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A483 Transport Study WeITAG Stage One

Welsh Government

WeITAG Stage One Report

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A483 Transport Study WelTAG Stage One

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1. Introduction

1.1 Background

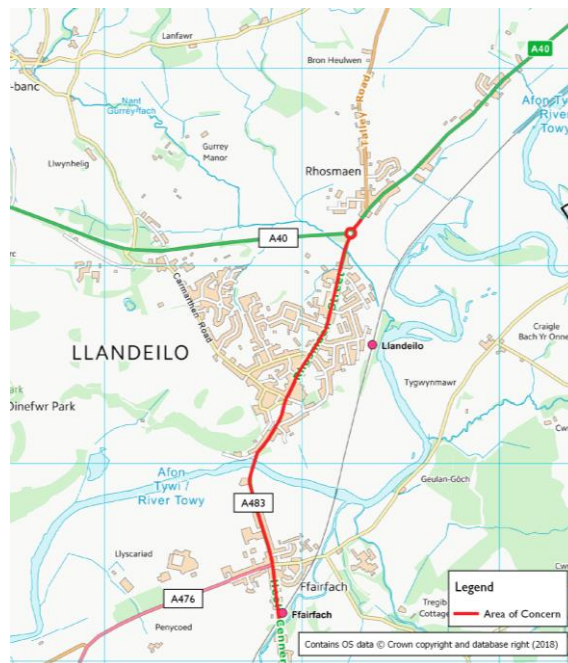
Jacobs UK Limited (Jacobs) and Mott Macdonald have been commissioned by the Welsh Government to undertake a WelTAG Stage One Assessment in Llandeilo and Ffairfach in Carmarthenshire. The aim of the study is to identify the need for a transport improvement scheme to address several issues of concern on the current highway network within the settlements.

1.2 Study Area

Figure 1-1 below illustrates the area of concern along the A483 within Llandeilo and Ffairfach, which is the focus for this study. It comprises the A483 from its junction with the A40 to the north of Llandeilo through to the south of Ffairfach, beyond the junction with the A476. This is the same area of concern as previous transport studies in Llandeilo and Ffairfach.

This section of the A483 is situated at the heart of Llandeilo’s town centre forming the high street (Rhosmaen Street). The A483 is a two-way street with parking and loading-only bays located in various locations along its length. Double-yellow lines are present where the road width narrows. There are numerous side streets running off the A483, many of which have poor visibility for traffic attempting to exit onto the A483. Footways are present throughout the majority of the A483 through Llandeilo and Ffairfach but are narrow in many places, forcing pedestrians to walk single file. To the north of Llandeilo, the A483 meets the A40 and to the south meets the A476 north of Ffairfach Railway Station.

Figure 1-1 – Study Area within Llandeilo and Ffairfach



Further information regarding the baseline environment within the study area is set out in the Impact Assessment Report which accompanies this WelTAG Stage One Report.

2. Methodology

The identification of existing issues and scheme objectives, along with the identification of the long-list and short-list options has taken into account the five ways of working set out in the Well-being of Future Generations (Wales) Act 2015. The Well-being of Future Generations Act has been considered throughout the study and reporting on this is clear in both this WeITAG Stage One Report and the Impact Assessment Report.

2.1 Legislative and Policy Context

The assessment of options for a suitable transport intervention is informed by a range of legislative and policy drivers. Key amongst these are:

- The Well-being of Future Generations (Wales) Act 2015
- The Wales Transport Strategy 2008
- National Transport Finance Plan (update 2017)
- Carmarthenshire County Council Local Development Plan 2006 – 2021 (2014)
- Well-being Plans of relevant public bodies.

Further information on these, and the other key legislation and policy that has been used to inform the assessment process is set out in the Impact Assessment Report.

2.2 The WeITAG Process

WeITAG is a five-stage process which takes a project from the identification of problems and project objectives through to post implementation reviews.

The first stage of the WeITAG process is Stage One. The purpose of Stage One is to *'understand the issue of concern, explore the context and to present a wide list of possible solutions, sufficient to be able to decide whether there are any possible solutions within the transport sector that are worth pursuing and to select a short list of options for more detailed consideration.'*

2.3 Option Identification and Appraisal

2.3.1 Strategic Case

The strategic case sets out the need for a potential transport intervention, including details of issues of concern. It sets out evidence based on the current baseline situation and outlines the likely future situation if no intervention takes place. At this stage long-term trends are considered, details regarding the timescales associated with the assessment of long-term trends is set out in the Impact Assessment Report.

At this stage the scheme specific objectives are identified, it is against these objectives, along with wider relevant Well-being Objectives of public bodies, that all options will be assessed.

2.3.2 Transport Case

The approach to the WeITAG Stage One level of appraisal is intended to initially assess the effectiveness of the long list of options in addressing the raised issues. The WeITAG 2017 guidance outlines that at this stage "the assessment will be based predominately on currently available evidence" such as passenger, pedestrian, cyclist or traffic counts and surveys. The transport case is thus an assessment of:

- What the impacts will be;
- The scale of those impacts;
- Where they will occur; and
- Who/what will experience them.

Due to the absence of detailed data at this stage of the WelTAG appraisal, a qualitative assessment has been undertaken to determine the potential impacts of each option. As stated in the WelTAG guidance, assessment should be proportionate to the impact under consideration. As such, the objectives of this project are to address traffic and environmental issues.

The appraisal has been tabulated using Appraisal Summary Tables (AST), the full content of which is set out in the Impact Assessment Report along with a comparison of the performance of each option against the appraisal criteria.

In undertaking the assessment, the core economic, environmental and social impacts from of the long-list options were considered. The impacts considered in this WelTAG One Report are set out in Table 2-1.

Table 2-1: WelTAG Appraisal Criteria – Assessed Topic Areas

Economic	Environmental	Social and Cultural
Journey Time Changes	Noise	Accidents
Journey Time Reliability	Air Quality	Journey Quality
Local Economy	Landscape and Townscape	Severance
	Historic Environment	Security
	Biodiversity	Physical Activity
	Water Environment	Access to Employment
	Greenhouse Gas Emissions	Access to Services
	Soils and Geology	Active Travel

At this stage this information considered is at a high level based on site visits and desk-based research. A summary table of the impacts identified is provided showing a colour matrix comparison between options. In accordance with WelTAG, the significance and scale of the impacts of each option will be presented using a seven-point scale, which is outlined in Table 2-2 below:

Table 2-2: WelTAG Seven-point Assessment Scale

Large beneficial		+++
Moderate beneficial		++
Slight beneficial		+
Neutral		0
Slight adverse		-
Moderate adverse		--
Large adverse		---

2.3.3 Financial Case

The financial case *'tells you whether an option is affordable in the first place and the long term financial viability of a scheme. It covers both capital and revenue requirements over the life time of the project and the implications of these for the balance sheet, income and expenditure accounts for public sector organisations'*.

This section sets out the financial case of each of the potential options established to resolve the problems that exist and the developed scheme objectives.

2.3.4 Commercial Case

The Commercial Case *'tells you if a scheme will be commercially viable, whether it is going to be possible to procure the scheme and then continue it into the future'*.

2.3.5 Management Case

The Management Case *'tells you if an option is achievable. This case covers the delivery arrangement of the project and then its management during its life time. It covers the arrangements for the procurement, construction and on-going operation of the intervention, details of the monitoring arrangements and the undertaking of the evaluation plan. The management case should embed the five ways of working'*.

2.4 Identification of Short-list of Options

The decision as to which options are taken forward to Stage Two is based on information in the five 'cases' set out above and:

- Their ability to solve the problem;
- Their ability to meet the objectives set;
- Their short and longer-term impacts;
- Their deliverability; and
- Their robustness to uncertainty.

3. Strategic Case

3.1 Identification of Issues of Concern

The Welsh Government involved a range of key organisations and representatives of the local community in the identification of the issues of concern regarding transport provision within the study area. Further details regarding the process is set out in the IAR. A workshop took place where these issues were discussed and Table 3-1 sets out the issues of concern that were identified.

Table 3-1: Issues of Concern

Key Problem	Further Detail
Access to railway stations	There is a lack of pedestrian wayfinding information from Llandeilo Railway Station providing directions for visitors into Llandeilo Town Centre. In addition, the path down to the railway station is of poor quality and not suitable for less-mobile people and inaccessible to wheelchair users.
Closure of local amenities	There are concerns that the congestion in Llandeilo can depress visitor numbers within the town, which result in economic challenges for businesses.
Crossing Rhosmaen Street / A483 (severance)	The traffic flows through Llandeilo, especially HGVs at peak times, can make crossing the A483 along Rhosmaen Street hazardous to pedestrians. There is a zebra crossing within the town, as well as signalised pedestrian crossings, but there is a concern that people crossing the road at other locations are at risk from collisions with through traffic.
Crossing / visibility at Ffairfach roundabout	The pavements at the Ffairfach roundabout are narrow particularly where children walk to get between Llandeilo and Ysgol Bro Dinefwr. Visibility is perceived to be poor at this location.
Emergency service response time (on-call fire service)	There were specific concerns regarding the length of time it can take on-call fire fighters to arrive at the fire station when there is congestion in Llandeilo and Ffairfach. The fire station is an on-call station, which means that fire fighters have to access the station using their own vehicles before they access the fire tenders, which have blue light priorities through congestion.
Future development	Concerns regarding how attractive Llandeilo is to future development and the ability of the local transport network to cope with any new development as set out in the Carmarthenshire Local Development Plan (there are land allocations within Llandeilo for future development).
Type of vehicle (HGV traffic)	HGVs, cattle trailer's and coaches appear to use the A483 for access to businesses, schools and other towns, such as Llandybie and Ammanford, which can cause congestion due to the slow vehicle speeds caused by gradients and width constraints and the amount of space they take up whilst manoeuvring within Llandeilo and Ffairfach.
Journey reliability / resilience	It has been identified that traffic flow is seasonal reflecting the status of Llandeilo as a tourist town with the further attraction of the National Trust Park. Llandeilo therefore experiences an increase in vehicles during summer months to that of winter months. There are also seasonal variances related to numerous festivals and events that take place in the town.
Noise levels	Contributors to noise in the areas of Llandeilo and Ffairfach include the vehicle speed, the types of vehicle, flow of traffic and the proximity of the buildings to carriageways and lack of dispersion because of this.
Number of pedestrians	It is considered likely that the number of pedestrians accessing Llandeilo or Ffairfach on foot is reduced as a result of the traffic flows on the A483 and that improvements to the transport network would encourage active travel by pedestrians.
Parking	Vehicles parked on the street conflict with moving traffic resulting in localised congestion. Long-stay parking on the A483 occurs due to a lack of off-street residential parking for many

Key Problem	Further Detail
	<p>properties in Llandeilo. A combination of unused pay and display car parking at Crescent Road and free car parking at King Street suggest that drivers may be unwilling to pay charges. There also appears to be a lack of enforcement. This results in additional on-street parking, especially in 'Loading Only' bays.</p>
<p>Pedestrian safety</p>	<p>Non-Motorised Users (NMUs) have to use narrow pavements throughout both Llandeilo and Ffairfach due to the width of space available. The proximity of HGVs to these narrow footways results in an intimidating experience for those walking or cycling. It is also difficult for pushchair/wheelchair users and people walking with children as the majority of footways would result in pedestrians having to walk in single-file. The quality and number of crossing points within the areas are frequently poor as many are not equipped with tactile paving/dropped kerbs.</p>
<p>Poor air quality</p>	<p>As a result of idling vehicles, stop/starting, manoeuvring around parked vehicles, hill starts (due to the gradients in Llandeilo) and the proximity of the buildings to the carriageway, which reduce dispersion, pollution within Llandeilo town centre is problematic. An industrial estate is also located within Llandeilo where manufacturing businesses may contribute to pollution as well. The length of Rhosmaen Street in Llandeilo is currently identified as an Air Quality Management Area.</p>
<p>Poor cycling environment</p>	<p>When a site visit was conducted there were no cyclists observed in Llandeilo or Ffairfach arising from barriers to cycling such as the type of vehicles which use the A483 and the lack of cycling infrastructure in place, such as on-road or off-road cycleway. There were also few cycle racks within Llandeilo and Ffairfach, with only Llandeilo Railway Station providing three racks for cyclists to secure their bikes to.</p>
<p>Public transport</p>	<p>The bus stops available in Llandeilo and Ffairfach are of a good standard, however the frequency of buses is sporadic. Llandeilo and Ffairfach railway stations offer Real Time Information displays, however the shelters which are provided are in need of maintenance and modernisation. This, as well as the lack of facilities and the infrequency of train services to surrounding villages and towns, may discourage residents and visitors to use public transport.</p>
<p>Road geometry and strategic purpose of A483</p>	<p>A number of junctions and sections of the A483 do not comply with current standards which may reduce the overall capacity and safety of the network. In particular, there are pinch points due to the proximity of buildings which result in localised congestion and narrow footways. Lack of visibility for drivers exiting junctions onto the A483 has been highlighted as an issue which could result in accidents with other vehicles or pedestrians.</p> <p>Further to this, there is limited rear access for retail properties which are located along the A483 and, therefore, servicing vehicles have to park and load on-street on the A483. The majority of residential properties within Llandeilo and Ffairfach do not have driveways and therefore have to park on the highway which adds to the congestion issues along the A483.</p> <p>The A483 has topographical constraints, particularly in regard to the incline on the A483 in both directions into Llandeilo Town Centre, which appears to reach a pinnacle at the zebra crossing. The River Towy, as well as the single-arch Grade II* listed road bridge (Llandeilo Bridge), add to the topographical constraints. The Heart of Wales railway line, which runs through Ffairfach village, skirts Llandeilo to the east of the town.</p> <p>Due to the historical nature of both Llandeilo and Ffairfach, each area is characterised by listed buildings and conservation areas which impact on the townscape. These impacts include reduced visibility, narrow streets, tight radii of corners and junctions, one-way streets, a listed bridge, a National Trust Park and parts of Llandeilo Town Centre are within a Conservation Area and the Brecon Beacons National Park boundary lies a short distance to the east.</p> <p>Servicing for businesses which line the A483 generally has to be carried out from the highway at the front of the properties as there is a lack of rear servicing provision, thus further contributing to the congestion issues in Llandeilo Town Centre.</p>

Key Problem	Further Detail
	There is a lack of potential diversion routes which are suitable for HGVs around Llandeilo and Ffairfach.
Road safety	Safety concerns relate to the visibility of pedestrians attempting to cross the A483 and side streets which lead onto it. Furthering this, due to the historic street layout of Llandeilo and Ffairfach, visibility splays out of a number of key junctions onto the A483 are below standard and are mainly blocked by historic buildings. There are also conflicting road signs in relation to speed limits which could cause confusion. Convex mirrors are not present in either settlement area which, if implemented, could prove to be beneficial in the future for drivers exiting junctions onto the A483.
School traffic	Ysgol Bro Dinewfr has a large catchment of children resulting in a significant number of coaches travelling to and from the school at the beginning and end of the school day. Many of these coaches are routed through Llandeilo and cause congestion due to the potential for them to cause a convoy. This traffic is also a hazard to children walking or cycling to the school from Llandeilo or Ffairfach. To a lesser extent there are problems with school traffic associated with the three primary schools in Llandeilo and Ffairfach. However, due to the small catchment to each of these schools the number of children coming to school by car is reduced and there are no coach movements required.
Traffic discouraging visitors (economic growth constraints)	The volume of traffic, especially the number of HGVs travelling on the A483 through Llandeilo, detract from the attractiveness of the town and its streetscape. There are concerns that this is discouraging visitors from staying in the town to shop or access services.
Traffic speed	There are general observations that drivers do not always abide to speed limits when looking to manoeuvre around obstructions or to avoid congestion. This is also perceived to occur at approach arms to the A483/A40 roundabout. Additionally, problems with vehicles driving at inappropriate speeds while passing parked vehicles have been highlighted, which could result in accidents. Conflicting/confusing speed limit signs could also result in drivers exceeding speed limits.
Vibration levels	The traffic flows, particularly the HGV movements, cause vibration through Llandeilo. While vibration levels dissipate quickly there are concerns regarding the effect this is having on the listed buildings that are alongside the A483 along Rhosmaen Street.

3.2 Scheme Objectives

A further workshop was held, which had a wider invitee list, the purpose of this workshop was to identify the scheme specific transport objectives for the assessment. Below are the scheme objectives that were identified at the workshop:

1. Preserve strategic function of the A483;
2. Improve pedestrian and cyclist safety within Llandeilo and Ffairfach, including safe routes to school;
3. Reduce community severance within Llandeilo and Ffairfach;
4. Improve journey time reliability through Llandeilo and Ffairfach;
5. Reduce congestion through Llandeilo;
6. Contribute to sustainable economic growth and tourism opportunities in Llandeilo;

7. Reduce exposure to air pollution for sensitive receptors; and
8. Support transition to a low carbon society ensuring the solution is sustainable and resilient which minimises carbon emissions associated with the transport infrastructure which includes improving access to, and provision of, public transport.

Following this workshop, a series of two public forum events took place in Llandeilo to allow local residents and a wider range of organisations and interested parties to input into the process. The purpose of these public forums was to consult on the proposed scheme objectives as well as to enable attendees to identify potential solutions to their issues of concern.

As a result of the public forums Scheme Objective 5 was amended to read:

5. Reduce congestion through Llandeilo **and Ffairfach**

The WelTAG Review Group met in October 2018. As a result of the Review Group's comments, Objective 6 was amended to read:

6. Contribute to sustainable economic growth and tourism **and cultural** opportunities in Llandeilo;

3.3 Well-being Objectives

Throughout this WelTAG One appraisal process the Well-being Objectives of relevant public bodies have been considered and objectives that are potentially relevant to a transport intervention in Llandeilo are detailed in the Impact Assessment Report. At this stage consideration of these objectives is high level. Opportunities to collaborate on the delivery of the objectives of other public bodies will be considered further at Stage Two. The public bodies that were identified to be relevant to this WelTAG One study are:

- Brecon Beacons National Park Authority;
- Carmarthenshire Public Services Board;
- Carmarthenshire County Council;
- Hywel Dda University Health Board;
- Mid and West Wales Fire and Rescue Services;
- Natural Resources Wales;
- Public Health Wales; and the
- Welsh Government.

3.4 Design and Environmental Objectives

At WelTAG Stage One the type of transport intervention has not been determined and options including those that conclude that no intervention is required are considered. On this basis it is not appropriate to consider key design and environmental objectives.

At WelTAG Stage Two the short-list of options will be considered further. At this stage key design and environmental objectives will be identified, against which each of the short-list options are assessed.

3.5 Long-list Options

Table 3-2 sets out a description of each of the Long-list Options identified and the extent to which they deliver the Scheme Objectives. Plans of each of these options are set out in Appendix A.

Table 3-2: Long List Options

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
DM	<p>Do-Minimum</p> <p>The Do-Minimum option does not include any improvements to the current scenario of the A483 within Llandeilo and Ffairfach</p>	✓	x	x	x	x	x	x	x
TC1A	<p>One Way System and a Bypass Option (A)</p> <p>Town Centre routing restrictions will be installed. Two-way traffic will remain from the junction of the A40 and junction of New Road/Carmarthen Street. New Road to remain open to two-way traffic. Rhosmaen Street from New Road/Crescent Road junction to Carmarthen Street and Abbey Terrace changed to one-way southbound but open to all vehicles. Rhosmaen Street between King Street and Ffairfach roundabout is weight restricted. Permitted traffic going north would turn left into King Street then George Street, then onto Carmarthen Street/Carmarthen Road to join the A40 at the existing junction with a potential roundabout. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians. There will be warning/diversion signs and weight limited signs within Ffairfach to stop HGVs from using Llandeilo Bridge crossing the Afon Tywi.</p>	✓	✓	✓	Partial	Partial	✓	x	x

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
TC1B	<p>One Way System and a Bypass Option (B)</p> <p>Two-way traffic from the junction of A40 and junction of New Road/Carmarthen Street. New Road to remain open to two-way traffic. Rhosmaen Street from New Road/Crescent Road junction to Carmarthen Street and Abbey Terrace is one way southbound but open to all vehicles. Rhosmaen Street between King Street and Ffairfach roundabout is weight restricted. Permitted traffic going north would turn left into Carmarthen Street then Carmarthen Road to join the A40 at the existing junction with a possible roundabout. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians. There will be warning/diversion signs and weight limited signs within Ffairfach to stop HGVs from using Llandeilo Bridge crossing the Afon Tywi.</p>	✓	✓	✓	Partial	Partial	✓	✗	✗
TC1C	<p>One Way System and a Bypass Option (C)</p> <p>One-way system using Crescent Road for southbound traffic and Rhosmaen Street for northbound traffic. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.</p>	✓	✓	✓	Partial	Partial	✓	✗	✗
TC2	<p>Traffic Light System and a Bypass Option</p> <p>Traffic lights would be installed on Rhosmaen Street to enable one-way traffic along the narrowest section of the road. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.</p>	✓	✗	✗	✗	✗	✓	✗	✗
NB1	<p>Traffic Lights</p> <p>Traffic lights would be installed on Rhosmaen Street to enable one-way traffic along the narrowest section of the road. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.</p>	Partial	✗	✗	✓	✓	✗	Partial	✗
NB2	<p>Removal of Parking</p> <p>Removal of parking along Rhosmaen Street enforced through double yellow lines. Restrictions of 'Loading Only' from 18:00 to 07:00, and then from 10:00 – 15:00 with no parking between 08:00 – 18:00 will be enforced.</p>	Partial	✗	✗	✓	✓	✗	Partial	✗

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
NB3	<p>HGV Restriction (legal sanction)</p> <p>Restriction on HGVs through Llandeilo between 08:00 – 20:00, all HGVs to be routed along the A40 to Carmarthen which will be enforced through traffic cameras. This restriction will apply from the A40 roundabout within Rhosmaen to the roundabout within Ffairfach.</p>	x	✓	✓	✓	✓	x	✓	x
NB4	<p>HGV Restriction with permit/emissions charge</p> <p>Restriction on HGVs with the exception of businesses within a certain distance which would be entitled to a free permit. The permit for other businesses will be priced at a cost that makes it more economically viable to go via Carmarthen rather than through Llandeilo and/or Ffairfach. This option would be a similar scheme to congestion charge/emission zone areas.</p>	x	✓	✓	x	✓	x	✓	x
NB5	<p>HGV Restriction (legal sanction) plus one-way system</p> <p>One-way system where there would be limited access for HGVs travelling southbound from the A40 onto the A483, with access permitted for deliveries only. Rhosmaen Street would be one-way southbound and directed to King Street onto Carmarthen Road and back onto the A40. HGVs would be restricted from crossing Llandeilo Bridge crossing the Afon Tywi in a northbound direction and the A483 will be de-trunked.</p>	x	✓	✓	x	✓	x	✓	x
NB6	<p>Combined No-bypass Option (with HGV restriction)</p> <p>This option is a package of works representing a combination of NB1, NB2 and NB3.</p>	x	✓	✓	x	✓	x	✓	x
NB7	<p>Combined No-bypass Option (No HGV restriction)</p> <p>This option is a package of works representing a combination of NB1 and NB2.</p>	✓	✓	✓	x	✓	x	✓	x

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BE1A	<p>Eastern Bypass Option 1 (A)</p> <p>Eastern Bypass Option 1 (A) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west, crossing the Afon Tywi then joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the east of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed on the A476 where the route then heads south east and joins the A483 to the south of Heol Pen Storum.</p>	✓	Partial	Partial	✓	✓	✓	✓	✓
BE1B	<p>Eastern Bypass Option 1 (B)</p> <p>Eastern Bypass Option 1 (B) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, heading west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.</p>	✓	✓	✓	✓	✓	✓	✓	✓
BE1C	<p>Eastern Bypass Option 1 (C)</p> <p>Eastern Bypass Option 1 (C) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476.</p>	✓	✓	✓	✓	✓	✓	✓	✓
BE1D	<p>Eastern Bypass Option 1 (D)</p> <p>Eastern Bypass Option 1 (D) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476 and a link from the proposed roundabout at B4300/A476 to the A483 south of Heol Pen Storum.</p>	✓	✓	✓	✓	x	✓	x	x

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BE2	<p>Eastern Bypass Option 2</p> <p>Eastern Bypass Option 2 leaves the A the A40/A483 roundabout, heading south-east around the boundary of Llandeilo before crossing the railway and following the railway line south to Bethlehem Road. From Bethlehem Road, the route then heads south to join the A483 to the north of Heol Pen Storom. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE3A	<p>Eastern Bypass Option 3 (A)</p> <p>Eastern Bypass Option 3 (A) leaves the A40 at the A40/A483 roundabout, heading south-east around the boundary of Llandeilo before crossing the railway and following the railway line south for a short distance before crossing the Afon Tywi, joining Bethlehem Road around Geulan-Goch. From this location the road would continue south avoiding the former secondary school, and link to the A483 to the south of Heol Pen Storom. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE3B	<p>Eastern Bypass Option 3 (B)</p> <p>Eastern Bypass Option 3 (B) leaves the A40 at the A40/A483 roundabout, heading south east to cross the railway line and the Afon Tywi, and wraps around to the north-east of Llandeilo. From this point to the east of the railway line the route would head south over multiple river crossings. The route would then cross Bethlehem Road between Ffairfach and the former secondary school, linking to the A483 to the north of Heol Pen Storom. This option would require a link to the A476.</p>	✓	✓	✓	Partial	✓	✓	✓	✗
BE3C	<p>Eastern Bypass Option 3 (C)</p> <p>Eastern Bypass Option 3 (C) leaves the A40 at the existing A40/A483 roundabout, heading south east towards Bethlehem Road, crossing the Afon Tywi and railway using a single structure. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storom. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BE3D	<p>Eastern Bypass Option 3 (D)</p> <p>Eastern Bypass Option 3 (D) leaves the A40 at the existing A40/A483 roundabout, heading south east towards Bethlehem Road, crossing the Afon Tywi and railway using a single structure. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road towards Ffairfach, leaves Bethlehem Road to the west of the former secondary school to join the A483 to the north of Heol Pen Storum. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE4A	<p>Mid Rhosmaen Eastern Bypass Option 4 (A)</p> <p>Mid Rhosmaen Eastern Bypass Option 4 (A) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south-east towards Bethlehem Road, crossing the railway and Afon Tywi. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE4B	<p>Mid Rhosmaen Eastern Bypass Option 4 (B)</p> <p>Mid Rhosmaen Eastern Bypass Option 4 (B) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south-east towards Bethlehem Road, crossing the railway and Afon Tywi. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BE4C	<p>Mid Rhosmaen Eastern Bypass Option 4 (C)</p> <p>Mid Rhosmaen Eastern Bypass Option 4 (C) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south-west towards Llandeilo Railway Station before crossing the railway and Afon Tywi using a single structure. The route then links to Bethlehem Road to the south of Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE4D	<p>Mid Rhosmaen Eastern Bypass Option 4 (D)</p> <p>Mid Rhosmaen Eastern Bypass Option 4 (D) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south-west towards Llandeilo Railway Station before crossing the railway and Afon Tywi using a single structure. The route then links to Bethlehem Road to the south of Craigle Bach Yr Onnen, follows Bethlehem Road towards Ffairfach, leaves Bethlehem Road to the west of the former secondary school, to join the A483 to the north of Heol Pen Storum. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗
BE5A	<p>Far Eastern Route 5 (A)</p> <p>Far Eastern Route 5 (A) leaves the A40 to the east of Rhosmaen, crosses the railway line and Afon Tywi at a single crossing point, and crosses the estuary to meet Bethlehem Road near to Pentre Parr Lodge. Bethlehem Road will be upgraded towards Ffairfach and the route will leave Bethlehem Road near Geulan Goch and link to A483 to the south of residential properties to avoid Heol Pen Storum. The route would avoid playing fields associated with the former secondary school. This option would require a link to the A476.</p>	✓	✓	✓	✓	✓	✓	✓	✗

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BE5B	<p>Far Eastern Route 5 (B)</p> <p>Far Eastern Route 5 (B) leaves the A40 to the east of Rhosmaen, crosses the railway line and Afon Tywi at a single crossing point and crosses the river to meet Bethlehem Road near to Pentre Parr Lodge. Bethlehem Road will be upgraded towards Ffairfach and the route will leave Bethlehem Road to the west of the former secondary school (to the east of the railway line) and wraps to the east of residential properties along Heol Cennen linking to A483 before Heol Pen Storum.</p>	✓	✓	✓	✓	✓	✓	✓	x
BE6	<p>Option formerly known as the Refined Protected Route</p> <p>This option leaves the A40 at the A40/A483 roundabout, heading south-east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, before passing closer to the escarpment than options BE1A – BE1D. It joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.</p>	✓	✓	✓	✓	✓	✓	✓	x
ARL1	<p>A Road Link (1)</p> <p>ARL1 connects the A476 and A483 without the need to pass through Ffairfach. The route starts at the junction between the B4300 and A476 and follows the slight valley, crossing the railway line at approximate NGR SN625 205 then joins the A483 south of Caemen Cottage.</p>	✓	x	x	✓	✓	✓	x	x
ARL2	<p>A Road Link (2)</p> <p>ARL2 connects the A476 to the A487 without the need to pass through Ffairfach. The route would leave the A476 south of Cwm at approximate NGR BN610 189 crossing the gorge over the railway line and links to A487 at approximately NRG SN 614 191.</p>	✓	x	✓	✓	✓	✓	x	x
BW1	<p>Western Bypass Option 1</p> <p>Western Bypass Option 1 leaves the A40 at the existing junction with Carmarthen Road at a new junction. The route then follows Carmarthen Road south to the entrance to the National Trust Dinewr property and follows the slight dip between mounds south-west of the junction of the B4300 and A476.</p>	✓	✓	✓	✓	✓	x	✓	x

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BW2	<p>Western Bypass Option 2</p> <p>Western Bypass Option 2 leaves the A40 at the existing junction with Carmarthen Road at a new junction. The route then follows an alignment to the west of Carmarthen Road south of the entrance to National Trust Dinefwr property, then runs to the west of residential properties on Carmarthen Road, Carmarthen Street, George Street, Bank Terrace and Bridge Street before crossing the Afon Tywi to the west of Llandeilo Bridge. The route then wraps west along the route of the Afon Tywi, north of Ysgol Bro Dinefwr and links to the A476 at the existing junction with the B4300.</p>	✓	✓	✗	✓	✓	✗	✓	✗
BW3A	<p>Western Bypass Option 3 (A)</p> <p>Western Bypass Option 3 (A) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west in a southern direction to the entrance to the National Trust Dinefwr property and follows the 'protected route' to the east of Ysgol Bro Dinefwr and links to the A483 within Ffairfach to the south of Heol Pen Storom.</p>	✓	✓	Partial	✓	✓	✗	✓	✗
BW3B	<p>Western Bypass Option 3 (B)</p> <p>Western Bypass Option 3 (B) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west in a southern direction to the entrance to the National Trust Dinefwr property and follows the 'protected route' to the east of Ysgol Bro Dinefwr.</p>	✓	✗	✗	✓	Partial	✗	✓	✗
BW3C	<p>Western Bypass Option 3 (C)</p> <p>Western Bypass Option 3 (C) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west, in a southern direction to the entrance to the National Trust Dinefwr property then passes to the north of Ysgol Bro Dinefwr and links to the junction of the B4300 and A476.</p>	✓	✓	✓	✓	✓	✗	✓	✗
BW4	<p>West of Dinefwr (East)</p> <p>West of Dinefwr Bypass Option (East) leaves the A40 prior to King's Lodge, wraps around the western boundary of National Trust Dinefwr Park property, links to A476 at the junction of the A476 and B4300.</p>	✓	Partial	Partial	✓	Partial	✗	✓	✗

Option Ref	Option Name and Description	Compliance with Scheme Objectives							
		1	2	3	4	5	6	7	8
BW5A	<p>West of Dinefwr (A)</p> <p>West of Dinefwr Bypass Option (A) leaves the A40 near Lletty Cottage and heads south along local roads which will be upgraded between Rhiw-Yr-Adar and Cilsan. The route then crosses the Afon Tywi and links to the B4300. The route also involves an upgrade of the B4300 and the existing junction with the A476, proposed to be a roundabout.</p>	✓	✗	✗	✓	✗	✗	✓	✗
BW5B	<p>West of Dinefwr (B)</p> <p>West of Dinefwr Bypass Option (B) leaves the A40 near Lletty Cottage and heads south along local roads which will be upgraded between Rhiw-Yr-Adar and Cilsan. The route then crosses the Afon Tywi estuary and links to the B4300. The route continues south to link to the A476 at approximate NGR SN 613200.</p>	✓	✗	✗	✓	✗	✗	✓	✗
BW5C	<p>West of Dinefwr (C)</p> <p>West of Dinefwr Bypass Option (C) leaves the A40 near Lletty Cottage, heads south, including an upgrade of local roads between Rhiw-Yr-Adar and Cilsan. The route then crosses the Afon Tywi estuary, links to the B4300 and continues south to link to the A476 at approximate NGR SN 610198 (wrapping around the boundary of Turner's wood).</p>	✓	✗	✗	✓	✗	✗	✓	✗
BW6	<p>Far West Route via Dryslwyn</p> <p>Far West Route via Dryslwyn is located approximately 6km west of Llandeilo. The route leaves the A40 at the junction with the B4297, near Cross Inn Cottage. The B4297 will be upgraded to an A road standard single carriageway (7.3m) which passes through Felindre, Dryslwyn, Penrhiwgoch and Maesybont. The route will then connect into A476 at Castyll-y-rhingyll/The Gate to the north of Cross Hands. It should be noted that Active Travel provision for this option not specified at this point.</p>	✓	✗	✗	✗	✗	✗	✗	✗
BT1	<p>Tunnel</p> <p>The tunnel is proposed from the A40 to A476 under Dinefwr Park to the east of King's Lodge.</p>	✓	✓	✓	✓	✓	✓	✓	✓

4. Transport Case

Each of the long-list options were considered against the key economic, environmental, social and cultural factors, with details of the assessment included in the Impact Assessment Report and a summary of the findings set out in Table 4-1. Details of the full assessment of each of the long-list options is included in the WelTAG Stage One: Impact Assessment Report.

Table 4-1: Summary of the WelTAG Assessment.

Option Name	Economy			Environment								Social and Cultural							
	Journey time	Journey time reliability	Local Economy	Noise	Local Air Quality	Greenhouse Gas Emissions	Landscape and Townscape	Biodiversity	Cultural Heritage	Water Environment	Soils and Geology	Physical Activity	Journey Quality	Accidents	Security	Access to Employment	Access to Services	Severance	Active Travel
Do Minimum	-	-	-	-	-	0	-	0	-	0	0	-	-	-	0	-	-	-	-
TC1A	+	++	+	0	++	0	+	0	+	0	0	++	++	++	0	0	0	+	+
TC1B	+	++	+	0	++	0	+	0	+	0	0	++	++	++	0	0	0	0	+
TC1C	+	++	+	0	++	0	+	0	+	0	0	++	++	++	0	0	0	0	+
TC2	-	+	+	0	++	0	+	0	+	0	0	++	-	++	0	0	0	0	+
NB1	-	+	+	0	+	0	+	0	+	0	0	+	-	+	0	0	0	+	+
NB2	+	+	-	0	+	0	+	0	+	0	0	+	+	+	0	0	0	+	+
NB3	-	-	0	0	++	0	+	0	+	0	0	+	0	+	0	0	0	+	+
NB4	-	-	0	0	++	0	+	0	+	0	0	+	0	+	0	0	0	+	+
NB5	-	-	0	0	++	0	+	0	+	0	0	+	0	+	0	0	0	+	+
NB6	-	-	0	0	+	0	+	0	+	0	0	+	0	+	0	0	0	+	+

Option Name	Economy			Environment								Social and Cultural							
	Journey time	Journey time reliability	Local Economy	Noise	Local Air Quality	Greenhouse Gas Emissions	Landscape and Townscape	Biodiversity	Cultural Heritage	Water Environment	Soils and Geology	Physical Activity	Journey Quality	Accidents	Security	Access to Employment	Access to Services	Severance	Active Travel
NB7	-	-	0	0	+	0	+	0	+	0	0	+	0	+	0	0	0	+	+
BE1A	++	++	+	0	++	0	---	---	--	---	0	+	+	+	0	+	+	-	+
BE1B	++	++	+	0	+	0	---	---	--	---	0	+	+	+	0	+	+	-	+
BE1C	+	+	+	0	+	0	---	---	--	---	0	+	+	+	0	+	+	-	+
BE1D	+	+	+	0	++	0	---	---	--	---	0	+	+	+	0	+	+	-	+
BE2	+++	+	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+
BE3A	++	++	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+
BE3B	+++	++	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	+	+++
BE3C	+	++	+	+	+++	0	---	---	--	---	0	+	++	+	0	+	+	+++	+
BE3D	++	++	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+
BE4A	+	++	+	+	+++	0	---	---	--	---	0	+	++	+	0	+	+	+++	+
BE4B	++	++	+	+	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+
BE4C	+	++	+	+	+++	0	---	---	--	---	0	+	++	+	0	+	+	+++	+
BE4D	++	++	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+
BE5A	+	++	+	0	+++	0	---	---	----	---	0	+	++	+	0	+	+	+++	+
BE5B	+	++	+	0	+++	0	---	---	--	---	0	+	++	+	0	+	+	++	+

Option Name	Economy			Environment								Social and Cultural							
	Journey time	Journey time reliability	Local Economy	Noise	Local Air Quality	Greenhouse Gas Emissions	Landscape and Townscape	Biodiversity	Cultural Heritage	Water Environment	Soils and Geology	Physical Activity	Journey Quality	Accidents	Security	Access to Employment	Access to Services	Severance	Active Travel
BE6	+	++	+	0	++	0	--	--	--	--	0	+	++	+	0	+	+	++	+
ARL1	NYA	NYA	NYA	0	++	0	-	-	-	-	0	+	+	+	0	0	0	+	+
ARL2	NYA	NYA	NYA	0	++	0	--	--	-	-	0	0	NYA	+	0	0	0	+	0
BW1	+	+	0	0	++	0	---	---	---	--	0	+	++	+	0	0	0	+	+
BW2	+	+	-	0	++	0	---	---	---	--	0	+	+++	+	0	0	0	+	+
BW3A	0	+	-	-	+++	0	---	---	---	--	0	+	++	+	0	0	0	--	+
BW3B	+	+	-	-	++	0	---	---	---	--	0	+	+	+	0	0	0	--	+
BW3C	+	+	-	0	++	0	---	---	---	--	0	+	++	+	0	0	0	+	+
BW4	+	+	+	+	++	0	---	---	---	--	0	+	+	+	0	+	+	+	+
BW5A	-	+	0	+	++	0	---	---	--	--	0	0	0	+	0	+	+	0	0
BW5B	-	+	0	0	++	0	---	---	--	--	0	0	+	+	0	+	+	+	+
BW5C	-	+	0	0	++	0	---	---	--	--	0	+	+	+	0	+	+	+	+
BW6	---	0	0	-	++	0	-	---	-	--	0	0	0	0	0	0	0	0	0
BT1	+	++	+	+	++	0	-	-	0	--	0	+	++	+	0	+	+	++	+

5. Financial Case

5.1 Introduction

The financial case *‘tells you whether an option is affordable in the first place and the long term financial viability of a scheme. It covers both capital and revenue requirements over the life time of the project and the implications of these for the balance sheet, income and expenditure accounts for public sector organisations’.*

This section sets out the financial case of each of the potential options established to resolve the problems that exist and the developed scheme objectives. The study for improvements to the transport infrastructure at Llandeilo is at an early stage and therefore the financial cases for each option are as yet undeveloped due to the limited information available. At this stage the tunnel option has been dismissed due to the significantly greater cost and ongoing maintenance cost associated with this technology.

5.2 Funding

Funding of the capital cost of the scheme will be from Welsh Government. An overall scheme budget of £50m is available. Funding of operation and maintenance (revenue) will be from Welsh Government for trunk road elements, and from Carmarthenshire County Council for non-trunk road elements.

5.3 Capital cost estimate

A Cost Estimate Report was compiled by Corderoy in June 2018, providing estimated capital costs for selected long list options. Those options which were costed were generally the shortest/least expensive within an option series, and those elements which form part of several options. This provided sufficient information to allocate the estimated cost of each long list option into cost bands. Taking into consideration the available budget, then bands are as follows:

Green (Low)	Less than £50m
Amber (Medium)	£50m to £60m
Red (High)	Greater than £60m

The report is in the WeITAG Stage One IAR.

6. Commercial Case

6.1 Introduction

The Commercial Case *'tells you if a scheme will be commercially viable, whether it is going to be possible to procure the scheme and then continue it into the future'*.

6.2 Assessment

The Welsh Government will use experienced consultants, who have been involved in similar highways projects to support it in the design of the scheme and developing the specifications. Liaison with the supplier market may inform this process and will help to identify the best format and content, which will facilitate the tendering process.

When developed, the commercial case, will be based upon the strategic objectives and expected outcomes, against which alternative procurement options and scenarios will be assessed to:

- Achieve cost certainty, or at least have certainty that the scheme can be delivered within the available funding constraints.
- Minimise further preparation costs with respect to scheme design.
- Obtain contractor experience to design and programming to ensure the implementation programme is robust and achievable.
- Obtain contractor input to risk management and appraisals, including mitigation measures, to capitalise at any early stage on opportunities to reduce construction risk and improve out-turn certainty.

It is important to note there are no significant issues to report at this juncture.

7. Management Case

The Management Case *'tells you if an option is achievable. This case covers the delivery arrangement of the project and then its management during its life time. It covers the arrangements for the procurement, construction and on-going operation of the intervention, details of the monitoring arrangements and the undertaking of the evaluation plan. The management case should embed the five ways of working'*.

When fully developed, the management case will consider the following:

- Evidence of similar projects;
- Programme / Project dependencies;
- Governance, organisational structure and roles;
- Programme / Project plan;
- Assurance and Approvals Plan;
- Communications and Stakeholder Management;
- Programme / Project Reporting;
- Risk Management Strategy; and
- Options.

8. Summary and Conclusions

8.1 Summary

This study has identified the key problems of concern based on stakeholder workshops and public forums along with professional judgement. The list of problems follows similar themes to those identified during previous studies, which indicate that work undertaken regarding transport solutions for Llandeilo in the past can legitimately be used to inform this new study. The key problems identified were:

- Safety;
- Traffic Speed;
- Network constraints;
- Type of vehicle;
- Parking;
- Services;
- Seasonality of traffic flow;
- Insufficient diversion routes;
- NMU environment;
- No cycling infrastructure;
- NMU wayfinding;
- Public transport quality;
- Pollution; and
- Noise.

Scheme specific objectives were identified to ensure that the potential options would resolve the above key problems. These scheme objectives are:

- Preserve strategic function of A483;
- Improve pedestrian and cyclist safety within Llandeilo and Ffairfach, including safe routes to school;
- Reduce community severance within Llandeilo and Ffairfach;
- Improve journey time reliability through Llandeilo and Ffairfach;
- Reduce congestion through Llandeilo and Ffairfach;
- Contribute to sustainable economic growth and tourism and cultural opportunities in Llandeilo;
- Reduce exposure to air pollution for sensitive receptors; and
- Support transition to a low carbon society ensuring the solution is sustainable and resilient which minimises carbon emissions associated with the transport infrastructure which includes improving access to, and provision of public transport.

Assessment work undertaken at Stage One has identified 41 potential options, these options were developed based on information provided by stakeholders at a stakeholder workshop and two public forums and professional judgement.

Each of these 41 options is described in this report and the extent to which it would meet the strategic scheme objectives has been considered. An assessment of each option against their potential to result in positive or negative social and cultural impacts, environmental impacts, and economic impacts. At this stage there are limitations to the extent to which this can be assessed, where this is the case this has been noted in the report.

8.2 Recommendations

The 41 longlisted options have been appraised through the WelTAG Stage One process against the following criteria:

- their ability to prevent, or solve the problem now and in the future;
- their ability to meet the scheme specific objectives and the Welsh Government Well-being Objectives;
- their short and longer-term impacts
- their deliverability; and
- their robustness to uncertainty and potential to drive long lasting change.

Based on the appraisal, the highest scoring options and therefore those which are recommended for further consideration at WelTAG Stage Two are set out in Table 8-1.

Table 8-1: Options to be progressed to Stage Two assessment

Option Reference	Option Description
NB1	Traffic lights, no bypass
NB2	Removal of parking, no bypass
NB5	HGV Restriction (legal sanction) plus one-way system
NB6	Combined No-bypass Option (with HGV restriction)
NB7	Combined No-bypass (No HGV restriction)
TCA1	One-way system and bypass
BE1A	Eastern Bypass Option 1 (A)
BE1B	Eastern Bypass Option 1 (B)
BE1C	Eastern Bypass Option 1 (C)
BE4D	Eastern Bypass Option 4 (D)
BE6	Eastern Bypass Option 6

It is therefore concluded that whilst non-bypass and town centre improvements will deliver benefits, significant improvements are predicted to arise from the construction of a bypass.

The 41 long-listed options were appraised through the WelTAG Stage One process against the following criteria:

- Their ability to prevent, or solve the problem now and in the future;
- Their ability to meet the scheme specific objectives and the Welsh Government Well-being Objectives;
- Their short and longer-term impacts;
- Their deliverability; and
- Their robustness to uncertainty and potential to drive long-lasting change.

Based on the appraisal, the highest scoring options are recommended for further consideration at WelTAG Stage Two.

Details of the Short-listed Options are set out below, summary details of all the long-list options is set out in Appendix A of this report.

NB1 – Traffic Lights

Description

Traffic lights would be installed on Rhosmaen Street to enable one-way traffic along the narrowest section of the road. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.

Location



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How it tackles the problem

NB1 would improve journey time reliability due to providing traffic lights that would improve flows through the pinch points within Llandeilo. Pedestrian safety would also improve as result of the widening of the pavements.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	Partial	x	x	✓	✓	x	Partial	x

NB2 – Removal of Parking

Description

Removal of parking along Rhosmaen Street enforced through double yellow lines. Restrictions of 'Loading Only' from 18:00 to 07:00, and then from 10:00 – 15:00 with no parking between 08:00 – 18:00 will be enforced.

Location



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How it tackles the problem

NB2 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. There would be a slight beneficial effect on air quality within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

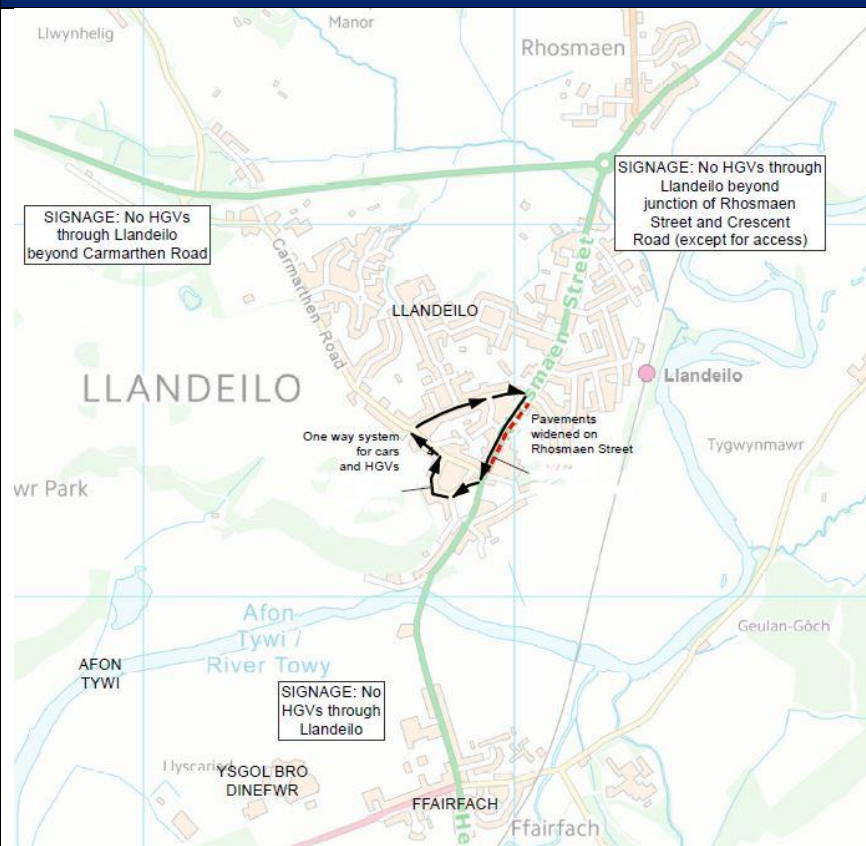
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	Partial	x	x	✓	✓	x	Partial	x

NB5 – HGV Restriction (legal sanction) plus one-way system

Description

One-way system where there would be limited access for HGVs travelling southbound from the A40 onto the A483, with access permitted for deliveries only. Rhosmaen Street would be one-way southbound, with traffic directed to King Street onto Carmarthen Road and back onto the A40. HGVs would be restricted from crossing Llandeilo Bridge crossing the Afon Tywi in a northbound direction and the A483 will be de-trunked.

Location



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How it tackles the problem

NB5 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

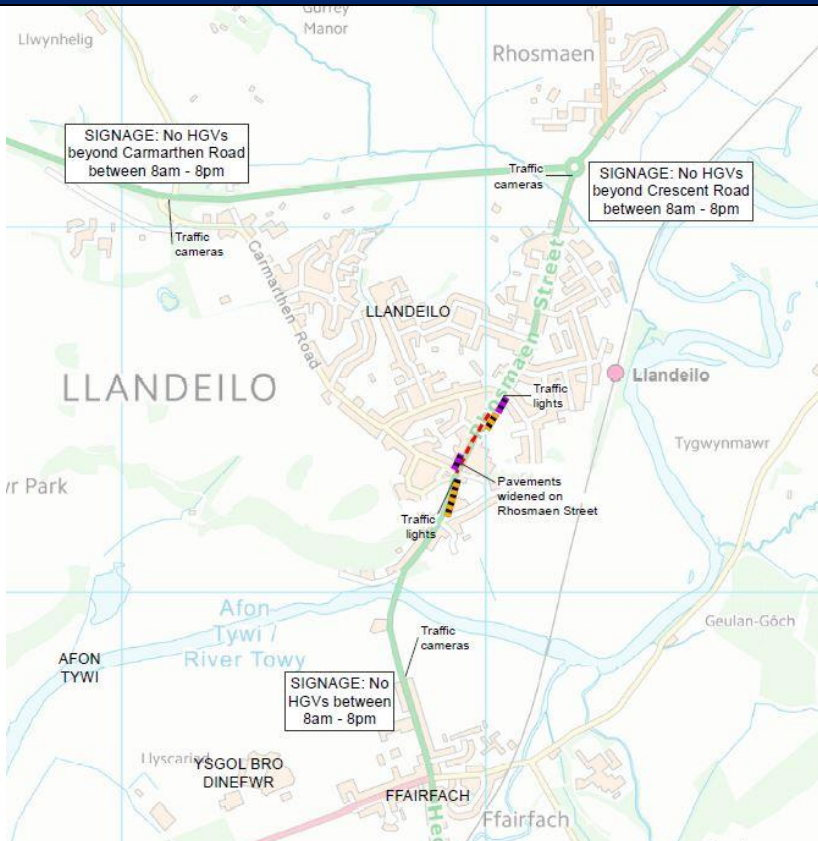
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	x	✓	x	✓	x

NB6 – Combined No-bypass Option (with HGV restriction)

Description

This option is a package of works representing a combination of NB1, NB2 and NB3.

Location



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How it tackles the problem

NB6 would improve journey time reliability due to providing a direct, free-flow route (albeit with lights) which would reduce the pinch points within Llandeilo/Ffairfach. Pedestrian safety would also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. NB6 would reduce severance along the A483/Rhosmaen Street. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to Welsh Government achieving its Well-being Objectives and help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	x	✓	x	✓	x

NB7 – Combined No-bypass Option (No HGV restriction)

Description

This option is a package of works representing a combination of NB1 and NB2.

Location



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How it tackles the problem

NB7 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

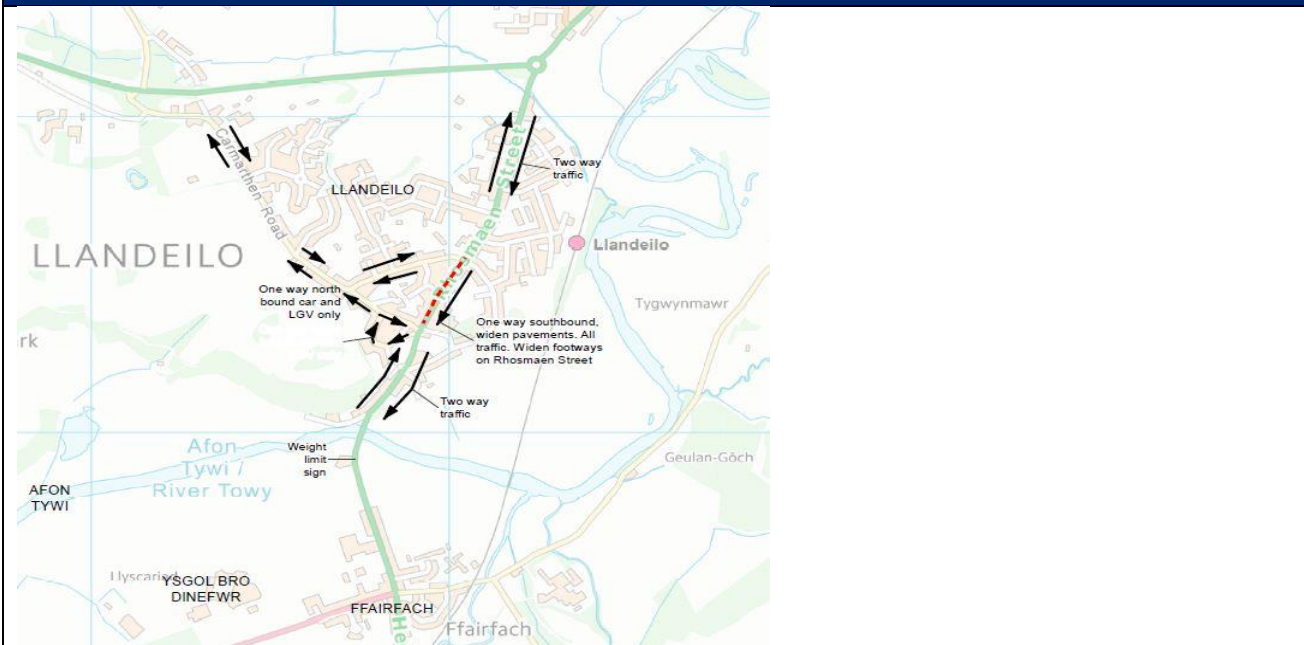
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	x	✓	x	✓	x

TC1A – One Way System and a Bypass Option (A)

Description

Town Centre routing restrictions will be installed. Two-way traffic will remain from the junction of A40 and junction of New Road/Carmarthen Street. New Road to remain open to two-way traffic. Rhosmaen Street from New Road/Crescent Road junction to Carmarthen Street and Abbey Terrace changed to one-way southbound but open to all vehicles. Rhosmaen Street between King Street and Ffairfach roundabout is weight restricted. Permitted traffic going north would turn left into King Street then George Street, then onto Carmarthen Street/Carmarthen Road to join the A40 at the existing junction with a potential roundabout. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians. There will be warning/diversion signs and weight limited signs within Ffairfach to stop HGVs from using Llandeilo Bridge crossing the Afon Tywi.

Location



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How it tackles the problem

It should be noted that option TC1A is dependent on the construction of a bypass, the bypass would remove through traffic and improve the resilience of the trunk road network. The following assessment assumes that the bypass option chosen would result in the intended benefits of the removal of through traffic and that the existing through traffic flows would divert onto the bypass and not continue to flow through the town. TC1A would reduce severance for pedestrians along the A483/Rhosmaen Street within Llandeilo but there would be a slight increase in severance on Carmarthen Road as northbound traffic is re-routed. Pedestrian safety would also improve as well as the cycling environment, the improvement to the streetscape for visitors may result in increased numbers of people shopping in the town and should make the town more attractive for people who pass through it on the way to Dinefwr Park. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

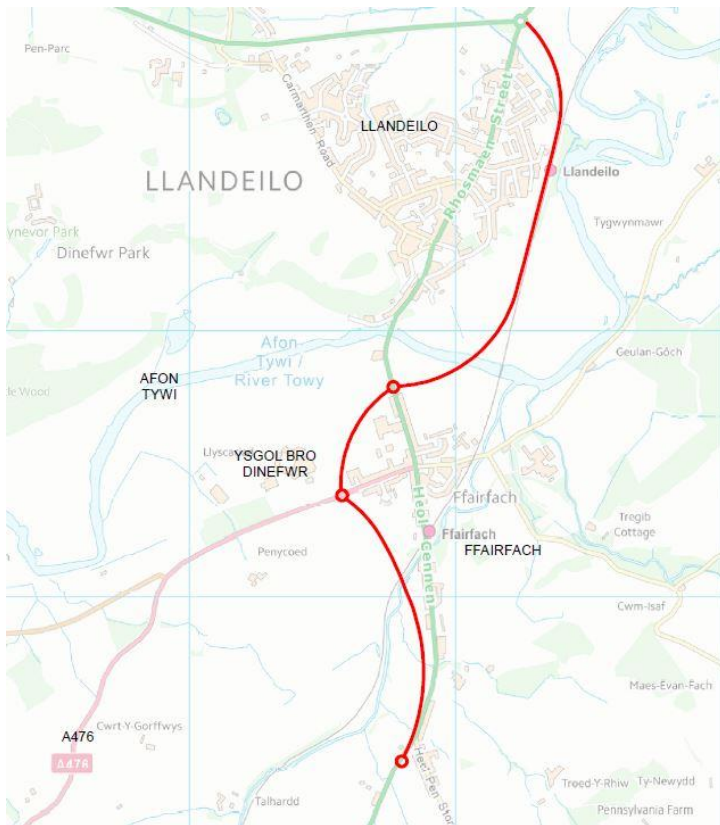
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	Partial	Partial	✓	x	x

BE1A – Eastern Bypass Option 1 (A)

Description

Eastern Bypass Option 1 (A) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west, crossing the Afon Tywi then joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the east of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed on the A476 where the route then heads south east and joins the A483 to the south of Heol Pen Storum.

Location



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How it tackles the problem

BE1A would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian and cycle safety within Llandeilo and Ffairfach would improve and this may attract new visitors to Llandeilo. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	Partial	Partial	✓	✓	✓	✓	✓

BE1B – Eastern Bypass Option 1 (B)

Description

Eastern Bypass Option 1 (B) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, heading west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.

Location



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How it tackles the problem

BE1B would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety would also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey would decrease with a bypass in place. HGV and school traffic would also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) would improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

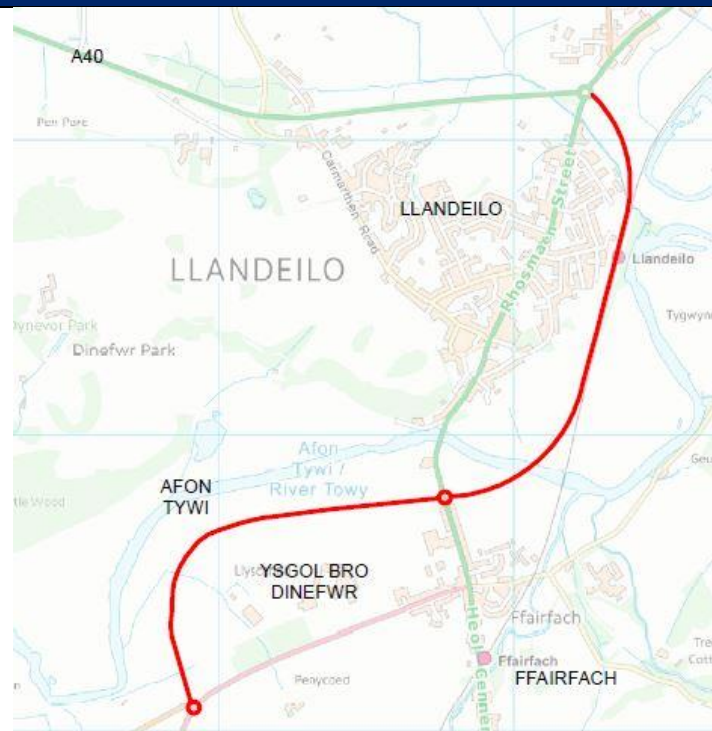
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x								

BE1C – Eastern Bypass Option 1 (C)

Description

Eastern Bypass Option 1 (C) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476.

Location



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How it tackles the problem

BE1C would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety within the town would also improve as a result of the improvements in road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic within the town would also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

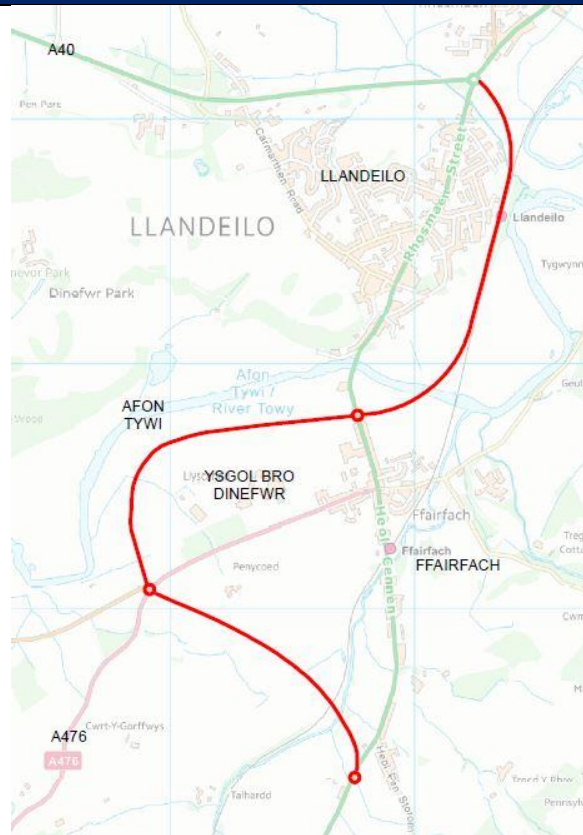
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	✓

BE1D – Eastern Bypass Option 1 (D)

Description

Eastern Bypass Option 1 (D) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476 and a link from the proposed roundabout at B4300/A476 to the A483 south of Heol Pen Storum.

Location



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How it tackles the problem

BE1D would reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability. Pedestrian and cycle safety should improve, and the reduction of through-traffic may attract more visitors to Llandeilo. Emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street. The bypass would reduce traffic passing the entrance to Ysgol Bro Dinefwr. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	x	✓	x	x

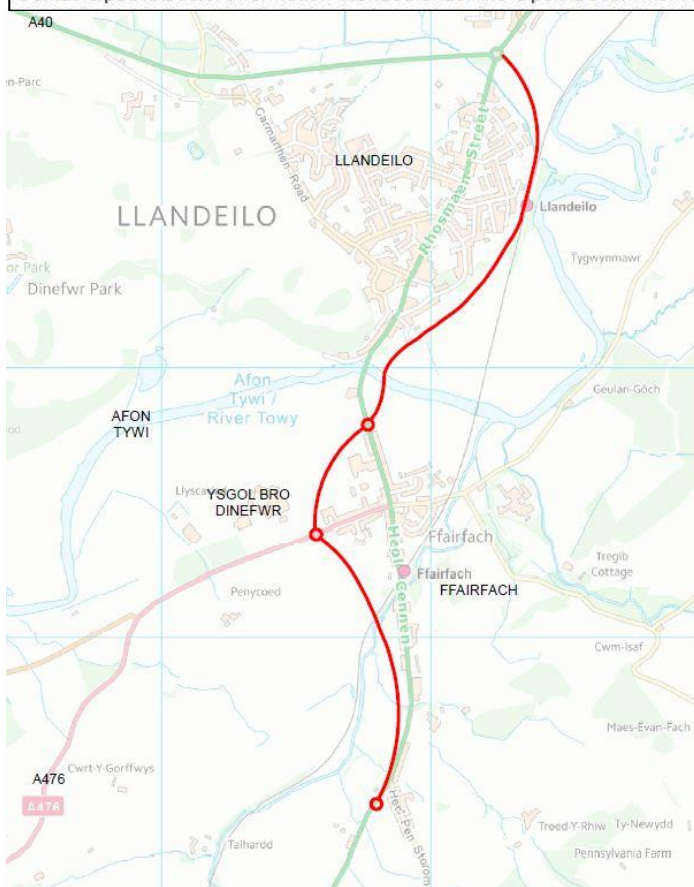
BE6 – Option formerly known as the Refined Protected Route

Description

This option leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, before passing closer to the escarpment than options BE1A – BE1D. It joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.

Location

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How it tackles the problem

BE6 would reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

9. Next Steps

9.1 Legislative requirements relevant to WelTAG Stage Two

As the transport study progresses through WelTAG Stage Two there is a range of legislation that will need to be considered. This includes a suite of environmental legislation which forms the basis of the environmental constraints, including legislation with regard to air quality, biodiversity, water quality, cultural heritage and landscape.

In addition, the provisions of the Active Travel (Wales) Act 2013 will be a key consideration.

The provisions of the Well-being of Future Generations (Wales) Act 2015 will be considered throughout WelTAG Stage Two and the way in which the study is undertaken will take into account the five ways of working. In assessing each of the shortlist options the extent to which any future scheme would contribute to the Well-being Goals and the Well-being Objectives of relevant public bodies will be considered.




9.2 Identification of Design and Environmental Objectives

Should a transport intervention be identified as a potential solution then there will be key design and environmental objectives that each shortlist option would be appraised against. As the WelTAG Stage One report has concluded that there are some options which do not propose a bypass and others that do, subsequent assessment will have to be mindful of the lower potential that a non-bypass option would have for collaboration and integration with the relevant public bodies. Care will need to be taken to ensure that options are fairly judged despite the obvious significant differences between bypass and non-bypass options.

9.3 Development of Collaboration and Involvement Strategy

The Stakeholder Engagement Strategy would set out the key stakeholders for the A483 Llandeilo Transport Study, which would be informed by feedback from the Future Generations Commissioner to the WelTAG Stage One Report. However, in the first instance the key statutory and non-statutory organisations set out in Table 9-1 and Table 9-2 have been identified, along with details of the subject areas that they would contribute to the project teams understanding of. We have also identified which bodies or organisations would be involved with or collaborate on the design and which public bodies' Well-being Objectives need to be integrated into the project development.

Table 9-1: Statutory Bodies

Statutory Bodies	Ways of Working			Subject Areas
Carmarthenshire County Council				<ul style="list-style-type: none"> • Biodiversity Officer • Strategic Planning • Highways • Environmental Health • Education • Cycling Officer • Disaster Management team • Social Services (disability needs)

Statutory Bodies	Ways of Working			Subject Areas
Brecon Beacons National Park				<ul style="list-style-type: none"> • Strategic Planning • Biodiversity • Landscape
Town and Community Councils				<ul style="list-style-type: none"> • Llandeilo Town Council • Manordeilo and Salem Community Council • Dyffryn and Cennen Community Council
Natural Resources Wales				<ul style="list-style-type: none"> • Flood Risk • Biodiversity • Landscape
Royal Commission on the Ancient and Historical Monuments of Wales				<ul style="list-style-type: none"> • Cultural heritage
Cadw				<ul style="list-style-type: none"> • Cultural heritage
Network Rail				<ul style="list-style-type: none"> • Design implications for railway and stations
Health Organisations				<ul style="list-style-type: none"> • Public Health Wales • Hywel Dda Public Health Team • NHS Ambulance Trust
Dyfed Powys Police				<ul style="list-style-type: none"> • Community policing • Traffic policing
Mid and West Wales Fire and Rescue Services				<ul style="list-style-type: none"> • Design • Management of access
Welsh Government				<ul style="list-style-type: none"> • Network Management • Active Travel







Statutory Bodies	Ways of Working			Subject Areas
				<ul style="list-style-type: none"> Environmental
SWTRA				<ul style="list-style-type: none"> Network Management
Future Generations Commissioner's Office				<ul style="list-style-type: none"> Review of consideration of the Well-being of Future Generations (Wales) Act 2015 and the sustainability principle

Table 9-2: Non-Statutory Organisations

Topic Areas	Ways of Working			Non-Statutory Consultee
Ecology				<ul style="list-style-type: none"> Wildlife Trust of South and West Wales Woodland Trust Butterfly Conservation National Trust
Cultural Heritage				<ul style="list-style-type: none"> National Trust Dyfed Archaeological Trust
Active Travel				<ul style="list-style-type: none"> Local Disability Groups RNIB Sustrans Ramblers Cymru Local walking and cycling groups British Horse Society
Education				<ul style="list-style-type: none"> Ysgol Bro Dinefwr Llandeilo Primary School Ysgol Gymraeg Teilo Sant Ysgol Ffairfach
Community and other interests				<ul style="list-style-type: none"> Local angling clubs (x 4) Objector groups (as applicable)

Topic Areas	Ways of Working		Non-Statutory Consultee
Design Commission for Wales			<ul style="list-style-type: none"> • Design review at key design freeze stages

9.4 Impacts to be considered at WelTAG Stage Two

The impacts that should be considered at WelTAG Stage Two will build on those that were considered at Stage One, with more detailed information identified for each of the topic areas set out in the assessment tables.

Key data that has been identified as being required are:

- Traffic data;
- Traffic model;
- Geotechnical, Hydrological and Topographical data;
- Accident data;
- Social and cultural data;
- Environmental data (surveys); and
- Cost information.

Appendix A. Long List Summary Appraisal Tables

The 41 options which are included in Appendix A are outlined below, followed by detailed tables:

- Do-Minimum;
- NB1 – Traffic Lights;
- NB2 – Removal of Parking;
- NB3 – HGV Restriction (legal sanction);
- NB4 – HGV Restriction with permit/emissions charge;
- NB5 – HGV Restriction (legal sanction) plus one-way system;
- NB6 – Combined No-bypass Option (with HGV restriction);
- NB7 – Combined No-bypass Option (No HGV restriction);
- TC1A – One Way System and a Bypass Option (A);
- TC1B – One Way System and a Bypass Option (B);
- TC1C – One Way System and a Bypass Option (C);
- TC2 – Traffic Light System and a Bypass Option;
- BE1A – Eastern Bypass Option 1 (A);
- BE1B – Eastern Bypass Option 1 (B);
- BE1C – Eastern Bypass Option 1 (C);
- BE1D – Eastern Bypass Option 1 (D);
- BE2 – Eastern Bypass Option 2;
- BE3A – Eastern Bypass Option 3 (A);
- BE3B – Eastern Bypass Option 3 (B);
- BE3C – Eastern Bypass Option 3 (C);
- BE3D – Eastern Bypass Option 3 (D);
- BE4A – Mid Rhosmaen Eastern Bypass Option 4 (A);
- BE4B – Mid Rhosmaen Eastern Bypass Option 4 (B);
- BE4C – Mid Rhosmaen Eastern Bypass Option 4 (C);
- BE4D – Mid Rhosmaen Eastern Bypass Option 4 (D);
- BE5A – Far Eastern Route 5 (A);
- BE5B – Far Eastern Route 5 (B);
- BE6 – Option formerly known as the Refined Protected Route;
- ARL1 – A Road Link (1);
- ARL2 – A Road Link (2);
- BW1 – Western Bypass Option 1;
- BW2 – Western Bypass Option 2;
- BW3A – Western Bypass Option 3 (A);
- BW3B – Western Bypass Option 3 (B);
- BW3C – Western Bypass Option 3 (C);

- BW4 – West of Dinefwr (East);
- BW5A – West of Dinefwr (A);
- BW5B – West of Dinefwr (B);
- BW5C – West of Dinefwr (C);
- BW6 – Far West Route via Dryslwyn; and
- BT1 – Tunnel.

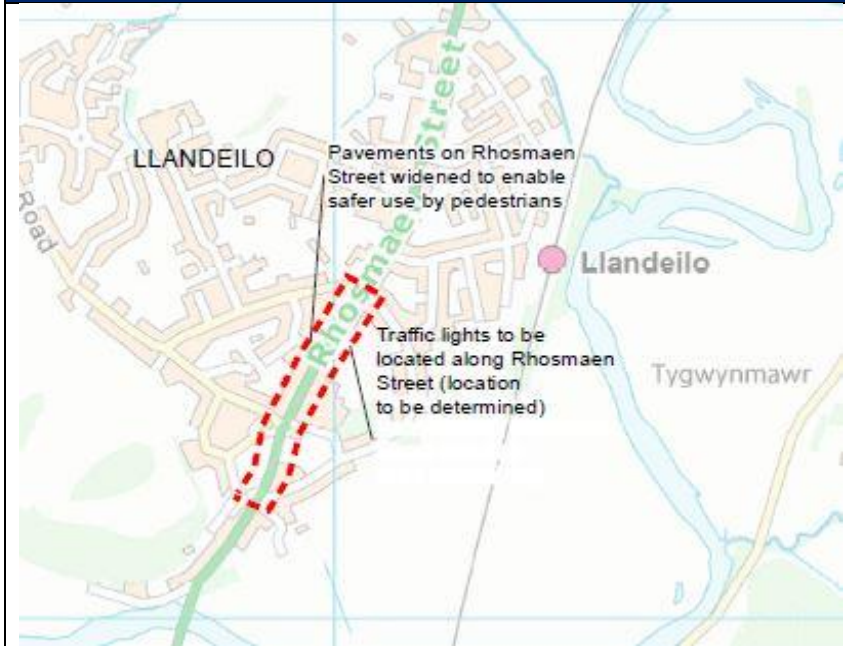
Do-Minimum								
Description								
The Do-Minimum option does not include any improvements to the current scenario of the A483 within Llandeilo and Ffairfach.								
Location								
Not applicable.								
How it tackles the problem								
The Do-Minimum Option would not solve problems within Llandeilo and Ffairfach as it anticipated that traffic flows will continue to increase, HGVs would still use the A483 trunk road and thus congestion at the pinch point within Llandeilo would worsen. As a result of this, the air quality within the AQMA is likely to increase.								
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	x	x	x	x	x
The Do-Minimum option would only meet objection 1 of preserving the strategic function of the A483.								
Appraisal								
<i>Economy and Social and Cultural</i>								
As the A483 and surrounding road network will be unaltered, it is envisioned that traffic flows and have an adverse impact on current congestion issues, particularly at the pinch point in front of the Cawdor within Llandeilo. The appraisal of Economics and Social and Cultural impacts has therefore identified that this option will have a negative affect across all appraisal areas. Congestion issues at the A483/A476/Heol Bethlehem roundabout within Ffairfach will also escalate and larger volumes of vehicles could make the roundabout more dangerous for pedestrians/cyclists crossing adjoining arms. It is also anticipated that the increase in traffic flows would result in a higher percentage of HGVs using the A483 trunk road as well. As this is an identified area of concern, the Do-Minimum Scenario could have a large adverse image on safety within Llandeilo and Ffairfach. As a result, physical activity could experience an adverse impact as well as active travel.								
<i>Environment</i>								
A neutral effect is anticipated on biodiversity, soils and geology, landscape and the water environment. An adverse effect is anticipated to noise due to increasing congestion and idling vehicles immediately alongside residential areas. An adverse effect is anticipated to air quality as there is the potential for air quality to continue to worsen in this area as traffic flows increase within Llandeilo/Ffairfach. Adverse effects are anticipated to townscape and cultural heritage due to effects that increasing traffic flows would have within a Conservation Area and alongside listed buildings.								
<i>Who the Option impacts on</i>								
It is expected that there would be a slight adverse impact upon Journey time changes/reliability changes. Furthermore, it is anticipated that there would be a slight adverse impact upon Local Air Quality, Noise, Landscape and Townscape and Cultural Heritage. It is also expected that there will be a slight adverse impact upon Physical activity, Journey quality, Accidents, Access to employment/services, severance and Active Travel.								

NB1 – Traffic Lights

Description

Traffic lights would be installed on Rhosmaen Street to enable one-way traffic along the narrowest section of the road. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.

Location



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How it tackles the problem

NB1 would improve journey time reliability due to providing traffic lights that would improve flows through the pinch points within Llandeilo. Pedestrian safety would also improve as result of the widening of the pavements.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	Partial	x	x	✓	✓	x	Partial	x

This option fulfils the objectives of improving pedestrian and cyclist safety within Llandeilo and Ffairfach and reducing congestion through Llandeilo. However, it only partially meets objectives 1 and 7 and does not achieve objectives 2, 3, 6 or 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial, there are some slight negative results within the appraisal such as journey

<p>time changes, journey quality and severance. This reflects the nature of a traffic light system and potential time restraints within the traffic light signals as well as queuing.</p>
<p><i>Environment</i></p>
<p>It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. Furthermore, it's predicted that there would be a slight beneficial effect on local air quality and to landscape and townscape and the historic environment.</p>
<p><i>Who the option impacts on</i></p>
<p>Some road users may dis-benefit from this option due to potential queuing from the proposed traffic lights in Llandeilo town Centre increasing severance and idling vehicles decreasing air quality. However, pedestrians would benefit due to the widening of pavements, this may also improve visitor experience which will benefit some businesses within Llandeilo and Dinefwr Park.</p>

NB2 – Removal of Parking

Description

Removal of parking along Rhosmaen Street enforced through double yellow lines. Restrictions of 'Loading Only' from 18:00 to 07:00, and then from 10:00 – 15:00 with no parking between 08:00 – 18:00 will be enforced.

Location



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How it tackles the problem

NB2 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. There would be a slight beneficial effect on air quality within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	Partial	x	x	✓	✓	x	Partial	x

This option fulfils the objectives of improving pedestrian and cyclist safety within Llandeilo and Ffairfach and reducing congestion through Llandeilo. However, it only partially meets objectives 1 and 7 and does not achieve objectives 2, 3, 6 or 8.

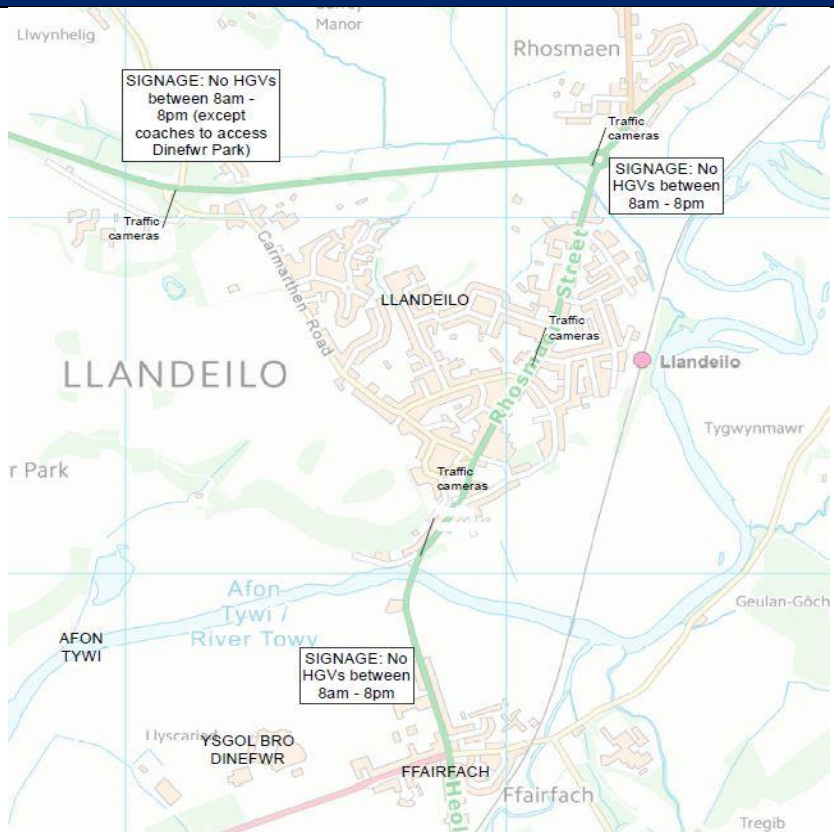
Appraisal
<i>Economy and Social and Cultural</i>
Appraisal of Economics and Social and Cultural impacts has identified that this option has a slight beneficial across the majority of the appraisal areas with some areas having a negligible impact such as local economy, security and access to employment and services.
<i>Environment</i>
It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. Furthermore, it's predicted that there would be a slight beneficial effect on local air quality and to landscape and townscape and the historic environment.
<i>Who the option impacts on</i>
All road users might slightly benefit from this option however; the local economy may dis-benefit due to the removal of parking. The removal of parking with this option has a predicted slight beneficial effect on local air quality. Walkers and cyclists within Llandeilo town Centre may also benefit due to the reduction of parked vehicles along Rhosmaen Street.

NB3 – HGV Restriction (legal sanction)

Description

Restriction on HGVs through Llandeilo between 08:00 – 20:00, all HGVs to be routed along the A40 to Carmarthen which will be enforced through traffic cameras. This restriction will apply from the A40 roundabout within Rhosmaen to the roundabout within Ffairfach.

Location



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How it tackles the problem

NB3 would reduce severance along the A483/Rhosmaen Street for pedestrians as traffic movements would be reduced. It would also improve journey reliability during the day when HGV movements are restricted as it would reduce the number of large vehicle pinch point delays. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journeys should decrease. Further to this, emergency service response times (on call) should improve due to a reduction in HGV traffic using Rhosmaen Street that can cause delays as a result of negotiating pinch points. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

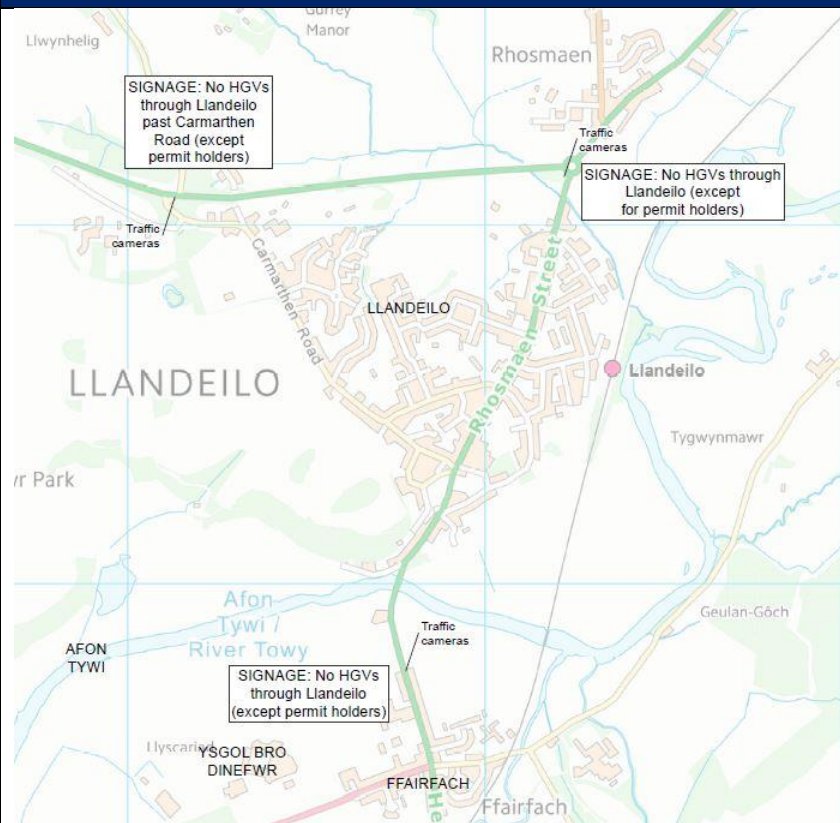
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	✓	✓	x	✓	x
<p>This option does not preserve the strategic function of the A483, contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society. It does however improve pedestrian and cyclist safety within Llandeilo and Ffairfach, reduce community severance, improve journey time reliability, reduce congestion through Llandeilo and reduces the exposure to air pollution for sensitive receptors.</p>								
Appraisal								
<i>Economy and Social and Cultural</i>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial across the appraisal areas, journey time changes and journey time reliability changes have a slight negative impact however.</p>								
<i>Environment</i>								
<p>It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. In regards to air quality it is anticipated that this option would have a moderate beneficial impact. It has also been predicted that this option would have a slight beneficial impact on landscape and townscape and the historic environment.</p>								
<i>Who the option impacts on</i>								
<p>Heavy vehicles users may dis-benefit from this option due to a HGV restriction along the A483. There would however be a beneficial impact for residential properties and businesses situated along the A483 as air quality would improve due to the HGV restriction. Walkers and cyclists would benefit the most within Llandeilo's town Centre due to the reduction of HGVs during certain hours of the day.</p>								

NB4 – HGV Restriction with permit/emissions charge

Description

Restriction on HGVs with the exception of businesses within a certain distance which would be entitled to a free permit. The permit for other businesses will be priced at a cost that makes it more economically viable to go via Carmarthen rather than through Llandeilo and/or Ffairfach. This option would be a similar scheme to congestion charge/emission zone areas.

Location



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How it tackles the problem

NB4 would reduce severance along the A483/Rhosmaen Street within Llandeilo due to the removal of the majority of HGV movements through the town. It would also improve journey reliability for car drivers through Llandeilo as delays at pinch points would be reduced. While journey time reliability for HGV drivers is likely to improve there would be a significant increase in journey time, therefore this cannot be seen as an advantage to these road users. This option would not preserve the strategic road network through Llandeilo due to the HGV restrictions. It would result in an improvement in air quality as a result of the reduction in HGV emissions and also reduce the amount of start / stop acceleration for other road users.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	x	✓	x	✓	x

This option would not preserve the strategic function of the A483 or improve journey time reliability through Llandeilo and Ffairfach. Additionally, the option would not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial across the appraisal areas, journey time changes and journey time reliability changes have a slight negative impact however.

Environment

It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. This option would have a moderate beneficial impact on air quality. It has also been predicted that this option would have a slight beneficial impact on landscape and townscape and the historic environment.

Who the option impacts on

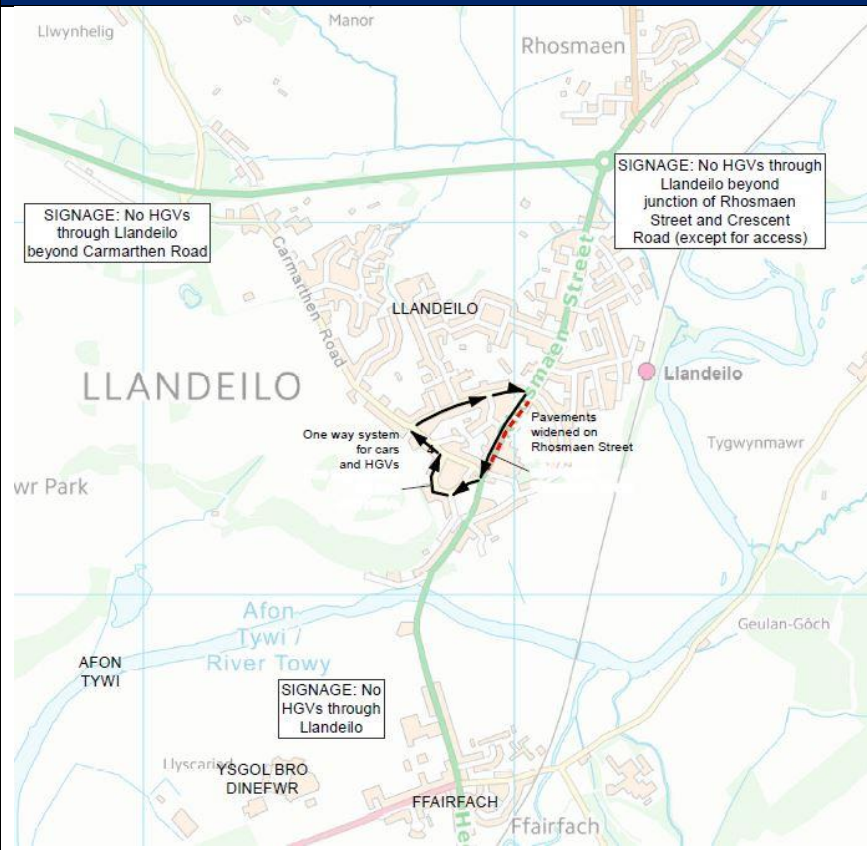
Heavy vehicle users would dis-benefit from this option however, this would have a positive impact on residential properties and businesses. As a result of the reduction in HGVs in the town Centre there would be an improvement in air quality. Walkers and cyclists would also benefit due to the reduction of HGVs and the improvement to the walking environment.

NB5 – HGV Restriction (legal sanction) plus one-way system

Description

One-way system where there would be limited access for HGVs travelling southbound from the A40 onto the A483, with access permitted for deliveries only. Rhosmaen Street would be one-way southbound, and directed to King Street onto Carmarthen Road and back onto the A40. HGVs would be restricted from crossing Llandeilo Bridge crossing the Afon Tywi in a northbound direction and the A483 will be de-trunked.

Location



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How it tackles the problem

NB5 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and would help deliver some of the long-term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	x	✓	x	✓	x

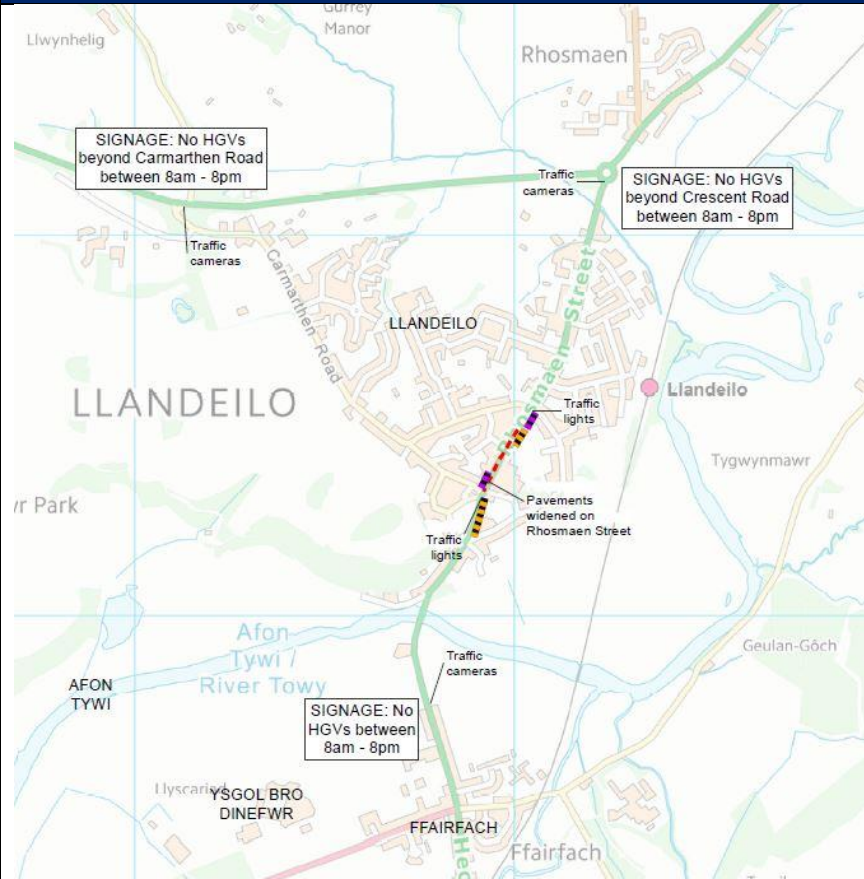
<p>This option would not preserve the strategic function of the A483 or improve journey time reliability through Llandeilo and Ffairfach. Additionally, the option would not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.</p>
<p>Appraisal</p>
<p><i>Economy and Social and Cultural</i></p>
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial across the appraisal areas, journey time changes and journey time reliability changes have a slight negative impact however.</p>
<p><i>Environment</i></p>
<p>It is anticipated that there would be a neutral impact upon biodiversity, noise, the water environment and soils and geology. This option would have a moderate beneficial impact on air quality. It has also been predicted that this option would have a slight beneficial impact on landscape and townscape and the historic environment.</p>
<p><i>Who the option impacts on</i></p>
<p>Heavy vehicle users may dis-benefit from this option however this would have a slight beneficial impact on residential properties and businesses located along the A483 in terms of noise and local air quality. Walkers and cyclists would also benefit from this option due to the reduced volume of HGVs using the A483.</p>

NB6 – Combined No-bypass Option (with HGV restriction)

Description

This option is a package of works representing a combination of NB1, NB2 and NB3.

Location



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How it tackles the problem

NB6 would improve journey time reliability due to providing a direct, free-flow route (albeit with lights) which would reduce the pinch points within Llandeilo/Ffairfach. Pedestrian safety would also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. NB6 would reduce severance along the A483/Rhosmaen Street. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to Welsh Government achieving its Well-being Objectives and help deliver some of the long term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	x	✓	✓	x	✓	x	✓	x

<p>This option would not preserve the strategic function of the A483 or improve journey time reliability through Llandeilo and Ffairfach. Additionally, the option would not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.</p>
<p>Appraisal</p>
<p><i>Economy and Social and Cultural</i></p>
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial across all appraisal areas.</p>
<p><i>Environment</i></p>
<p>It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. This option would have a moderate beneficial impact on air quality. It has also been predicted that this option would have a slight beneficial impact on to landscape and townscape and the historic environment.</p>
<p><i>Who the option impacts on</i></p>
<p>Light and heavy vehicle users could dis-benefit from this option however, as a result of this it is anticipated that there would be a slight beneficial effect on residential properties and businesses along the A483 in regard to air quality. Walkers and cyclists would probably benefit the most from this option due to the widening of the pavements and reduction of HGVs in the town Centre.</p>

NB7 – Combined No-bypass Option (No HGV restriction)

Description

This option is a package of works representing a combination of NB1 and NB2.

Location



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How it tackles the problem

NB7 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. It is also anticipated that vehicle speeds/acceleration on the A483 would reduce due to the reduction in parked vehicles. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of the long term outcomes set out in the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	x	✓	x	✓	x

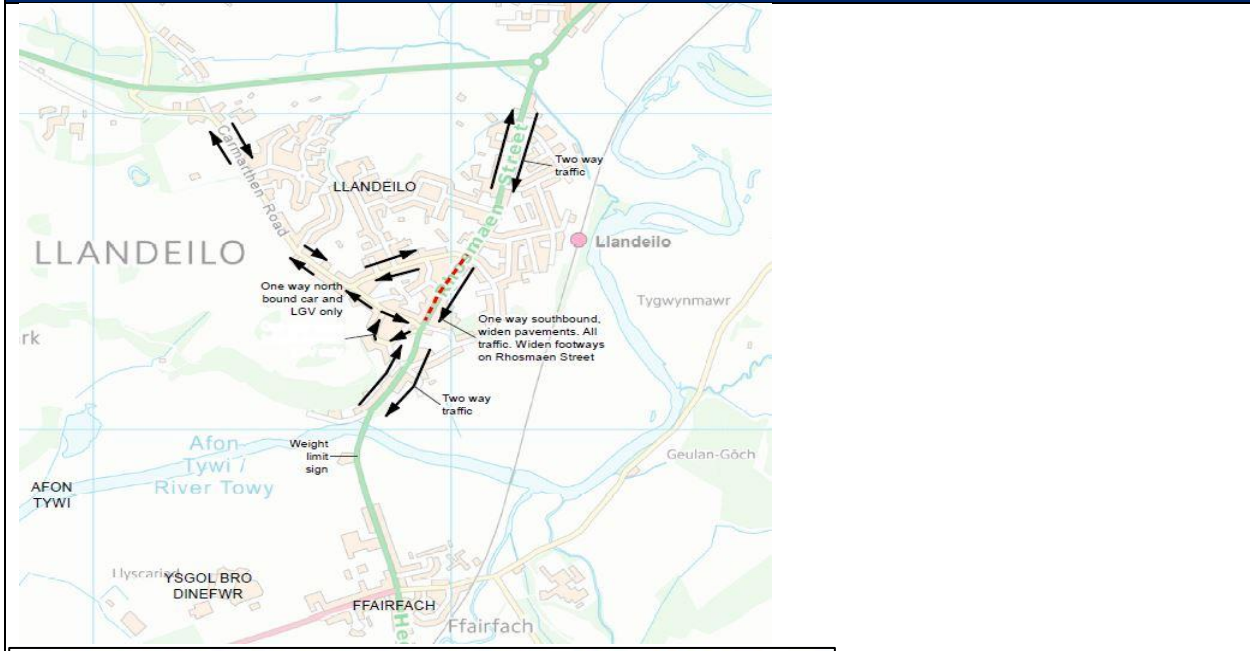
<p>This option fulfils the majority of the objectives. It does not however improve journey time reliability through Llandeilo and Ffairfach, contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.</p>
<p>Appraisal</p>
<p><i>Economy and Social and Cultural</i></p>
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial, with a higher score for social and cultural appraisal and a slightly lower score for economic appraisal.</p>
<p><i>Environment</i></p>
<p>It is anticipated that there would be a neutral effect upon biodiversity, noise, the water environment and soils and geology. This option would have a moderate beneficial impact on air quality. It has also been predicted that this option would have a slight beneficial impact on landscape and townscape and the historic environment.</p>
<p><i>Who the option impacts on</i></p>
<p>It is anticipated that there would be a slight adverse impact on light and heavy vehicle users. However, as a result of this, it is anticipated that there will be a slight beneficial effect on residential properties and businesses in terms of local air quality. Walkers and cyclists would most benefit from this option due to the widening of the footways and the reduction of HGVs in the town Centre.</p>

TC1A – One Way System and a Bypass Option (A)

Description

Town Centre routing restrictions will be installed. Two-way traffic will remain from the junction of A40 and junction of New Road/Carmarthen Street. New Road to remain open to two-way traffic. Rhosmaen Street from New Road/Crescent Road junction to Carmarthen Street and Abbey Terrace changed to one-way southbound but open to all vehicles. Rhosmaen Street between King Street and Ffairfach roundabout is weight restricted. Permitted traffic going north would turn left into King Street then George Street, then onto Carmarthen Street/Carmarthen Road to join the A40 at the existing junction with a potential roundabout. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians. There will be warning/diversion signs and weight limited signs within Ffairfach to stop HGVs from using Llandeilo Bridge crossing the Afon Tywi.

Location



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How it tackles the problem

It should be noted that option TC1A is dependent on the construction of a bypass, the bypass would remove through traffic and improve the resilience of the trunk road network. The following assessment assumes that the bypass option chosen would result in the intended benefits of the removal of through traffic and that the existing through traffic flows would divert onto the bypass and not continue to flow through the town. TC1A would reduce severance for pedestrians along the A483/Rhosmaen Street within Llandeilo but there would be a slight increase in severance on Carmarthen Road as northbound traffic is re-routed. Pedestrian safety would also improve as well as the cycling environment, the improvement to the streetscape for visitors may result in increased numbers of people shopping in the town and should make the town more attractive for people who pass through it on the way to Dinefwr Park. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and support the outcomes of the Wales Transport Strategy.

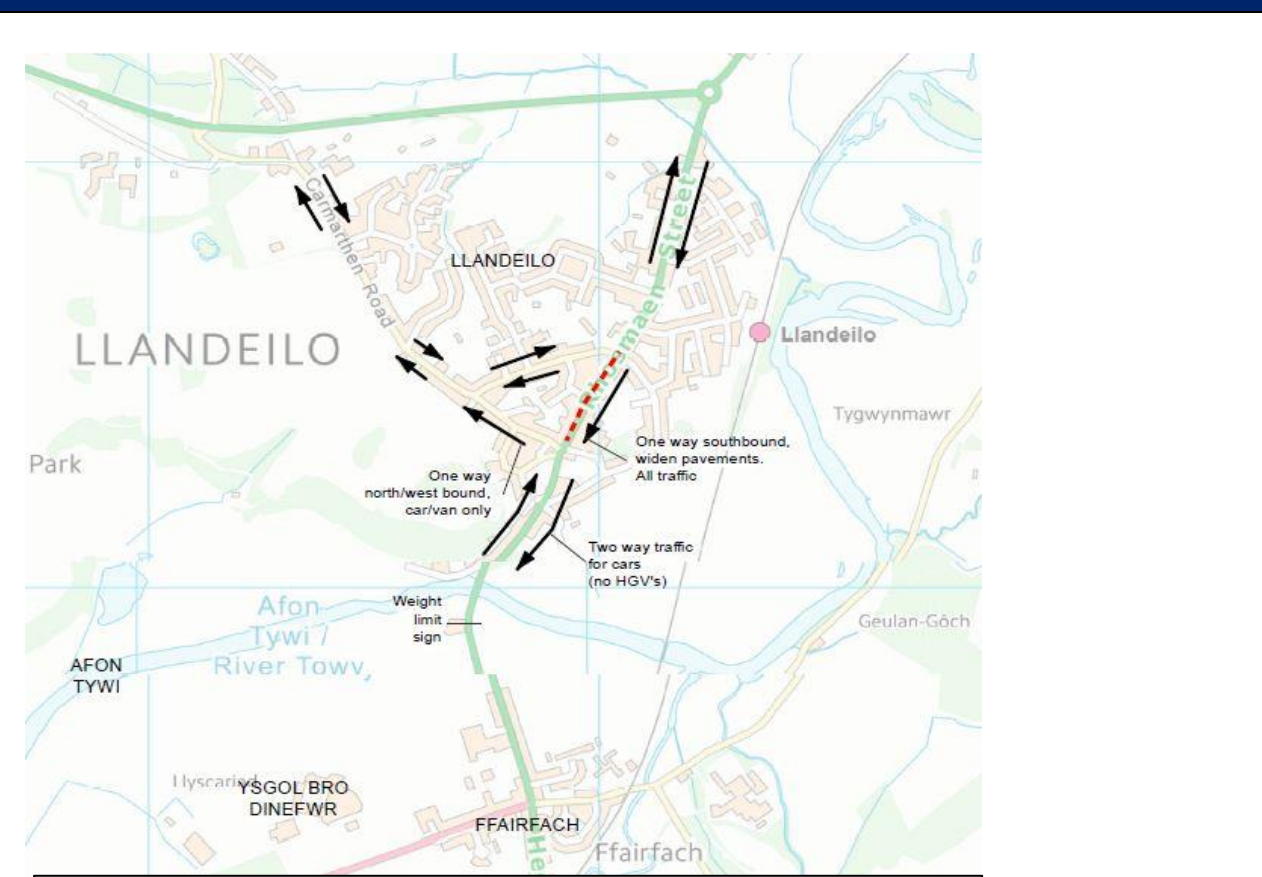
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or ×	✓	✓	✓	Partial	Partial	✓	×	×
<p>This option fulfils the majority of the objectives; however, it does not reduce exposure to air pollution for sensitive receptors or support the transition to a low carbon society. Further to this, the option partially meets the objectives of improving journey time reliability through Llandeilo and Ffairfach as well as reducing congestion within Ffairfach.</p>								
Appraisal								
<i>Economy and Social and Cultural</i>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has a benefit across the majority of the appraisal areas, varying from slight to moderate beneficial with a negligible impact on security, access to employment and access to services and affordability. The option scores positively for both journey time changes and journey time reliability changes.</p>								
<i>Environment</i>								
<p>A neutral effect is anticipated upon biodiversity, noise, the water environment and soils and geology. Further to this, a slight beneficial effect is anticipated to landscape and townscape and the historic environment. Additionally, a moderate beneficial effect is anticipated on local air quality.</p>								
<i>Who the Option impacts on</i>								
<p>All road users should experience benefits with this option with businesses in Llandeilo's town Centre and Dinefwr Park also benefiting as the widening of pavements in the town Centre should improve visitor experience.</p>								

TC1B – One Way System and a Bypass Option (B)

Description

Two-way traffic from the junction of A40 and junction of New Road/Carmarthen Street. New Road to remain open to two-way traffic. Rhosmaen Street from New Road/Crescent Road junction to Carmarthen Street and Abbey Terrace is one way southbound but open to all vehicles. Rhosmaen Street between King Street and Ffairfach roundabout is weight restricted. Permitted traffic going north would turn left into Carmarthen Street then Carmarthen Road to join the A40 at the existing junction with a possible roundabout. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians. There will be warning/diversion signs and weight limited signs within Ffairfach to stop HGVs from using Llandeilo Bridge crossing the Afon Tywi.

Location



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How it tackles the problem

It should be noted that option TC1B is dependent on the construction of a bypass. TC1B would reduce severance for pedestrians along the A483/Rhosmaen Street within Llandeilo but there would be a slight increase in severance on Carmarthen Road as northbound traffic is re-routed. Pedestrian safety would also improve as well as the cycling environment, the improvement to the streetscape for visitors may result in increased numbers of people shopping in the town and should make the town more attractive for people who pass through it on the way to Dinefwr Park. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and support the outcomes of the Wales Transport Strategy.

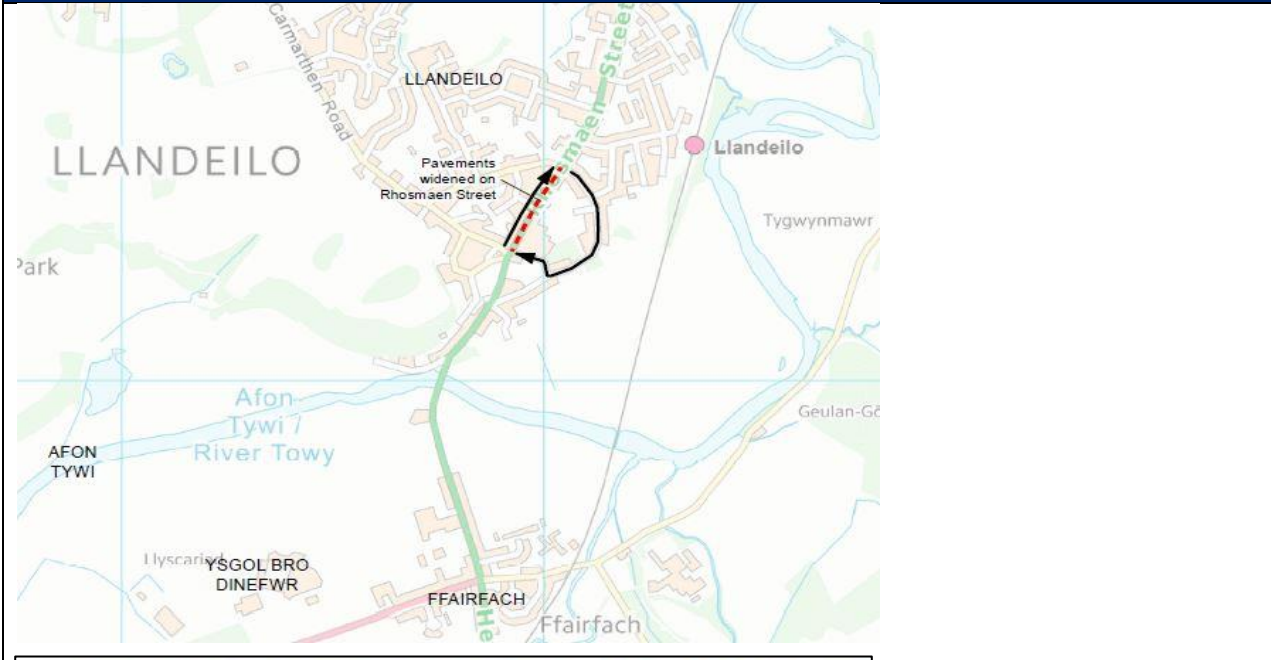
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	Partial	Partial	✓	x	x
<p>This option fulfils the majority of the objectives; however, it does not reduce exposure to air pollution for sensitive receptors or support the transition to a low carbon society. Further to this, the option partially meets the objectives of improving journey time reliability through Llandeilo and Ffairfach as well as reducing congestion within Ffairfach.</p>								
Appraisal								
<i>Economy and Social and Cultural</i>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has a benefit across the majority of the appraisal areas, varying from slight to moderate beneficial with a negligible impact on security, access to employment and access to services and affordability. The option scores positively for both journey time changes and journey time reliability changes.</p>								
<i>Environment</i>								
<p>A neutral effect is anticipated upon biodiversity, noise, the water environment and soils and geology. Also there is a moderate beneficial effect is anticipated on local air quality. Further to this there is a slight beneficial effect is anticipated to landscape and townscape and the historic environment.</p>								
<i>Who the Option impacts on</i>								
<p>All road users should experience benefits with this option with businesses in Llandeilo's town Centre and Dinefwr Park also benefiting as the widening of pavements in the town Centre should improve visitor experience.</p>								

TC1C – One Way System and a Bypass Option (C)

Description

One-way system using Crescent Road for southbound traffic and Rhosmaen Street for northbound traffic. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.

Location



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How it tackles the problem

It should be noted that option TC1C is dependent on the construction of a bypass, the bypass would remove through traffic and improve the resilience of the trunk road network. The following assessment assumes that the bypass option chosen would result in the intended benefits of the removal of through traffic and that the existing through traffic flows would divert onto the bypass and not continue to flow through the town. TC1C would reduce severance for pedestrians along the A483/Rhosmaen Street within Llandeilo but there would be a slight increase in severance on Crescent Road as northbound traffic is re-routed. Pedestrian safety would also improve as well as the cycling environment, the improvement to the streetscape for visitors may result in increased numbers of people shopping in the town and should make the town more attractive for people who pass through it on the way to Dinefwr Park. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and support the outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	Partial	Partial	✓	x	x

This option fulfils the majority of the objectives; however, it does not reduce exposure to air pollution for sensitive receptors or support the transition to a low carbon society. Further to this, the option partially meets the objectives of improving journey time reliability through Llandeilo and Ffairfach as well as reducing congestion within Ffairfach.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option has a benefit across the majority of the appraisal areas, varying from slight to moderate beneficial with a negligible impact on security, access to employment and access to services and affordability. The option scores positively for both journey time changes and journey time reliability changes.

Environment

A neutral effect is anticipated upon biodiversity, noise, the water environment and soils and geology due. Further to this, a slight beneficial effect is anticipated for the landscape and townscape and the historic environment. Furthermore, there is a moderate beneficial effect anticipated on local air quality.

Who the Option impacts on

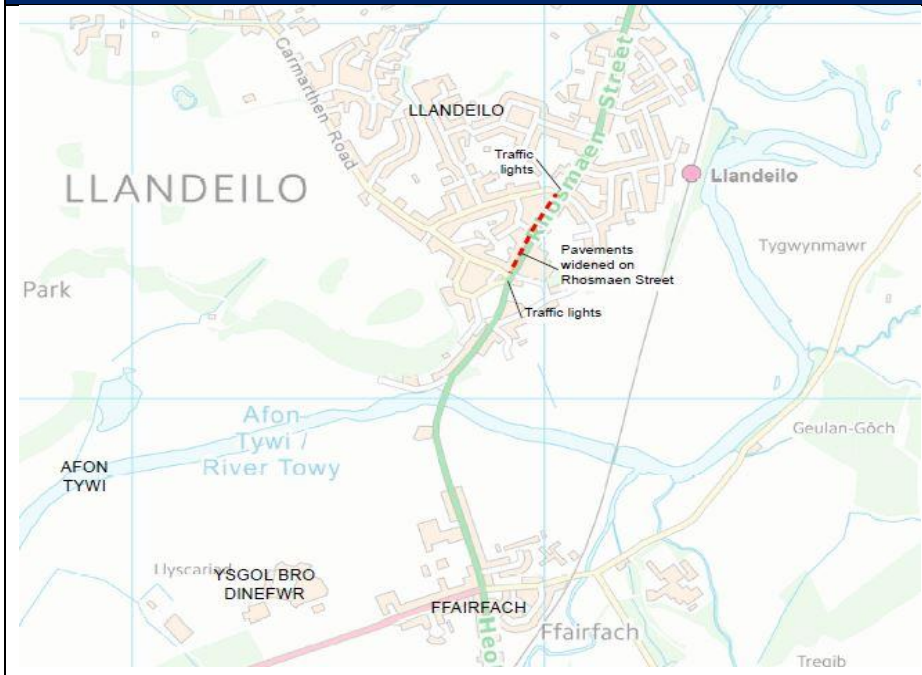
The local economy within Llandeilo's town Centre, including businesses, and Dinefwr Park should experience a positive impact with this option. Further to this, walkers and cyclists within Llandeilo's town Centre should experience a benefit due to proposed improvements within the town.

TC2 – Traffic Light System and a Bypass Option

Description

Traffic lights would be installed on Rhosmaen Street to enable one-way traffic along the narrowest section of the road. Pavements to be widened within the one-way section of Rhosmaen Street to enable safer use by pedestrians.

Location



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How it tackles the problem

It should be noted that option TC2 is dependent on the construction of a bypass, the bypass would remove through traffic and improve the resilience of the trunk road network. The following assessment assumes that the bypass option chosen would result in the intended benefits of the removal of through traffic and that the existing through traffic flows would divert onto the bypass and not continue to flow through the town. TC2 would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the bypass option selected) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach (albeit with traffic lights for a short section of Rhosmaen Street). Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA

This option would contribute to the Welsh Government achieving its Well-being Objectives and support the outcomes of the Wales Transport Strategy.

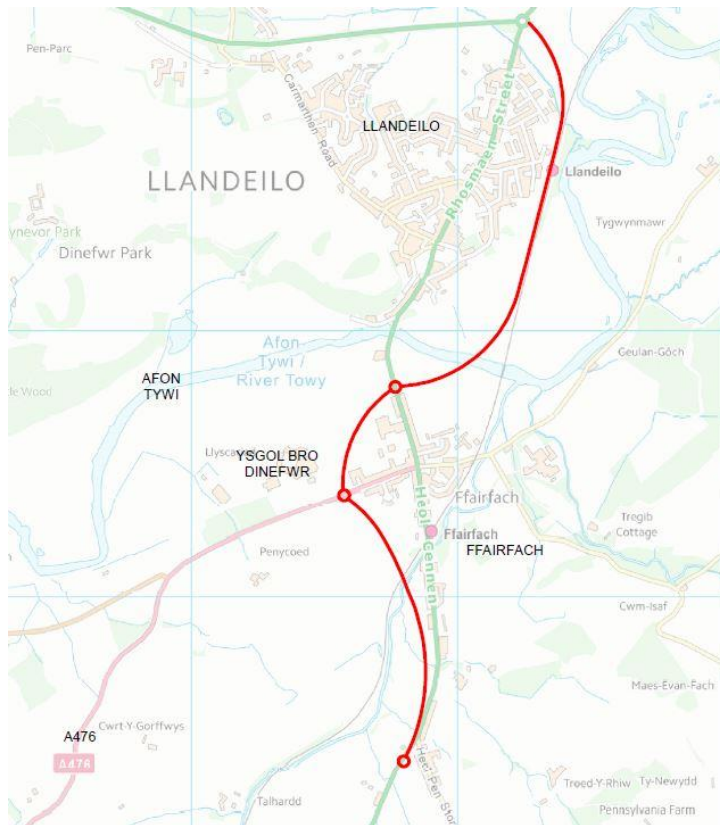
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	x	x	✓	x	x
The majority of the objectives are not fulfilled with this option. It does however preserve the strategic function of the A483 and contribute to economic growth and tourism opportunities in Llandeilo.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall score of slight beneficial, there are some slight negative results within the appraisal such as journey time changes and journey quality. This reflects the nature of a traffic light system and potential time restraints within the traffic light signals as well as queuing.								
<i>Environment</i>								
A neutral effect is anticipated upon biodiversity, noise, the water environment and soils and geology. Also there is an anticipated slight beneficial effect to landscape and townscape and the historic environment. Furthermore, there is a moderate beneficial effect predicted for the local air quality.								
<i>Who the Option impacts on</i>								
All road users (light and heavy vehicles as well as bicycles) may benefit from the reduction in journey time changes with this bypass option. However, some users of the Rhosmaen Street may experience an increase in journey time changes due to the traffic light system. Businesses within Llandeilo town Centre and Dinefwr Park should also benefit.								

BE1A – Eastern Bypass Option 1 (A)

Description

Eastern Bypass Option 1 (A) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west, crossing the Afon Tywi then joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the east of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed on the A476 where the route then heads south east and joins the A483 to the south of Heol Pen Storum.

Location



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How it tackles the problem

BE1A would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety within Llandeilo and Ffairfach and may promote visitors as the number of through-traffic journey should decrease with a bypass in place.

HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in

traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route.

This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	Partial	Partial	✓	✓	✓	✓	✓

This option fulfils scheme objectives 1, 4, 5, 6, 7 and 8, and partially meets scheme objectives 2 and 3.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option scores either beneficial or negligible across the assessment areas other than severance which scores moderate negative impact.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to large reduction of vehicle movements. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of a designated water feature and loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, local views and views from Brecon Beacons National Park.

Who the Option impacts on

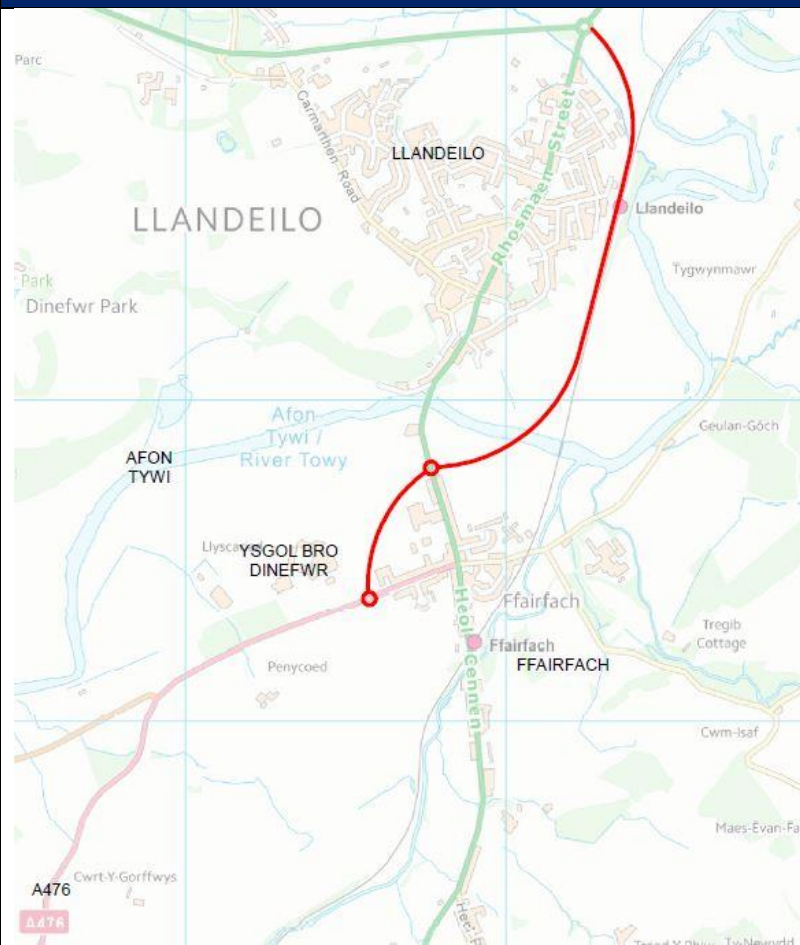
All road users are expected to have a moderate beneficial effect in relation to Journey times and Journey time reliability. The Local economy in Llandeilo's Town Centre is expected to have a slight benefit. A moderate beneficial impact is predicted in relation to Local Air Quality. Walkers and Cyclists are expected to benefit most as a reduction in vehicles using Rhosmaen street.

BE1B – Eastern Bypass Option 1 (B)

Description

Eastern Bypass Option 1 (B) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, heading west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.

Location



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How it tackles the problem

BE1B would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety would also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey would decrease with a bypass in place. HGV and school traffic would also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) would improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

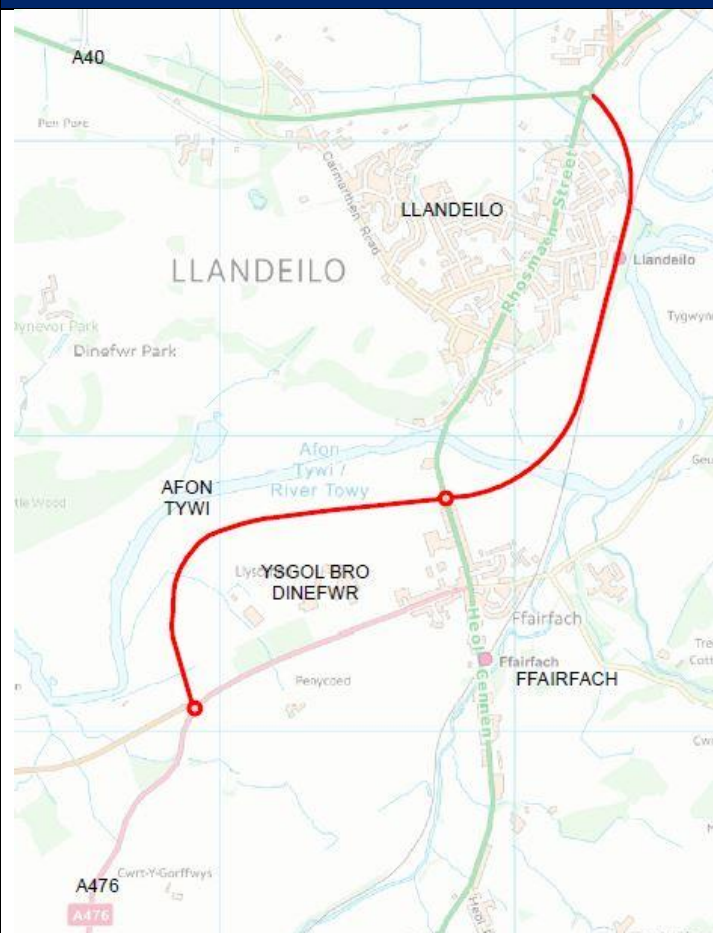
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x								
This option fulfils all scheme objectives.								
Appraisal								
<i>Economy and Social and Cultural</i>								
The majority of the appraisal areas for this option of Economics and Social and Cultural impacts score either beneficial or negligible with the exception of severance which scores slight negative.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a reduction of vehicle movements. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of two designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, local views and views from Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It anticipated a moderate beneficial impact upon Journey time and journey reliability for all road users. There is a slight beneficial impact upon the local economy and the local air quality. It is expected that there would be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. Furthermore, it is expected that there would be a slight beneficial impact on Active travel, Access to services and employment as well as on Accidents in the area.								

BE1C – Eastern Bypass Option 1 (C)

Description

Eastern Bypass Option 1 (C) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476.

Location



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How it tackles the problem

BE1C would improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety within the town would also improve as a result of the improvements in road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic within the town would also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or

emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	✓

This option fulfils all scheme objectives.

Appraisal

Economy and Social and Cultural

The majority of the appraisal areas for this option of Economics and Social and Cultural impacts score either slight beneficial or negligible with the exception of severance which scores slight negative.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a reduction of vehicle movements. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, local views and views from Brecon Beacons National Park.

Who the option impacts on

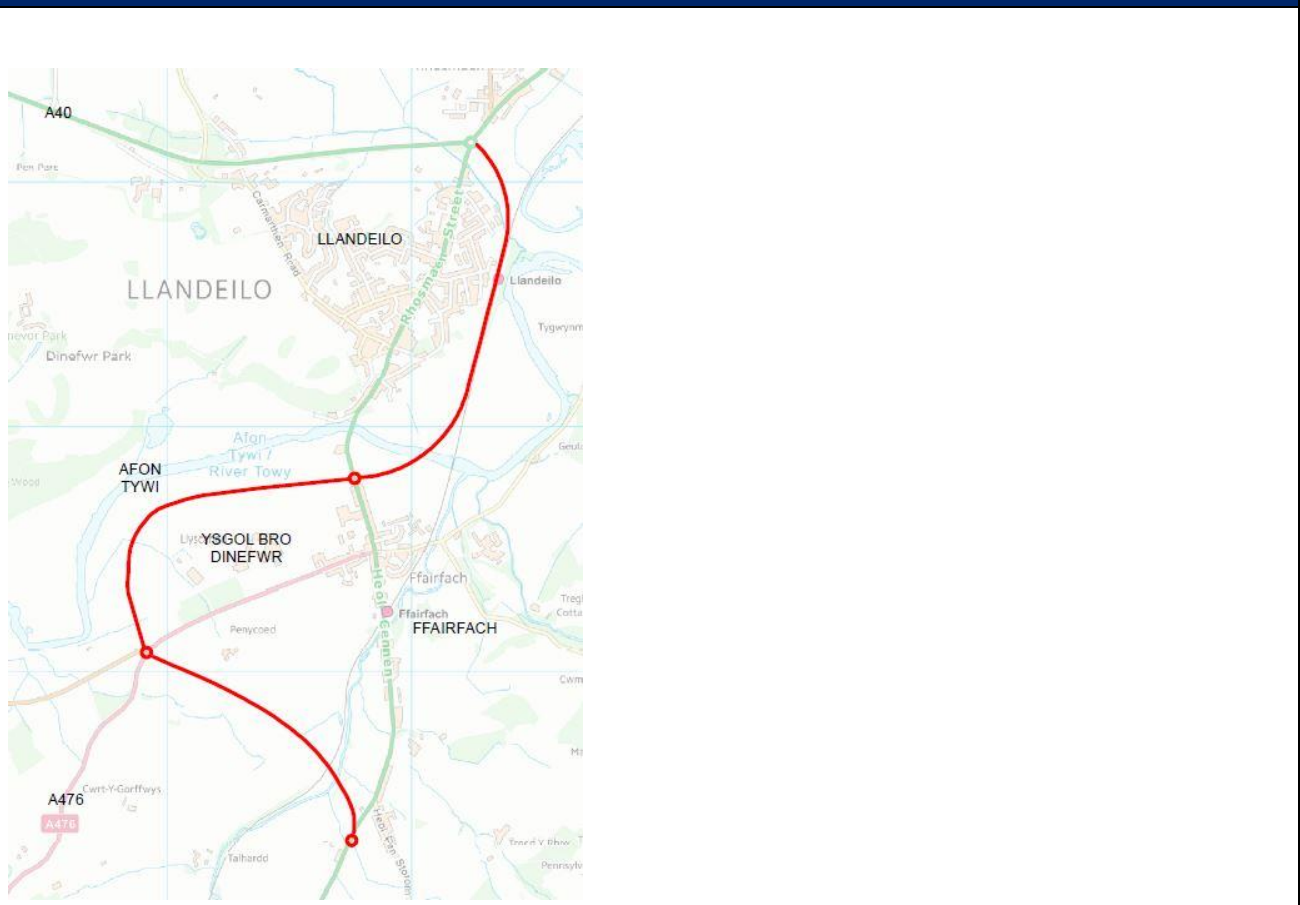
It is expected that there will be a slight beneficial impact on Journey time changes/reliability and also on the local economy. There is also a slight beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, Journey quality, accidents and access to employment and services.

BE1D – Eastern Bypass Option 1 (D)

Description

Eastern Bypass Option 1 (D) leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line. The route then heads west to join the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge. The route then heads further west and joins the A476 to the west of Ysgol Bro Dinefwr. A roundabout is proposed to be constructed at the junction of the B4300/A476 and a link from the proposed roundabout at B4300/A476 to the A483 south of Heol Pen Storum.

Location



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How it tackles the problem

BE1D would reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. The bypass would remove through traffic from the A476 as it passes the entrance to Ysgol Bro Dinefwr. This option would result in a reduction in air pollution within the AQMA.

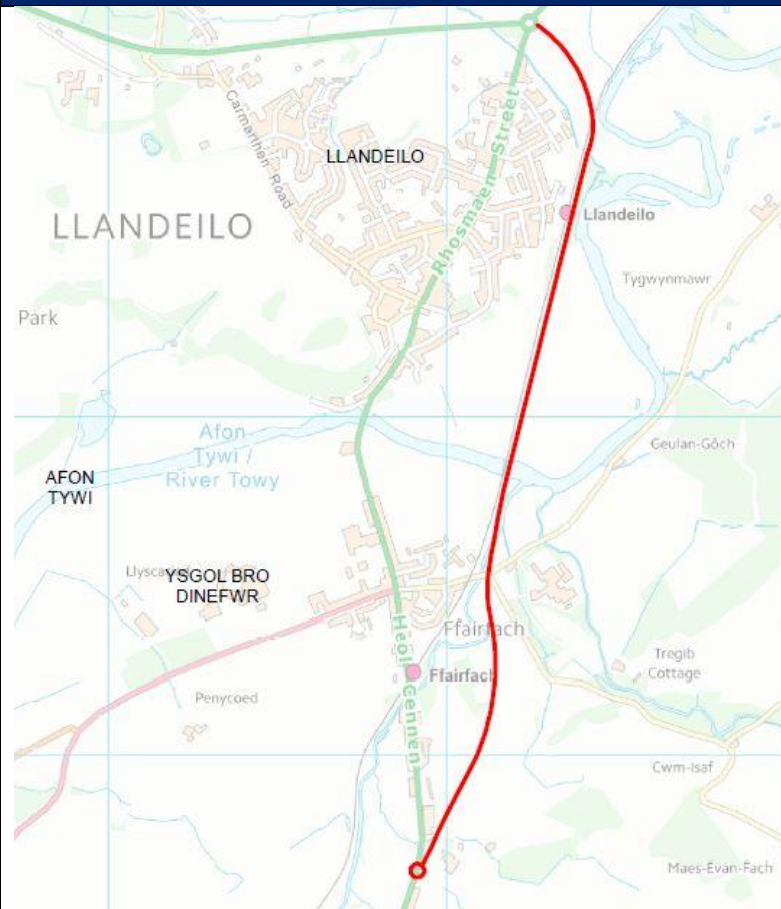
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	x	✓	x	x
This option fulfils scheme objectives 1, 2, 3, 4 and 6, however, does not meet scheme objectives 5, 7, 8.								
Appraisal								
<i>Economy and Social and Cultural</i>								
The majority of the appraisal areas for this option of Economics and Social and Cultural impacts score either slight beneficial or negligible with the exception of severance which scores slight negative.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings, local views and views from Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It is expected that there will be a slight beneficial impact on Journey time changes/reliability and also on the local economy. There is also a moderate beneficial impact on the Local air quality. There is also a slight beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, Journey quality, accidents and access to employment and services.								

BE2 – Eastern Bypass Option 2

Description

Eastern Bypass Option 2 leaves the A40 at the A40/A483 roundabout, heading south-east around the boundary of Llandeilo before crossing the railway and following the railway line south to Bethlehem Road. From Bethlehem road, the route then heads south to join the A483 to the north of Heol Pen Storum. This option would require a link to the A476.

Location



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How it tackles the problem

Subject to the provision of a link between the A476 and A483, BE2 would reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x
This option meets all the objectives other than objective 8.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option scores for the majority of the appraisal areas of beneficial, particularly journey quality and severance, with a negligible impact on security and affordability, this option also scores a large beneficial for journey time changes.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening east of Llandeilo/Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings, local views and views from Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It is expected that there will be a large beneficial impact on Journey time changes and a slight beneficial impact on reliability and also on the local economy. There is also a large beneficial impact on the Local air quality. There is also a slight beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.								

BE3A – Eastern Bypass Option 3 (A)

Description

Eastern Bypass Option 3 (A) leaves the A40 at the A40/A483 roundabout, heading south-east around the boundary of Llandeilo before crossing the railway and following the railway line south for a short distance before crossing the Afon Tywi, joining Bethlehem Road around Geulan-Goch. From this location the road would continue south avoiding the former secondary school, and link to the A483 to the south of Heol Pen Storm. This option would require a link to the A476.

Location



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How it tackles the problem

BE3A would reduce severance along the A483/Rhosmaen Street within Llandeilo (subject to the link between the A476 and A483 being provided) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

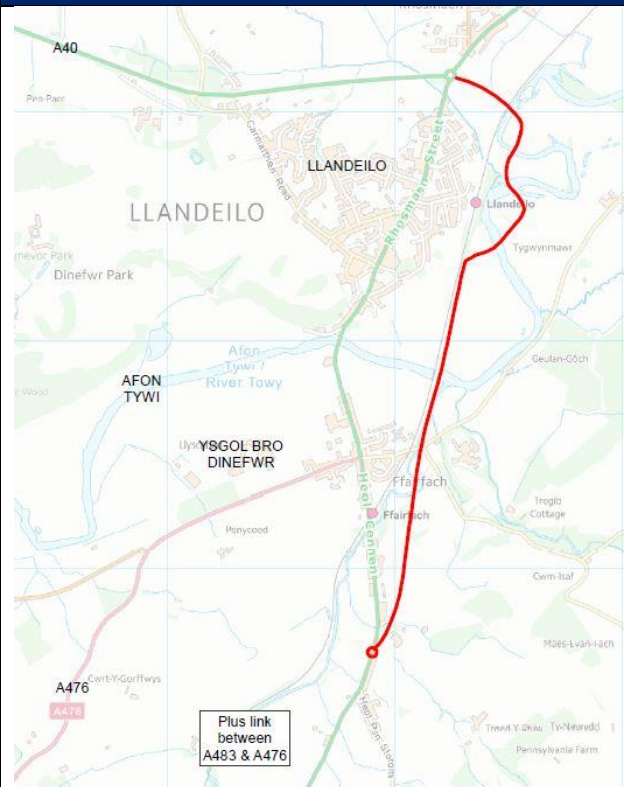
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x
This option meets all the objectives other than objective 8.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option scores beneficial across the majority of appraisal areas, particularly journey time quality and reliability with some negligible impact on security and affordability, large beneficial has been scored for severance.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening east of Llandeilo/Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow and ancient woodland habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings, local views and views from Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It is expected that there will be a moderate beneficial impact on Journey time changes/reliability and a slight beneficial impact on the local. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.								

BE3B – Eastern Bypass Option 3 (B)

Description

Eastern Bypass Option 3 (B) leaves the A40 at the A40/A483 roundabout, heading south east to cross the railway line and the Afon Tywi, and wraps around to the north east of Llandeilo. From this point to the east of the railway line the route would head south over multiple river crossings. The route would then cross Bethlehem Road between Ffairfach and the former secondary school, linking to the A483 to the north of Heol Pen Storwm. This option would require a link to the A476.

Location



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How it tackles the problem

In order to be effective this option would have to work in association with a link between the A476 and A483 to the south of Ffairfach. BE3B would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	Partial	✓	✓	✓	x
<p>This option also scores highly for journey quality and severance, fulfilling scheme objectives 1, 2, 3, 5, 6 and 7, partially meeting scheme objective 4 however it does not meet scheme objective 8.</p>								
<p>Appraisal</p>								
<p><i>Economy and Social and Cultural</i></p>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option scores for the majority of the appraisal areas of beneficial with a negligible impact on security and affordability, this option also scores a large beneficial for journey time changes.</p>								
<p><i>Environment</i></p>								
<p>A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening east of Llandeilo/Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes through Brecon Beacons National Park.</p>								
<p><i>Who the option impacts on</i></p>								
<p>There is expected to be a Large beneficial impact on Journey time changes, a moderate beneficial impact on journey reliability and a slight beneficial impact upon the local economy. There is also a large beneficial impact expected upon Local air quality. Furthermore, it is expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.</p>								

BE3C – Eastern Bypass Option 3 (C)

Description

Eastern Bypass Option 3 (C) leaves the A40 at the existing A40/A483 roundabout, heading south east towards Bethlehem Road, crossing the Afon Tywi and railway using a single structure. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storur. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and A483 which would link to the A483 where the bypass links in. BE3C would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could

use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option meets all the objectives other than objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option scores for the majority of the appraisal areas of beneficial with a negligible impact on security and affordability, this option also scores a large beneficial for severance.

Environment

A neutral effect is anticipated to soils and geology. A beneficial effect is anticipated for noise due to noise decreases within Llandeilo/Ffairfach. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening east of Llandeilo/Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of a designated water feature and through loss of hedgerow and ancient woodland habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes through Brecon Beacons National Park.

Who the option impacts on

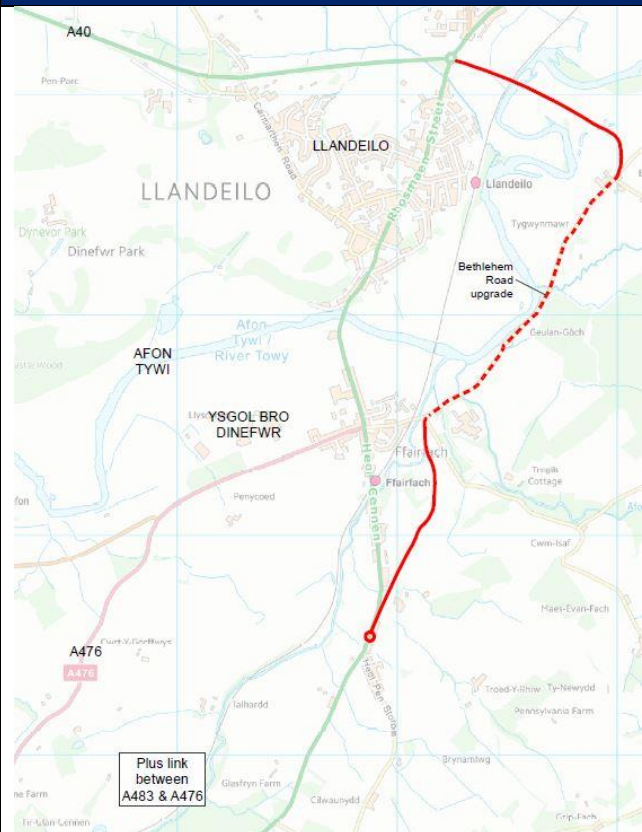
It is expected that there will be a moderate beneficial impact on Journey time changes/reliability and a slight beneficial impact on the local. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape, Bio-diversity and the Water environment. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE3D – Eastern Bypass Option 3 (D)

Description

Eastern Bypass Option 3 (D) leaves the A40 at the existing A40/A483 roundabout, heading south east towards Bethlehem Road, crossing the Afon Tywi and railway using a single structure. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road towards Ffairfach, leaves Bethlehem Road to the west of the former secondary school to join the A483 to the north of Heol Pen Storum. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on the inclusion of a link between the A476 and A483 that would tie in at the point where the bypass joins the A476. BE3D would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

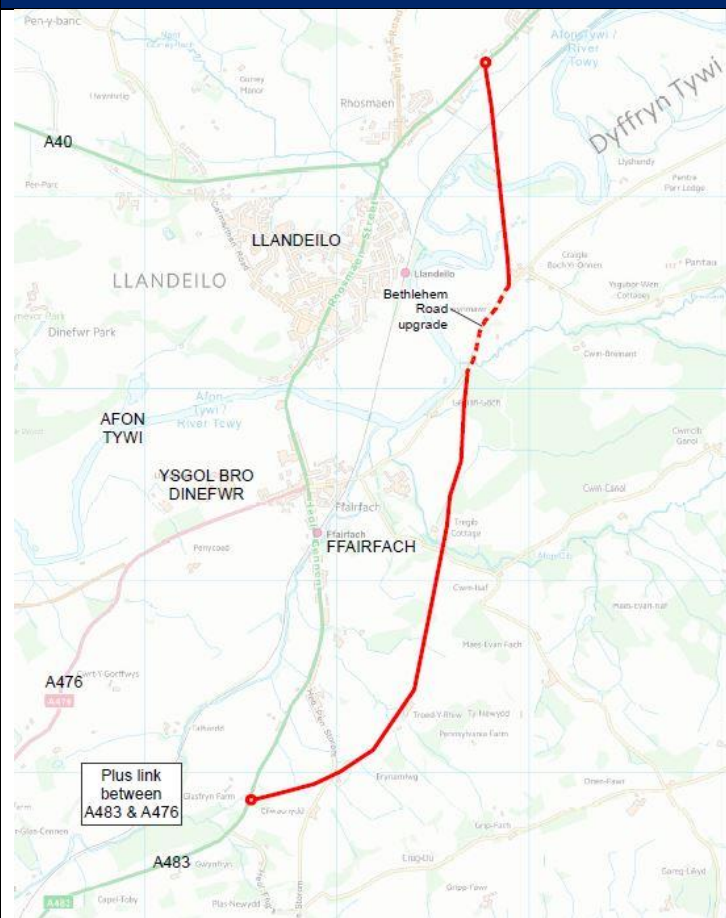
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x
This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option scores beneficial for the majority of the appraisal areas, scoring particularly highly on journey time changes, quality and reliability, and severance, with some negligible impacts for areas such as physical activity, security and affordability.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo/Ffairfach but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of a designated waterbody and through loss of hedgerow habitat and indirect impacts to ancient woodland. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes through Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It is expected that there will be a moderate beneficial impact on Journey time changes/reliability and a slight beneficial impact on the local. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.								

BE4A – Mid Rhosmaen Eastern Bypass Option 4 (A)

Description

Mid Rhosmaen Eastern Bypass Option 4 (A) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south east towards Bethlehem Road, crossing the railway and Afon Tywi. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.

Location



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How it tackles the problem

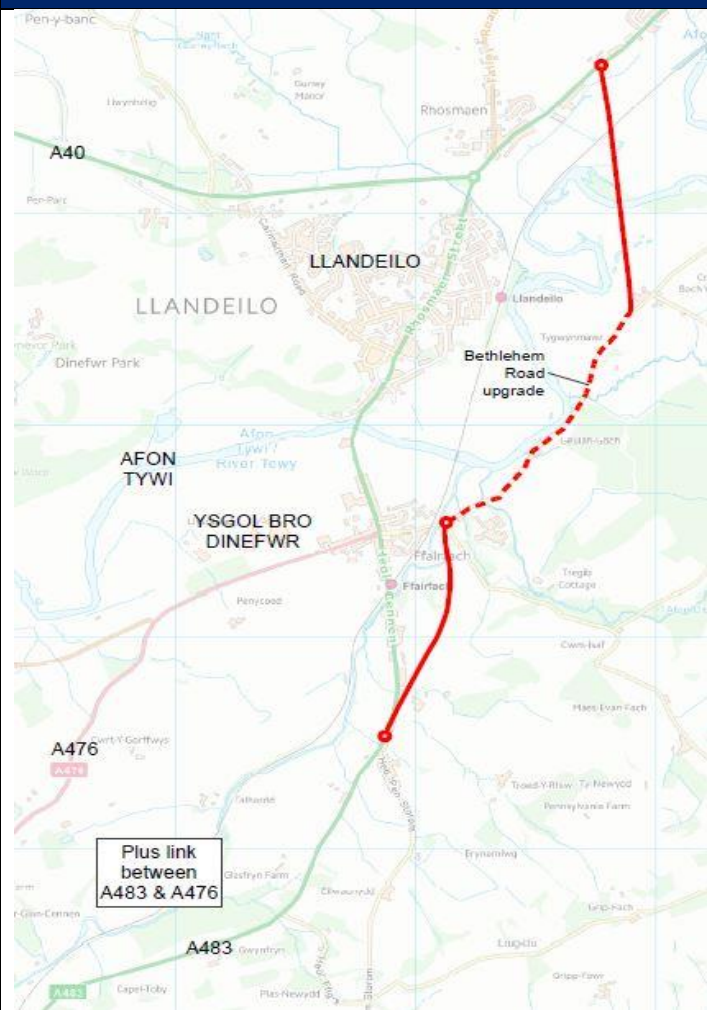
BE4A would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on a link between the A476 and A483 being provided) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would

provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.								
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x
This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option scores beneficial for the majority of the appraisal areas, with a large beneficial for severance.								
<i>Environment</i>								
A neutral effect is anticipated to soils and geology. A beneficial effect is anticipated for noise due to noise decreases within Llandeilo/Ffairfach. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to rural properties. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow and ancient woodland habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes through Brecon Beacons National Park.								
<i>Who the option impacts on</i>								
It is expected that there will be a moderate beneficial impact on Journey time reliability and a slight beneficial impact on the journey time changes and local economy. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.								

BE4B – Mid Rhosmaen Eastern Bypass Option 4 (B)

Mid Rhosmaen Eastern Bypass Option 4 (A) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south east towards Bethlehem Road, crossing the railway and Afon Tywi. The route then links to Bethlehem Road near Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and A483 in order for the bypass to avoid traffic through Ffairfach. BE4B would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than

Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial for the appraisal areas, scoring particularly highly on journey time changes and reliability, and severance, with negligible impacts on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A beneficial effect is anticipated for noise due to noise decreases within Llandeilo/Ffairfach. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to the east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of a designated waterbody and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it is immediately adjacent to Brecon Beacons National Park.

Who the option impacts on

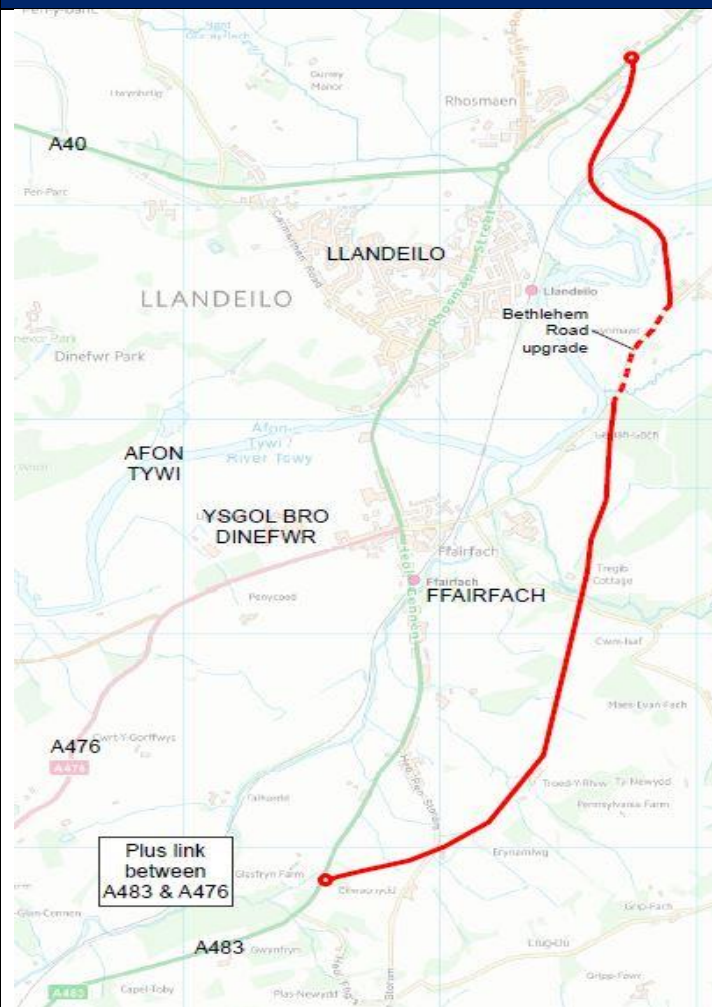
It is expected that there will be a moderate beneficial impact on Journey time changes/reliability and a slight beneficial impact on the local economy. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE4C – Mid Rhosmaen Eastern Bypass Option 4 (C)

Description

Mid Rhosmaen Eastern Bypass Option 4 (C) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south west towards Llandeilo railway station before crossing the railway and Afon Tywi using a single structure. The route then links to Bethlehem Road to the south of Craigle Bach Yr Onnen, follows Bethlehem Road west to the edge of the Woodland Trust woodland then heads south avoiding the former secondary school playing fields so far as possible, before linking to the A483 to the south of Heol Pen Storum. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and A483 in order to bypass the village of Ffairfach. BE4C would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-

trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial impacts across the appraisal areas, with a large beneficial score for severance, and negligible impacts on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A beneficial effect is anticipated for noise due to noise decreases within Llandeilo/Ffairfach. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to the east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow and ancient woodland habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument and as it passes through Brecon Beacons National Park.

Who the option impacts on

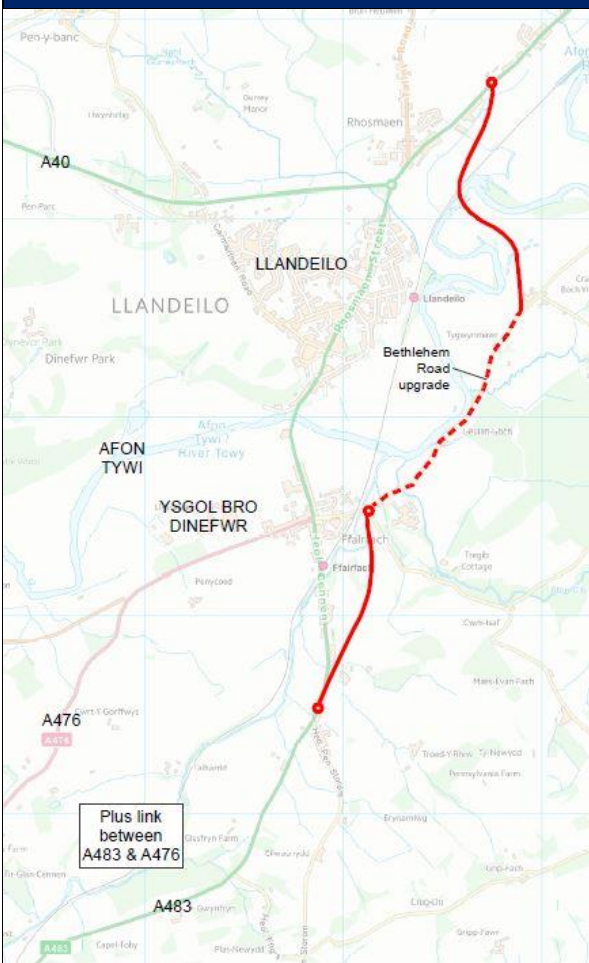
It is expected that there will be a moderate beneficial impact on Journey time reliability and a slight beneficial impact on the local economy and journey time changes. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE4D – Mid Rhosmaen Eastern Bypass Option 4 (D)

Description

Mid Rhosmaen Eastern Bypass Option 4 (D) leaves the A40 to the north-east of the A40/A483 roundabout using a new junction by the Plough Inn Hotel. The route then heads south west towards Llandeilo station before crossing the railway and Afon Tywi using a single structure. The route then links to Bethlehem Road to the south of Craige Bach Yr Onnen, follows Bethlehem Road towards Ffairfach, leaves Bethlehem Road to the west of the former secondary school, to join the A483 to the north of Heol Pen Storom. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and A483. BE4D would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should

improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option scores beneficial across the majority of the appraisal areas, scoring particularly highly for journey time changes, quality and reliability, and severance, with a negligible impact on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo/Ffairfach but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to the east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes immediately adjacent to Brecon Beacons National Park.

Who the option impacts on

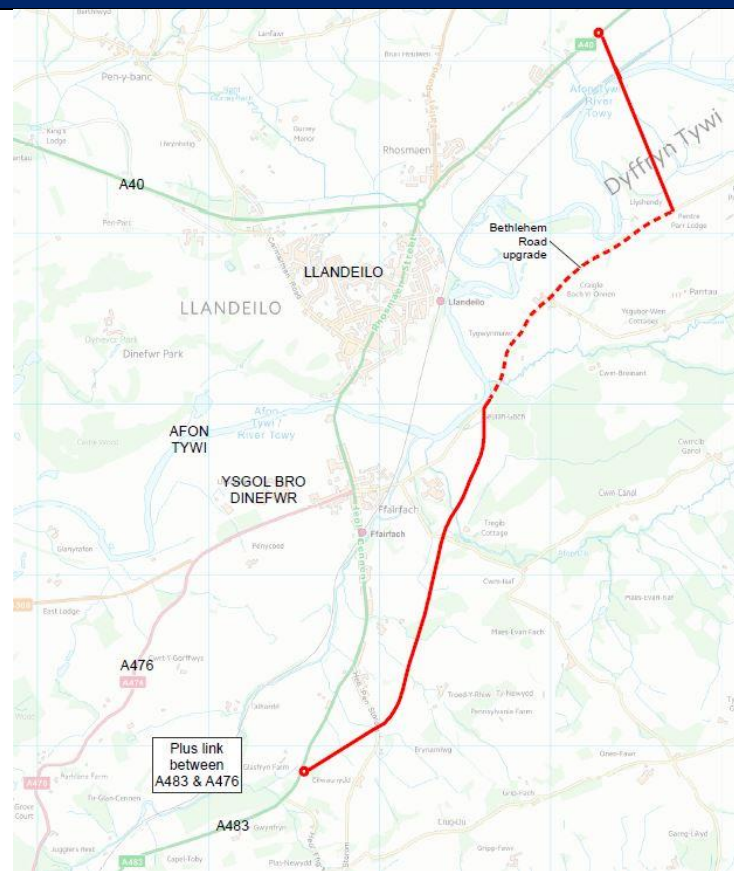
It is expected that there will be a moderate beneficial impact on Journey time changes/reliability and a slight beneficial impact on the local economy. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE5A – Far Eastern Route 5 (A)

Description

Far Eastern Route 5 (A) leaves the A40 to the east of Rhosmaen, crosses the railway line and Afon Tywi at a single crossing point, and crosses the estuary to meet Bethlehem Road near to Pentre Parr Lodge. Bethlehem Road will be upgraded towards Ffairfach and the route will leave Bethlehem Road near Geulan Goch and link to A483 to the south of residential properties to avoid Heol Pen Storum. The route would avoid playing fields associated with the former secondary school. This option would require a link to the A476.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and the A483 in order to reduce congestion and severance within Ffairfach. Without the link to the A476 vehicle drivers are unlikely to use the bypass and would instead continue to travel along Rhosmaen Street. BE5A would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using

Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial across the appraisal areas, with a large beneficial for severance and journey reliability and quality benefits, with a negligible impact on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo/Ffairfach but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to the east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow and ancient woodland habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes through Brecon Beacons National Park.

Who the option impacts on

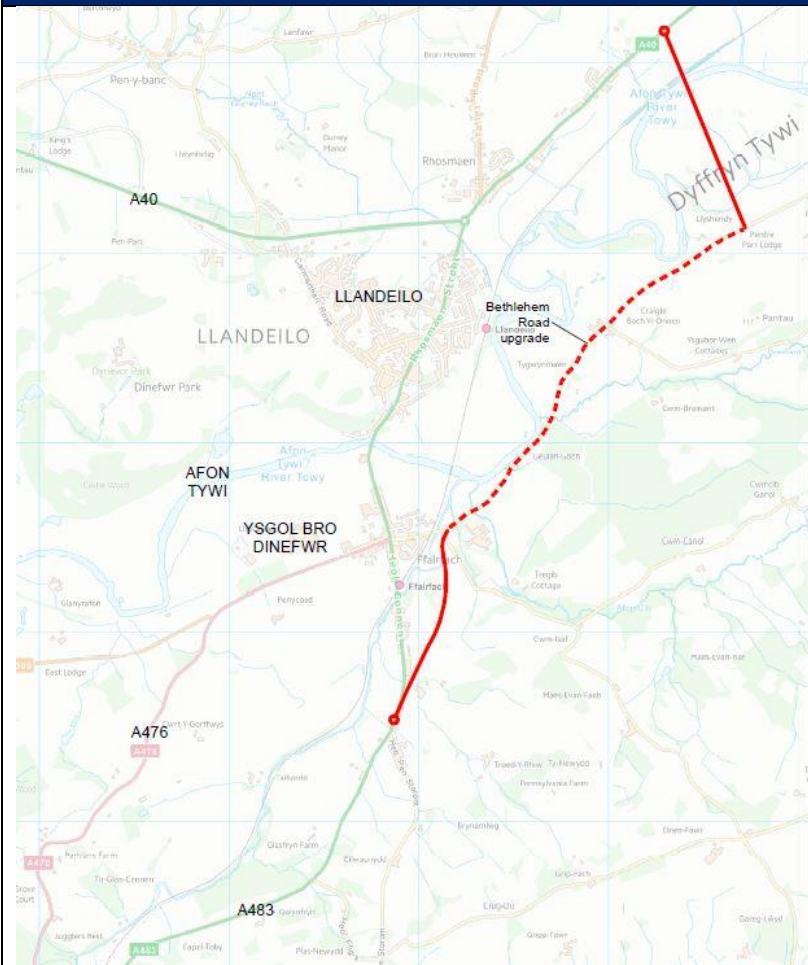
It is expected that there will be a moderate beneficial impact on Journey time reliability and a slight beneficial impact on the local economy and journey time changes. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE5B – Far Eastern Route 5 (B)

Description

Far Eastern Route 5 (B) leaves the A40 to the east of Rhosmaen, crosses the railway line and Afon Tywi at a single crossing point and crosses the river to meet Bethlehem Road near to Pentre Parr Lodge. Bethlehem Road will be upgraded towards Ffairfach and the route will leave Bethlehem Road to the west of the former secondary school (to the east of the railway line) and wraps to the east of residential properties along Heol Cennen linking to A483 before Heol Pen Storum.

Location



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How it tackles the problem

This option is dependent on a link between the A476 and A483 to the south of Ffairfach in order to remove congestion and severance within the community of Ffairfach. Without the link traffic heading north from Cross Hands would probably continue to drive through Llandeilo. BE5B would reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use

the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial across the appraisal areas, scoring particularly highly for journey time reliability, journey quality and severance, with negligible impacts on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo/Ffairfach but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening to the east of Ffairfach. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and as it passes immediately alongside Brecon Beacons National Park.

Who the option impacts on

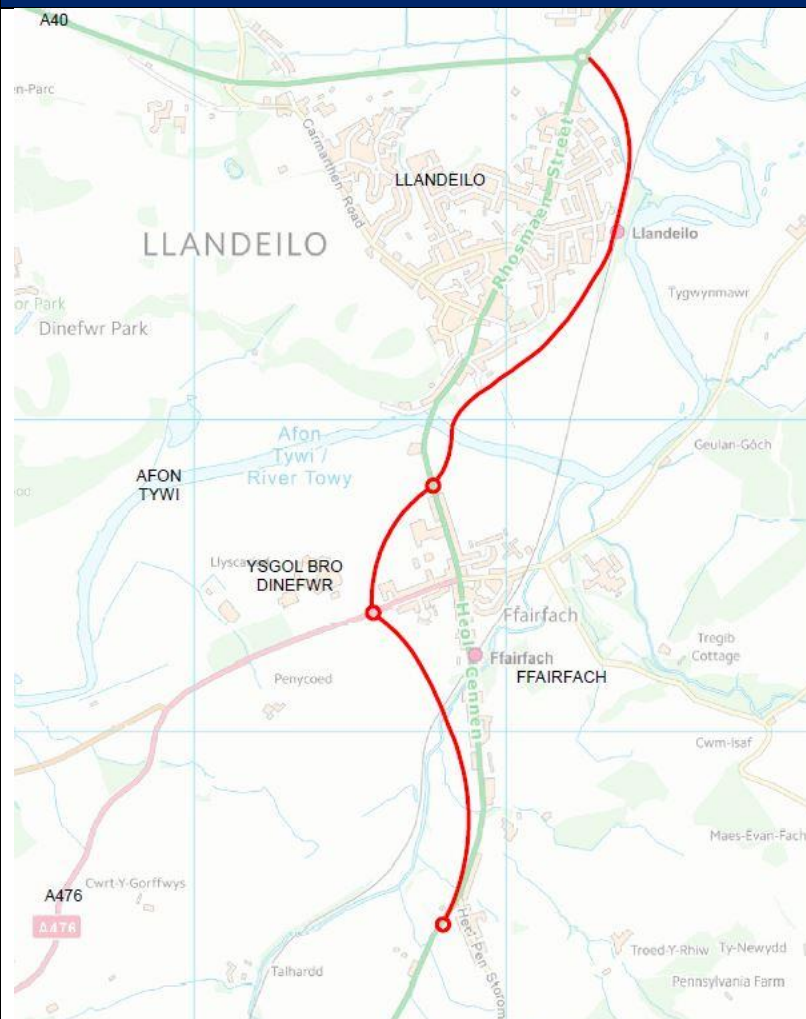
It is expected that there will be a moderate beneficial impact on Journey time reliability and a slight beneficial impact on the local economy and journey time changes. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

BE6 – Option formerly known as the Refined Protected Route

Description

This option leaves the A40 at the A40/A483 roundabout, heading south east around the boundary of Llandeilo, to the west of the railway line and follows the railway line, before passing closer to the escarpment than options BE1A – BE1D. It joins the A483 to the south of Llandeilo Bridge. A proposed roundabout would be constructed on the A483 to the south of Llandeilo Bridge.

Location



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How it tackles the problem

BE6 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass

which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	x

This option fulfils scheme objectives 1 to 7, however does not meet scheme objective 8.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option scores beneficial across the appraisal areas, scoring particularly highly for journey time reliability, journey quality and severance, with a negligible impact on security and affordability.

Environment

A neutral effect is anticipated to soils and geology. A neutral effect is anticipated for noise due to a balance of both noise decreases within Llandeilo/Ffairfach but increases in areas currently unaffected by road noise. A beneficial effect is anticipated for air quality due to a large reduction of vehicle movements through the AQMA, although there is potential for air quality worsening elsewhere. An adverse effect to the water environment and biodiversity is anticipated due to the crossing of several designated water features and through loss of hedgerow habitat. Adverse effects are anticipated to landscape, townscape and cultural heritage due to effects to a scheduled monument, listed buildings and the impact to local and Brecon Beacons National Park views.

Who the option impacts on

It is expected that there will be a moderate beneficial impact on Journey time reliability and a slight beneficial impact on the local economy and journey time changes. There is a large beneficial impact on the Local air quality. It is also expected that there will be a large adverse impact upon Landscape and Townscape and Bio-diversity. In relation to social and cultural there is a slight beneficial impact expected upon Physical activity, accidents and access to employment and services.

ARL1 – A Road Link (1)

Description

ARL1 connects the A476 and A483 without the need to pass through Ffairfach. The route starts at the junction between the B4300 and A476 and follows the slight valley, crossing the railway line at approximate NGR SN625 205 then joins the A483 south of Caemen Cottage.

Location



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How it tackles the problem

ARL1 may improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. This option would result in the eastern bypass options avoiding Ffairfach which would mean that severance would be reduced, this is likely to encourage people to travel between Ffairfach (extending south past the station) to Llandeilo where they may currently drive. This link would mean that traffic flows past the entrance to Ysgol Bro Dinefwr could be controlled to avoid HGVs (with only buses allowed), this would apply even if there were not an eastern bypass by then routing traffic through Ffairfach as a north-south link). This route would encourage children to travel to Ysgol Bro Dinefwr by active travel means. By limiting HGV traffic past Ysgol Bro Dinefwr it would mean that HGV traffic would divert to the bypass and would therefore be less likely to switch on to the A483 and travel through Llandeilo. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and supports the Welsh Transport Plan.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	✓	✓	✓	x	x

Option ARL1 does not improve pedestrian and cyclist safety within Llandeilo and Ffairfach or reduce community severance. Additionally, it does not fulfil the objectives of reducing exposure to air pollution or support the transition to a low carbon society. It does however preserve the strategic function of the A483, improve journey time reliability, reduce congestion through Llandeilo and contributes to sustainable economic growth and tourism in Llandeilo.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option scores a large beneficial for journey time changes, with other beneficial impacts on journey time reliability changes, journey quality, accidents and severance. This option scores negligible for local economy, physical activity, security, access to employment and services, affordability as well as active travel.

Environment

It is anticipated that there will be a neutral effect upon noise, geology and soils with this option. Additionally, a moderate beneficial effect is anticipated on local air quality. However, a slight adverse effect is anticipated upon the water environment and cultural heritage. Furthermore, a moderate adverse effect is anticipated upon biodiversity and to the landscape and townscape.

Who the Option impacts on

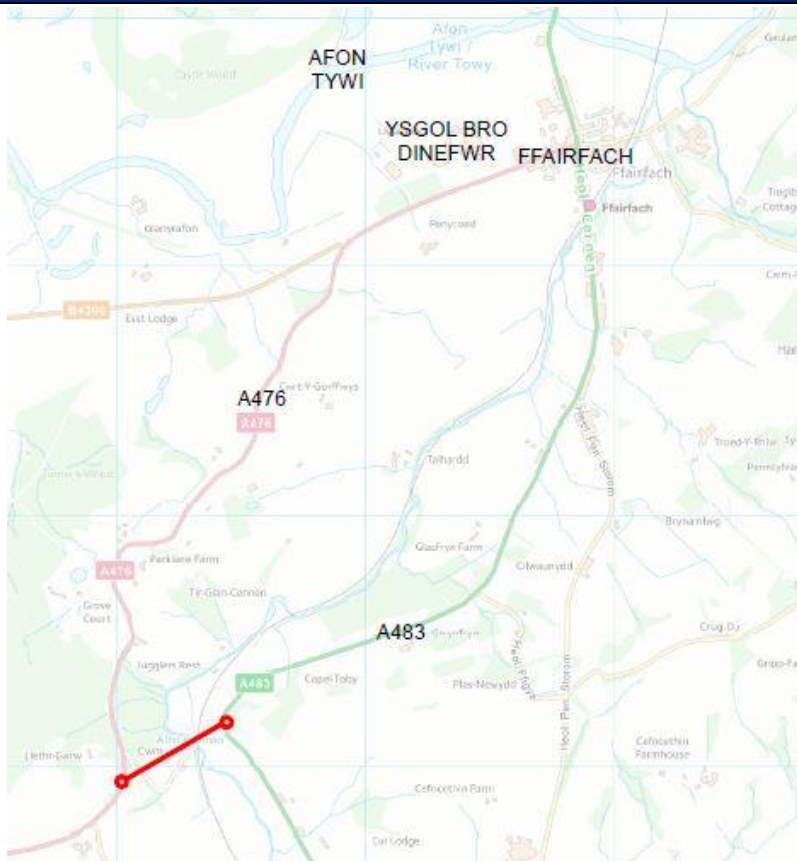
All road users should benefit from this bypass link road. Users of Llandeilo train station and students of Ysgol Bro Dinefwr may benefit from this link road as it will divert traffic away from the school as well as Llandeilo and Ffairfach.

ARL2 – A Road Link (2)

Description

ARL2 connects the A476 to the A487 without the need to pass through Ffairfach. The route would leave the A476 south of Cwm at approximate NGR BN610 189 crossing the gorge over the railway line and links to A487 at approximately NRG SN 614 191.

Location



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How it tackles the problem

ARL2 would provide a link between the A476 and A483 and would result in more HGV traffic using eastern bypass options, without either ARL1 or ARL2 there is a risk that traffic would stay on the existing A483 through Llandeilo rather than divert to the bypass. This option would result in a decrease in congestion and severance within Ffairfach and would also reduce severance between Ffairfach and Llandeilo. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and supports the Welsh Transport Plan.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
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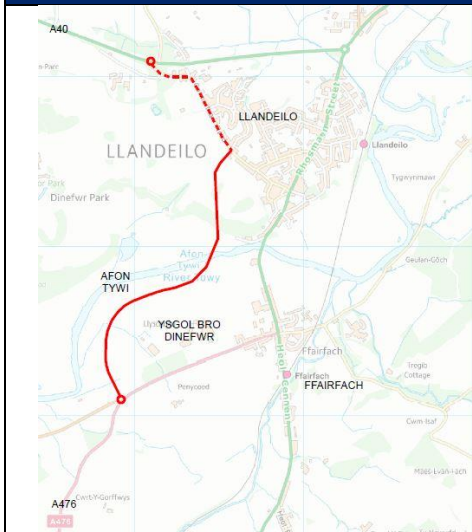
Met ✓ or x	✓	x	✓	✓	✓	✓	x	x
<p>This option fulfils the majority of the objectives, however does not improve pedestrian and cyclist safety within Llandeilo and Ffairfach, reduce exposure to air pollution for sensitive receptors or support the transition to a low carbon society.</p>								
<p>Appraisal</p>								
<p><i>Economy and Social and Cultural</i></p>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option scores large beneficial for journey time changes, and slight beneficial for journey time reliability changes, journey quality, accidents and severance. This option scores negligible for local economy, physical activity, security, access to employment and services, affordability and active travel.</p>								
<p><i>Environment</i></p>								
<p>A neutral effect upon geology and soils is anticipated and also noise as there are very few properties in the vicinity of this option. Further to this, a minor beneficial effect is anticipated on local air quality. However, a moderate adverse effect is anticipated upon biodiversity and landscape and townscape. Furthermore, there is a slight adverse effect anticipated upon the water environment and cultural heritage.</p>								
<p><i>Who the option impacts on</i></p>								
<p>All road users should benefit from this bypass link road. Users of Llandeilo train station and students of Ysgol Bro Dinefwr may benefit from this link road as it will divert traffic away from the school as well as Llandeilo and Ffairfach.</p>								

BW1 – Western Bypass Option 1

Description

Western Bypass Option 1 leaves the A40 at the existing junction with Carmarthen Road at a new junction. The route then follows Carmarthen Road south to the entrance to the National Trust Dinefwr property and follows the slight dip between mounds south west of the junction of the B4300 and A476.

Location



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How it tackles the problem

BW1 would reduce traffic flows, and therefore severance, along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. This option would not take traffic from the A483 from Ammanford, or if it does then this traffic would be routed past the front of Ysgol Bro Dinefwr. Pedestrian safety should improve with Llandeilo and Ffairfach as well as the cycling environment, road safety and may promote visitors who are coming to Llandeilo as a destination town. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	x	✓	x

The majority of the objectives are fulfilled with this option, however this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.

Appraisal

Economy and Social and Cultural

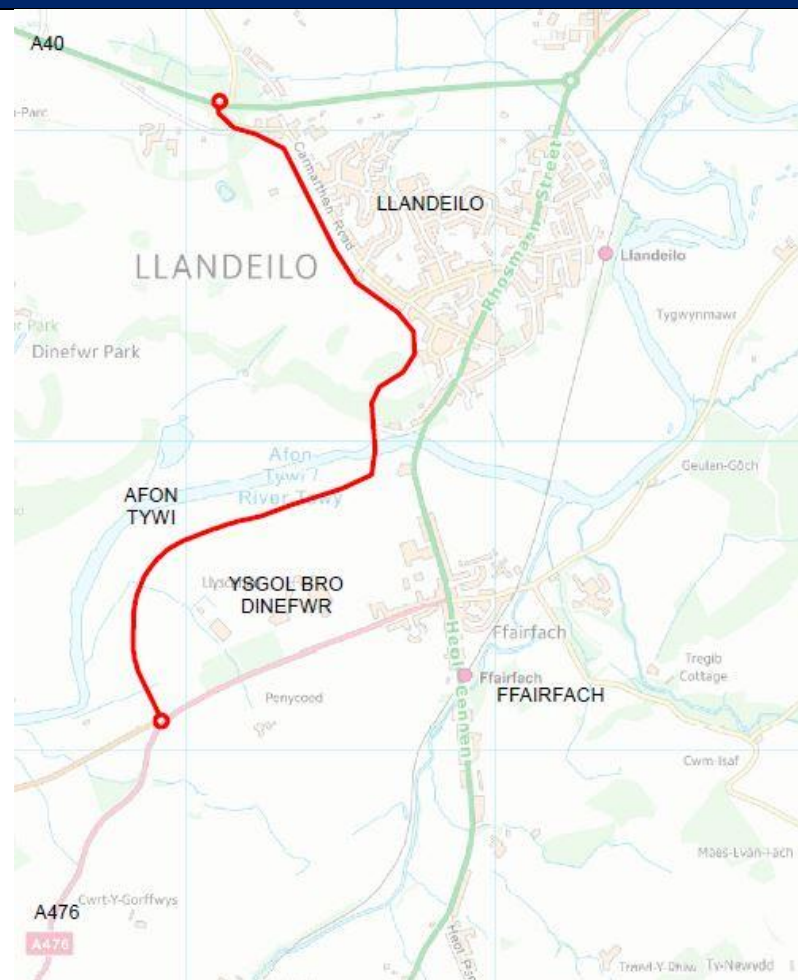
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial for the appraisal areas, with negligible impacts on local economy, security, access to employment and services and affordability.</p>
<p><i>Environment</i></p>
<p>Overall, a neutral effect for noise and geology and soils is scored, with a moderate beneficial effect anticipated on local air quality. However, a moderate adverse effect is anticipated upon the water environment. Further to this, a large adverse effect is anticipated to landscape and townscape, cultural heritage and biodiversity.</p>
<p><i>Who the Option impacts on</i></p>
<p>All road users may benefit from this bypass, with businesses in Llandeilo and Dinefwr Park experiencing a neutral impact. Walkers, cyclists and students of Ysgol Bro Dinefwr should also benefit due to a reduction in traffic using the current A483 within Llandeilo/Ffairfach.</p>

BW2 – Western Bypass Option 2

Description

Western Bypass Option 2 leaves the A40 at the existing junction with Carmarthen Road at a new junction. The route then follows an alignment to the west of Carmarthen Road south of the entrance to National Trust Dinefwr property, then runs to the west of residential properties on Carmarthen Road, Carmarthen Street, George Street, Bank Terrace and Bridge Street before crossing the Afon Tywi to the west of Llandeilo Bridge. The route then wraps west along the route of the Afon Tywi, north of Ysgol Bro Dinefwr and links to the A476 at the existing junction with the B4300.

Location



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How it tackles the problem

BW2 may reduce severance along the A483/Rhosmaen Street within Llandeilo and within Ffairfach (for traffic on the A476) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call)

should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	x	✓	✓	x	✓	x

The majority of the objectives are fulfilled with this option, however this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial for the appraisal areas, with negligible impacts on local economy, security, access to employment and services and affordability.

Environment

A neutral effect upon geology and soils and noise is anticipated. Further to this, a moderate beneficial effect is anticipated on local air quality. However, a moderate adverse effect is anticipated upon the water environment with an expected large adverse impact for biodiversity, landscape and townscape as well as cultural heritage.

Who the Option impacts on

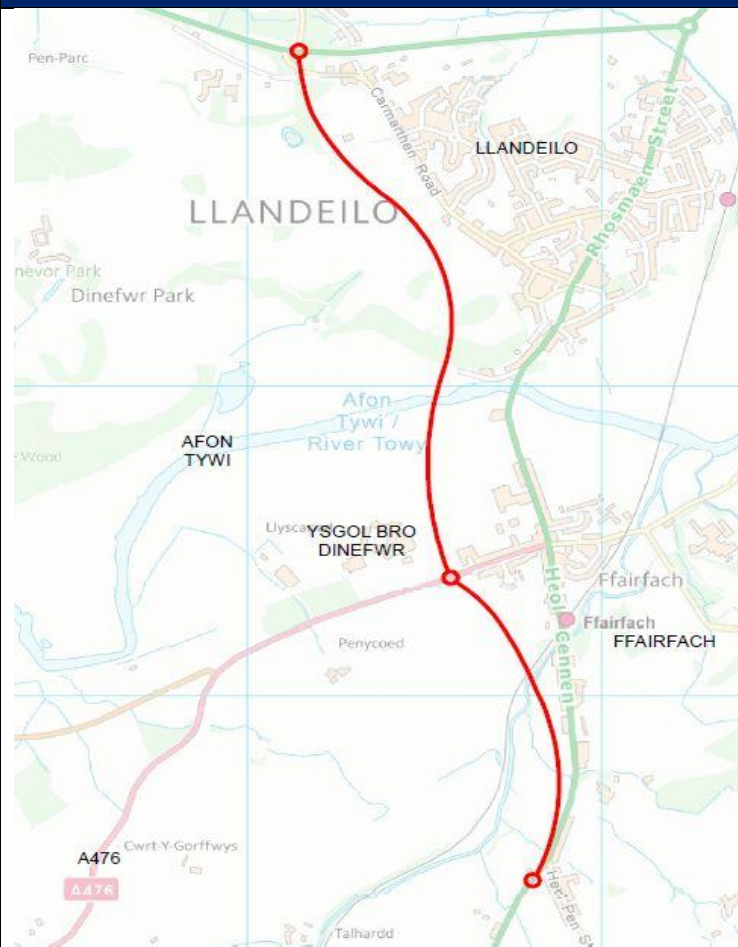
All road users may benefit from this bypass, however businesses in Llandeilo and Dinefwr Park may dis-benefit as the route proposes to go through National Trust land. Walkers, cyclists, students of Ysgol Bro Dinefwr and users of Llandeilo railway station are also likely to benefit due to a reduction in traffic using the current A483 within Llandeilo/Ffairfach.

BW3A – Western Bypass Option 3 (A)

Description

Western Bypass Option 3 (A) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west in a southern direction to the entrance to the National Trust Dinefwr property and follows the 'protected route' to the east of Ysgol Bro Dinefwr and links to the A483 within Ffairfach to the south of Heol Pen Storum.

Location



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How it tackles the problem

BW3A may improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	Partial	✓	✓	x	✓	x

The majority of the objectives are fulfilled with this option, however this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option has some negative impacts on the local economy and severance however does have beneficial impacts on journey time reliability, physical activity, journey quality, accidents and active travel.

Environment

A large beneficial effect is anticipated on local air quality due to a large reduction of vehicle movements through the AQMA. Also, a neutral effect upon geology and soils is anticipated. However, a slight adverse effect for noise is anticipated as properties to the east of Carmarthen Road are likely to receive noise increases that would not be able to be mitigated. Additionally, a moderate adverse effect is anticipated upon the water environment as it crosses Rivers Tywi and Cennen, a WFD waterbodies along with three tributaries. Further to this, a large adverse effect is anticipated upon biodiversity, landscape and townscape and cultural heritage.

Who the Option impacts on

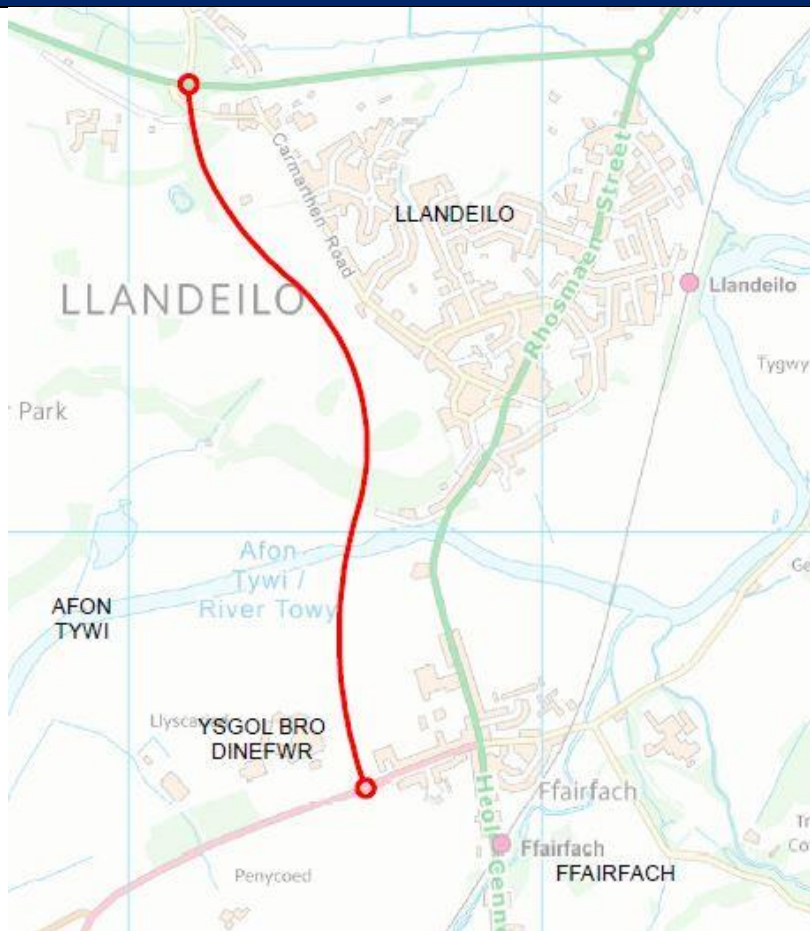
All road users may benefit from this bypass, as well as some businesses in Llandeilo. However, Dinefwr Park would dis-benefit due to the proposed bypass alignment. Properties on the west side of Ffairfach and the rear properties on the A482 to the south of Ffairfach may be negatively impacted upon in terms of noise. Walkers and cyclists should also benefit due to a reduction in traffic using the current A483 within Llandeilo/Ffairfach. However, students of Ysgol Bro Dinefwr would have a dis-benefit due to the proposed option bypass alignment.

BW3B – Western Bypass Option 3 (B)

Description

Western Bypass Option 3 (B) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west in a southern direction to the entrance to the National Trust Dinefwr property and follows the ‘protected route’ to the east of Ysgol Bro Dinefwr.

Location



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How it tackles the problem

BW3B may improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs on the A476 would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked, traffic on the A483 would probably continue to use the route. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

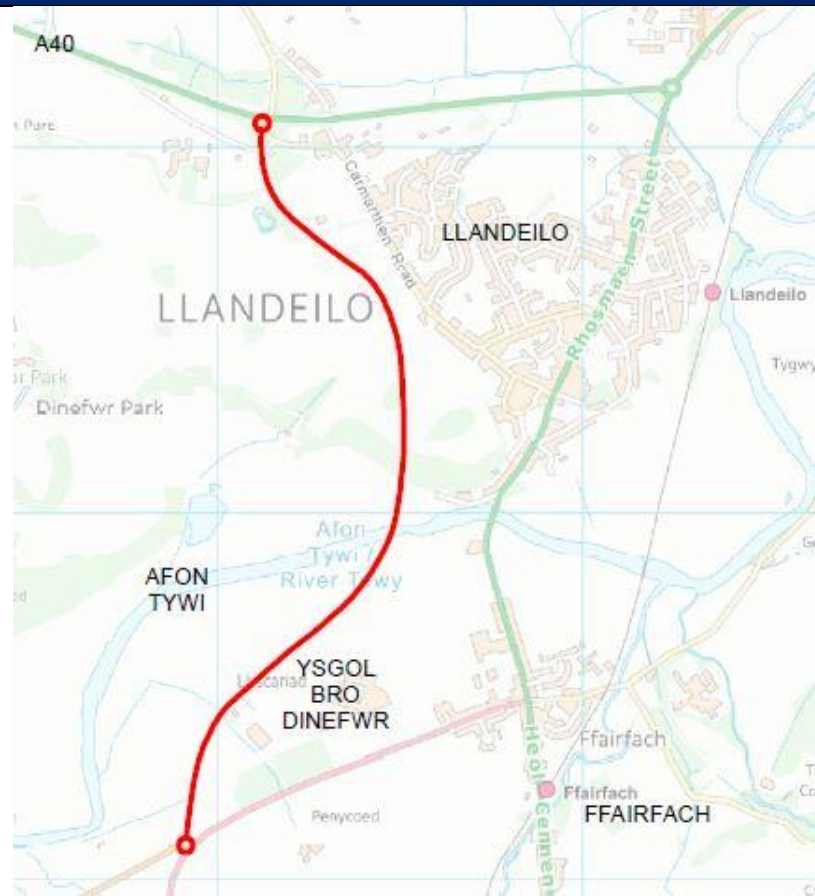
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	✓	Partial	x	✓	x
<p>The majority of the objectives are not fulfilled with this option. For instance, this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society. Additionally, it does not improve pedestrian and cyclist safety or reduce community severance within Llandeilo and Ffairfach.</p>								
Appraisal								
<i>Economy and Social and Cultural</i>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option has some negative impacts on the local economy and severance however does have beneficial impacts on journey time reliability, physical activity, journey quality, accidents and active travel.</p>								
<i>Environment</i>								
<p>A moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movements through the AQMA. Additionally, a neutral effect upon geology and soils is anticipated. A moderate adverse effect is anticipated upon the water environment as the route crosses the River Tywi, a WFD waterbody. Also, a slight adverse effect for noise is anticipated, although it is likely that increases would be partially offset by decreases on the existing road network resulting from re-assignment of traffic flows, without the additional link these may be correspondingly less. Further to this, a large adverse effect is anticipated to landscape and townscape, cultural heritage and biodiversity.</p>								
<i>Who the Option impacts on</i>								
<p>All road users may benefit from this bypass as well as walkers and cyclists within Llandeilo. However, Dinefwr Park and students of Ysgol Bro Dinefwr may dis-benefit due to the proposed bypass alignment.</p>								

BW3C – Western Bypass Option 3 (C)

Description

Western Bypass Option 3 (C) leaves the A40 at the existing junction with Carmarthen Road at a new roundabout. The route then follows Carmarthen Road to the west, in a southern direction to the entrance to the National Trust Dinefwr property then passes to the north of Ysgol Bro Dinefwr and links to the junction of the B4300 and A476.

Location



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How it tackles the problem

BW3C may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route for traffic currently on the A476 which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	x	✓	x

The majority of the objectives are fulfilled with this option, however this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.

Appraisal

Economy and Social and Cultural

Appraisal of Economics and Social and Cultural impacts has identified that this option overall has a beneficial impact across appraisal areas with a beneficial impact on journey quality, there is however a slight negative impact on the local economy.

Environment

A neutral effect upon geology and soils and noise is anticipated. Further to this, a moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movement through the AQMA. However, a moderate adverse effect is anticipated upon the water environment as the route crosses the River Tywi, a WFD waterbody and two minor tributaries. Also, a large adverse effect is anticipated upon biodiversity, landscape and townscape and cultural heritage.

Who the Option impacts on

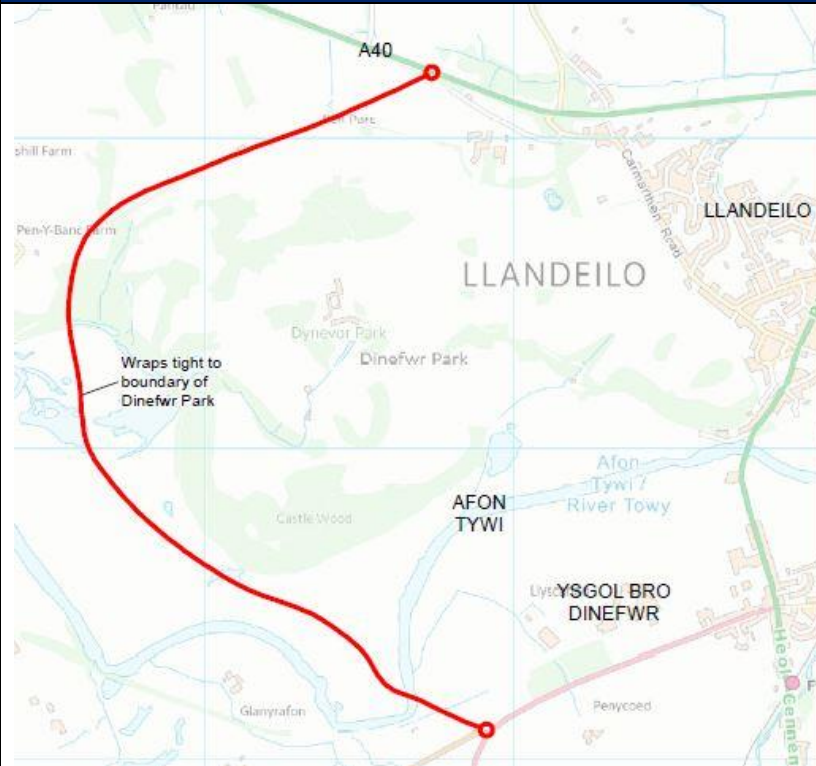
All road users may benefit from this bypass as well as businesses within Llandeilo. However, Dinefwr Park would dis-benefit due to the proposed bypass alignment. Walkers, cyclists and students of Ysgol Bro Dinefwr should benefit due to a reduction in traffic using the current A483 within Llandeilo/Fairfach.

BW4 – West of Dinefwr (East)

Description

West of Dinefwr Bypass Option (East) leaves the A40 prior to King's Lodge, wraps around the western boundary of National Trust Dinefwr Park property, links to A476 at the junction of the A476 and B4300.

Location



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How it tackles the problem

BW4 may reduce severance along the A483/Rhosmaen Street within Llandeilo as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. As a result of the removal of through traffic from the A476 and improvements in traffic flows there should be a decrease in air pollution within Llandeilo and Ffairfach.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
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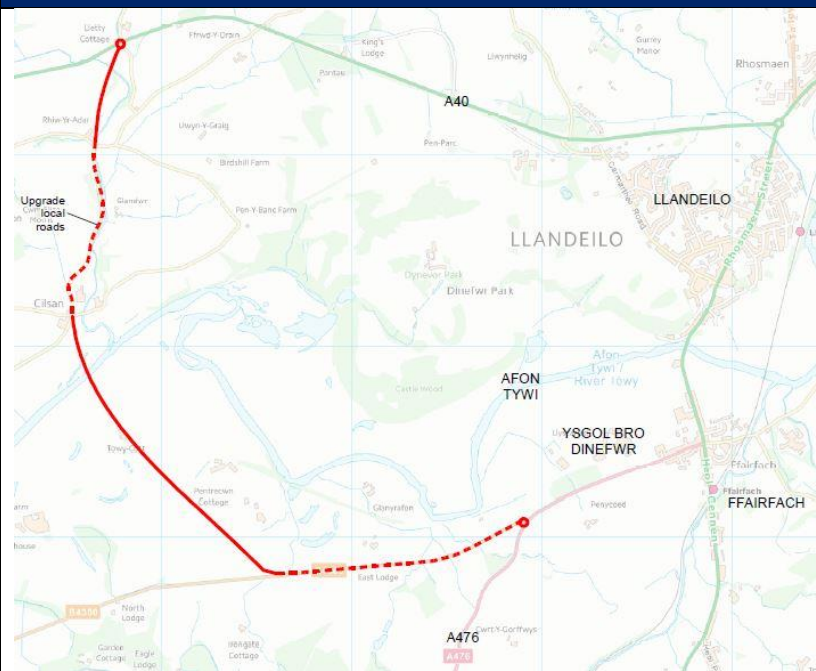
Met ✓ or x	✓	Partial	Partial	✓	Partial	x	✓	x
The majority of the objectives are fulfilled with this option, however this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option has an overall beneficial impact across appraisal areas, with negligible impacts on security and affordability.								
<i>Environment</i>								
A neutral effect upon geology and soils is anticipated. A slight beneficial effect for noise is expected, as there are few properties close to the route, which are currently located in a low-noise environment. Further to this, a moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movements through the AQMA. However, a moderate adverse effect is anticipated upon the water environment as the route crosses the River Tywi, a WFD waterbody and two minor tributaries. Additionally, a large adverse effect is anticipated to landscape and townscape as the route passes through a Landscape of Outstanding Historic Interest, a Conservation Area and is along the edge of a Historic Park and Garden. Also, a large adverse effect is anticipated to cultural heritage and biodiversity.								
<i>Who the Option impacts on</i>								
All road users may benefit from this bypass as well as businesses in Llandeilo and Dinefwr Park. However, properties located close to the proposed bypass would however experience increases in noise. Walkers, cyclists and students of Ysgol Bro Dinefwr should also benefit due to a reduction in traffic using the current A483 within Llandeilo/Ffairfach.								

BW5A – West of Dinefwr (A)

Description

West of Dinefwr Bypass Option (A) leaves the A40 near Lletty Cottage and heads south along local roads which will be upgraded between Rhiw-Yr-Adar and Cilcan. The route then crosses the Afon Tywi and links to the B4300. The route also involves an upgrade of the B4300 and the existing junction with the A476, proposed to be a roundabout.

Location



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How it tackles the problem

This option would not divert traffic from the A483 (except with a combination with ARL2) and is unlikely to divert traffic from the A476 due to the additional length of the route. Therefore, any potential benefits of removing through traffic from Llandeilo and Ffairfach are unlikely to be realised. If traffic did divert on to the bypass, there would be a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	✓	x	x	✓	x

The majority of the objectives are not fulfilled with this option. For instance, this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society. Additionally, it does not improve congestion through Llandeilo or pedestrian and cyclist safety, it also does not reduce community severance within Llandeilo and Ffairfach.

Appraisal
<i>Economy and Social and Cultural</i>
Appraisal of Economics and Social and Cultural impacts has identified that this option overall has a beneficial impact, with a slight negative impact on journey time changes, and negligible impacts on local economy, security and affordability.
<i>Environment</i>
A neutral effect upon geology and soils is anticipated, with a slight beneficial effect for noise. Further to this, a moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movements through the AQMA. However, a moderate adverse effect is anticipated upon the water environment and cultural heritage. Further to this, a large adverse effect is anticipated to landscape and townscape and biodiversity.
<i>Who the Option impacts on</i>
All road users may dis-benefit from this bypass due to the proposed alignment, with businesses in Llandeilo and Dinefwr Park experiencing a neutral impact. Users of Llandeilo train station and students of Ysgol Bro Dinefwr may benefit from this bypass option; however, some businesses may dis-benefit due to the significant diversion.

BW5B – West of Dinefwr (B)

Description

West of Dinefwr Bypass Option (B) leaves the A40 near Lletty Cottage and heads south along local roads which will be upgraded between Rhiw-Yr-Adar and Cilsan. The route then crosses the Afon Tywi estuary and links to the B4300. The route continues south to link to the A476 at approximate NGR SN 613200.

Location



How it tackles the problem

BW5B may reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

To what extent it meets the objectives

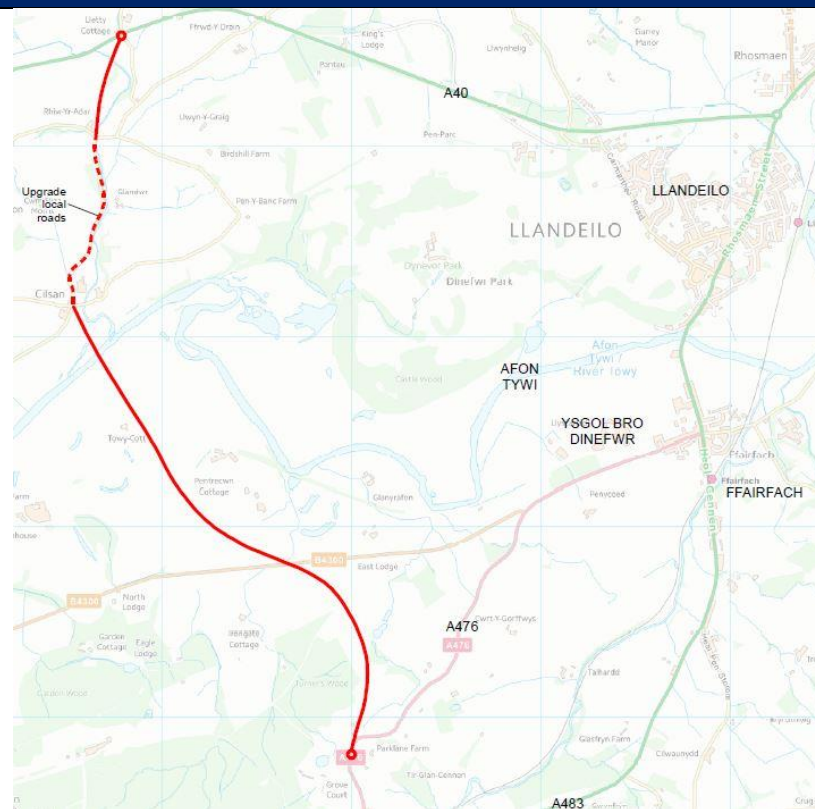
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	✓	x	x	✓	x
<p>The majority of the objectives are not fulfilled with this option. For instance, this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society. Additionally, it does not improve congestion through Llandeilo or pedestrian and cyclist safety, it also does not reduce community severance within Llandeilo and Ffairfach.</p>								
<p>Appraisal</p>								
<p><i>Economy and Social and Cultural</i></p>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option overall has a beneficial impact, with a slight negative impact on journey time changes, and negligible impacts on local economy, security and affordability.</p>								
<p><i>Environment</i></p>								
<p>A neutral effect upon geology and soils, as well as noise, is anticipated. Also, a moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movements through the AQMA. However, moderate adverse effects are anticipated for cultural heritage and the water environment and large adverse effects are anticipated upon biodiversity and landscape and townscape.</p>								
<p><i>Who the Option impacts on</i></p>								
<p>All road users may dis-benefit from this bypass due to the proposed alignment, with businesses in Llandeilo and Dinefwr Park experiencing a neutral impact. Users of Llandeilo train station and students of Ysgol Bro Dinefwr may benefit from this bypass option; however, some businesses may dis-benefit due to the significant diversion.</p>								

BW5C – West of Dinefwr (C)

Description

West of Dinefwr Bypass Option (C) leaves the A40 near Lletty Cottage, heads south, including an upgrade of local roads between Rhiw-Yr-Adar and Cilsan. The route then crosses the Afon Tywi estuary, links to the B4300 and continues south to link to the A476 at approximate NGR SN 610198 (wrapping around the boundary of Turner's wood).

Location



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How it tackles the problem

BW5C may reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. If sufficient vehicles divert from Rhosmaen Street, there should be a decrease in air pollution within Llandeilo.

This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of outcomes of the Wales Transport Strategy.

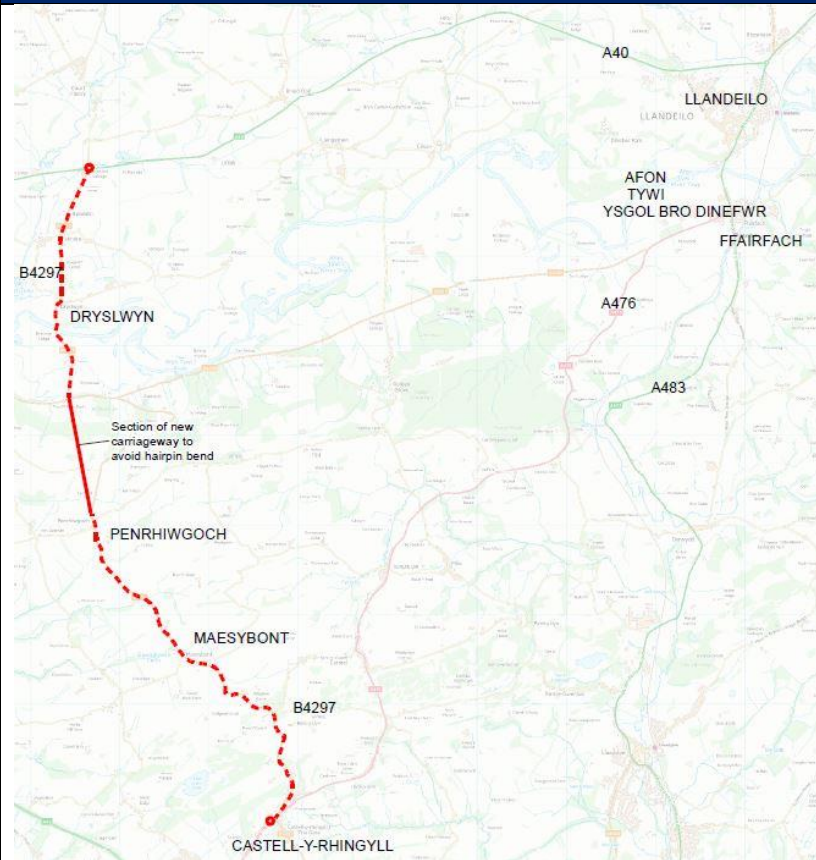
To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	x	x	✓	x	x	✓	x
<p>The majority of the objectives are not fulfilled with this option. For instance, this option does not contribute to sustainable economic growth and tourism opportunities in Llandeilo or support the transition to a low carbon society. Additionally, it does not improve congestion through Llandeilo or pedestrian and cyclist safety, it also does not reduce community severance within Llandeilo and Ffairfach.</p>								
Appraisal								
<i>Economy and Social and Cultural</i>								
<p>Appraisal of Economics and Social and Cultural impacts has identified that this option overall has a beneficial impact, with a slight negative impact on journey time changes, and negligible impacts on local economy, security and affordability.</p>								
<i>Environment</i>								
<p>A neutral effect upon geology and soils, as well as noise, is anticipated. Additionally, a moderate beneficial effect is anticipated on local air quality due to a reduction of vehicle movements through the AQMA. However, a moderate adverse effect is anticipated upon the water environment and cultural heritage. Further to this, a large adverse effect is expected upon biodiversity and landscape and townscape.</p>								
<i>Who the Option impacts on</i>								
<p>All road users may dis-benefit from this bypass due to the proposed alignment, with businesses in Llandeilo and Dinefwr Park experiencing a neutral impact. Users of Llandeilo train station and students of Ysgol Bro Dinefwr may benefit from this bypass option; however, some businesses may dis-benefit due to the significant diversion.</p>								

BW6 – Far West Route via Dryslwyn

Description

Far West Route via Dryslwyn is located approximately 6km west of Llandeilo. The route leaves the A40 at the junction with the B4297, near Cross Inn Cottage. The B4297 will be upgraded to an A road standard single carriageway (7.3m) which passes through Felindre, Dryslwyn, Penrhiwgoch and Maesybont. The route will then connect into A476 at Castyll-y-rhingyll/The Gate to the north of Cross Hands. It should be noted that Active Travel provision for this option not specified at this point.

Location



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How it tackles the problem

BW6 is unlikely to divert significant amounts of traffic off the A483 or A476 as they approach Llandeilo and therefore traffic flows on Rhosmaen Street would remain as they are currently. On this basis, there would not be any significant improvement to address the issues raised in respect of traffic in Llandeilo.

This option would not contribute to the Well-being Objectives of the Welsh Government and is considered not to contribute to any of the outcomes set out in the Wales Transport Plan.

To what extent it meets the objectives

Objective No	1	2	3	4	5	6	7	8

Met ✓ or x	✓	x	x	x	x	x	x	x
This option only fulfils objective 1 of preserving the strategic function of the A483.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option scores large negative on journey time changes, however the rest of the appraisal scores are either beneficial or negligible.								
<i>Environment</i>								
A neutral effect upon geology and soils is anticipated and a moderate beneficial effect is anticipated on local air quality. However, a slight adverse effect for noise is anticipated, as the majority of this route would be along existing minor roads but there is the potential for large increases at small communities and scattered rural properties. A slight adverse effect is also anticipated to landscape and townscape and cultural heritage. A moderate adverse effect is anticipated upon the water environment as the route crosses the River Tywi and several tributaries, all WFD waterbodies. Further to this, a large adverse effect is anticipated upon biodiversity.								
<i>Who the Option impacts on</i>								
All road users may dis-benefit from this bypass due to the proposed alignment, it is anticipated that businesses in Llandeilo and Dinefwr Park experiencing a neutral impact. Small communities and scattered rural properties may also experience a negative impact in terms of noise. It is anticipated that a neutral impact on users of Llandeilo train station and students of Ysgol Bro Dinefwr would occur; however, some businesses may dis-benefit due to the significant diversion.								

BT1 – Tunnel
Description
The tunnel is proposed from the A40 to A476 under Dinefwr Park to the east of King's Lodge.
Location
<p>The map displays the proposed tunnel route in red, starting at the A40 near Pen Parc and ending at the A476 near Ysgol Bro Dinefwr. The route passes through Llandeilo and Ffairfach, avoiding the town center. Key roads shown include Carnwaelan Road, Rhosmaen Street, and Ffairfach Road. The River Towy is also visible.</p>
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How it tackles the problem
<p>BT1 may reduce severance along the A483/Rhosmaen Street within Llandeilo (depending on the chosen bypass) as well as improve journey reliability due to providing a direct, free-flow route which would avoid the pinch points within Llandeilo/Ffairfach. Pedestrian safety should also improve as well as the cycling environment, road safety and may promote visitors as the number of through-traffic journey should decrease with a bypass in place. This may also help reduce the closure of local amenities. HGV and school traffic should also reduce within Llandeilo/Ffairfach as it is anticipated that HGVs would use the bypass rather than Rhosmaen Street as the current A483 would be de-trunked. Further to this, emergency service response times (on call) should improve due to a reduction in traffic using Rhosmaen Street, or emergency service vehicles could use the bypass which would provide a direct, free-flow route. This option would result in a reduction in air pollution within the AQMA.</p> <p>This option would contribute to the Welsh Government achieving its Well-being Objectives and help deliver some of the long-term outcomes set out in the Wales Transport Strategy.</p>

To what extent it meets the objectives								
Objective No	1	2	3	4	5	6	7	8
Met ✓ or x	✓	✓	✓	✓	✓	✓	✓	✓
Option BT1 passes all 8 of the objectives however is unlikely to be feasible when looking at the Land and Cost requirements for it. For this reason, the option wasn't shortlisted.								
Appraisal								
<i>Economy and Social and Cultural</i>								
Appraisal of Economics and Social and Cultural impacts has identified that this option overall scores beneficial for the appraisal areas, with negligible impacts on security and affordability.								
<i>Environment</i>								
It is anticipated that there is a neutral effect upon geology and soils and cultural heritage. Additionally, there is a slight beneficial effect for noise and a moderate beneficial effect on local air quality. However, it is anticipated that there is a slight adverse effect is anticipated to landscape and townscape, biodiversity and cultural heritage. Also, it is anticipated that a moderate adverse effect will occur upon the water environment.								
<i>Who the Options impacts on</i>								
All road users should benefit from this option, as well as businesses within Llandeilo's town Centre and Dinefwr Park. There would be no noise increases along the alignment and properties along the A483 within Llandeilo should also benefit. Further to this, walkers and cyclists, students of Ysgol Bro Dinefwr and users of Llandeilo railway station are likely to benefit from this option.								