be created that will run from the public highway leading to Trefangor Burial Ground, east along the highway boundary to Ffynnon Chapel, where it intersects with footpath SP19/37/1, partially utilising the existing A40 layby that will be stopped up. At Ffynnon Chapel, the new northern bridleway will pass beneath the proposed A40 in a new underpass.
- b) A new combined equestrian, cycling and pedestrian link will be provided along the southern highway boundary of the A40, running east from just south of Henllan Lodge to meet the detrunked A40 at Llanddewi Velfrey Western Junction. This route will link to the proposed bridleway described in the previous paragraph.
- c) A new public footpath will be created at the east Llanddewi Velfrey Junction. The footpath will cross the proposed A40 carriageway at the proposed roundabout, at an at-grade crossing. This provides connectivity between the village of Llanddewi Velfrey and Bethel Chapel and the properties to the north of the A40.

15.6.4 The PRoWs located within the permanent land take for the Scheme will be permanently diverted along new alignments to maintain the connectivity of the network, with the exception of one public footpath (SP19/4/5), whereby the existing network and proposed network already provides alternative, equally advantageous routes.

15.6.5 A number of new routes are proposed that will improve the network for all WCHR, including horse riders and cyclists. The sensitivity of the local PRoW network is assessed to be low (i.e. of low or medium importance and rarity, local scale).

15.6.6 The magnitude of the impact on these resources is assessed to be minor beneficial as all affected routes, bar one, will be permanently diverted

to maintain the connectivity of the local network and the network will also be improved by the addition of new lengths of public footpaths and bridleways that will provide new active travel facilities.

15.6.7 Taking these factors into account, the predicted environmental land take effects arising from the permanent stopping up and diversion of local PRoWs, and the provision of new routes are assessed as permanent and of slight beneficial significance.

15.6.8 Any changes in the experience of those using routes that have been affected by the Scheme are described under ‘Changes in Amenity’ in Sections 15.6 and 15.7 of this chapter relating to construction and operational effects respectively.

Cycle Routes

15.6.9 There are no cycle routes affected by the Scheme. Therefore, there is no impact.

Other Routes Used by WCHRs

15.6.10 Of the unclassified county roads and informal paths used by walkers, cyclists and horse-riders, the following will be permanently stopped up (see Volume 2 Figures 15.2A and 15.2B):

- a) Part of the access to the properties and chapel at Ffynnon will be stopped up as part of the construction of the new trunk road. The access currently forms part of the A40 as a “layby”. Private Means of Access will be provided for access from a new junction to the east of Ffynnon. A new footpath will provide connectivity, described above, to the existing footpath SP19/37/1.
- b) The private access leading to Pen-troydin-fach Farm will be stopped up in order to construct the new trunk road and junctions. The access provides informal connectivity between the existing A40 and the footpath SP19/37/1 and SP19/37/2, although there is no evidence of its use.

15.6.11 The sensitivity of these routes is assessed to be low (i.e. of low or medium importance and rarity, local scale). Overall, the magnitude of the impact on these resources is assessed to be minor adverse considering the proposals that have been incorporated into the design to maintain the connectivity of WCHR routes. Taking these factors into account, the predicted environmental land take effects on other routes used by WCHRs are assessed to be permanent and of slight adverse

significance.

Public Highways

15.6.12 The following local highways that fall within the permanent land take area for the proposed new section of trunk road will be permanently stopped up, diverted or improved (see Volume 2 Figures 15.2A and 15.2B):

- a) The southern section of the unnamed public road leading to Trefangor Burial Ground will be stopped up as the land is required for the construction of the new trunk road. A diversion will be provided that runs parallel to the proposed A40, from a new junction off the A487 north of Penblewin roundabout. It will tie-in to the existing road to south of the property known as Brominau. This road will have light use, mainly for property and farm access and will provide an attractive WCHR route, tying into several existing and proposed PRoW.
- b) The northern section of the unnamed public road leading to Henllan Farm and to the south of Llanddewi Velfrey will be stopped up as the land is required for the construction of the new trunk road. A diversion will be provided that will utilise the existing A40, which will be detrunked, from the existing Rest Area to the property known as Henllan Lodge. A short diversion will be constructed around the north of Henllan Lodge to tie-in to the existing unnamed road. This road will have light use, mainly for property and farm access and will provide an attractive WCHR route, tying into several existing and proposed PRoW and linking back into Llanddewi Velfrey village.
- c) The public road that leads from Llanddewi Velfrey to Llanfallteg (Llanfallteg Road) will be severed by the proposed Scheme. A new overbridge shall be provided, along the line of the existing road, to maintain connectivity. A temporary diversion of the public highway will be required to construct the new road. This is discussed further in section 15.7.

15.6.13 The existing A40 is a strategic route of major importance in South Wales, linking Carmarthen, St. Clears and Haverfordwest with key settlements to the east via the M4 motorway including Swansea, Cardiff and ultimately London. The sensitivity of these strategic routes is therefore assessed to be high (i.e. of high importance and rarity, national scale).

15.6.14 The other public highways linking to the strategic network are important at a local level and the sensitivity of these routes is therefore

assessed as low (i.e. of low to medium importance and rarity, local scale).

- 15.6.15 The potential magnitude of the impact on these resources takes into consideration the maintenance of public access along the strategic network and the provision of diversions for most local roads, or parts thereof, that will be permanently stopped up, in accordance with measures that have been incorporated into the design of the proposed new section of trunk road.
- 15.6.16 The magnitude of the impact is therefore assessed to be minor adverse i.e. vehicular and WCHR access along the strategic network and most local roads, including diverted sections, will be maintained to ensure the connectivity of journeys for all travellers.
- 15.6.17 Taking these factors into account, the predicted environmental land take effects on public highways are assessed to be permanent and of slight adverse significance.

Overbridge and Underbridge Crossings

- 15.6.18 There are no existing overbridges or underbridges effected by the Scheme. Therefore, there is no impact.
- 15.6.19 There are several new crossing points that will be delivered as part of the proposed new trunk road to maintain connectivity of the local highway and PRoW networks:
- a) A new underpass, which a new bridleway will pass through, providing north/south connectivity between SP19/30/1 and SP19/37/1.
 - b) A new pedestrian underpass will be provided for diverted footpath SP19/38/1. This underpass will also provide farm access to severed land.
 - c) A new overbridge to carry the public road that leads from Llanddewi Velfrey to Llanfallteg.
 - d) A new pedestrian underpass to carry a new footpath that is the diversion for several stopped-up footpaths (SP19/1/1, SP19/2/2 & SP19/3/2).
- 15.6.20 There are no existing structures affected by the proposed Scheme, therefore there is no adverse impact. New structures will be constructed to provide safe vehicular and WCHR access across the new carriageway

and maintain links between local roads and PRow. Most of these are to be constructed off-line or with diversions to enable access to be maintained until the new structures are operational.

- 15.6.21 The sensitivity of All Travellers using these crossings is assessed to be low in relation to the local network. The magnitude of the impact on these receptors is assessed to be minor adverse. There will be limited impacts on local journeys.
- 15.6.22 Taking these factors into account, the predicted land take effects arising from the construction of new overbridge and underpasses crossings are assessed to be permanent and of slight adverse significance.

Public Transport and Bus Stops

- 15.6.23 No land take effects on public transport services are predicted. The two bus stops within the village of Llanddewi Velfrey (one west-bound, one east-bound) will be by-passed as part of the Scheme. A junction will be provided at both the east and west side of the village, allowing access for the bus services.
- 15.6.24 The bus stops will no longer be on the A40 Trunk Road and buses will need to negotiate the junctions when entering and exiting the village. This may add some journey time to the bus route, but this is deemed to be negligible. Taking these factors into account, the predicted land take effect arising from the construction of new Trunk Road are assessed to be permanent and of neutral to slight significance.

Community Severance

- 15.6.25 The DMRB methodology for assessing community severance specifically relates to any increases in the length of journeys of pedestrians using PRow, cycle routes and public highways during the opening year of the Scheme. However, it is noted here that during the development of the design for the new section of trunk road, measures have been incorporated to ensure that the network of WCHR resources will be maintained, where possible, and improved as a result of the Scheme.
- 15.6.26 Potential land take effects on community severance are therefore limited, with the exception of one public footpath (SP19/4/5), whereby the existing network and proposed network will already provide

alternative, equally advantageous routes.

- 15.6.27 The proposed A40 will bypass the village of Llanddewi Velfrey. The following section describes this in further detail. As through traffic will be removed from the village there will be significant enhancements to the community severance currently encountered within the village.

Detrunking

- 15.6.28 The proposed A40 will bypass the existing A40 carriageway in several sections. The existing A40 will be detrunked with the road to remain Public Highway and responsibility to revert to the Local Authority, Pembrokeshire County Council. The detrunking proposals for the Scheme include:

- a) A section of Carriageway from the existing Rest Area to the junction at Henllan lodge will be bypassed by the proposed Scheme, which will run to the north and parallel to the existing. A small section of new highway will tie the existing A40 into the unnamed road leading to Henllan Farm.
- b) The Scheme bypasses the village of Llanddewi Velfrey. The section of existing carriageway from the proposed Western Llanddewi Velfrey junction to the proposed East Llanddewi Velfrey junction will be detrunked. This includes the village of Llanddewi Velfrey.

- 15.6.29 As these roads will be retained as Public Highway, with the through traffic removed, the detrunked lengths of carriageway will become more attractive to WCHRs.

- 15.6.30 These measures do not require any additional land take areas over and above those discussed for the new section of trunk road assessed. Therefore, there will be no additional potential land take effects that will affect All Travellers.

15.7 Assessment of Potential Construction Effects

- 15.7.1 The assessment of effects provided in this section takes into account the mitigation measures that are integral to the design of the Scheme, including the embedded mitigation measures described in this section.

PRoWs

15.7.2 Those PRoWs that fall within the footprint of the proposed new section of trunk road, junctions and associated earthworks that will be permanently stopped up during the construction phase are set out in Section 15.6. In addition, some PRoWs will need to be temporarily stopped up or diverted to allow for works on the carriageway, junctions, bridge and WCHR crossings to be undertaken, or where they fall within temporary construction storage areas and site compounds or within temporary construction traffic arrangements and haul roads. These are discussed below.

Temporary Effects on PRoWs

15.7.3 The PRoWs that will be temporarily stopped up or subject to traffic management during the construction stage are listed in Table 15.10 and shown on Volume 2 Figures 15.2A and 15.2B.

Table 15.10 PRoWs Temporarily Affected During Construction.

PRoW Reference	Location	Temporary Effect
SP19/31/3	Bounty Farm Access Road	The footpath will remain open with a localised temporary diversion during construction. Once the new side road leading to Trefangor Burial Ground is complete, the footpath leading to the existing A40 will be stopped up.
SP19/30/1	Ffynnon Wood. South of A40.	The public footpath will be diverted early on during construction, along the line of the proposed permanent diversion. This will lead to the existing A40, which will be under traffic management.
SP19/38/1	Pen-troydin-fach Farm. North of the A40.	The public footpath will be locally diverted during construction, within the site extents. Controlled haul road crossing points maybe required. The footpath will then move to the route of the proposed permanent diversion once the underpass is constructed.
SP19/38/2	South of Pen-troydin-fawr Farm. West of Llanfallteg Road.	The public footpath will be diverted onto the proposed temporary diversion of the Llanfallteg Road (in order to construct the overbridge). Once construction of the bridge is complete, the short permanent footpath diversion will be instated.

PRoW Reference	Location	Temporary Effect
SP19/1/1, SP19/2/2 & SP19/3/2	North of Blaen-pentroydin	The permanent diversions along the highway boundaries will be instated early on during construction. All the footpaths will link to and utilise the footpath SP19/2/2 in order to cross the scheme, with footpaths SP19/3/2 and SP19/1/1 stopped up. Controlled haul road crossing points maybe required. When the proposed underpass is complete all the footpaths will then be diverted to the permanent route. Footpath SP 19/2/2 will then be stopped up.
SP19/4/5	North of A40, west of Bethel Chapel.	This footpath will be permanently stopped up at the beginning of the construction of the Scheme.
SP19/17/1	South of Bethel Chapel, south of the A40.	The permanent footpath diversion, to replace the existing footway along the A40, will be carried out early on during construction. Footpath SP19/17/1 will then tie-in to this footpath.

15.7.4 The PRoWs affected by the construction works comprise local routes. The sensitivity of the PRoWs affected by the construction works is therefore assessed to be low for local routes (i.e. of low or medium importance and rarity, local scale for the local routes). The magnitude of impact of the local PRoWs is assessed to be moderate adverse i.e. there will be some temporary impacts that will affect the public's ability to access some local routes. Alternatives are available but generally require lengthy diversions.

15.7.5 Taking these factors into account, the predicted effects arising from the temporary stopping up of PRoWs during construction are assessed to be temporary and medium term and of slight adverse significance in relation to local routes.

Cycle Routes

Temporary Effects on Cycle Routes

15.7.6 There are no cycle routes affected by the Scheme. Therefore, there is no impact during construction.

Other Routes Used by WCHR

Temporary Effects on Other Routes Used by WCHR

15.7.7 There are no temporary effects on other routes used by WCHR crossed

by the proposed new section of trunk road during construction.

Public Highways

Temporary Effects on Public Highways

- 15.7.8 The existing strategic highway network including the A40 will remain open during the construction phase under traffic management where required, except for overnight lane closures that may be required for traffic management installations, utility diversions and new road tie-ins and surfacing. At these times diversion routes will be put in place.
- 15.7.9 The Llanfallteg Road, which leads from Llanddewi Velfrey to Llanfallteg, will need to be temporarily stopped up, in order to construct the new overbridge to carry this road over the proposed A40. A temporary diversion will be constructed alongside the existing road, which will maintain connectivity, whilst the new bridge is constructed. The land required for the temporary diversion is included within the Orders and will be reinstated and handed back to the land owner once construction is complete.
- 15.7.10 The magnitude of the impact on these resources takes account of the maintenance of public access along the strategic network and some local roads throughout the construction stage, except for some overnight weekend lane closures when traffic flows are lower, and diversions will be in place.
- 15.7.11 Taking these factors into account, the predicted effects on public highways during the construction phase are assessed to be temporary, medium term and of slight to moderate adverse significance in relation to the strategic network and temporary, medium term and of slight significance for the local road network.

Overbridge and Underpass Crossings

- 15.7.12 There are no public highways or PRowS intersecting the existing A40 on overbridge or underpass crossings. Therefore, there will be no impact during the construction phase.
- 15.7.13 However, a number of new crossings will be delivered as part of the proposed new section of trunk road as described in Section 15.6. The following overbridges and underbridges will be constructed with the

potential effects on All Travellers minimised by providing diversions during construction:

- a) A new underpass, which a new bridleway will pass through, providing north/south connectivity between SP19/30/1 and SP19/37/1.
- b) A new Pedestrian Underpass will be provided for diverted footpath SP19/38/1. This underpass will also provide farm access to severed land.
- c) A new overbridge to carry the public road that leads from Llanddewi Velfrey to Llanfallteg.
- d) A new pedestrian underpass to carry the new footpath that forms the diversion for several stopped-up footpaths (SP19/1/1, SP19/2/2 & SP19/3/2).

15.7.14 The magnitude of the impact on these resources takes into consideration the programming of construction works to ensure that public access is available during the construction phase. It is therefore assessed to be minor adverse.

15.7.15 Taking these factors into account, the predicted effects on underpass and overbridge crossings during the construction works is assessed to be temporary, medium term and of slight adverse significance in relation to crossings of the strategic network and the local road network.

Public Transport and Bus Stops

15.7.16 Public transport between Haverfordwest and St. Clears and other local settlements is provided by national and local bus companies. Only one bus service stops at Llanddewi Velfrey (including the surrounding area). No regular bus services will be disrupted during the construction phase since the A40 carriageway will remain in operation during the construction of the Scheme. There may be minor delays during peak traffic flows.

15.7.17 Taking these factors into account, the predicted environmental effects on public transport and bus stops during the construction phase is assessed to be temporary, medium term and of slight adverse significance.

Changes in Amenity

15.7.18 Changes in the overall amenity of journeys made by All Travellers

during the construction phase are largely a factor of changes to the visual and noise environments, which are assessed in detail in Chapters 9 Landscape and Visual Effects and 14 Noise and Vibration respectively of this ES. In accordance with DMRB methodology in relation to changes in amenity, a commentary of the relevant sections of those assessments is set out below.

- 15.7.19 The landscape and visual assessment describes the potential construction visual effects on PRoWs along the route of the new road. By considering the route of the scheme carefully the loss of trees and woodland will be minimised. During construction stage the changes to the landscape setting of the paths will be most visible to users as a consequence of tree felling, removal of hedges and soil stripping. Once construction is complete, the proposed woodland and hedge mitigation planting will grow to repair the landscape setting and to screen views. As the planting scheme matures over the 5 to 15 years after construction, users of public footpaths in the study area will be gradually less and less aware of the changes brought about by the Scheme. Fully effective mitigation will mean that users of most public footpaths will be unaffected by the Scheme, except where these PRoWs are diverted, or the route has to cross changes to landform. Further away from the Scheme, users on PRoWs will find that views are screened or filtered due to intervening topography and vegetation.
- 15.7.20 The assessment also describes visual changes experienced by road users during the construction phase, which are generally predicted to be more limited, due to traffic speeds and screening vegetation.
- 15.7.21 Temporary changes to the noise environment during construction are set out in Chapter 14 Noise and Vibration and will predominantly be experienced by WCHRs. This assessment shows that for daytime work, when most WCHR journeys take place, the level of impact from a range of construction activities will reduce with distance from the activity. Significant effects could occur within close proximity of the construction activity, which will be temporary and occur only during the most intense periods of construction. Therefore, walking, cycling and horse-riding journeys along PRoWs to the construction activities will be subject to increased noise levels over the baseline environment, although these will change as journeys progress due to the transient nature of the activity.

Driver Stress

- 15.7.22 The DMRB driver stress methodology does not specifically include a consideration of the potential effects on drivers resulting from the construction activities associated with a highway project, including road closures, diversions and disruption to journeys and journey times.
- 15.7.23 However, there are likely to be increased levels of driver stress during this period, compared to the baseline situation. This may be due to frustration i.e. by a driver's inability to drive at a speed consistent with his or her own wishes; as a result of traffic congestion and delays caused by traffic management; or because of uncertainty relating to the route being followed where temporary construction diversions are in place.

Community Severance

- 15.7.24 During the construction phase for the proposed new section of trunk road, measures will be put in place to maintain the connectivity of the highway network used by WCHRs. However, there will be temporary impacts on PRowS and cycle routes that will hinder pedestrian journeys and potentially increase journey lengths during the construction phase, as set out in Table 15.9 and Table 15.10.
- 15.7.25 Taking these factors into account, the predicted environmental construction effects on community severance are assessed, using the DMRB three-point scale, as moderate i.e. some residents may be dissuaded from making trips and some trips will be made longer or less attractive.

Detrunking

- 15.7.26 The detrunking of the existing A40 will not require any additional temporary land take during construction. Most of the works will be undertaken within the existing highway boundary or utilising areas of permanent and temporary land take already identified for the Scheme. The construction works associated with the remainder of the detrunking will only commence once the Scheme is operational.
- 15.7.27 Carriageway modifications are required as part of the detrunking works. This includes: Narrowing of the carriageway between Penblewin and Henllan Lodge; widening of the existing pedestrian walkway between the proposed East and West Llanddewi Velfrey Junctions; widening of

the carriageway into the verge at Cross Cottage; modification of the area surrounding the war memorial; and the narrowing of side road junctions within Llanddewi Velfrey.

15.8 Assessment of Potential Operational Effects

15.8.1 The assessment of effects provided in this section takes into account the mitigation measures that are integral to the design of the Scheme, including the embedded mitigation measures described in this section.

PRoWs

15.8.2 On completion of the construction phase, PRoW that are to be fully stopped up on a permanent basis will have already been diverted, with the exception of one public footpath (SP19/4/5), whereby the existing network and proposed network already provide alternative, equally advantageous routes.

15.8.3 Those PRoW that were only being temporarily, either partly or fully, stopped up during the construction phase will have already been reinstated along their original alignment. In addition, the new routes created as part of the Scheme will be operational.

15.8.4 The PRoWs within the local network around the proposed new section of trunk road comprise a mixture of local routes, including footpaths and bridleways. The sensitivity of these PRoWs is therefore assessed to be low (i.e. of low or medium importance and rarity, local scale) for the local routes.

15.8.5 The impacts will be minor beneficial for local routes i.e. all affected PRoWs, except for one, will be permanently diverted and additional PRoWs will be available for WCHR, which will improve the connectivity of the local network and provide additional active travel opportunities.

15.8.6 Taking these factors into account, the predicted effects arising from the operation of the Scheme will be of slight beneficial significance in relation to local PRoW.

Cycle Routes

15.8.7 There are no cycle routes affected by the Scheme. Therefore, there is

no impact during operation.

Other Routes Used by WCHRs

- 15.8.8 The only identified ‘Other Route Used by WCHRs’ is the existing access to Ffynnon that is to be stopped up as part of the works as described in Section 15.6. As such there is no operational impact, as the route is permanently stopped up.

Public Highways

- 15.8.9 The strategic highway network including the proposed new section of A40 trunk road will be fully open during the operational phase, together with local roads linking to those routes (including Llanfallteg Road) and serving the population of Llanddewi Velfrey, Llanfallteg and Ffynnon settlements.
- 15.8.10 Sections of the A40 remaining between Penblewin and Llanddewi Velfrey, will be detrunked and will become local highway, as described under the section entitled ‘Detrunking’.
- 15.8.11 A full Scheme description is provided in Chapter 2 - The Project, of the ES.
- 15.8.12 The existing A40 is a strategic route of major importance in South Wales, linking Carmarthen, St. Clears and Haverfordwest with key settlements to the east via the M4 motorway including Swansea, Cardiff and ultimately London. The sensitivity of these strategic routes is therefore assessed to be high (i.e. of high importance and rarity, national scale). The other public highways linking to the strategic network are important at a local level and the sensitivity of these routes is therefore assessed as low (i.e. of low to medium importance and rarity, local scale).
- 15.8.13 The potential magnitude of the impact on these resources takes into consideration the operation of the new section of trunk road, which will predominantly serve a strategic role; the maintenance of public access along the rest of the strategic network; improvements in access to destinations along the A40; and reduced journey times. It also takes account of the provision of permanent diversions for those local roads that will be permanently stopped up or affected during the construction phase. The magnitude of the impact is therefore assessed to be moderate

beneficial i.e. vehicular and WCHR access along the strategic network and most local roads, including diverted sections, will be maintained to ensure the connectivity of journeys for all travellers and, the new section of trunk road and connecting new highways will result in reduced journey times.

- 15.8.14 Taking these factors into account, the predicted operational effects on public highways are assessed to be permanent and of moderate beneficial significance, which is significant in EIA terms.

Overbridge and Underbridge Crossings

- 15.8.15 There are no underpass and overbridge crossings of the existing A40, with a single uncontrolled pedestrian crossing found close to the war memorial within Llanddewi Velfrey. However, new structures will be constructed to provide safe vehicular and WCHR access across the new carriageway to maintain links between local roads and settlements and for travellers.

- 15.8.16 The sensitivity of All Travellers using these crossings is assessed to be low i.e. they will generally be used by people accessing the local road network. The magnitude of the impact on these receptors, is assessed to be negligible.

- 15.8.17 Taking these factors into account, the predicted operational effects on all travellers using existing and new overbridges and underbridges is assessed to be permanent and of neutral significance.

Public Transport and Bus Stops

- 15.8.18 The only public transport that currently operates in the vicinity of the Scheme is a bus service. The bus stops will be located on the section of bypassed existing road that will be detrunked. The bus services will need to leave the proposed A40 and travel through the village using the proposed junctions. It is envisaged that the bus services will continue to function as they do presently and therefore there will be no effects arising from the operation of the proposed new section of trunk road.

Changes in Amenity

- 15.8.19 Changes in the overall amenity of journeys made by All Travellers during the operational phase is largely a factor of changes to the visual

and noise environments, which are assessed in detail in Chapters 9 Landscape and Visual Effects and 14 Noise and Vibration respectively of this ES. In accordance with DMRB methodology in relation to changes in amenity, a commentary of the relevant sections of those assessments is set out below.

- 15.8.20 The landscape and visual assessment describes the potential visual effects on PRoWs along the route of the new section of trunk road during operation. These views will return to baseline conditions by year 15 when mitigation planting will have matured and will largely screen and integrate this part of the Scheme into its surroundings.
- 15.8.21 By considering the route of the scheme carefully the loss of trees and woodland is minimised. During operation of the Scheme the changes to the landscape setting of the paths will be most visible to users soon after construction is complete, when mitigation planting will not have grown. Fully effective mitigation after 15 years will mean that users of most public footpaths will be unaffected by the Scheme. Further away from the Scheme users on PRoWs will find that views of the Scheme are screened or filtered due to intervening topography and vegetation.
- 15.8.22 Changes to the noise environment during the operation of the Scheme are set out in Chapter 14 Noise and Vibration. This assessment shows that in operation, both beneficial and adverse noise effects are predicted as a result of the Scheme. The new section of trunk road will remove through traffic from the village of Llanddewi Velfrey, therefore there will generally be a reduction in noise impacts on WCHR receptors around the village. Conversely, the proximity of a new trunk road to WCHR resources to the north of the village will result in higher noise levels over the baseline environment being experienced by the users of those resources, although these will change as journeys progress due to the transient nature of the activity. Noise mitigation to reduce those impacts has been incorporated into the Scheme by the provision of a thin road surface system, which results in relatively low noise.

Driver Stress

- 15.8.23 As set out in Section 15.4, the Transport Model has been developed to prepare traffic forecasts for the Scheme, which is documented in the Traffic Forecasting Report. The model represents the AM and PM peak periods on an average weekday for the design year of 2036, as follows:

- a) The AM peak hour (0800 – 0900).
- b) The PM peak hour (1700 – 1800).

15.8.24 The modelled peak hourly vehicle flows along the most heavily trafficked new section of road for the design year (2036) are as follows.

Eastbound

- a) AM peak hour: 560 vehs/hour
- b) PM peak hour: 590 vehs/hour

Westbound

- a) AM peak hour: 640 vehs/hour
- b) PM peak hour: 580 vehs/hour

15.8.25 The peak hourly flow in each direction ranges from approximately 610 to 700 units per hour. The DMRB guidance in relation to driver stress on single carriageway roads indicates that average peak flows of under 800 units per hour at an average journey speed of over 70kph will lead to a moderate level of driver stress, increasing to a high level of stress above 800 units per hour.

15.8.26 The improvements to the strategic highway network will, however, reduce driver stress as a result of the following:

- a) Reduced frustration, with fewer delays, due to the new section of overtaking provision, leading to more overtaking opportunities.
- b) Reduced frustration as a result of improved road surfacing with reduced spray and noise generation along the new section of trunk road.
- c) Reduced frustration of not being constrained by speed limits and substandard road geometry.

15.9 Additional Mitigation and Monitoring

Construction

15.9.1 The maintenance of access along public highways and traffic management commitments during the construction stage of the Scheme to manage driver and public safety are set out in Chapter 2 The Project. No additional construction mitigation measures are required in relation to public highways.

- 15.9.2 Mitigation measures during the construction period will be detailed in, and delivered through, the Construction Environmental Management Plan (CEMP) and Construction Transport Management Plan (CTMP) for the Scheme. This will include traffic management measures to manage driver and public safety and minimise disruption to the public and the local and strategic road networks. It will also include measures to keep the public informed on the programming and length of construction works affecting local highways and WCHR routes. A Pre-Construction Environmental Management Plan (Pre-CEMP) is provided at Volume 3 Appendix 2.2.
- 15.9.3 Mitigation has been addressed as part of an iterative design and assessment process in relation to landscape and visual impact and no additional or further mitigation measures during construction have been proposed. Likewise, noise mitigation has been incorporated into the Scheme.

Operation

- 15.9.4 Measures such as junction arrangements, signage and lighting form part of the design of the Scheme to minimise driver stress. The measures forming part of the Scheme (embedded mitigation) to maintain connectivity are described in Chapter 2 The Project and in Sections 15.6 and 15.7 above. No further operational mitigation measures are proposed in relation to All Travellers in addition to those incorporated into the Scheme.
- 15.9.5 As stated above, landscape and visual mitigation have been addressed as part of an iterative design and assessment process for the Scheme (e.g. woodland planting and other vegetation, boundary treatment) and no further measures are proposed. In relation to noise, mitigation has also been incorporated into the Scheme design.

Monitoring

Construction

- 15.9.6 Monitoring of mitigation measures that have been developed in relation to All Travellers will be undertaken via the suite of pre-construction documents that will be prepared for the Scheme, including the CEMP and the CTMP. Permanent changes to the highway network including PRoWs and other WCHR routes will be implemented through the Side

Road Orders.

Operation

- 15.9.1 No significant adverse impacts have been identified and therefore there is no requirement for future monitoring of as a result of the Scheme.

15.10 Assessment of Land Take Effects

- 15.10.1 The design of the new section of trunk road includes permanent diversions for most of the PRowS and other WCHR routes affected by the new section of trunk road. Highway diversions and new or replacement overbridges have also been considered. The assessment of land take effects with mitigation in place will therefore remain as set out in Section 15.6 above.

15.11 Assessment of Construction Effects

PRowS

- 15.11.1 Further mitigation measures will be put into place to provide temporary diversions for those PRowS affected during the construction of the new section of trunk road. The magnitude of impact on these resources with these measures in place is therefore assessed to be negligible.
- 15.11.2 Taking these factors into account, the predicted residual environmental effects on PRowS from the construction works are assessed to be temporary, medium term and of neutral significance.

Cycle Routes, Other Routes Used by WCHRs, Public Highways, Overbridge & Underbridge change, Crossings and Public Transport and Bus Stops

- 15.11.3 There are no cycle routes affected by the Scheme.
- 15.11.4 No further mitigation measures will be put in place for these resources during the construction phase, in addition to those incorporated into the design of the new section of trunk road. Therefore, the assessment of effects set out in Section 15.7 above will not change.

Community Severance

- 15.11.5 The further mitigation measures for PRowS and cycle routes during the construction phase set out above will help to mitigate for temporary impacts on pedestrian journeys, although there will still be some hindrance to movement, particularly for north-south journeys across the existing A40 including those using the local roads. This may dissuade some residents, particularly children and elderly people from making trips. Taking these factors into account, the predicted residual effect on community severance during construction is assessed to be slight to moderate.

Driver Stress

- 15.11.6 There will be no change to the assessment of driver stress set out in Section 15.7.

Detrunking

- 15.11.7 There will be no additional construction effects resulting from the provision of WCHR friendly infrastructure, other than those described above for the Scheme. The construction of the other detrunking works will not commence until the Scheme is operational and a construction strategy for these works has yet to be developed.

15.12 Assessment of Operational Effects

Proposed New Trunk Road

- 15.12.1 No further mitigation measures will be put in place in relation to All Travellers resources or driver stress during the operation phase. The assessment of operational effects is therefore unchanged from those set out in Section 15.8.

Detrunking

- 15.12.2 There will be no additional operational effects resulting from the provision of WCHR friendly infrastructure, other than those described above for the Scheme. The operation of the other detrunking works will not commence until the Scheme is operational.

15.13 Assessment of Cumulative and Inter-Related Effects

- 15.13.1 The assessment of cumulative effects relating to All Travellers and of inter-relationships between topics is presented in Chapter 19 to 21 of this ES.

15.14 Summary of Effects

- 15.14.1 In addition to the local road network linking Llanddewi Velfrey, Llanfallteg and Ffynnon, walkers, cyclists and horse-riders have access to a network of PRowS. The proposed new section of trunk road will affect a number of these routes, predominantly used for informal recreation by pedestrians.
- 15.14.2 Consultation has been undertaken with Pembrokeshire County Council and the local community, in relation to these resources and measures that have been incorporated into the Scheme to minimise the impacts on them.
- 15.14.3 A number of site visits, together with user surveys, were undertaken to establish the baseline conditions for this range of resources used by walkers, cyclists and horse-riders.
- 15.14.4 Some routes used by WCHRers will require stopping up on a temporary basis during construction, or on a permanent basis where they fall within the permanent land take for the Scheme. During both phases diversion routes will be established for most routes to enable users to access other parts of the local network and to maintain connectivity between routes.
- 15.14.5 Taking into account the measures incorporated into the Scheme for the diversion of permanently affected routes and the mitigation measures proposed to provide temporary diversions for those PRowS affected during construction, no significant adverse effects on PRowS or other routes are predicted.
- 15.14.6 During construction, the existing A40, together with most local roads crossing the Scheme or linking to it, will remain open under traffic management, where required, except for some overnight weekend road and lane closures during works such as utility diversions and tie-in

works. Llanfallteg road will be temporarily stopped up during construction with a temporary diversion put in place to allow for the construction of a new overbridge. This, together with the temporary impacts on PRoWs used by pedestrians, will result in a construction effect on community severance i.e. some residents may be dissuaded from making trips and some trips will be made longer or less attractive. However, this effect will be temporary and for the duration of construction only.

15.14.7 Following the completion of the construction works, the connectivity of the PRoWs network will be maintained. Those routes that were partly or fully stopped up on a permanent basis will have been diverted, with the exception of one public footpath (SP19/4/5), whereby the existing network and proposed network already provide alternative, equally advantageous routes. Those that were partly or fully stopped up temporarily during the construction phase will have been reinstated along their original alignment or their permanent diversion alignment. In addition, the new public bridleways and two new public footpaths created as part of the Scheme will be operational. These include:

- a) A new bridleway will be created that will run from the public highway leading to Trefangor Burial Ground, east along the highway boundary to Ffynnon Chapel, where it intersects with footpath SP19/30/1. At this location, the new northern bridleway will pass beneath the proposed A40 in a new underpass.
- b) A new combined, equestrian, cycling and pedestrian link will be provided along the southern highway boundary of the A40, running east from just south of Henllan Lodge to meet the detrunked A40 at Llanddewi Velfrey Western Junction. This route will link to the proposed bridleway described in the previous paragraph.
- c) A new public footpath will be created at the east Llanddewi Velfrey Junction. The footpath will cross the proposed A40 carriageway at the proposed roundabout, at an at-grade crossing. This will provide connectivity between the village of Llanddewi Velfrey and Bethel Chapel, and the properties to the north of the A40.
- d) The existing A40 Carriageway will be detrunked as part of the proposals. This provides opportunity to improve cycling and pedestrian facilities through the village.

15.14.8 The only public transport that currently operates in the vicinity of the Scheme is a bus service. The bus stops will be located on the section of bypassed existing road that will be detrunked. The bus services will

need to leave the proposed A40 and travel through the village using the proposed junctions. It is envisaged that the bus services will continue to function as they do presently and therefore there will be no effects arising from the operation of the proposed new section of trunk road.

Table 15.11 Summary of Likely Environmental Effects on All Travellers

Activity/Receptor	Sensitivity of receptor	Description of impact	Short/medium/long term	Magnitude of impact (without mitigation)	Significance of effect (without mitigation)	Magnitude of impact (with mitigation)	Significance of effect (with mitigation)	Significant/not significant
Land Take								
PRoWs	Low	Permanent stopping up or diversion of section of routes and provision of new routes.	Permanent	Minor Beneficial	Slight Beneficial	Minor Beneficial	Slight Beneficial	Not Significant
Cycle Routes		No cycle routes impacted by the Scheme	n/a	No Impact	N/A	N/A	N/A	N/A
Other Routes Used by WCHRs	Low	Stopping up of existing access to Ffynnon, which forms is classified as part of the A40 (Layby)	Permanent	Minor adverse	Slight adverse	Minor adverse	Slight Adverse	Not significant
Public Highways	High (A40 strategic route) Low (Local route)	Diversion of some existing routes. Provision of new section of trunk roads and junctions.	Permanent	Minor adverse	Slight adverse	Minor adverse	Slight Adverse	Not significant
Users of overbridge and underbridge crossings	N/A	No Impact- no existing overbridges or underpasses affected.	Permanent	No Impact	N/A	N/A	N/A	N/A

Activity/Receptor	Sensitivity of receptor	Description of impact	Short/medium/long term	Magnitude of impact (without mitigation)	Significance of effect (without mitigation)	Magnitude of impact (with mitigation)	Significance of effect (with mitigation)	Significant/not significant
Public Transport and Bus Stops	N/A	No Impact	Permanent	No Impact	N/A	N/A	N/A	N/A
Detrunking	Low	No additional land take required	Permanent	No Impact	N/A	N/A	N/A	N/A
Construction								
PRoWs	Low	Temporary stopping up of local routes, including temporary local diversions	Medium term	Moderate Adverse	Slight adverse	Negligible	Neutral	Not significant
Cycle Routes	N/A	No cycle routes impacted by the Scheme	n/a	No Impact	N/A	N/A	N/A	N/A
Other Routes Used by WCHRs	Low	No Temporary Affect (A40 Layby access stopped up early during construction)	Medium term	Slight	Slight	Slight	Slight	Not significant
Public Highways	High	Temporary stopping up and diversion of the Llanfallteg Road. Traffic Management required on the A40.	Medium term	Minor to Moderate adverse	Slight to Moderate adverse	Minor to Moderate adverse	Slight to Moderate adverse	Not significant
Users of overbridge and underbridge crossings	Low	Temporary impact during the construction of new structures for the crossing of WCHRs.	Medium term	Slight	Slight	Slight	Slight	Not significant

Activity/Receptor	Sensitivity of receptor	Description of impact	Short/medium/long term	Magnitude of impact (without mitigation)	Significance of effect (without mitigation)	Magnitude of impact (with mitigation)	Significance of effect (with mitigation)	Significant/not significant
Public Transport and Bus Stops	N/A	No Impact	Medium term	No Impact	Not significant	Not significant	Not significant	Not significant
Detrunking	Low	No temporary impact during construction.	Medium term	No Impact	N/A	N/A	N/A	N/A
Operation								
PRoWs	Low	Maintaining connectivity of network and provision of new routes	Permanent	Minor Beneficial	Slight Beneficial	Minor Beneficial	Slight Beneficial	Not significant
Cycle Routes	N/A	No cycle routes impacted by the Scheme	n/a	No Impact	N/A	N/A	N/A	N/A
Other Routes Used by WCHRs	Low	Route permanently stopped up (A40 Layby access stopped up early during construction)	Permanent	Slight	Slight	Slight	Slight	Not significant
Public Highways	High	Creation of new section of trunk road and new junctions. New local road diversions to provide local highway connectivity	Permanent	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial	Significant

Activity/Receptor	Sensitivity of receptor	Description of impact	Short/medium/long term	Magnitude of impact (without mitigation)	Significance of effect (without mitigation)	Magnitude of impact (with mitigation)	Significance of effect (with mitigation)	Significant/not significant
Users of overbridge and underbridge crossings	Low	Temporary impact during the construction of new structures for the crossing of WCHRs.	Permanent	Negligible	Neutral	Negligible	Neutral	Not Significant
Public Transport and Bus Stops	N/A	No Impact	Permanent	No Impact	Not significant	Not significant	Not significant	Not significant
Detrunking	N/A	Improved facilities and more attractive to WCHR users	Permanent	Slight Beneficial	Slight Beneficial	Moderate Beneficial	Moderate Beneficial	Significant