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Interim Evaluation of ERDF Road Operations

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Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

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Glossary

Acronym/Key word	Definition
ERDF	European Regional Development Fund
CCT	Cross-cutting themes
WEFO	Welsh European Funding Office
TEN-T	Trans-European Transport Network
NDF	National Development Framework
TRFP	Trunk Road Forward Programme
WeITAG	Welsh Transport Appraisal Guidance
ECI	Early Contractor Involvement
PLO	Public Liaison Officer
NTFP	National Transport Finance Plan
OP	Operational Programme
COVID-19	Coronavirus
PRoWs	Public Rights of Way
PMA	Private Means of Access

1. Introduction

1.1 This report provides an interim evaluation of two road projects (referred to as ‘operations’, which have been supported by the European Regional Development Fund (ERDF) and commissioned by the Welsh Government. The two operations are:

- New highway on the A40 Llanddewi Velfrey to Penblewin and Redstone Cross (South West Wales)
- Improvements to the A55 between Abergwyngregyn and Tai'r Meibion (North Wales).

Background and changes to scope

1.2 In May 2020, the Welsh Government commissioned SQW to develop and deliver an evaluation of two operations above, as well as a third operation: Improvements to A55 Junctions 15 and 16 at Llanfairfechan and Penmaenmawr (North Wales). However, in September 2021, this third operation was withdrawn from the ERDF programme.

1.3 The reason for this change in scope is that in June 2021, the Deputy Minister for Climate Change announced a freeze on new road building projects¹. Following this, an independent review of highway schemes across Wales is underway². While the improvements on the A55 Abergwyngregyn to Tai'r Meibion and improvements to the A40³ Llanddewi Velfrey to Redstone Cross are not included in the review, the A55 Junctions⁴ is being considered within the review's remit.

1.4 To enable the A55 Junctions operation to form part of the review, it was decided in September 2021 to postpone the public inquiry into the scheme. This would mean that construction would be delayed beyond summer 2023, and consequently, it would be beyond the scope of the ERDF programme. As a result, Welsh Government officials have requested that it is withdrawn from the programme

1.5 This means that the A55 Junctions operation is no longer part of the final evaluation. However, before its withdrawal, material had been gathered on the progress of the operation so far, so for information, the interim evaluation report is included as Annex F.

¹ [Plenary 22/06/2021 - Welsh Parliament \(assembly.wales\)](#) Deputy Minister's [Statement to the Senedd](#)

² [Roads review | GOV.WALES](#)

³ [A40: Llanddewi Velfrey to Redstone Cross improvements | GOV.WALES](#)

⁴ [Written Statement: A55 improvements junctions 14 to 16 \(15 September 2021\) | GOV.WALES](#)

1.6 The interim evaluation was originally intended to be undertaken when the operations were part way through delivery. However, the operations have been subject to some delays (see the respective operation sections below), two of them (A40 Llanddewi Velfrey to Redstone Cross, and A55 Junctions 15 and 16) are still at a relatively early stage. The evaluation findings should be considered in this context.

About the ERDF-funded road operations

1.4 ERDF-funding was secured by the Welsh Government as part of the 2014-20 ERDF West Wales and the Valleys Operational Programme (OP)⁵ to deliver improvements to two arterial roads in Wales: the A55 and the A40. **The road operations include:**

- **New highway on the A40 Llanddewi Velfrey to Redstone Cross**
- **Improvements to the A55 between Abergwyngregyn and Tai'r Meibion⁶**

1.7 The strategic rationale for investment in the schemes is set out in the Operational Programme. This contains an objective to invest in the **Trans-European Transport Network (TEN-T)**, a planned network of roads (and other infrastructure) which aims to “*develop an integrated multimodal transport network allowing people and goods to move quickly and easily across the EU. This is intended to support the development of the internal market and reinforce economic and social cohesion*”.⁷

1.8 The OP specifically highlighted investment on the A55 and A40, noting a preference for a small number of significant schemes in order to maximise impact. The core investment rationale set out in the OP is economic: Specific Objective 4.1 states that investments should aim to mitigate peripherality and “*will need to demonstrate that they are addressing genuine bottlenecks in terms of access to employment or that they are unlocking opportunities for economic growth at a regional level rather than just affecting sub regional or local choices for business locations... There should be an expectation that investment will leverage additional private sector investments (e.g., through inward investment)*”⁸. Operations are also expected to make a positive contribution to sustainable travel options, including through the provision of cycleways, footpaths, etc. in addition to the improved highway.

⁵ [Welsh European Funding Office, ERDF West Wales and the Valleys Operational Programme 2014-2020](#)

⁶ And Improvements to A55 Junctions 15 and 16 at Llanfairfechan and Penmaenmawr (now withdrawn from the ERDF programme, as set out in paragraphs 1.2-1.5)

⁷ [Research Briefing: Trans-European Transport Network \(TEN-T\) – a quick guide, National Assembly for Wales](#)

⁸ [Welsh European Funding Office, ERDF West Wales and the Valleys Operational Programme 2014-2020](#)

1.9 In addition to the economic benefits, the operations are expected to contribute to a broader range of environmental, transport and social benefits locally. More detail on the road schemes, including the rationale, aims and objectives, and delivery progress is set out in Section 2.

Aims and objectives of the evaluation

1.10 The overall aim of the evaluation is to assess the delivery of each operation against the indicators set out in its business case (including the ERDF Result and Output Indicators), explore the likely wider outcomes and impacts, and provide recommendations for future, similar activity. The evaluation seeks to capture and explore how the operations achieved their aims, any unintended outcomes, and to identify key lessons relevant to operation delivery.

1.11 To achieve this aim, this evaluation:

- develops a **logic model** for the schemes to inform the development of an evaluation framework
- assesses the **efficiency of the programme management and monitoring processes** and identifies how these may be improved for future, similar programmes
- assesses the success of each operation in meeting the **specific aims and indicator targets** set out in the relevant business plans
- assesses the success of the operations in meeting the **specific aims and objectives set in relation to the Cross-Cutting Themes (CCT)**
- assesses to what extent the operations met or are likely to achieve the **outcomes** they sought to achieve, including the wider social, environmental and economic outcomes and impacts
- examines the overall contribution of the operations to the Welsh Government, WEFO and regional strategies and policies
- considers the feasibility of conducting a counterfactual analysis and present approaches where appropriate
- identifies any **key lessons relevant to this and future operations** to achieve the Welsh Government's strategic aims.

1.12 A single evaluation is being developed to cover the operations. Each operation has a separate allocation of ERDF funding and has its own governance, management and oversight arrangements. However, all contribute to Strategic Objective 4.1 of the Operational Programme, and they share similarities in terms of output indicators

and management and delivery mechanisms. A single evaluation enables the evaluation requirements of each individual operation to be addressed, while supporting a wider strategic view through the synthesis of findings from both operations.

Methodology for the interim evaluation

1.13 The interim evaluation has been informed by three distinct research activities, undertaken between January and July 2021. These built on an earlier phase of research to inform the development of the Evaluation Plan and included:

- **A desk-based review of policy/strategy documents**, including:
 - a) National strategies (such as *Future Wales: The National Plan 2040* and *An Active Travel Action Plan for Wales*)
 - b) Local and regional strategies (such as the *South West Wales Regional Plan for Regeneration* and *A Growth Deal for North Wales*)
 - c) Documents relating to recovery post-COVID-19.
- **Consultations with 31 stakeholders**. These took the form of bilateral semi-structured interviews. Consultees included representatives from:
 - a) Project delivery teams, including representatives from the Welsh Government and the contractors (12)
 - b) Regional representatives from the Welsh Government, including Chief Regional Officers, Head of Regional Planning, and the Chair of the North Wales Economic Ambition Board (5)
 - c) Business and community organisations (7)⁹
 - d) Local authority representatives, including Pembrokeshire County Council, Conwy County Borough Council, Gwynedd Council, and the Isle of Anglesey County Council (7).
- **Analysis of programme monitoring data**, including progress reports for each of the operations.

⁹ Note that only one business and one business representative organisation was consulted with as part of the Interim Evaluation due to a low response rate.

Structure of the report

1.14 The structure of this report is set out as follows:

- Section 2: National policy and economic context
- Section 3: Interim Evaluation findings: A40 Llanddewi Velfrey to Redstone Cross
- Section 4: Interim Evaluation findings: A55 between Abergwyngregyn and Tai'r Meibion
- Section 6: Conclusions, recommendations and issues for consideration in the final evaluation stage.

1.15 Five supporting annexes are provided:

- Annex A: Background and context to the schemes
- Annex B: Overview of national/ local strategies and policies
- Annex C: Overview of the management and delivery models for the Welsh Government infrastructure projects
- Annex D: Logic model and theory of change
- Annex E: Appraisal of counterfactual evaluation options.
- Annex F: Interim evaluation findings for the subsequently withdrawn Improvements to A55 Junctions 15 and 16 at Llanfairfechan and Penmaenmawr operation.

1.16 The following **naming convention** will be used to reference the road operations throughout the report:

- '**A40 improvements**': the new highway on the A40 Llanddewi Velfrey to Redstone Cross in South West Wales
- '**A55 Abergwyngregyn**': the improvements to the A55 between Abergwyngregyn and Tai'r Meibion in North Wales
- '**A55 Junctions**': the improvements to A55 Junctions 15 and 16 at Llanfairfechan and Penmaenmawr in North Wales (subsequently withdrawn from the ERDF programme - see Annex F).

2. National policy and economic context

- 2.1. This section sets out the strategic context within which the road operations are being developed. It provides an overview of the existing transport network and explains the transport policy context, its evolution and the continued relevance of the operations.

Transport infrastructure

Mid and South West Wales

- 2.2. The strategic transport infrastructure network in Mid and South West Wales¹⁰ broadly runs east-west. It includes the western end of the M4 motorway, the A40 trunk road and the western part of the South Wales Main Line. It also includes five of the nine ports in Wales (see Figure 2.1), including Milford Haven (the largest port in Wales¹¹ and the fourth largest port in the UK by volume of freight)¹².

Figure 2.1: Map of the major seaport locations in Wales (2018), including Holyhead, Fishguard, and Milford Haven.



Source: [Welsh Government: Statistical Bulletin, Sea transport 2018](#)

- 2.3. The **A40 Trunk Road** (which is approximately 260 miles in length) **provides an important strategic link to West Wales**. It serves the county town of Haverfordwest, the tourist economy of central and north Pembrokeshire and (via the

¹⁰ Defined as the local authority areas of Carmarthenshire, Ceredigion Neath Port Talbot, Pembrokeshire, Powys and Swansea

¹¹ Welsh Government, [Sea Transport: 2017](#)

¹² In 2018, it handled 32.0 million tonnes (Mt) of traffic which was 6.6 per cent of the UK total for 2018. Freight traffic at Milford Haven accounts for 62.0 per cent of all Welsh port traffic (see Welsh Government, [Statistical Bulletin, Sea Transport: 2018](#))

A4076) the town of Milford Haven in the south. It is of national and international significance as **part of the E30 TEN-T route**, forming the key road link connecting continental Europe and Ireland, providing access to the ports of Milford Haven and Fishguard.¹³ The A40 route is strategically important as it provides access to the Haven Waterway Enterprise Zone and the opportunities it presents in renewable energy and port-related activities.¹⁴

- 2.4. The road infrastructure in Mid and South West Wales is also important in enabling access to employment for residents; particularly as the region is a predominantly rural area, with limited access to public transport. According to census data from 2011¹⁵, three quarters (75 per cent) of workers (aged 16-74) living in the region travelled to work by car, van, motorcycle, scooter or moped. This corresponded to around 293,000 persons across the region. A smaller proportion (12 per cent or 48,000 persons) travelled on foot or by bike, and only four per cent travelled by train, bus, minibus or coach.

North Wales

- 2.5. Strategic transport infrastructure in North Wales comprises a major port and ferry port in Holyhead on the Isle of Anglesey, one of the two airports in Wales, the A55 trunk road and the North Wales Coast Line.
- 2.6. Holyhead, the third most important port in Wales by freight volume¹⁶, is the main port for freight and sea passenger transport with Ireland. In 2018, 556,000 lorries and unaccompanied trailers passed through Welsh ports to and from Ireland; 81% of this traffic went through Holyhead.
- 2.7. **The A55 trunk road** is approximately 87 miles from Chester to Holyhead and **is the main coastal route and principal economic artery of North Wales**. It is an important link for local towns and communities across North Wales, linking with local roads to service the rest of the region and with the A470 to South and Mid Wales. It also links North West Wales with North West England and the wider motorway network. It provides a link to key Enterprise Zone employment sites in the Isle of Anglesey and the Port of Holyhead, and to important visitor economy

¹³ Outline Statement of The Welsh Government's Principal Submissions to be put forward at The Public Local Inquiry December 2019

¹⁴ The Enterprise Zone is an attractive location for energy companies with its excellent access to energy infrastructure and established supply chain. The Enterprise Zone is also gaining a marine energy focus, given its deep-sea port facilities combined with marine conditions suited to wave and tidal stream technologies, plus the benefit of electricity grid access –[Haven Waterway Enterprise Park](#).

¹⁵ ONS, [2011 Census Data](#)

¹⁶ [Welsh Government: Statistical Bulletin, Sea transport 2018](#)

locations such as Snowdonia National Park and UNESCO World Heritage Sites¹⁷. The A55 also serves the commercial and ferry port of Holyhead. The A55 is part of TEN-T Route E22.

Figure 2.2: Transport infrastructure in North Wales



Source: Welsh Government: [Summary statistics for Welsh economic regions: North Wales 2019](#)

2.8. The road also provides important transport infrastructure for employment access in North Wales. Census data from 2011¹⁸ shows that 75.7 per cent of workers (aged 16-74) living in North Wales travelled to work by car, van, motorcycle, scooter or moped (this corresponded to approximately 237,000 persons). A small proportion of workers travelled by foot or by bike (11.9 per cent) or by train, bus, minibus, or coach (5.1 per cent).

Assessment of continued strategic fit

2.9. The national strategic context for the 2014-20 OP was informed by *One Wales: Connecting the Nation*, the national transport strategy published in 2008. This emphasised sustainability as a central principle and included an aim of “*getting the most out of the existing transport system*”¹⁹.

¹⁷ For example: Pontcysyllte Aqueduct, Conwy Castle, and Caernarfon Castle.

¹⁸ ONS, [2011 Census Data](#)

¹⁹ Welsh Government (2008), [One Wales: Connecting the Nation – the Wales Transport Strategy](#)

- 2.10. Since then, the policy context has evolved radically, with a progressive strengthening of measures to reduce Wales' carbon footprint and to increase the relative prominence of active travel and public transport within the Welsh transport mix.
- 2.11. As part of this, the new Welsh Government elected in May 2021 created a Minister of Climate Change portfolio, which brought together a number of portfolios including transport. Subsequently, in June 2021, the Deputy Minister for Climate Change announced a freeze on new road building projects, whilst a review of highway schemes across Wales is undertaken.²⁰ In his announcement, transport was acknowledged as a key contributor to Wales' total emissions (circa 17%), and the review aims to reduce transport emissions to achieve Wales' target of net zero emissions by 2050.

“We need a shift away from spending money on projects that encourage more people to drive and spend more money on maintaining our roads and investing in real alternatives that give people a meaningful choice.”

Lee Waters, Deputy Minister for Climate Change

- 2.12. As noted earlier, the A55 Abergwyngregyn and A40 improvements will not be affected by the freeze, although the Deputy Minister announced in September 2021 the postponement of the Public Local Inquiry for the A55 Junctions scheme²¹. As this will delay construction beyond the scope of the ERDF programme, Welsh Government officials requested in September 2021 that the operation should be withdrawn from the programme

Relevant Welsh Government strategies

- 2.13. A series of recent strategies are relevant to the delivery of the three operations.
- 2.14. In relation to overall **decarbonisation objectives**, *Prosperity for All: A Low Carbon Wales* was published by the Welsh Government in 2019²². This outlines several significant measures to support carbon reduction: relevant to transport, these include:

- **an additional £60 million investment over three years to implement the Active Travel (Wales) Act 2013**; the Active Travel Act requires the Welsh

²⁰ Welsh Government (2021) [Press release: Freeze on new road projects to be announced](#)

²¹ [Written Statement: A55 improvements junctions 14 to 16 \(15 September 2021\) | GOV.WALES](#)

²² Welsh Government (2019), [Prosperity for All: Low Carbon Wales](#)

Government to take reasonable steps to enhance the provision for walkers and cyclists whenever it invests in highway infrastructure, therefore provision for active travel are key requirements of each of the operations.

- A **Sustainable Transport Hierarchy**, first presented in Planning Policy Wales (2018). This places walking and cycling at the top of sustainability rankings, followed by public transport, and then Ultra Low Emission Vehicles (ULEV). Other private motor vehicles sit at the bottom of the hierarchy.

2.15. Since the publication of *Low Carbon Wales*, the Welsh Government published its *Net Zero Wales* plan in October 2021²³. This sets out 123 policies and proposals to achieve net zero carbon emissions by 2050. In relation to transport, these include a commitment to reduce passenger transport emissions by 22% by 2025 (over a 2019 baseline) and by 98% by 2050. Demand reduction and modal shift are seen as key contributors to this, with the *Plan* setting an ambition to reduce the number of car miles per passenger by 10% by 2030²⁴.

2.16. In relation to **strategic planning**, *Future Wales: The National Plan 2040* provides a new national development framework set in the context of the Wellbeing of Future Generations Act²⁵. In common with wider strategy, it emphasises decarbonisation and sustainability, although contains a series of wider policies that support the continued rationale for investment in the three road operations:

- **Policy 4 - Supporting Rural Communities**. The Welsh Government will support investment in the road network to maintain or improve rural accessibility, sustainability and community well-being.
- **Policy 10 - International Connectivity**. Holyhead Port (which is served by the A55), the Haven Waterway (which includes the ports of Milford Haven and Pembroke Dock) and Fishguard Port (both of which are served by the A40) are identified as Strategic Gateways that facilitate international connectivity. The Welsh Government sets out its commitment to working with stakeholders (including operators, investors, and local authorities) to support these Gateways and maintain their international connectivity roles. One method of support will be via infrastructure investments.

²³ Welsh Government (2021), [Net Zero Wales: Carbon Budget 2, 2021-25](#)

²⁴ Welsh Government (2021), [Net Zero Wales: Carbon Budget 2, 2021-25](#), p.82

²⁵ Welsh Government (2021) [Future Wales: National Plan 2040](#)

- **Policy 11 - National connectivity.** The Welsh Government will support and invest in improving national connectivity; key to this will be investing in a strategic road, rail, bus and cycle network.

- 2.17. In relation to **transport policy**, in November 2020 the Welsh Government published a draft Wales transport strategy (*Llwybr Newydd*) for consultation.²⁶ The draft strategy outlines a vision for an accessible and sustainable transport system that is ‘*good for people and communities, good for the environment, good for the economy and places in Wales, and good for culture and the Welsh language*’. To achieve the long-term ambition, the Welsh Government has developed an initial set of five-year priorities which aim to address the most pressing issues. The priority which is of most relevance to the operations is Priority 3: safe, accessible, well-maintained and managed transport infrastructure. As part of this priority, the Welsh Government has committed to ‘*future-proof current transport infrastructure to make safe and attractive active travel provision, tackle congestion, improve accessibility, embrace innovation and respond to climate change*’. Implicit in this, is improving existing transport infrastructure through investment.
- 2.18. These new and emerging strategies demonstrate that there has been an observable shift towards a greater prioritisation of low-carbon and environment aims and targets, and this is now central to the Welsh Government strategy. The operations contain ambitions to improve air quality, enhance biodiversity and promote active travel along the routes, and continue to address the connectivity and economic objectives highlighted above. However, demonstrating their contribution to a more sustainable transport mix is likely to be increasingly important to their continued ‘strategic fit’.

Local and regional strategy

- 2.19. Improved connectivity through investment in existing transport infrastructure is also recognised as a priority in local strategies and policies. For example, one of three key principles in *A Growth Deal for North Wales* (Connected North Wales), published by the North Wales Economic Ambition Board in October 2018²⁷, concerns improving transport infrastructure to improve connectivity to and within the region. In South West Wales, the *Pembrokeshire Recovery and Regeneration*

²⁶ Welsh Government (2020) [Llwybr Newydd: a new Wales transport strategy](#)

²⁷ North Wales Economic Ambition Board (2018) [A Growth Deal for North Wales](#)

*Strategy*²⁸ emphasises the importance of investing in key infrastructure to support the local economy and its main industries. The A40 Llanddewi Velfrey to Redstone Cross improvements is cited as an example of such investment.

Responding to COVID-19

- 2.20. Various papers have been published at a national and local level regarding the impact of COVID-19 on the regional and local economy and on behaviours in terms of travel and working patterns.
- 2.21. In February 2021, the Welsh Government published *Our Economic Reconstruction and Resilience Mission*, setting out a plan for economic recovery from the pandemic. This reinforces the themes set out above, and also highlights the potentially permanent impacts of COVID-19 on work and travel patterns; outlining the Welsh Government's ambition to capitalise on the opportunities offered by this. For example, to continue to reap the environmental benefits associated with increased home working (specifically reduced pollution and congestion), the *Economic resilience and reconstruction mission* sets a 'long-term ambition' for 30% of the workforce to work flexibly and remotely²⁹. It is likely that this will result in reduced road usage with fewer people travelling to work. In the assessing the outcomes of the road operations (such as road usage and journey times), the evaluation will need to recognise these potential shifts in working patterns.
- 2.22. Linked with this, the Welsh Government has committed to work with trade unions, local authorities and passengers to build on trials of demand responsive public transport; put clear emphasis on minimising the need to travel in the finalised Transport Strategy; and invest a further £15 million to support active travel as an investment in public health and to achieve sustained changes in travel behaviour.
- 2.23. Further information regarding the impact of COVID-19 on the delivery of the operations is set out in the respective operation sections below.

²⁸ Pembrokeshire County Council (2020) [Renew and Regenerate. Pembrokeshire. A great place to visit, live and work, 2020-2030](#)

²⁹ Welsh Government (2021), [Our Economic Resilience and Reconstruction Mission, p.11](#)

3. New highway on the A40 Llanddewi Velfrey to Redstone Cross

3.1 This section sets out an overview of the A40 improvements operation, including the background and rationale and the scheme description and progress, and the interim evaluation findings.

Rationale for the A40 improvements operation

3.2 Improvements to the A40 were first identified as being important in the Welsh Government's **Trunk Road Forward Programme** (TRFP), published in 2002. The report stated that the A40 in West Wales had "*the lowest standard of the Trans-European Road Network in the United Kingdom*"³⁰ and that improvements to the road would be economically beneficial³¹.

3.3 A Welsh Transport Appraisal Guidance (WelTAG)³² study undertaken in 2017 identified a variety of transport problems associated with the route. These included:

- Unimproved sections of the A40 pass through the middle of population centres (e.g., Llanddewi Velfrey village centre) which splits communities and means that speed limits have to be reduced (to 40mph in some instances). These conditions lead to community severance, poor operation in terms of acting as a link road to West Wales, and poor traffic safety.
- There are long lengths in each direction of single carriageway with no safe overtaking opportunities. This leads to driver frustration, risky manoeuvres and collision incidents. STATS19 police records indicate that, in the 10-year period between 2006 and 2015, there were 9 accidents on the section of A40 in Llanddewi Velfrey with a speed limit of 40mph and a further 13 accidents were recorded between Llanddewi Velfrey and Penblewin Roundabout. The accident records include several accidents that involved head on collisions or collisions whilst overtaking.
- The A40 is susceptible to unreliable journey times caused by slower-moving and larger volumes of traffic and congestion, particularly during holiday periods and during busy periods at the ports. For example, during summer, traffic can increase by over 30%. 'Platooning', caused by convoys of heavy goods vehicles from the ferry ports, slow-moving agricultural vehicles and high volumes of tourist

³⁰ Welsh Government (March 2002) [Trunk Road Forward Programme](#)

³¹ Welsh Government (2019) *A40 Llanddewi Velfrey to Penblewin Improvements - Environmental Statement Chapter 3: Alternatives Considered*

³² Welsh Government (November 2018) [A40 Llanddewi Velfrey to Penblewin Improvements WelTAG Stage 1 Report](#)

traffic results in weaker connectivity to Haverfordwest, Milford Haven and other parts of Pembrokeshire, and leads to poorer perceptions of the area's accessibility amongst businesses and tourists.

- There are many side road junctions and direct accesses to properties and agricultural fields off the A40, which contribute to operational problems along the road. For example, agricultural vehicles accessing side roads and farms contribute to journey time unreliability and the safety issues highlighted above.

3.4 Several wider economic and social issues were also identified during the WelTAG process. These are relevant for background context and reinforce the economic rationale for the scheme. They include, Pembrokeshire's relatively low productivity; high concentrations of unemployment and disadvantage in Milford Haven and Pembroke Dock; and perceptions of 'remoteness' and peripherality, which are quoted in the WelTAG study as deterring inward investment, tourism and the development of the travel-to-work market within the Swansea Bay City Region.³³

Developing the business case

3.5 An addendum to the TRFP report in 2004 outlined plans for two major single carriageway improvement schemes for the A40 to the west of St Clears. The schemes were to be delivered in two phases. The first phase comprised improvements between Penblewin and Slebech Park (completed in March 2011) and the second phase comprised improvements between Llanddewi Velfrey and Penblewin.

3.6 A Strategic Outline Case for the Llanddewi Velfrey and Penblewin scheme was produced by the Welsh Government in June 2014. Since then, the focus of the scheme has been expanded to include highway improvements between Penblewin and Redstone Cross, resulting in the "**A40 between Llanddewi Velfrey and Redstone Cross**" scheme as it is known today.³⁴ In April 2019, a Full Business Case was approved with both scheme components.³⁵

³³ A40 Llanddewi Velfrey to Penblewin Improvement Outline Statement of the Welsh Government's Principal Submissions to be put Forward at the Public Local Inquiry December 2019

³⁴ Welsh Government (2014) Llanddewi Velfrey to Penblewin WelTAG Stage 1 Strategic Outline Case Report

³⁵ Welsh Government (2019) [Llanddewi Velfrey to Penblewin Improvements WelTAG Stage 3 Full Business Case Report](#)

Description of the operation

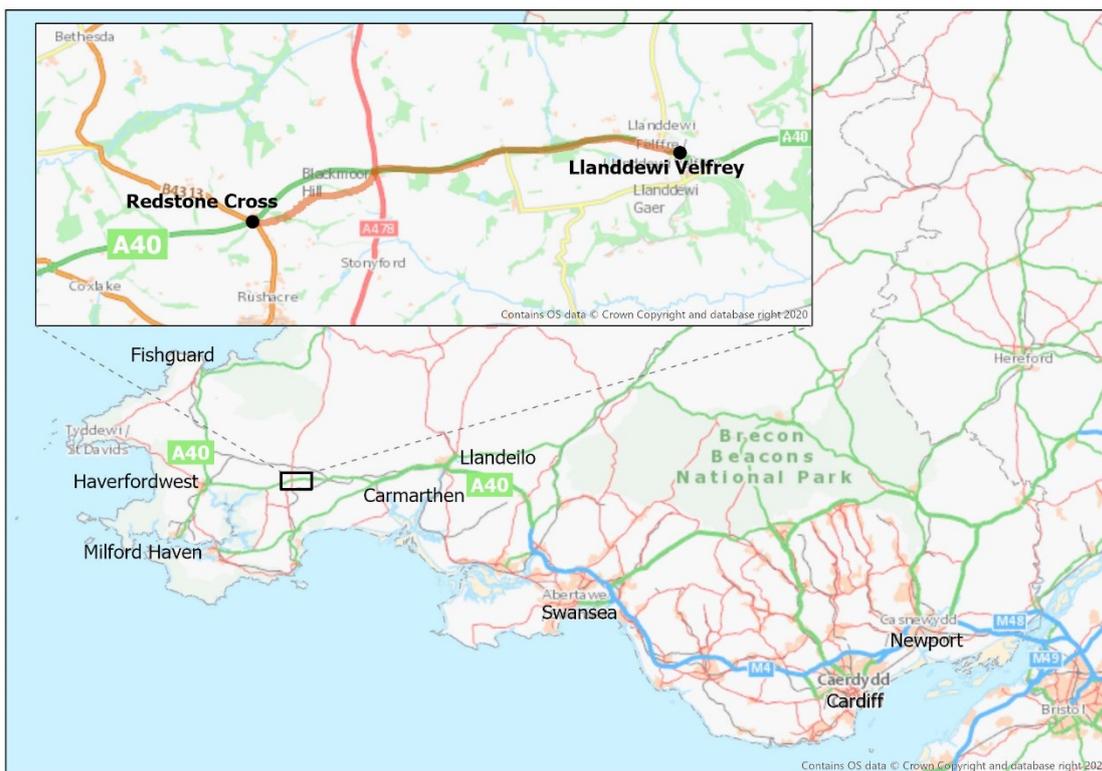
- 3.7 The operation is located in South West Wales between Llanddewi Velfrey and Redstone Cross, as shown in Figure 3.1. It comprises a new highway which will run from the Penblewin Roundabout to the west (which will be enlarged to accommodate the proposed trunk road) to the new Llanddewi Velfrey East Roundabout to the east.
- 3.8 The new road will consist of 4.3km of single carriageway, consisting of three traffic lanes, two in one direction and one in the other. This will provide 2.94km of overtaking length in the eastbound direction and 1.05km overtaking length in the westbound direction.
- 3.9 Most of the operation will be building a new carriageway, with new or diverted Public Rights of Way (PRoWs) and Private Means of Access (PMAs) provided to mitigate those affected by the operation.
- 3.10 As set out above, the A40 Llanddewi Velfrey to Penblewin improvement scheme also incorporates works on the Redstone Cross junction. The Redstone Cross scheme was originally part of a suite of schemes to be delivered along the A40. However, it became apparent that the works would not be able to be delivered in their entirety within the ERDF funding allocation period. As a result, the Welsh Government decided to drop the overall suite of schemes and incorporate the Redstone Cross scheme in the existing A40 operation. It was deemed appropriate for the A40 Llanddewi Velfrey to Penblewin operation to incorporate the Redstone Cross improvement works due to their close proximity and alignment in rationale and objectives.
- 3.11 The Redstone Cross improvement works comprises of road upgrades to 1.8km of the A40 which will deliver a three-lane carriageway, with two lanes in one direction and one in the opposite direction and will meet modern standards. The scheme will bypass Redstone Cross Junction with the new carriageway built off-line passing to the south of the existing A40 before connecting to Penblewin Roundabout. The existing road will remain for access to properties. Local roads and businesses and will be accessible from Penblewin Roundabout.³⁶

³⁶ A40 Penblewin to Redstone Cross improvements public information exhibition: December 2019

Operation costs

- 3.12 The original cost of the A40 Llanddewi Velfrey to Penblewin operation was £40m, comprising: £23m ERDF funding and £17m from the Welsh Government.
- 3.13 However, as the operation has been revised to incorporate the additional work at Redstone Cross, the total cost of the scheme has increased. The revised cost for the operation was approved in autumn 2020; **the total cost is £55.87m, comprising: £36.684m ERDF funding and £19.185m from the Welsh Government.**
- 3.14 Note that there are standardised costs associated with road improvement projects that are ineligible for ERDF funding. These costs are incurred by Welsh Government and are additional to the total WEFO project costs listed above.³⁷
- 3.15 Further information regarding the operation, including the key outputs and outcomes is set out in the operation logic model in Annex D.

Figure 3.1: Map of A40 between Llanddewi Velfrey and Redstone Cross



³⁷ [A40: Llanddewi Velfrey to Redstone Cross improvements | GOV.WALES](#)

The main aims and objectives

3.16 Funded by the ERDF 2014-2020 Operation Programme, under Specific Objective 4.1, the operation aims to address issues of peripherality and improve private investment in local areas through improvements to the functioning of the Trans-European Transport Network (TEN-T). The **ERDF Result Indicator** is a 3-8% increase in average speed along the A40 road (from a baseline average of 58kph in 2013). The **ERDF Output Indicators** are:

- Total length of reconstructed or upgraded roads (including TEN-T): 6.1km
- Footpath or cycleway created or reconstructed: 1km

3.17 The objectives of the operation, taken from the WelTAG Study³⁸, are to:

- enhance network resilience and improve accessibility along the east-west transport corridor to key employment, community and tourism destinations
- improve prosperity and provide better access to the county town of Haverfordwest, the Haven Enterprise Zone and the West Wales ports at Fishguard, Milford Haven and Pembroke Dock
- reduce community severance and provide health and amenity benefits
- reduce the number and severity of collisions
- promote active travel by cycling, horse riding and walking to provide opportunities for healthy lifestyles
- deliver a scheme that promotes social inclusion and integrates with the local transport network to better connect local communities to key transport hubs
- deliver a project that is sustainable in a globally responsible Wales, taking steps to reduce or offset waste and carbon
- give due consideration to the impact of transport on the environment and provide enhancement when practicable.

Cross-cutting themes

3.18 The regulations governing European Development Programmes stipulate that all operations funded through European Structural and Investment Funds must integrate Cross-Cutting Themes (CCT). There are three CCT: Equal Opportunities, Gender Mainstreaming and the Welsh Language; Sustainable Development; and

³⁸ Welsh Government A40 Llanddewi Velfrey to Penblewin Improvements WelTAG Stage 1 Report (November 2018)

Tackling Poverty and Social Exclusion. The aim of the CCT is to ensure good quality of future developments and promote a legacy from each scheme supported by the Structural Funds while adding value to the programmes as a whole³⁹.

- 3.19 At the start of any operation, the CCT team at the Welsh European Funding Office (WEFO) will assess the business case to outline a series of case level indicators for the operation. The case level indicators set out the activities the operation will undertake to contribute to the delivery of the CCT. Operation delivery teams identify a 'CCT champion' in accepting WEFO funding. Their role is to ensure that the CCT aims are delivered.
- 3.20 The design and delivery of the A40 Llanddewi Velfrey to Redstone Cross set out to address the CCT as follows:

³⁹ Welsh European Funding Office (2018) [Cross Cutting Themes Key Document – European Structural Funds 2014-2020](#)

Table 3.1: A40 Improvement contribution to CCT actions (taken from operation Business Plan)

Cross Cutting Theme	Agreed actions (as set out in operation Business Plan)	Actions to date
Sustainable development	<p>Develop and promote integrated transport</p> <p>Potential to implement small-scale green or blue infrastructure into ‘operation’ design.</p> <p>-</p>	<p>Impacts During Construction:</p> <p>Ongoing Environmental Management Environmental management will be implemented through the Construction Environmental Management Plan (CEMP). This will ensure that environmental issues such as surface water run-off, noise, and dust and site waste are properly addressed through the implementation and operation of the scheme. Further information relating to the approach to Environmental Management during construction, during the period of ‘aftercare’ will be provided in the Environmental Statement.</p> <p>Modern sustainable practices will be employed to minimise resources, waste and carbon emissions. This includes the planned recovery of old road materials for recycling, and the development of a solution, which allows the majority of aggregates, used to be produced on-site from ‘site won rock’ rather than from virgin stones.</p>
<i>Tackling poverty and social inclusion</i>	<p>Consult with local access groups, Third Sector organisations and local community groups.</p>	<p>The scheme has and will continue to be subject to extensive consultation with local community groups.</p> <p>Successful relationships must be established and maintained with all interested third parties, through effective Public Liaison.</p> <p>This process will primarily be facilitated by the project’s Public Liaison Officer, and an Environmental</p>

<i>Equal Opportunities and Gender Mainstreaming</i>	<p>Language / Accessibility The operation also needs to build-in Welsh language considerations. For example, ensure all materials, websites and publicity aimed at the public are made available in accessible and bilingual formats.</p>	<p>Coordinator as well as the Project Director and Project Engineer.</p>
	<p>Social Clauses / Community Benefit Schemes Wherever possible, work with contractors to incorporate a social clause/community benefit scheme, which offers some form of re-investment into the community via work experience/trainee placements and employment opportunities, invests back into the local community.</p> <p>Support / incorporate options that encourage healthier lifestyles such as walking and cycling</p>	<p>The operation will consider the Welsh Language and ensure that Welsh is not treated less favourably than English, particularly in terms of information to the public and residents about the scheme and the signage.</p> <p>The scheme will be delivered in line with best practice identified in the Welsh Government guide, Community Benefits: Delivering Maximum Value for the Welsh Pound, ensuring community benefits are realised from the public procurement. The document points towards the importance of training and recruitment opportunities benefitting the local community.</p> <p>The A40 Llanddewi Velfrey to Penblewin design and build contract will include the provision of targeted training and recruitment as a core requirement of the contract fitting clearly with this objective.</p> <p>By providing safe walking and cycling routes within the village, the schemes will encourage active travel and healthier lifestyles.</p>

Source: A40 Llanddewi Velfrey to Penblewin and Redstone Cross Business Plan, WEFO (July 2020)

Timescales and delivery progress to date

Delivery progress to date

- 3.21 Delivery of the A40 Llanddewi Velfrey to Penblewin scheme has been split into Key Stages, which cover design, statutory processes, construction, and aftercare in accordance with Transport Division's Key Stage Approval Process.
- 3.22 The Welsh Government announced the preferred route for the A40 Llanddewi Velfrey to Penblewin improvement scheme in March 2010. This included the feasibility of dualling the road.⁴⁰An update⁴¹ was undertaken in 2015 which considered options for improvements along the A40, assessed through the WelTAG appraisal process.
- 3.23 In October 2015, Arcadis was appointed as the Welsh Government's Employer's Agent to support the delivery of the scheme. In February 2017, the Welsh Government appointed Carillion, with Arup and RML (the 'Carillion Team') as their technical and environmental advisors, to develop the design of the proposed A40 Llanddewi Velfrey to Penblewin improvements up to the publication of draft Orders (Key Stage 3).⁴²
- 3.24 Following the acceptance of a business plan in 2016 and prior to the award of the Early Contractor Involvement (ECI) contract to Carillion in 2017, WEFO approved the application for financial support from ERDF.⁴³
- 3.25 Carillion entered liquidation in January 2018. The Welsh Government subsequently appointed Arup, supported by RML, to continue the development of the design up to publication of draft Orders and to support the Welsh Government through the Statutory process. Carillion going into liquidation caused major delays to the delivery of the scheme. In January 2018, the scheme was approximately eight weeks from finalising Key Stage 3. Given the work to date and the likely costs associated with changing the contractor team at this stage, the Welsh Government determined that it represented best value to appoint Arup and RML without a public tender process. The process took several months with work restarting in August 2018.

⁴⁰ Outline Statement of The Welsh Government's Principal Submissions to be put forward at The Public Local Inquiry, Part B - Statement of Need, December 2019

⁴¹ Welsh Government, A40 St Clears to Haverfordwest Study, Design Options Report, (June 2015)

⁴² Outline Statement of The Welsh Government's Principal Submissions to be put forward at The Public Local Inquiry, Part B - Statement of Need, December 2019

⁴³ Outline Statement of The Welsh Government's Principal Submissions to be put forward at The Public Local Inquiry, Part B - Statement of Need, December 2019

- 3.26 Since then, delivery of the A40 Llanddewi Velfrey to Penblewin improvement scheme progressed well. Key Stage 3, which includes the completion of preliminary design submission and publishing draft orders for side roads, was complete in Spring 2019.
- 3.27 Key Stage 4, which includes the Public Local Inquiry and Inspector's report, Minister's decision and making the Orders, initially progressed well and the Public Local Inquiry was completed in March 2020. The Minister for Economy and Transport published his decision in March 2021 following consideration of the recommendation in the Inspector's Report; this was approximately six months later than expected (originally anticipated in spring/ summer 2020). The reason for the delay was given as further consideration of the scheme by the Minister for Economy, Transport and North Wales and the Deputy Minister for Economy and Transport.
- 3.28 The project delivery team undertook work to minimise the delays to Key Stage 5/6 while waiting for the Minister's decision, including finalising procurement processes and tenders with the Welsh Government.
- 3.29 At the scoping stage, on the assumption that the scheme received a favourable decision, the procurement process (Key Stage 5) was expected to take place in August 2020 and the award of the construction works contract expected in January 2021. Construction (Key Stage 6) was due to commence in spring 2021 and finish in 2022. However, as a result of the delay in the ministerial decision, the award of the construction works contract took place in summer 2021 with construction due to start in autumn 2021 and finish in spring 2023.
- 3.30 The Penblewin to Redstone Cross improvement works that are being incorporated in the scheme were initially behind the Llanddewi Velfrey to Penblewin improvement scheme. Key Stage 3 was completed in autumn 2020 and the Public Local Inquiry for the Penblewin to Redstone Cross element took place in November 2020. Originally, it was thought that the two schemes would be delivered separately, however, the delay to the Minister's decision on the Llanddewi Velfrey to Penblewin improvement scheme meant that the two schemes could be approved together and be delivered at the same time (see Figure 3.3).

Timescales

3.31 The timescale for the A40: Llanddewi Velfrey to Redstone Cross operation as of August 2021 is set out in Table 3.2. Note that there will be additional work on the A40 on the de-trunked road which is not funded by the ERDF and so not covered in the table below.

Table 3.2: Timetable for the A40 Operation

	A40: Llanddewi Velfrey to Penblewin	A40 Penblewin to Redstone Cross
Publish preferred route	Spring 2010 – updated in 2015	Autumn 2019
Publication of draft orders	Summer 2019	Summer 2020
Statutory process	Summer 2019	Summer 2020 to early 2021
Public Local Inquiry	Spring 2020	November 2020
Procurement of contractor	Autumn 2020 to summer 2021	Autumn 2020 to summer 2021
Construction starts	Summer/ autumn 2021	Summer/ autumn 2021
Construction ends	Spring 2023	Spring 2023
Operation completion	March 2023	March 2023

Source: [A40: Llanddewi Velfrey to Penblewin \(overview\)](#) and [A40: Penblewin to Redstone Cross improvements \(overview\)](#)

Commentary on delivery progress to date

- 3.32 As set out above, the Llanddewi Velfrey to Penblewin improvement scheme has suffered significant delays, due to the collapse of Carillion and additional considerations as part of the Ministerial decision-making process.
- 3.33 However, WEFO representatives accepted that some delay was due to the decision to approve funding very early in the design process before a preferred route had been identified. This meant that increased time was needed following funding approval to accommodate the consultation process, and the final design evolved in response. While it is important to commit European funding to projects early (and in the case of the road package, suitable funding alternatives were not available), WEFO typically looks to approve schemes further along in the design process, for example, once a preferred route has been approved. The risk of a 'no deal Brexit' scenario meant that WEFO sought to approve projects quickly to avoid losing its ERDF allocation. This meant that timescales were unclear in the early stages of project development, and slippage was always a possibility. We assume that delivery risks will have been weighed up against the risk of losing the ERDF allocation and a decision made based on the balance of risk, although it would be helpful to explore this further with WEFO in the next phase of the evaluation.
- 3.34 COVID-19 has had a minimal impact on the delivery of the Llanddewi Velfrey to Redstone Cross operation. The Public Local Inquiry on the Llanddewi Velfrey to Penblewin scheme finished the week prior to COVID-19 lockdown restrictions being introduced. The Public Local Inquiry on the Redstone Cross scheme was held later in 2020 and was able to go ahead using video conferencing software. Consultees stated that holding the Public Local Inquiry virtually worked well.
- 3.35 Going forward, it is believed that COVID-19 does not pose any further risks to delivery at this stage. The procurement process has been designed in the current context of COVID-19 and expects the contractor to work as per regulations outlined by the Welsh Government. It is believed that, unless there are significant changes in the COVID-19 situation, COVID-19 will have little impact as contactors have had sufficient time to adapt.

Process evaluation findings

Project management

- 3.36 The overall management and delivery model is the same for each of the three schemes. The Welsh Government's Transport Infrastructure Delivery Division is responsible for the delivery of the operations through the procurement of a private sector contractor which is responsible for construction. Further detail regarding the arrangements is set out in Annex C.
- 3.37 The specific project management arrangements and responsibilities for the A40 Llanddewi Velfrey to Redstone Cross operation are as follows:
- A Project Director and Project Engineer at the Welsh Government have overall responsibility for the scheme.
 - Arcadis LLP is the appointed Employer's Agent. As the Employer's Agent, Arcadis represents the Welsh Government and ensure the works are done in accordance with the specification. Arcadis was appointed in 2015 and its contract runs until June 2028 (5 years after the scheme is complete).
 - The preliminary design has been undertaken by Arup which has largely been responsible for managing the day-to-day delivery up to Key Stage 4.
 - The appointed contractor's project manager will be responsible for managing the construction of the operations (Key Stage 6).
 - Construction will be supervised by the core management team, the strategic board, and the project board.
 - The core management team includes: the Project Director and Project Engineer at the Welsh Government, the Employer's Agent, and the contractor's project manager.
 - The strategic board and project board are made up of various representatives from the Welsh Government, the project Employer's Agent, and the appointed contractor. These boards are typically only called upon when something cannot be resolved by the core management team.
- 3.38 The project management processes implemented by the Welsh Government appear to adequately support the delivery of the operations. Consultees attributed this to the following reasons:
- The Project Director and Project Engineer are familiar with the Welsh Government's project management processes and can therefore sufficiently prepare and respond to challenges appropriately if they occur.

- Welsh Government often works with Arcadis and Arup. All parties know what to expect and not much familiarisation was required.

Project monitoring systems

3.39 Project monitoring systems are in place at various levels, including the Project Delivery Team, the Welsh Government and WEFO. The following paragraphs explain the systems in place at each level.

Project Delivery Team

3.40 The systems in place include:

- Monthly progress meetings between Arup and the Welsh Government. Prior to these meetings, Arup submits progress reports which outline what has been achieved and the actions to be undertaken in the next period.
- Monthly dashboards produced by Arup to summarise how the operation is performing against the objectives set out in the Wellbeing of Future Generations Act.
- Project risk registers – one for the A40 Llanddewi Velfrey to Penblewin improvement scheme and one for the Redstone Cross improvement works – which are typically reviewed and updated at key milestones. Arup also provides a summary of the top ‘design issues/ risks’ and the actions taken to mitigate them.
- ‘Project co-location days’ where the Welsh Government colleagues work from the design team’s office once a week. The purpose of these days is to ensure effective communication and alignment across different teams; however, ‘project co-location days’ were not possible due to current restrictions associated with the COVID-19 pandemic. Instead, these were effectively substituted through regular virtual meetings using Microsoft Teams.

3.41 The project monitoring systems were considered to be effective by the Welsh Government consultees, enabling them to monitor progress of delivery, manage and respond to risks, and ensure alignment across the various teams. However, consultees believed that the current arrangements would need to change once construction on site begins. The main change required will be more regular meetings between project partners, as there will be more information to report and possibly more delivery risks to manage.

Welsh Government Infrastructure Delivery Team

- 3.42 The Welsh Government has various systems in place to monitor delivery. During procurement, contractors are required to set out key milestones relating to construction in their tenders. The operation delivery team then uses these to develop a formal monitoring plan to ensure milestones are met. Furthermore, the contractor is required to outline a series of KPIs against which it will report performance.
- 3.43 In terms of project expenditure, the Welsh Government has a financial management plan to monitor spend internally. The plan compares spend profile forecasts against actual spend and is updated regularly by finance colleagues. Based on an updated delivery profile (which was re-profiled in September 2020), the latest project Progress Report (March 2021) confirms that the financial expenditure is in line with the delivery profile. Progress against the original forecast expenditure will be reviewed in more detail in the Final Evaluation Report.

WEFO

- 3.44 The Welsh Government has appointed an EU Grants Officer within the Transport Team to act as an intermediary between the project team and WEFO. WEFO has a quarterly claim process in place. Operations are expected to submit quarterly reports, using a WEFO template, to summarise progress against delivery and expenditure, monitor progress against the CCT, and update on evaluation plans. The quarterly reports are followed up with a progress meeting between the Welsh Government intermediary and WEFO.
- 3.45 Up to this point, the operation has not incurred large costs during the design and Public Local Inquiry phases. As a result, WEFO has not received regular claims or reports. However, they anticipate that claims, reports and progress meetings will become more regular as the operation moves into the construction stage. WEFO representatives suggested that the operation would benefit from more regular reporting, particularly in relation to monitoring progress against the CCT. This is described in more detail below.
- 3.46 The project delivery team commented that the Welsh Government project management and monitoring processes are “*well-rehearsed*”. They believe that current and future processes will support the effective and efficient delivery of the operations. This was demonstrated by the progress made throughout KS3, KS4 and KS5 – noting that the majority of delays have been a result of external and uncontrollable factors (with the exception of the delays resulting from early scheme

approval). As stated above, the management and monitoring arrangements will change once the operation has procured a contractor and construction begins.

CCT monitoring

3.47 Evidence from the latest progress report indicates that the A40 operation has made some progress against delivery of its CCT objectives:

- The progress report states that a number of community benefits were delivered by Carillion before it went into liquidation. These included school events, improvements to the Llanddewi Village Hall, and engagement with the local supply chain. Arup has continued to deliver community benefits through school engagement, staff training, local supply chains and appointing the same Public Liaison Officer (PLO) for continuity and engagement with the community.
- The A40 operation has made progress against the CCT under '*support people and businesses to drive prosperity*', '*support young people to make the most of their potential*' and '*build ambition and encourage learning for life*'. For example, the project team has employed a number of apprentices and graduates and supported them through their training and development. Arup also supported a two-day Carmarthenshire Careers Convention at the end of February 2019 to raise awareness of careers in civil engineering during which they engaged with 409 pupils over the two days. The operation's PLO has continued with school engagement by hosting CV clinics and interview preparation sessions.
- In terms of engaging with the community, the PLO has held regular drop-in sessions at the Llanddewi Village Hall (COVID-19 regulations permitting), to ensure effective and accessible engagement throughout the process. Regular engagement also took place with all affected landowners to arrange access for environmental and other surveys.
- The progress report indicates that the operation has also made progress against other CCT objectives – including "*build better environments, promoting good health and well-being for everyone*" - by preparing a Sustainable Development Report (which considers how the proposed Scheme has been designed and developed taking into account the Welsh Government's sustainable development principle and in the national well-being goals and local well-being objectives), and undertaking a detailed Environmental Impact Assessment as part of the Environmental Statement. Environmental mitigation has also been incorporated into the current design.

- 3.48 The CCT will be further developed during the construction phase once a contractor has been appointed.
- 3.49 While the A40 operation is delivering against many of the CCT, consultation evidence suggests that this progress has not been effectively communicated to WEFO. This meant that the CCT Team at WEFO were unaware of progress against CCT in relation to community benefits and environmental sustainability. This is, in part, because until recently formal progress meetings between the delivery team and WEFO were not taking place. This suggests that whilst the reporting arrangements of submitting progress reports with each claim for funding were considered to be sufficient by the EU grants officer in Transport, there could be better communication between Transport and WEFO in relation to the CCT.
- 3.50 Similarly, consultation evidence suggests that progress against the CCT has not been communicated with wider community stakeholders. For example, some doubts had been expressed by community consultees about the likelihood of 'community benefits' materialising in the shape of new jobs and training opportunities. Another consultee stated that the level of consultation could have been improved. For example, COVID-19 has naturally delayed progress which has resulted in a sense of frustration, therefore re-engaging with the community and getting some momentum back into the process may be beneficial. The project delivery team confirmed that CCT could not be confirmed with local residents until the construction contractor was appointed and community benefits could start to be realised. As this process is now complete, two public facing events are scheduled for September 2021.

Interim impact evaluation findings

Outputs

- 3.51 As set out in the A40 logic model (see Figure D.2), the scheme is expected to achieve the following outputs:
- ERDF outputs:
 - 6.1km of 'reconstructed or upgraded TEN-T road, including: 4.3km new highway comprised of WS2+1 road – between Llanddewi Velfrey and Penblewin and 1.8km highways improvements between Penblewin roundabout and Redstone Cross
 - 1km of footpath or cycleway created/reconstructed

- Project outputs:
 - No. apprentices supported and work experience placements⁴⁴
 - Evaluation report
 - Estimated construction years of employment - this output is not set out in the operation business case but has been identified and calculated by the evaluators as a construction activity output⁴⁵

3.52 The outputs above all remain valid but as the scheme has not yet started construction, there are no outputs to report on.

Outcomes

3.53 The outcomes from the A40 operation are dependent on the completion of the scheme. As this is not expected until 2023, no outcomes have been realised to date. The key anticipated outcomes at completion include:

- 3-8% increase in average speed along the A40 (baseline of 58kph) (ERDF Result Indicator)
- Enhanced reliability in journey times
- Shorter journey times along the route
- Reduction in the number and severity of collisions
- Reduced community severance
- Reduction in noise pollution
- Improved air quality in Llanddewi Velfrey
- Improved pedestrian and cyclist provision

Assessment of wider outcomes

⁴⁴ The original target was to support 23 apprentices and 8 work experience placements; however, this will be confirmed once the contractor has been appointed.

⁴⁵ Estimated to be 647 years. Construction years of employment is calculated using a labour coefficient benchmark from a [Homes & Communities Agency best practice note](#). This is based on 2011 values which inflation rates have been applied to. Note that while the jobs are not central to the fundamental rationale for investment, they are an ancillary effect and are considered a relevant output from the construction activities. The output estimate will be updated at the final evaluation stage when scheme specific information is available from project delivery.

3.54 Various wider outcomes are anticipated as a result of the new A40 highway, as set out in the A40 logic model (see Figure D.2). This section sets out stakeholders' perspectives on the outcomes that are likely to be realised and, where relevant, presents baseline data for those outcomes.

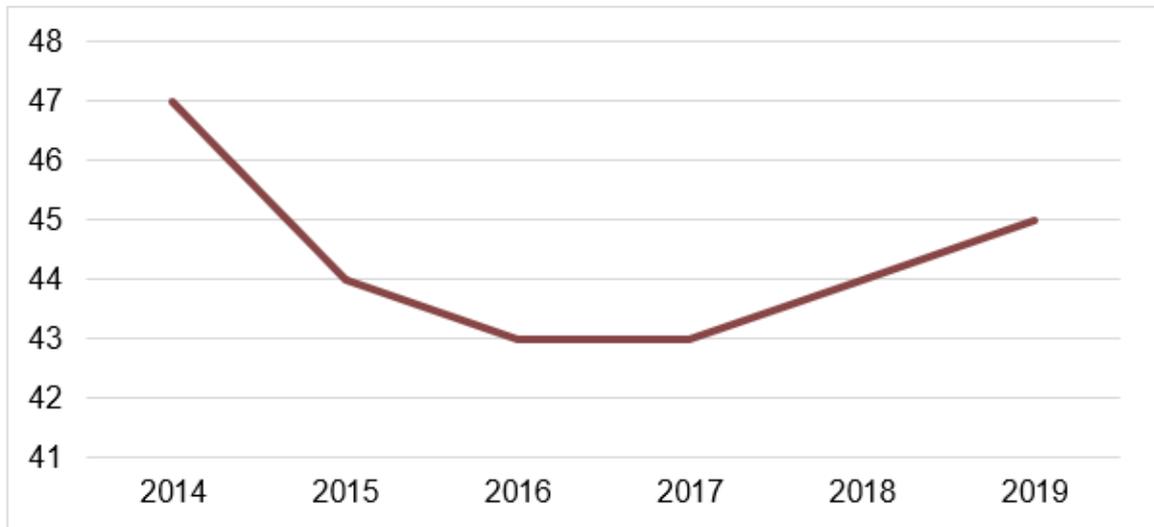
Enhanced reliability in journey times / Shorter journey times along the route

3.55 Six consultees said that the improvements to the A40 are expected to result in greater journey time reliability and shorter journey times along the route. This was considered to be of particular benefit for users outside of the local community that utilise the route every day or those passing through the area to access leisure/ tourism destinations or for access to the ports of Fishguard and Milford Haven. One consultee noted that incremental journey time savings can potentially have a large impact on visitors to tourism and accommodation businesses located in Pembrokeshire. This is because even an incremental reduction in journey times can positively alter visitors' perception of the accessibility of those areas – and will lead to a better experience for visitors.

3.56 While journey time savings were considered to be of most benefit to users passing through the area, one consultee said that the work may also reduce waiting times for local residents crossing the relevant junction/s which is likely to improve journey times locally.

3.57 Journey time savings are enabled, in part, through the increased overtaking opportunities. The revised highway design to a three-lane carriageway, with two lanes in one direction and one in the opposite direction, will enable road users to overtake slow moving traffic and HGV vehicles travelling to the ports more easily and safely. Consultees described that this is likely to reduce congestion on the road as a result, although community consultees noted that the specific benefit for local residents is likely to be limited.

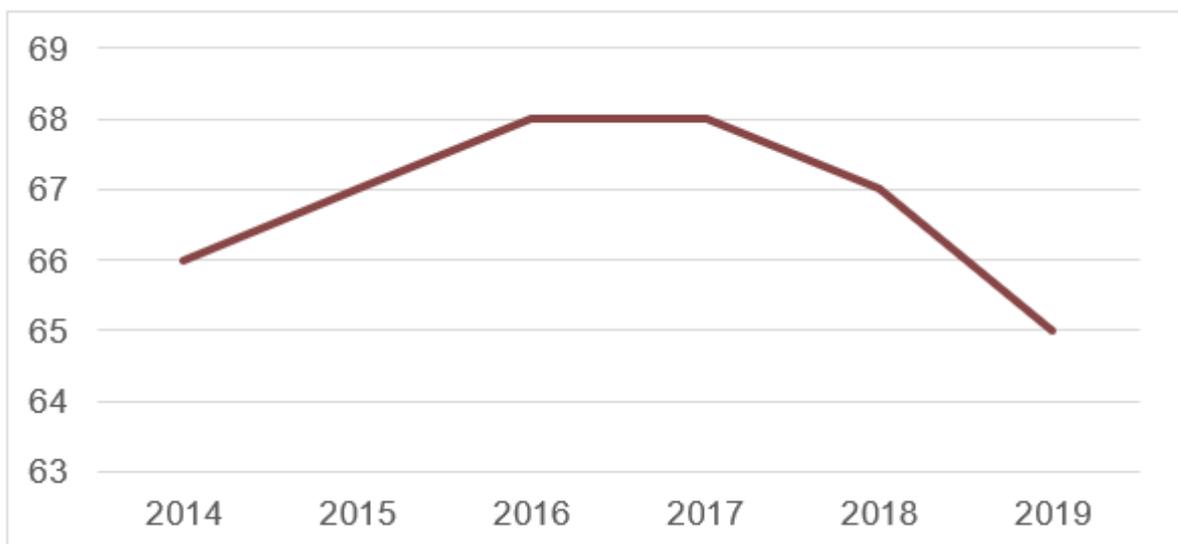
Figure 3.2: Average travel speed on the A40 per annum (mph); Haverfordwest (A40/A4076) to St Clears (A40/A477)



Source: SQW analysis of INRIX travel data, StatsWales

3.58 Analysis of INRIX highway data⁴⁶, from Haverfordwest to St Clears, shows that the average travel speed (miles per hour [mph]) on the A40 has reduced slightly from 47 in 2014, to 45 in 2019, despite a small year on year increase from 2017 to 2019. This data will be updated and analysed as part of the final evaluation of the A40 operation to assess the extent to which the ERDF Result Indicator of a 3% increase in average speed along the A40 is achieved.

Figure 3.3: Average travel time on the A40 per annum (minutes); Haverfordwest (A40/A4076) to St Clears (A40/A477)



Source: SQW analysis of INRIX travel data, StatsWales

⁴⁶ [UK Highways Agency – INRIX data](#)

- 3.59 INRIX highway data has also been analysed to understand the average travel time, in minutes, on the A40, from Haverfordwest to St Clears, and any changes over time.
- 3.60 Consistent with the reduction in average speed, this shows that the average travel time increased slightly, from 66 minutes in 2014 to 68 minutes in 2017. However, overall, it has decreased slightly (by one minute) from 2014, to 2019. This data will be updated and analysed as part of the final evaluation of the A40 operation to assess any changes in journey times.

Reduction in the number and severity of collisions

- 3.61 From a community perspective, the main benefits from the new highway are in relation to safety. In particular, the Bethesda junction (which leads onto the A40 and across to Narberth) was referenced by two consultees who described the junction as problematic and dangerous, due to high volume of traffic approaching from both directions at high speed.

“The junction is a nightmare. We’ve had a lot of accidents there and a lot of residents are looking forward to the relief of being able to get out of that junction more safely and quickly”.

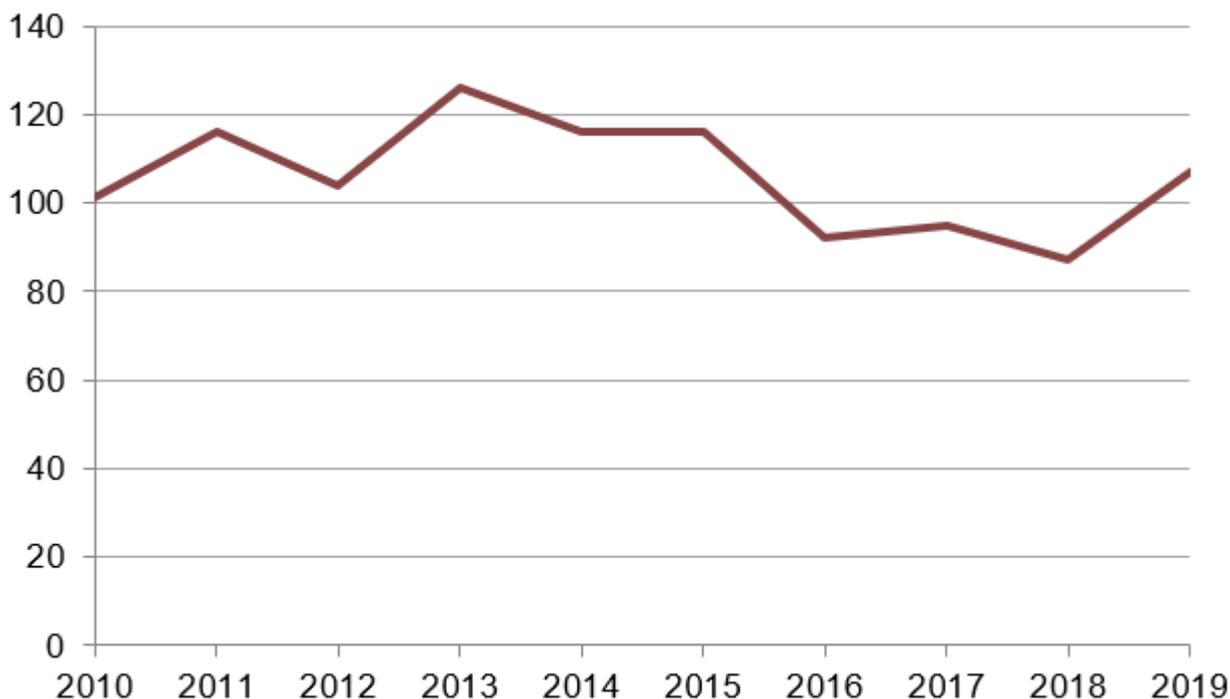
Community representative

“For local residents who find themselves stuck in the middle of the road waiting to turn, this can make for a very frightening experience. There can also be long waiting times when tourist and freight traffic is heavy.”

Community representative

- 3.62 Moreover, due to the volume and speed of traffic passing through the local villages, one community consultee said there are significant safety concerns over the current road layout which is inhibiting active travel around the village. The new road layout is expected to alleviate some of the safety concerns and thus improve the permeability of the local area and enable greater active travel.
- 3.63 Analysis of accident data across the wider stretch of the A40 quoted in the WelTAG study (Haverfordwest A4075 to St Clears A477) shows that from 2010 to 2019 there were, on average, 106 accidents per annum (see Figure 3.6). Over this period, the highest number of accidents were observed in 2013 (126). Since then, the number of accidents per annum has steadily declined (to 87 in 2018), with the exception of 2019 when the number of accidents increased to 107.

Figure 3.4: Number of accidents per annum recorded on the A40



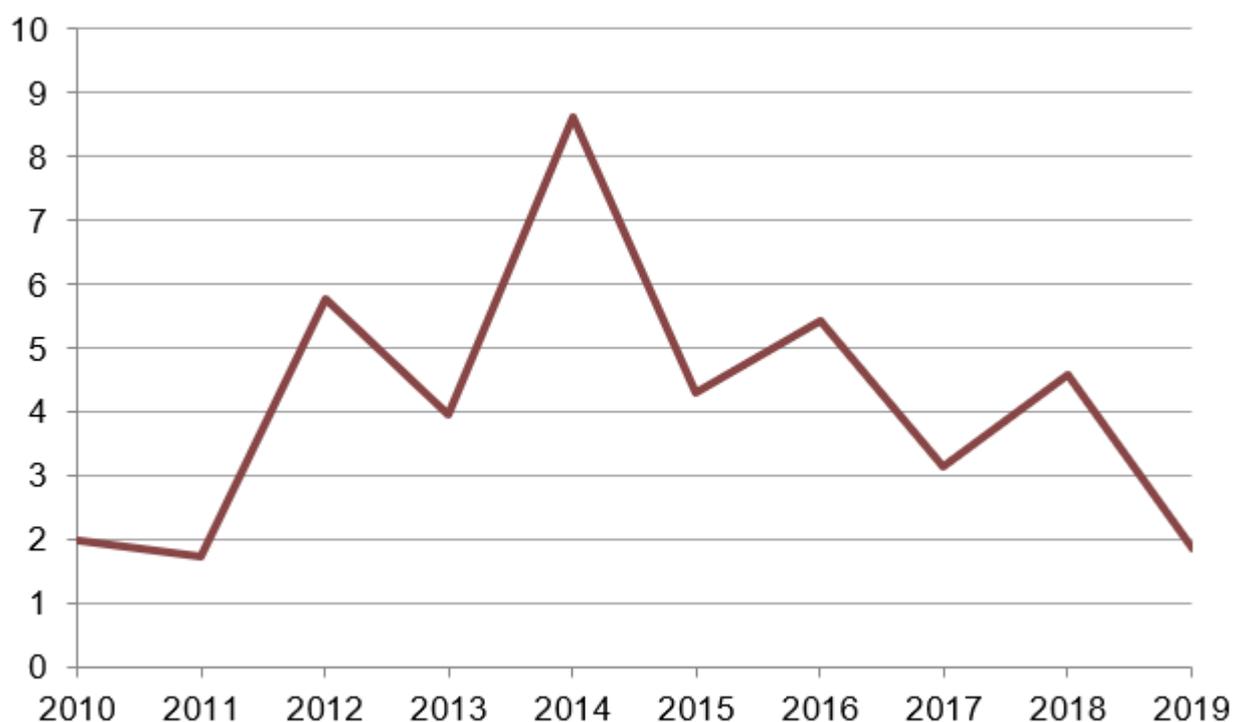
Source: SQW analysis of Accident level data, StatsWales

3.64 Figure 3.7 shows the average number of fatalities per 100 accidents on the A40 from 2010 to 2019. Over this period, the average number of fatalities per 100 accidents was four. The highest number of fatalities per 100 accidents was observed in 2014 when nine fatalities occurred. Since then, the number of fatalities per 100 accidents has reduced to two in 2019.

3.65 This data will be updated and analysed as part of the final evaluation of the A40 operation to assess the extent to which any changes have been observed in the number and severity of collisions⁴⁷, including analysis of data relating specifically to the A40 improvements operation. It must be noted that there may be other factors influencing the number of accidents so attribution to the A40 improvements scheme will be difficult.

⁴⁷ Note that a Cost-Benefit Analysis assessment undertaken as part of the operation Business plan forecasts a saving of 41 personal injury accidents resulting in 51 fewer casualties over the 60-year appraisal period.

Figure 3.5: Average number of fatalities per 100 accidents recorded on the A40



Source: SQW analysis of Accident level data, StatsWales

Improved pedestrian and cycling provision

3.66 A new combined-user (pedestrian, cyclist and equestrian) route is planned along the southern boundary of the A40 to provide an active travel link between Llanddewi Velfrey and the de-trunked A40 to Penblewin – this also links into the Redstone section. Consultees described that the operation would create opportunities for more cycle paths locally which will enable more active travel. In addition, due to a reduction in traffic flows, it was considered that local roads will be safer for cyclists and walkers, promoting the active travel options.

“It is too risky using these pavements with a pushchair or mobility scooter at the moment”.

Community representative

Improved air quality

- 3.67 Air quality is also a concern for local residents in proximity to the existing A40 highway. One consultee said that by reducing the volume of traffic and the number of HGVs travelling through the centre of Llanddewi Velfrey, the operation could have a notably positive impact on improving the air quality locally.
- 3.68 This will be explored qualitatively as part of the final evaluation as air quality data is not collected in the area around the road scheme. Note that air quality is monitored in Narberth, however, the monitoring site is located to the south of the A40, in a rural area close to the B4314. This presents some limitations with the data and will make attributing any differences to the A40 improvements scheme difficult.

Reduction in noise pollution

- 3.69 The anticipated reduction in traffic volumes and the number of HGVs using the existing A40 highway, was considered to have potentially positive implications for local noise pollution. Noise pollution was described as a major concern for local residents. Changes to the road surfaces, in particular, were thought to reduce overall noise levels.

“This has a big impact on people’s daily lives, so the scheme could drastically improve this aspect”.

Community representative

- 3.70 However, concerns were also raised regarding the location of the new highway and the associated increase in noise levels for local residents. For example, one consultee said that the new road is *“too close to the rural part of Narberth”* resulting in increased traffic and noise pollution in a previously quiet area. These issues will however have been considered as part of the consultation process.
- 3.71 These issues will be further explored as part of the final evaluation using a qualitative assessment of resident/stakeholder views.

Reduced community severance

- 3.72 One consultee described the anticipated benefits associated with reduced community severance. The benefits included reunifying the community, reconnecting local amenities, and subsequently improving the quality of life for local residents. Much of this will arguably be achieved as a result of the reduced traffic

flow through the Llanddewi Velfrey village centre (because of the new A40 highway).

- 3.73 However, concerns were raised by other community consultees regarding the extent to which the type of traffic will reduce through the village centre, as it is expected that many HGVs will still require local access to businesses; for example, to access the local quarry, dairy and food factory.
- 3.74 These issues will be further explored as part of the final evaluation using a qualitative assessment of resident/stakeholder views.

4. Improvements to the A55 between Abergwyngregyn and Tai'r Meibion

Rationale for the A55 Abergwyngregyn operation

- 4.1 In relation to the A55 were first acknowledged in a strategy document entitled “*Driving Wales Forward*” produced by the Welsh Office in 1998.⁴⁸ This recognised that a full upgrade was required to bring the section of the A55 up to the (modern) standards of the rest of the road. The existing road between Abergwyngregyn and Tai'r Meibion has been unmodified since the 1960s and does not comply with current highway standards. The highways issues include: the section does not have 1m wide hard strips at the edges of the carriageways and the vertical alignment does not comply with the current standards
- the horizontal alignment is undulating and has substantially reduced sight lines
 - junctions and accesses onto the existing roads have no acceleration or deceleration lanes and poor emerging visibility
 - there are eight gaps in the central reservation and numerous field and private accesses joining the carriageway, often used by slow-moving vehicles, which is a detriment to the free and safe flow of through traffic on the A55
 - the eight gaps in the central reservation allow vehicles to drive through and change direction of travel allowing vehicles to make right turn movements across the path of oncoming vehicles; there are currently no restrictions in place to prohibit such traffic movements
 - there is no footway along the existing road, making its use by non-motorised users particularly hazardous
- 4.2 In addition, since 2009, this section of the A55 has experienced multiple flooding events following heavy rainfall, which have caused major disruption. These events have led, with increasing frequency, to the partial or total closure of this section of the A55.
- 4.3 As the main coastal route and principal economic artery of North Wales, the effective functioning and resilience of the A55 highway is of strategic importance for the area. Improvements to the highway infrastructure will improve journey times and regional connectivity for businesses and residents of North West Wales delivering on economic objectives.

⁴⁸ [Driving Wales forward: A strategic review of the Welsh trunk roads programme](#)

Description of the scheme

- 4.4 The operation is located in North Wales between Conwy and Bangor, as shown in Figure 4.1. The improvements to the A55 between Abergwyngregyn and Tai'r Meibion in Gwynedd will widen a 2.2km length of dual carriageway trunk road to modern dual carriageway standards, and close the existing gaps in the central reservation and the numerous field and private accesses joining the A55. In addition, the operation includes:
- the reconstruction or creation of 2km of footpath or cycleway
 - the creation of an agricultural access track
 - delivery of a footway between Tan yr Allt cottages and Llain y Ffwlbart to improve pedestrian access to the local bus service
 - extension of the existing cattle underpasses at Tai'r Meibion and Wig farms
 - implementation of an improved drainage system on the A55.
- 4.5 The total cost of the operation is £20.78m, comprising £13.81m of ERDF funding and £6.96m of the Welsh Government match funding.
- 4.6 Note that there are standardised costs associated with road improvement projects that are ineligible for ERDF funding. These costs are incurred by Welsh Government and are additional to the total WEFO project costs listed above⁴⁹.
- 4.7 Further information regarding the operation, including the key outputs and outcomes, is set out in the operation logic model in Annex D.

⁴⁹ [A55: Abergwyngregyn to Tai'r Meibion improvements \(overview\)](#)

Figure 4.1: Map of A55 improvements between Abergwyngregyn and Tai'r Meibion



Source: Produced by SQW 2019. Licence 100030994. Contains OS data © Crown copyright [and database right] 2020.

Aims and objectives

4.8 Funded by the ERDF 2014-2020 Operation Programme, under Specific Objective 4.1, the operation aims to address issues of peripherality and improve private investment in local areas through improvements to the functioning of the Trans-European Transport Network (TEN-T). The ERDF Result Indicator is 5-10% increase in average speed along the A55 road (from a baseline average of 86kph). The ERDF Output Indicators are:

- Total length of reconstructed or upgraded roads (including TEN-T): 2.2km
- Footpath or cycleway created or reconstructed: 2km

4.9 The objectives of the operation, taken from the Welsh Government 'A55 Abergwyngregyn to Tai'r Meibion Improvements: Environmental Statement' are as follows, to:

- improve the standards of a strategically important highway to ensure that it provides efficient future connectivity between communities and economic hubs
- alleviate flooding issues to ensure ongoing transport connectivity and resilience to climate change

- improve pedestrian and cycling connections to provide alternative, healthier forms of travel
- enhance biodiversity and future connectivity for wildlife at the locality
- consider the aims of sustainable development within the design, construction and delivery of the operation.

Cross-cutting themes

4.10 The regulations governing European Development Programmes stipulate that all operations funded through European Structural and Investment Funds must integrate cross-cutting themes (CCT). The design and delivery of the A55 Abergwyngregyn operation has set out to address the CCT as follows:

Table 4.1: A55 Abergwyngregyn contribution to CCT actions (taken from operation Business Plan)

Cross Cutting Theme	Agreed actions	Actions to date
Tackling poverty and social inclusion	Consult with local access groups, 3rd Sector organisations and local community groups.	<p>The scheme has and will continue to be subject to extensive consultation with local stakeholders, which, given the rural nature of the location are primarily farmers/landowners.</p> <p>It is essential that successful relationships are established and maintained with all interested third parties, through effective Public Liaison.</p> <p>This process will primarily be facilitated by the project’s Public Liaison Officer, an Environmental Coordinator as well as the Project Director and Project Engineer.</p>
Equal Opportunities and Gender Mainstreaming	<p>Language / Accessibility</p> <ul style="list-style-type: none"> The operation also needs to build-in Welsh language considerations. For example, ensure all materials, websites and publicity aimed at the public are made available in accessible and bilingual formats. <p>Social Clauses / Community Benefit Schemes</p> <ul style="list-style-type: none"> Wherever possible, work with contractors to incorporate a social clause / community benefit scheme, which offer some form of re-investment into the community via work experience / trainee placements and employment opportunities, invests back into the 	<p>The operation will take the Welsh Language into consideration and ensure that Welsh is not treated less favourably than English, particularly in terms of information to the public and residents about the scheme and the signage.</p> <p>The scheme will be delivered in line with best practice identified in the Welsh Government guide, Community Benefits: Delivering Maximum Value for the Welsh Pound.</p> <p>As part of its efforts in addressing community benefit themes, the Welsh Government requires that throughout the duration of KS3, 4, and 6 the Contractor shall identify and record all benefits associated with the community. The Community Benefits Measurement Tool (CBMT) is an Excel spreadsheet that captures the full range of</p>

local community for example:
sponsoring local football teams or
paying to have community centre
redecorated etc.

Community Benefits outcomes not just those aspects that
can be easily monetised and to provide a consistent way
of measuring Community Benefit objectives. See the
section plan regarding delivery and monitoring of CCT.

The Contractor will be required to complete a Community
Benefits Report within 6 months of the completion of
construction project. The exact scope of the report shall
be agreed with the Welsh Government but shall record
details of all Community Benefit activities undertaken
through the scheme, including Targeted Recruitment and
Training as detailed below.

The Contractor will be required to allow provision for the
employment of new entrant trainees who have an
apprenticeship, trainee or employment contract with the
Contractor or a subcontractor and are engaged in a
training programme that is accepted by the Project
Manager.

The Contractor is also encouraged to provide training and
accreditation opportunities for existing personnel.

Support / incorporate options that
encourage healthier lifestyles such as
walking and cycling

By providing safe walking and cycling routes the schemes
will encourage active travel and healthier lifestyles.

Source: A55 Abergwyngregyn to Tai'r Meibion Business Plan, WEFO (July 2020)

Timescales and delivery progress to date

Progress to date

- 4.11 The A55 Abergwyngregyn operation was approved for £13.81m funding in December 2016 and work commenced on the scheme in January 2017; the operation was originally due to complete in December 2021. Ymgynghoriaeth Gwynedd Consultancy (YGC) has been appointed as the Employer's Agent for the scheme, and the construction contract has been awarded to Alun Griffiths Contractors.⁵⁰
- 4.12 The following key tasks have been undertaken to date:
- Key Stages 1 and 2, Design and Preliminary Investigation:
 - Scoping and design work were undertaken alongside public consultation.
 - Key Stages 3 to 5, Preferred route, publication of draft Orders and statutory process, and tender bids:
 - As the scheme is an 'on-line' improvement, it does not have alternative 'route options'. However, three alternatives were considered, including a 'do minimum' option. The preferred option that has been chosen is to upgrade the road to the same standard as the adjacent trunk road, close all gaps in the central reservation and remain as far as possible within the current land take.⁵¹
 - The draft Orders were published in August 2017 and subsequently made permanent, as there were no objections. The project decided to use an enabling works contract (in advance of the main construction contract) due to the time constraints on environmental work. The enabling works were completed between late 2018 and spring 2019 and involved environmental works as well as constructing some new accesses to farms.
 - Stage 6, Construction
 - The scheme is now in Key Stage 6. In late February 2020, the Welsh Government was due to appoint Alun Griffiths as the design and build contractor, with construction work due to start in late March/ early April 2020. However, due to the disruption caused by the COVID-19 pandemic, there was

⁵⁰ Welsh European Funding Office and Welsh Government (2020) A55 Abergwyngregyn to Tai'r Meibion Business Plan

⁵¹ Welsh European Funding Office and Welsh Government (2020) A55 Abergwyngregyn to Tai'r Meibion Business Plan

a delay in awarding the contract; in part, because the contractor was unable to commence construction activities as a result of the associated COVID-19 restrictions (including lockdown). Following discussions with the contractor, the project team arranged for the contractor to progress other elements of the programme which were not site-based, such as the design work. The contract (and off-site work) subsequently commenced in June 2020 and construction work started on site in September 2020. Construction work has been progressing since then and is on track to be completed by summer (June) 2022.

Timescales

4.13 The original⁵² timescale for the operation is set out in Table 4.2, against the actual or the revised timetable for the operation. This indicates that the delivery of the operation progressed as planned, until spring 2020.

Table 4.2: Original and revised timetable for the A55 Abergwyngregyn operation

	Original timetable	Estimated revised timetable
Publication of draft Orders	Autumn 2016	Autumn 2016
Enabling works contract commencement	Late 2018	Late 2018
Completion of enabling works contract	Spring 2019	Spring 2019
Start of main works construction	Spring 2020	Autumn 2020
Completion of new section of trunk road	Autumn 2021	Summer 2022

Source: [A55: Abergwyngregyn to Tai'r Meibion improvements | GOV.WALES](#) and consultations with the project team

4.14 Construction had been programmed to commence in late March/early April 2020. However, as outlined above, the contractor was unable to provide sufficient resources to enable construction to commence as planned due to the COVID-19 restrictions.

4.15 The core management team took the decision to delay construction until September 2020 and, in the meantime, to progress with the detailed design in June 2020, and the environmental, topographical and ground surveys. It was considered that this

⁵² [A55: Abergwyngregyn to Tai'r Meibion improvements | GOV.WALES](#)

would balance reducing risks as well as keeping momentum and progress with the scheme design. The construction is now expected to be completed a year later than scheduled, in summer 2022.

Process Evaluation Findings

Project management

4.16 The overall management and delivery model are the same for each of the three schemes. The Welsh Government's Transport Infrastructure Delivery Division is responsible for the delivery of the operations through the procurement of a private sector contractor which is responsible for construction. Further detail regarding the arrangements is set out in Annex C.

4.17 There was clarity across the Project Delivery Team regarding the project management arrangements, roles and responsibilities for the A55 operation. The specific arrangements are as follows:

- a Project Director and Project Engineer at the Welsh Government are responsible for overseeing the scheme
- Welsh Government is represented by an appointed Employer's Agent, Ymgynghoriaeth Gwynedd Consultancy (YGC) which ensure the works are done in accordance with the specification and contract
- the detailed design and construction work is being undertaken by Alun Griffiths Contractors and Atkins
- on the construction site, the contractor's project manager is responsible for managing the contractor's operations and a supervisor from the Employer's Agent represents the Welsh Government
- monthly progress meetings are held, during which project progress is discussed and key issues are raised
- a risk register is regularly reviewed and reported on at these meetings
- quarterly finance meetings are in place and commercial updates are discussed alongside any issues or risks that could lead to cost escalation.

4.18 The project management arrangements were described as effective and working well. This was for two main reasons:

- the project managers and the supervisor on the scheme are experienced and knowledgeable, which has meant that the construction works have progressed well and run smoothly to date with no major issues raised

- the Employer's Agent team is local and have good relationships with the main stakeholders (e.g., local councils and North and Mid Wales Trunk Road agency) as well as the statutory organisations (e.g., BT OpenReach, British Gas, Dŵr Cymru) – knowledge of key contacts and how these organisations operate has been particularly beneficial when issues have arisen on site which require a joint approach or resolution.

4.19 The strong project management arrangements have meant that whilst delays were experienced to the construction works due to COVID-19, the team worked together with the Welsh Government to advance other aspects of delivery, such as the detailed design work, which are not site-based. Therefore, the construction delays have not impacted on the overall completion date because the initial design work was brought forward.

4.20 There were no improvements suggested by consultees to the project management processes at this stage.

Communication and engagement

4.21 Overall, feedback from local consultees was positive on the level of communication and engagement on the operation. This is primarily due to the appointment of a Public Liaison Officer (PLO). The PLO has engaged with community councils and other local stakeholders to inform them about the progress of the scheme and facilitate community benefits.

4.22 However, wider stakeholders at some of the local councils (e.g., those in economic development and tourism) said they had limited detailed knowledge of the scheme and would benefit from more information. In particular, it would be helpful to share an overview of the key activities and updated timescales publicly so stakeholders can better understand progress and when construction activities will be taking place.

Project monitoring systems

4.23 Project monitoring systems are in place at various levels, including the Project Delivery Team, the Welsh Government and WEFO.

Project delivery team

4.24 The programme monitoring systems were considered to be working well by consultees at the Welsh Government and all programmes of work to date have been submitted on time and accepted. The systems in place have enabled the team

to monitor progress of delivery, manage and respond to risks, and ensure alignment across the various teams. Based on an updated delivery profile (which was re-profiled in September 2020), the latest project Progress Report (March 2021) confirms that the financial expenditure is in line with the delivery profile. Progress against the original forecast expenditure will be reviewed in more detail in the Final Evaluation Report. The monitoring systems in place include:

- As this scheme is now under construction, monitoring of delivery against key milestones is undertaken on site through the Employer's Agent.
- The contractor provides a monthly programme, which sets out their activities for the month and the works to be undertaken to complete construction, as part of their contract and this is reviewed and revised monthly. This is done in consultation with the Employer's Agent who reviews the programme. The monthly programme is used to show how well the scheme is progressing.
- A monthly progress report is produced regarding the operation activities and achievements, which is informed by the data collected on site. For example, this data includes key progress activities, timesheets and the number of hours worked each month.
- The scheme has monthly progress meetings between the Welsh Government, the contractor and the Employer's Agent.
- A project risk register is regularly reviewed and updated. It is reported on in the monthly progress reports and discussed at the monthly progress meetings.
- In terms of financial management, every month, the contractor records activities and progress and then applies for payment based on the activity undertaken during that period. This is checked and reviewed by the Employer's Agent.

Welsh Government Infrastructure Delivery Team and WEFO

4.25 Welsh Government has various systems in place to monitor delivery:

- Welsh Government is kept informed of progress through monthly progress reports and meetings. The monthly progress report includes sections on progress updates, profile against spend, the forward plan, CCT, monitoring and evaluation, publicity, procurement and risks. Monitoring of progress is undertaken by the Employer's Agent on site and reported back to the Welsh Government.

4.26 Formal monitoring arrangements between WEFO and the Welsh Government have been limited to date. The Welsh Government has discussed monitoring arrangements with the WEFO team and are planning to set up a meeting between

the contractor, WEFO and the Welsh Government to discuss this further. At the meeting, they will discuss what the contractor's original bid set out in terms of the CCT, what has been delivered to date and what they are delivering at the moment. In the future, they hope to have a monthly report and meetings every quarter on this.

- 4.27 Overall, the Welsh Government described that the monitoring processes are working well: all programmes have been submitted on time to date and accepted; the system in place allows opportunity for critical reflection and review of the contractor's programme by the Employer's Agent; and the Welsh Government receive an appropriate amount of information on the operation – with an awareness that more detailed information is available on site as required, e.g., the Welsh Government receive a summary of the number of hours worked each month, rather than the individual timesheets, which are checked by the Employer's Agent.

Cross-Cutting Themes

- 4.28 To date, the project has not formally reported against the CCT objectives as set out in section 2 to WEFO. However, as set out above, the Project Engineer and Project Director are liaising with the WEFO team to implement the relevant arrangements. Progress made against the broad CCT is provided in the operation's quarterly Progress Report. This demonstrates that good progress is being made across all the CCT, particularly since construction work started on site:

- *Sustainable Development:*
 - Sustainability is a key objective for the contractor, in particular, to minimise waste and reuse materials as much as possible on site. All material that is excavated is screened and any suitable material is stored on site, e.g., topsoil. Any other material that is excavated is graded and reviewed for its suitability for reuse.
 - Within the site, any waste is dealt with by a waste disposal contractor who separates out the waste.
 - In terms of biodiversity, the clearance work was done within the appropriate window and any planting has been kept separate to the main works contract so that it can be handled by a suitably experienced contractor.
 - Sustainable design principles have been used for certain aspects of the site, e.g., new stream crossings underneath the A55. The designers and contractors have been working with Natural Resources Wales to make sure

this work is done in a sustainable way. This has been set out in the Environmental Statement.

- *Tackling Poverty and Social Inclusion*

- Since the contract award, Alun Griffiths has had a PLO in post who has been responsible for contact between the project team and stakeholders. This includes businesses, residents, road users and local landowners. This has addressed the CCT as the PLO has ensured that all stakeholders are aware of the operation, its progress and timescales and that local people have an opportunity to contribute views and suggest community initiatives that could be supported. Some examples of community initiatives include supporting local sports teams, sharing expertise with local community councils, donating laptops to local secondary schools, and work experience placements and training on site.
- Due to COVID-19, the contractor was unable to run a public exhibition event after they were awarded the contract. However, they decided instead to put together a newsletter to introduce themselves and set out the key dates for the scheme. The PLO has been working with community councils to distribute the newsletters to local residents. They have also employed a mailshot company to send a more recent project newsletter to every property between J11 and J13 on the A55.
- Alun Griffiths has set up a community website which has key dates and project bulletins to keep the local community informed of activities and progress. People can register their interest in receiving updates on the scheme.

- *Equal Opportunities and Gender Mainstreaming*

- In terms of promoting the Welsh language, the Welsh Government policy is to publish everything bilingually and this has been the case in all material produced and at public engagement events. The contractor and Employer's Agent both have Welsh speakers in their teams. Alun Griffiths is a Welsh contractor and employs locally. Almost 75% of the workforce on site speak Welsh and they all live locally.
- The contractor has created a Good Causes Committee made up of members of the on-site team who meet to decide which initiatives the scheme should support. The committee includes the project Manager, the PLO, a Site Engineer, two Operatives and a Trainee QS. It is a mix of ages and roles. The committee discuss the causes and initiatives that are proposed by the local

community and select which ones to support. One consultee felt that this was working really well and ensures the scheme supports a range of initiatives supported by a cross-section of the on-site team. Some examples of initiatives supported to date include sports kit for a local under 8s girls' football team, sharing expertise with a local community council who want an additional car park near the Aber Falls tourist destination, surplus laptops donated to local secondary schools, advice to a local community council on the cost of works to improve an amenity area, and work experience placements and training on site.

- Feedback from the community consultations suggests that, whilst some residents acknowledge the benefits of the scheme and that it will deliver positive changes to local road infrastructure, many are concerned about the disruption caused by the construction works being undertaken and the inconvenience this will cause. These concerns often mean that local communities struggle to appreciate the longer-term or local benefits that will be achieved.
- In terms of Active Travel, there is a new Active Travel link along the route. The project delivery team want to encourage people to use more sustainable modes of transport. The Welsh Government has consulted Cycling UK, Sustrans and the local councils to ask about how they can improve Active Travel and get people to use more sustainable transport options. This has reportedly worked well.

Interim Impact Evaluation Findings

Outputs

4.29 The scheme is expected to achieve the following outputs:

- ERDF outputs:
 - 2.2km of reconstructed or upgraded roads (including TEN-T) (ERDF indicator)
 - 2km of footpath or cycleway created or reconstructed (ERDF indicator)
- Project outputs:
 - An agricultural access track created
 - A footway (2m wide) between Tan yr Allt cottages and Llain y Ffwlbart to improve pedestrian access to the local bus service
 - Extension of the existing cattle underpasses at Tai'r Meibion and Wig farms
 - An improved drainage system on the A55

- Deliver 135-person days of training and four places on Apprenticeship+ programme
- Estimated construction years of employment – this output is not set out in the operation business case but has been identified and calculated by the evaluator as a construction activity output ⁵³.

4.30 At the time of the consultations, the agricultural track was complete, and the new county road running parallel to this section of the A55 was 90% complete. The county road will provide alternative access to the fields and properties located north of the A55, as the existing junction will be closed as part of the highways improvements. The next stage is to begin the works on the A55 highway, which started in May 2021.

Outcomes

4.31 The outcomes from the A55 Abergwyngregyn to Tai'r Meibion are dependent on the completion of the scheme. As this is not expected until 2022, no outcomes have been realised to date. The key outcomes at completion include:

- 5-10% increase in average speed along the A55 road (baseline average of 86kph) (ERDF Result Indicator)
- Improvements in travel time reliability (e.g. through addressing congestion bottlenecks)
- Improved network resilience
- Improved safety by removing the need for farm vehicles to join the fast-flowing traffic.

Assessment of wider outcomes

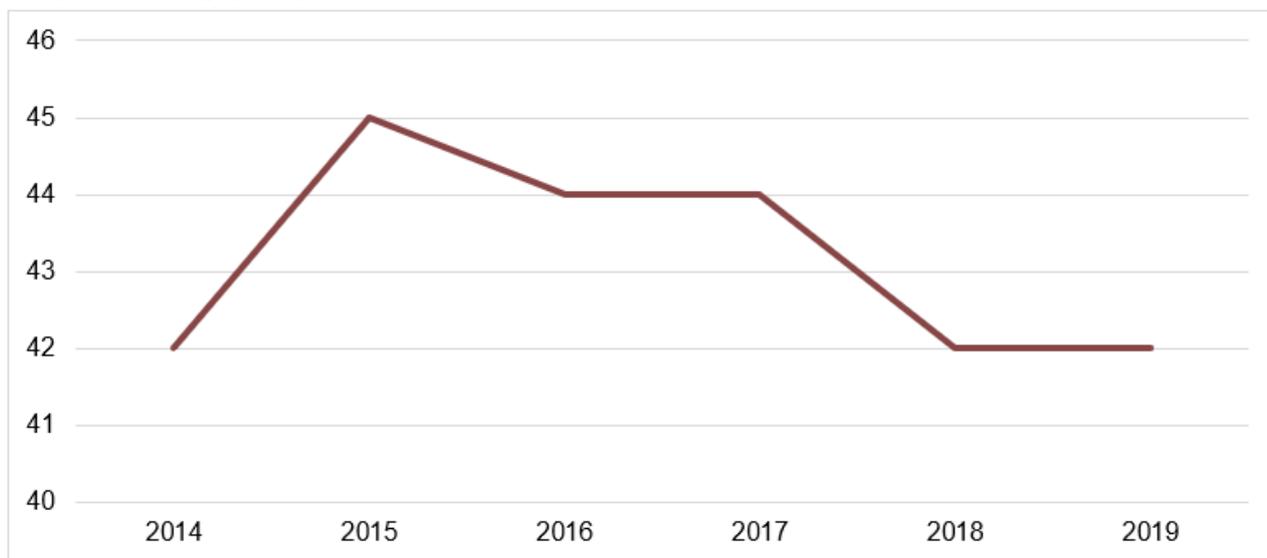
4.32 Various wider outcomes are anticipated as a result of the A55 Abergwyngregyn, as set out in the logic model (see Figure D.3). This section sets out stakeholder perspectives on the outcomes that are likely to be realised.

Improvements in travel time reliability

⁵³ Estimated 241 construction years of employment. Construction years of employment calculated using a labour coefficient benchmark from a [Homes & Communities Agency best practice note](#). This is based on 2011 values which inflation rates have been applied to. Note that while the jobs are not central to the fundamental rationale for investment, they are an ancillary effect and are considered a relevant output from the construction activities. The output estimate will be updated at the final evaluation stage when scheme specific information is available from project delivery. From 31 May to 2 July 2021, 115 employees worked on site, including direct employees, labour only, subcontractors and other.

- 4.33 The most common anticipated outcome of the A55 improvements noted by consultees was improvements to journey times and journey reliability. Although there were mixed views on the scale of the journey time savings with one local authority consultee stating that they will be “*huge*” and others describing “*slight reductions in journey time*”. This might highlight some scope for improved communications in explaining the benefits of the scheme.
- 4.34 One consultee described that, from a community perspective, the main rationale appears to be to increase the speed of traffic along the A55. This was considered to have a more strategic focus rather than to benefit the local community directly. As a result, some local people were concerned about the level of disruption they would experience as a result of construction to the benefit of the wider road network. However, local benefits were anticipated by other consultees, such as improving the wait times in accessing the A55 from particular junctions.

Figure 4.2: Average travel time on the A55 per annum (minutes); Tal-y-Bont (Bangor) (J11) to Conwy (J17)



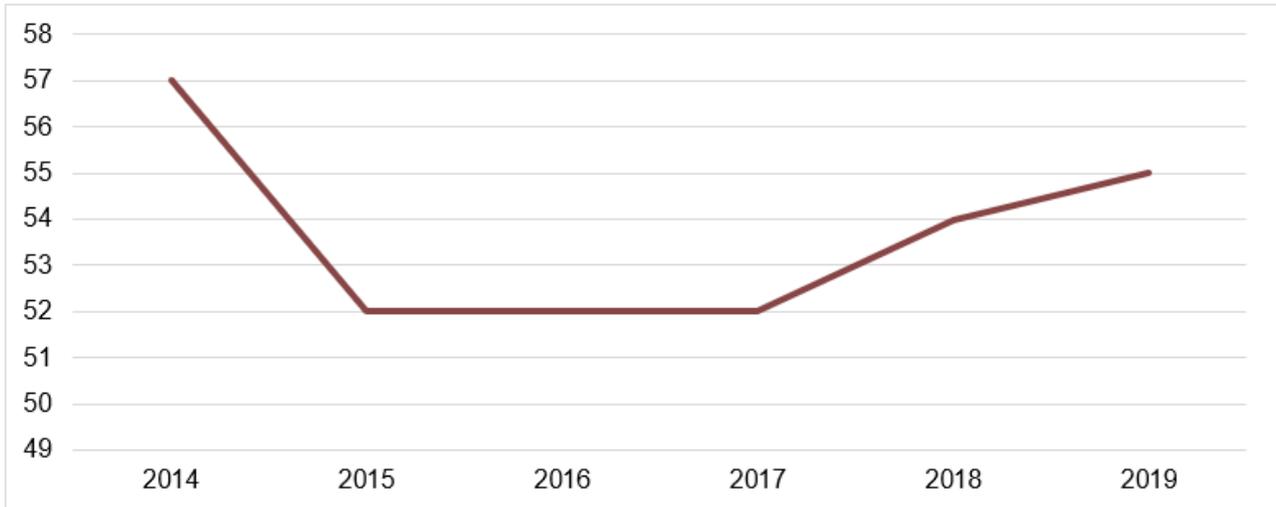
Source: SQW analysis of INRIX travel data, StatsWales

- 4.35 INRIX highway data⁵⁴, from Tal-y-Bont to Conwy, has been analysed to understand changes in the average travel time (minutes) on the A55 and any changes over time.
- 4.36 This shows that the average travel time has remained relatively static from 2014 to 2019, at an average of 42 minutes in both years. However, an increase in average travel speed was observed in 2015 to 45 minutes (+3 minutes), which then

⁵⁴ [UK Highways Agency – INRIX data](#)

decreased year on year to an average of 42 minutes in 2018. This data will be updated and analysed as part of the final evaluation of the A55 operation to assess any changes in journey times.

Figure 4.3: Average travel speed on the A55 per annum (mph); Tal-y-Bont (Bangor) (J11) to Conwy (J17)



Source: SQW analysis of INRIX travel data, StatsWales

4.37 Analysis of INRIX data shows that the average travel speed (mph) per annum on the A55 has reduced slightly from 57 in 2014, to 55 2019, despite a small year on year increase from 2017 to 2019. This data will be updated and analysed as part of the final evaluation of the A55 operation to assess the extent to which the ERDF Result Indicator is achieved: 5-10% increase in average speed along the A55.

Improved network resilience

4.38 The resilience of the network is expected to improve significantly as a result of the highway improvements. Currently, a number of challenges are experienced on the road due to flooding and safety issues, which often result in road closures. One consultee described that this has a significant impact on businesses and emergency services because of a lack of alternative viable routes. They described this outcome as the main benefit of the highways improvements.

Increased provision and improved experience for pedestrians and cyclists

4.39 The section of A55 carriageway being upgraded is not suitable for non-motorised road users and presents a potential hazard to this group. The operation is expected to improve provision for pedestrians and cyclist through a new, segregated road which runs adjacent to the eastbound carriageway between the Tal-y-Bont Interchange and Abergwyngregyn Interchange.

4.40 Two consultees noted that the active travel route is a key benefit of the scheme – although this will come at a later stage. One community consultee explained that this is a notable positive for the local village and reiterated the Town Council’s support for the route. The walking and cycling provision aim to encourage healthier lifestyles and permeability of the local area⁵⁵.

Improved journey times and journey reliability for public transport

4.41 As a result of the highway improvements, it is expected that journey times and journey reliability will also improve for public transport, namely buses operating on the route. The journey time savings could increase the attractiveness of this. While there was limited detail known on the plans for public transport on the A55, consultees described that there is greater opportunity to promote the use of public transport and to look at alternative fuels (e.g., electric buses) to support wider environmental objectives.

Enhanced biodiversity through replanting hedgerows and trees as well as improved access underneath the carriageway

4.42 Two consultees noted that environmental benefits, such as promoting biodiversity, are expected through the operation. However, further work is required with the community to support this. For example, there is potential to include additional green space at particular points along the highway.

⁵⁵ Welsh Government (2020) A55 Abergwyngregyn to Tai'r Meibion Business Plan

5. Conclusion and recommendations

- 5.1 This section sets out a summary of the findings of the interim evaluation and the key conclusions, by operation. Based on this, a number of recommendations are presented for the operations moving forward.

Assessment of continued strategic fit

- 5.2 In recent months, the policy context in Wales has changed quite radically, including the creation of a new Minister for Climate Change portfolio, which brings together a number of portfolios including transport (May 2021). This aligns with the suite of climate change objectives set out within the Programme for Government and the Welsh Government's strong emphasis on decarbonisation as a theme running through all activity. In that context, the Deputy Minister for Climate Change announced a freeze on new road building projects, whilst a review of highway schemes across Wales is undertaken (June 2021).
- 5.3 The Minister has confirmed that the A55 Abergwyngregyn and A40 improvements are not going to be included in the Roads Review. However, at the time of writing, the Public Inquiry for the A55 Junctions has been postponed until further notice so that the scheme can form part of the Welsh Government Roads Review. It is not yet clear whether the operation will go ahead as planned and has been withdrawn from ERDF funding.
- 5.4 A review of local and national policies and strategies confirms that the A55 Abergwyngregyn and A40 improvements operations continue to align with the Welsh Government's objectives to improve regional connectivity and existing transport infrastructure through investment to support economic development and improved wellbeing. While there has been an observable shift, both nationally and locally, in priorities regarding low-carbon and environment aims and targets, strategic consultees from the Welsh Government described that the operations remain relevant as they are supportive of these aims. In particular, the operations have various ambitions to improve air quality, protect biodiversity and promote active travel along the routes. However, delivery against these wider objectives is likely to be an even more important consideration in the new strategic context.
- 5.5 It is not yet clear how some of the wider economic conditions, such as Brexit and the COVID-19 outbreak, will impact on the continued relevance of the operations. In

particular, there are a number of possible implications which could result in reduced usage of the road schemes, such as:

- fewer companies using the TEN-T network to transport goods from mainland Europe to Ireland as a result of Brexit (and the additional administration requirements)
- due to COVID-19, more people will be work from home indefinitely and fewer people will be travelling to and from places of work – a position which is encouraged by the Welsh Government.

5.6 This could have an impact on the original rationale for the schemes and the anticipated outcomes. The position should be clearer by the time of the Final Evaluation.

Overview of findings – A40 improvements

Summary of operation progress

5.7 Since the preferred route for the A40 improvement scheme was announced in 2010, the operation has experienced notable delays which has meant that the operation completion date has been moved back to March 2023. In the early stages of project development, the overall timescales for the operation were unclear which meant slippage was always a possibility. This is due to the early approval of the scheme by WEFO as a result of funding pressures associated with Brexit. Since then, the operation has experienced subsequent delays resulting from the collapse of Carillion in 2018 (seven-month delay) and the delayed publication of the Minister for Economy and Transport's and Inspector's recommendation in 2020/21 (six-month delay).

5.8 Despite the delays, the latest Progress Report (March 2021) states that project expenditure is in line with the delivery profile.

Assessment of project management and monitoring arrangements

5.9 The project management arrangements appear to be robust and well-tested. There is clarity across the project delivery team on roles and responsibilities and the arrangements are functioning effectively.

5.10 The monitoring arrangements at a project delivery level are reportedly working well, enabling the team to track and monitor progress effectively. However, monitoring reports to WEFO have been limited to date, both in terms of delivery progress and

progress against CCT. This is because the operation has not yet commenced the construction stage.

- 5.11 Communication and engagement on the operation was described positively by the majority of consultees. However, there was limited local knowledge regarding the latest progress on the operation and the broader community benefits (CCT) that will be delivered.

Progress against outputs and outcomes

- 5.12 Due to the delays experienced, the operation is still in the early stages and construction has not yet commenced. Therefore, no outputs or outcomes have been realised to date – including the ERDF Output Indicators and Result Indicator.
- 5.13 Various anticipated outcomes were identified in the consultations. However, as expected, it was difficult for stakeholders to comment on what will be delivered. The final evaluation would benefit from more business perspectives to better understand some of the broader economic benefits of the operation.

Overview of findings – A55 Abergwyngregyn

Summary of operation progress

- 5.14 Since the A55 Abergwyngregyn operation was approved for funding in 2016, it has largely progressed as expected against the original timetable. However, in March/ April 2020, the construction phase was delayed by approximately six months, due to capacity issues resulting from the COVID-19 outbreak. The delivery team were able to progress with the detailed design works in the meantime. The delay has meant that operation completion date has been moved back six months, to summer (June) 2022.

Assessment of project management and monitoring arrangements

- 5.15 The project management arrangements appear to be effective and working well. This is due to the knowledge and experience of the project delivery team and the partnership arrangements with local stakeholders.
- 5.16 The monitoring systems at a project delivery level are robust, and sufficient information is provided to the Welsh Government to enable effective management and oversight. Monitoring reports to WEFO have been limited to date, both in terms of delivery progress and progress against CCT. Further discussions are underway to ensure suitable arrangements are in place.

5.17 Overall, feedback from local consultees was positive on the level of communication and engagement on the operation, particularly in regard to the role of the PLO. However, some wider stakeholders (particularly in local authorities) had limited knowledge of the operation and would benefit from more information regarding the key activities and updated timescales.

Progress against outputs and outcomes

5.18 Progress has been made towards two of the operation's outputs: the agricultural track is complete, and the county road is 90% complete. The A55 highway works will commence in the next stage of construction; this was due to start in early May 2021.

5.19 Various anticipated outcomes were identified in the consultations. However, as expected, it was difficult for stakeholders to comment on what will be achieved by the operation – although journey time savings were anticipated by most consultees. More detailed insights are expected from stakeholders following completion of the operation.

Key conclusions and recommendations

5.20 There is mixed progress in project delivery across both operations, due to various issues relevant to each of the schemes. While many of the issues were unforeseen and outside the control of the project team, some issues have taken longer than anticipated to resolve and could have been better factored into the overall timescales. Given the operations are largely being delivered in parallel, there may be opportunities for the project teams to critically reflect on the issues and to share learning across the operation teams.

5.21 While project monitoring appears to be effective at the project delivery level, strategic oversight of the operations, ahead of notable operation expenditure, is less clear, particularly from WEFO. This is demonstrated in the existing monitoring arrangements. In addition, the latest Progress Reports confirm that financial expenditure is in line with the delivery profile; this is based on a re-profiled budget undertaken and agreed with WEFO in September 2020, and therefore does not take into account the implications of project delays. Progress against the original forecast expenditure for the operations will be reviewed in more detail in the Final Evaluation Report.

5.22 Communication and engagement across the three operations has largely been positive, particularly with local stakeholders and community councils. This has been aided through the PLO position. However, additional or more frequent communication of operation updates would be beneficial, particularly to wider stakeholders, such as local authorities, in the surrounding area.

Recommendations

5.23 Based on the findings of the Interim Evaluation, four recommendations are suggested for the operations moving forward:

- It is suggested that, as per WEFO's reporting arrangements, quarterly progress reports are provided to WEFO for each of the operations moving forward, regardless of the scheme's financial expenditure. This should include updates on operation progress and progress against the CCT, as specified in the operations' business plans. This will provide clearer oversight of progress at an earlier stage in project delivery.
- Where issues and substantial delays have been experienced in operation delivery, it is recommended that teams undertake internal reviews to identify key learning (at an appropriate time) and that this learning is shared across the operation delivery teams. This should feed into the final evaluation report.
- It is recommended that the delivery teams issue additional communication of operation progress to wider stakeholders including updated timescales for key tasks/ activities. In addition, increased communication of the operations' progress towards CCT objectives is suggested, this would improve local communities' perception of the schemes and secure community engagement/ buy-in.
- From an evaluation perspective, there are four key areas which would benefit from more detailed information: the financial profile and expenditure of each of the operations, including progress against the original forecast; the reason for delays to the operations, particularly the A40 improvements; more specific timing for key milestones (for example, months rather than seasons for project monitoring purposes); and more detailed progress against CCT targets.

Next steps and implications for the Final Evaluation

5.24 The final output from the evaluation will be the Final Evaluation Report in autumn 2023. This will provide a final assessment of operation delivery progress and the achievement of outputs, CCT, and (emerging) outcomes. At the outset of this final

phase, we will review the current context with the Welsh Government and confirm the overall approach, as set out in the Evaluation Plan.

5.25 There are various factors that will need to be considered at (or, in some cases, before) this final phase:

- the impact of Brexit and COVID-19 on the usage of the TEN-T network/ road operations and whether the rationale for the operations remains valid
- approaches to secure sufficient engagement from wider stakeholders, particularly businesses, in the evaluation research
- scope for additional data collection measures to be implemented; for example, measurement of air quality on the A40.

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Annex A: Background and context to the schemes

A snapshot of the Welsh economy

The Welsh economy, in terms of Gross Value Added (GVA) per head, has grown in recent years: from 2007 to 2019 GVA per head increased by 31 per cent in Wales, in line with the UK average⁵⁶. However, Wales consistently underperforms in relation to the UK as a whole on several economic indicators.⁵⁷ For example:

- Economic output: in 2019, economic output (GVA) per head in Wales was £21,295, this was substantially lower than the £29,324 recorded for the UK⁵⁸. Furthermore, GVA per hour worked in Wales in 2018 was £29.19. Again, this was lower than the £35.03 recorded for the UK.
- Employment: the employment rate in Wales between December 2019 and February 2020 (prior to the COVID-19 outbreak) was 74 per cent in comparison 77 per cent in the UK.
- Earnings and income: the median gross weekly earnings for full-time employees in Wales in 2019 was £535 in comparison to £584.90 for full-time employees in the UK.

The Chief Economist's Report (2019)⁵⁹ states that better transport is one of main factors that will deliver improvements in relation to Wales' relative economic performance.

The local economy of North Wales, Mid and South West Wales and South East Wales

Wales is split into three economic regions, as set out in the Economic Action Plan and the draft National Development Framework⁶⁰: North Wales, Mid and South West Wales, and South East Wales (shown in Figure A.1):

- North Wales economic region comprises of six local authorities: Isle of Anglesey, Conwy, Denbighshire, Flintshire, Gwynedd, and Wrexham
- Mid and South West Wales economic region consists of the following six local authorities: Powys, Ceredigion, Carmarthenshire, Pembrokeshire, Swansea and Neath Port Talbot
- South East Wales encompasses ten local authorities: Bridgend, Vale of Glamorgan, Cardiff, Caerphilly, Rhondda Cynon Taf, Merthyr Tydfil, Blaenau Gwent, Newport, Torfaen and Monmouthshire.

⁵⁶ Stats Wales (2019) Gross Value Added (£ per head) by area and year

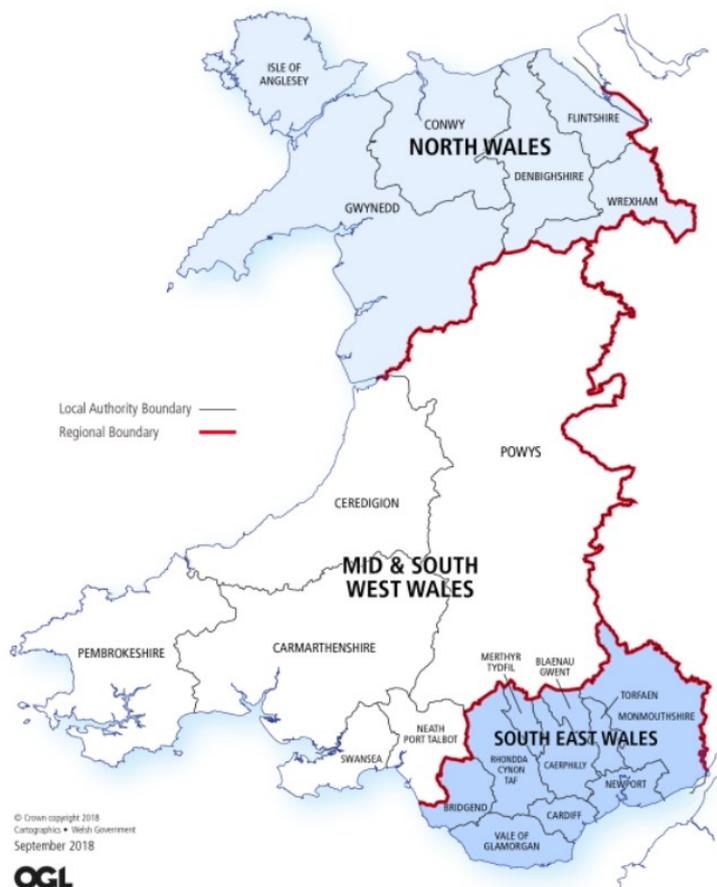
⁵⁷ [Welsh economy in numbers](#)

⁵⁸ Stats Wales (2019) Gross Value Added (£ per head) by area and year

⁵⁹ [Chief Economist's Report 2019 | GOV.WALES](#)

⁶⁰ [National Development Framework: Issues, options and preferred option](#)

Figure A.1: Map of Wales by economic region



Source: Welsh Government, [Summary statistics for Welsh economic regions](#)

Table A.1 sets out a summary of economic statistics for the Welsh regions, including GVA per head, the employment rate, economic inactivity, and average earnings. The data indicates that the regions generally underperform against the UK on economic measures. However, there are indications of growth in GVA per head, and economic performance is mixed across the regions:

- South East Wales had the highest GVA per head in 2019/20 (£21,950) and the highest average weekly earnings (£543.80). However, the economic inactivity rate remains relatively high (20.0 per cent).
- North Wales had the highest employment rate (75.9 per cent) and is in line with the UK rate. The economic inactivity rate in North Wales (18.3 per cent) is the lowest across the three regions, albeit higher than the UK rate. North Wales also had the greatest increase in annual growth in GVA per head, of 3.8 per cent. Annual growth in GVA per head across all three regions was higher than the UK growth (2.4 per cent).
- Mid and South West Wales has the lowest economic performance across the regions; GVA per head is £18,958 and it is significantly lower than the GVA per head in the UK

(£28,489). However, annual growth in GVA per head in 2018 (2.6 per cent) was slightly higher than the UK (2.4 per cent). The economic inactivity rate is also the highest across the regions (20.5 per cent).

Table A-1: Summary of economic statistics

	GVA per head (£) ⁶¹	Annual growth in GVA per head (%)	Employment rate (%) ⁶²	Economic inactivity rate (%) ⁶³	Average weekly earnings ⁶⁴ (£)
United Kingdom	28,489	2.4	75.9	17.2	584.90
Wales	20,738	2.9	73.7	19.8	535.00
North Wales	20,389	3.8	75.9	18.3	530.00
South East Wales	21,950	2.6	73.4	20.0	543.80
Mid and South West Wales	18,958	2.6	72.4	20.5	525.10

Source: Welsh Government, Statistical Bulletin July 2020

⁶¹ Data relate to 2018 and are provisional.

⁶² Rates are for those aged 16-64. Data relate to the year to March 2020.

⁶³ Rates exclude students are for those aged 16-64. Data relate to the year to March 2020.

⁶⁴ Average (median) gross weekly earnings. Data relate to 2019 and are provisional.

Annex B: Overview of national and local strategies and policies

National strategies and policies

Future Wales: The National Plan 2040 (2021)

Future Wales replaces the Wales Spatial Plan (2008) as the National Development Framework (NDF). The NDF is a spatial plan which sets the direction for where investment in infrastructure and development should occur over the next 20 years to 2040. The NDF is an important lever to address the issues and challenges faced by Wales at a national level, specifically the climate emergency, the ecological emergency, and recovery from the COVID-19 global health emergency.

The NDF outlines a series of policies that are of relevance to the operations:

- **Policy 4 - Supporting Rural Communities.** Welsh Government will support investment in the road network to maintain or improve rural accessibility, sustainability and community well-being.
- **Policy 10 - International Connectivity.** Holyhead Port (which is served by the A55) and the Haven Waterway (which includes the ports of Milford Haven and Pembroke Dock) and Fishguard Port (both of which are served by the A40) are identified as Strategic Gateways that facilitate international connectivity. The Welsh Government sets out its commitment to working with stakeholders (including operators, investors, and local authorities) to support these Gateways and maintain their international connectivity roles. One method of support will be via infrastructure investments.
- **Policy 11 - National connectivity.** The Welsh Government will support and invest in improving national connectivity; key to this will be investing in a strategic road, rail, bus and cycle network.

Llwybr Newydd – A New Wales Transport Strategy (2021)

In November 2020, the Welsh Government published the draft Wales transport strategy (*Llwybr Newydd*) for consultation. The draft strategy was developed in conjunction with stakeholders and once finalised will shape the future of transport in Wales over the next two decades.

The draft strategy outlines a vision for an accessible and sustainable transport system that is *'good for people and communities, good for the environment, good for the economy and places in Wales, and good for culture and the Welsh language'*. In doing so, the draft strategy contributes to each of the seven national well-being goals outlined in the Well-being of Future Generations Act (2015).

To achieve the long-term ambition, the Welsh Government has developed an initial set of five-year priorities which aim to address the most pressing issues. The priority of most relevance to the operations is Priority 3: safe, accessible, well-maintained and managed transport infrastructure. As part of this priority, the Welsh Government has committed to *'future-proof current transport infrastructure to make safe and attractive active travel provision, tackle congestion, improve accessibility, embrace innovation and respond to climate change'*. Implicit in this, is improving existing transport infrastructure through investment.

Prosperity for All: A Low Carbon Wales (2019)

The Low Carbon Delivery Plan sets the foundations for Wales to transition to a low carbon nation in accordance with the 2015 Paris Agreement roadmap for decarbonisation of the global economy.

In order to meet the statutory duty outlined in the Environment (Wales) Act 2016 - which requires a reduction in the emissions of greenhouses gases by a least 80% by 2050 - the Welsh Government are positioning Wales at the forefront of a shift towards active travel and a low carbon public transport system.

To support this shift, the Low Carbon Delivery Plan outlines a number of significant investments, including:

- **an additional £60 million investment over 3 years to implement the Active Travel (Wales) Act 2013**; the Active Travel Act requires the Welsh Government to take reasonable steps to enhance the provision for walkers and cyclists whenever it invests in highway infrastructure, therefore provision for active travel are key requirements of each of the operations.

The Low Carbon Delivery Plan also makes reference to the Sustainable Transport Hierarchy, first presented in Planning Policy Wales (2018). The Sustainable Transport Hierarchy places walking and cycling at the top of sustainability rankings, followed by public transport, and then Ultra Low Emission Vehicles (ULEV). Other private motor vehicles sit at the bottom of the hierarchy. Through the provision of active travel infrastructure and highway improvements that make public transport a more attractive option, the operations act on the principles of the Sustainable Transport Hierarchy.

COVID-19 Reconstruction: Challenges and Priorities (2020)

This document, published in October 2020, highlights the extensive impact COVID-19 has had on patterns of work and travel and outlines the Welsh Government's ambition to

capitalise on the opportunities offered by this. To continue to reap the environmental benefits associated with increased home working (specifically reduced pollution and congestion) the Welsh Government have set a target of 30% of the country's entire workforce to work from or near home in the future. It is likely that this will result in reduced road usage with fewer people travelling to work. Furthermore, those that do have to travel to work may consider active travel options, such as walking and cycling or public transport. In the assessment of outcomes from the road operations (such as road usage and journey times), the evaluation will need to be cognisant of wider factors, such as the shift towards working from home, that will impact on outcomes.

Linked to this target, the Welsh Government have committed to work with trade unions, local authorities and passengers to build on trials of demand responsive public transport; put clear emphasis on minimising the need to travel in the finalised Transport Strategy; and invest a further £15 million to support active travel as an investment in public health and to achieve sustained changes in travel behaviour.

Regional / local strategies and policies – A40

South West Wales Regional Plan for Regeneration (2018)

Poor transport links have been identified as both a national and local priority. The South West Wales Regional Plan for Regeneration (2018) outlines the target areas and scope of activities possible under the Welsh Government's Targeted Regeneration Investment Programme⁶⁵ which commenced in April 2018 for three years. Poor transport links are highlighted in the Plan as a weakness of the South West Wales region (which encompasses the counties of Neath Port Talbot, Swansea, Carmarthenshire and Pembrokeshire), whilst resolving congestion on the M4 around Newport is highlighted as a key opportunity to improve connectivity.

To maximise the impact of the Welsh Government Regeneration funding, the Plan states that funding will be targeted in nine key locations across the region; these locations have been selected because of their socio-economic profile, the complex range of challenges they face and opportunity to reverse decline through a series of interventions. Pembroke and Haverfordwest, the latter of which is directly served by the A40, are both included in the

⁶⁵ *The Targeted Regeneration Investment (TRI) funding programme aims to support regeneration projects that promote economic regeneration - creating jobs, enhancing skills and employability, and creating the right environment for businesses to grow and thrive - focusing on areas most in need. In total, £100 million funding is available under the TRI programme; the funding is split across four regions: North Wales (£22m), Mid Wales (£7m), South East Wales (£44m), South West Wales (£27m).*

nine Target Regeneration Areas. Objective 10 of the Plan concerns improving access to and within these areas.

Pembrokeshire Recovery and Regeneration Strategy, 2020-2030

Pre COVID-19, Pembrokeshire's economy could be characterised by a relatively high proportion of self-employed people and workers in low paid and often seasonal jobs. In addition, the economy was heavily dependent on a few sectors, including tourism. It is not unsurprising therefore that Pembrokeshire has been badly affected by the pandemic: in May 2020, early ONS figures identified 12,900 furloughed employees, roughly 30% of Pembrokeshire's total employment figure.

The Pembrokeshire Recovery and Regeneration Strategy emphasises the importance of investing in key infrastructure to support the local economy and its main industries. The A40 Llanddewi Velfrey to Penblewin and Redstone Cross improvements is cited as an example of such investment. Additional transport and infrastructure priorities either underway or being explored include:

- Improved access to key industrial sites
- Improved rail services to West Wales, including the South West Wales Metro
- Improvements to transport interchanges in Haverfordwest, Milford Haven and Pembroke Dock
- Active Travel initiatives

Carmarthenshire Economic Recovery Plan (2020)

Like Pembrokeshire, Carmarthenshire's economy has been significantly affected by the COVID-19 pandemic. Between March and April 2020 (the first month of lockdown) the claimant count in Carmarthenshire increased by 127%, substantially higher than the proportional increases seen at a Wales and UK level, (94% and 91% respectively). Furthermore, a survey of 574 businesses in the county found that many of the businesses worst affected by the pandemic were in the sectors deemed to be of significant importance to Carmarthenshire in terms of employment and/or GVA, specifically the visitor economy, food and beverage sector and agricultural sector.

Carmarthenshire's Economic Recovery Plan is focused on 11 key areas, one of which is capital infrastructure. The Plan states that significant regeneration capital infrastructure investments will be continued post COVID-19 *"to boost demand in the construction sector and stimulate confidence"*.

Regional / local strategies and policies - A55

A Growth Deal for North Wales (2018)

The vision for the Growth Deal for North Wales is underpinned by three principles, one of which – Connected North Wales – concerns improving transport and digital infrastructure to improve connectivity to and within the region.

The publication states that a Connected North Wales will:

- Improve transport infrastructure, specifically road and rail
- Develop integrated transport hubs to connect localities to employment centres and the regional and national transport infrastructure, and achieve a modal shift from private to public transport
- Identify and deliver low carbon transport solutions
- Reduce traffic congestion on strategic road routes to improve connectivity and access
- Upgrade digital networks and infrastructure

The £1 billion Growth Deal was signed on 17th December 2020. Backed by £240 million investment from both the Welsh and UK Governments, the Growth Deal comprises 14 projects spanning low carbon energy, innovation in high-value manufacturing, agri-food and tourism, digital connectivity and land and property⁶⁶. A number of the funded projects are located in close proximity to the A55.

In addition to the 14 projects, the North Wales Growth Board commits to working with the Welsh Government to deliver a North Wales Metro and an improved road network.

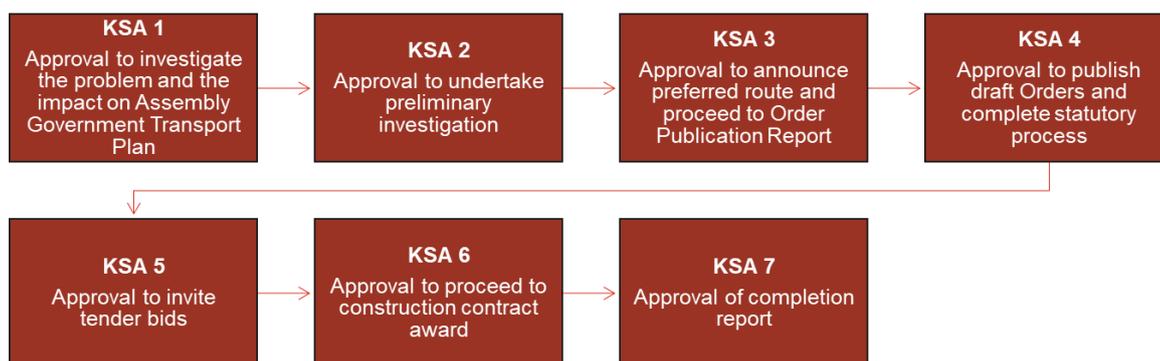
⁶⁶ [UK Government signs North Wales Growth Deal](#)

Annex C: Overview of the management and delivery model for the Welsh Government projects

The management and delivery model are the same for each of the three schemes. The Welsh Government's Transport Infrastructure Delivery Division is responsible for the delivery of the operations through the procurement of a private sector contractor which is responsible for construction.

The operations are being delivered through a Design and Build Contract, which the Welsh Government will manage with the support of contractors engaged as an Employer's Agent. Delivery of each operation is split into seven key stages, which cover design, statutory process, construction and aftercare in accordance with the Transport Infrastructure Delivery Division's Key Stage Approval Process (see Figure C.1).

Figure C.1: The Welsh Government's Key Stage Approval (KSA) process for major road projects



Source: Welsh Government, adapted by SQW

A Core Management Team is responsible for the day-to-day detailed management of each scheme, as set out in Figure C.2. The same structure is employed for each of the operations; although, the same EU Programme Manager and the EU Grants Manager cover all three operations, while the A55 operations have the same Project Director.

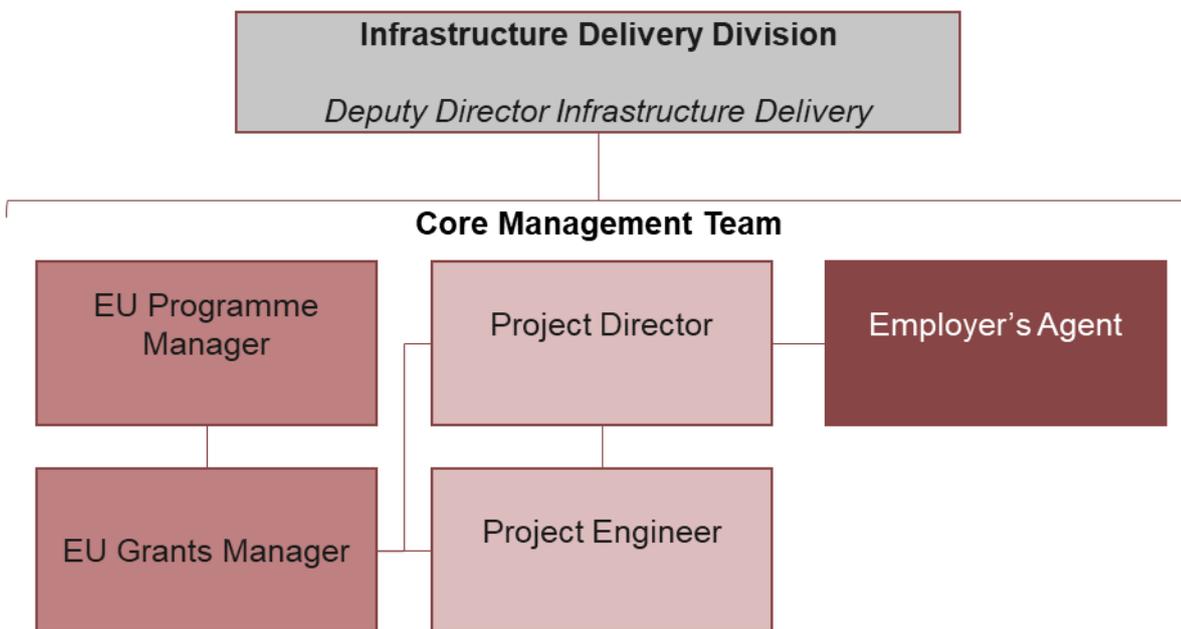
The Core Management Team comprises the Welsh Government Project Director and Project Engineer/s, representatives of the Employer's Agent and members of the contractor's team. The Team's primary activities include:

- promoting the scheme both internally and to external partners and stakeholders
- ensuring the scheme delivered is the optimum solution
- ensuring scheme activities comply with Welsh Government policy

- ensuring the scheme complies with its commitment to the Sustainability Objective of the Welsh Government
- ensuring the scheme is delivered to budget & programme
- ensuring the scheme delivers Value for Money within delegated financial commitments.

The **Core Management Team** is supported by the **EU Grants Manager** who leads on fulfilling the specific requirements of delivering ERDF funded projects including addressing requirements for publicity, CCT, monitoring and reporting on Operation delivery to the Managing Authority (the Welsh European Funding Office).

Figure C.2: Infrastructure delivery organogram (for each operation)

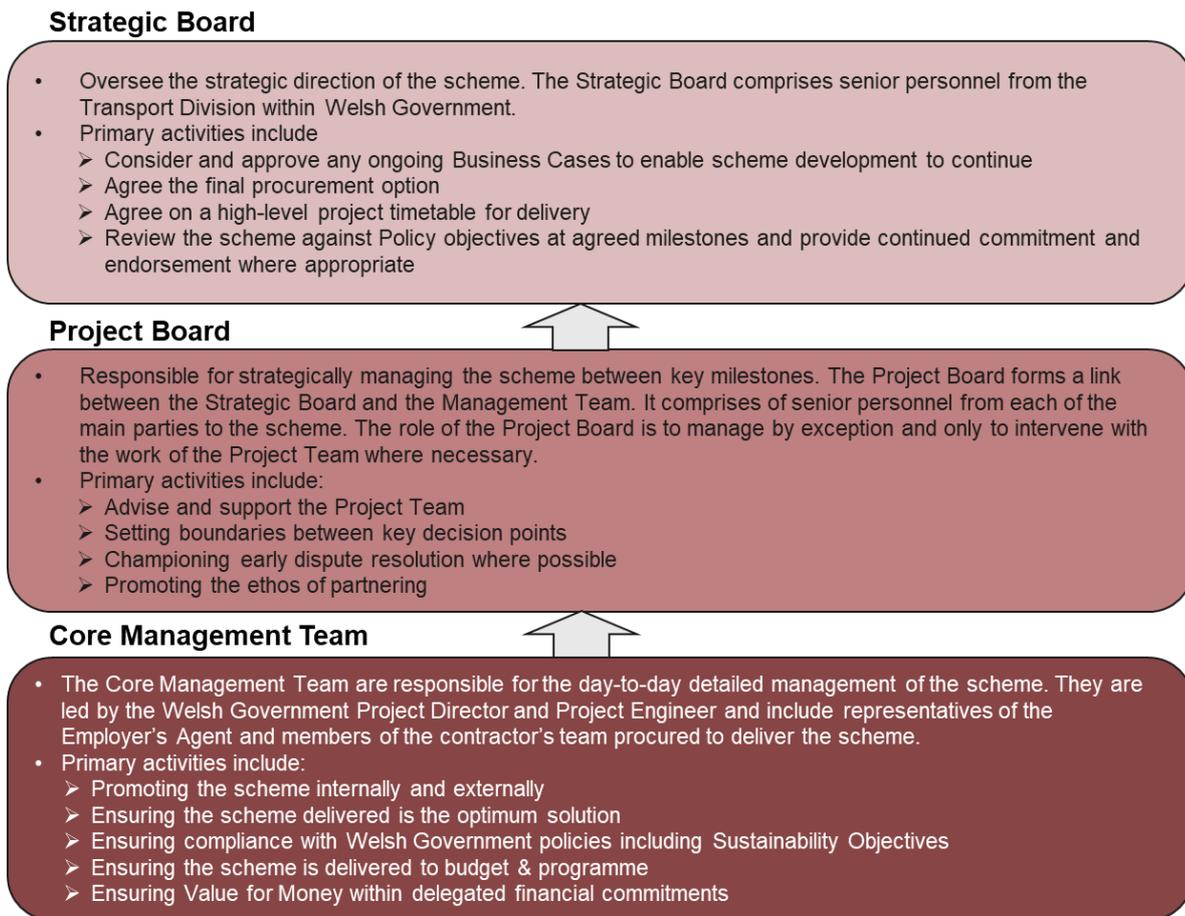


Source: Welsh Government, adapted by SQW

The governance structure and responsibilities for oversight of transport road projects is set out in Figure C.3. The **Core Management Team reports to a Strategic Board** which oversees the strategic direction of the scheme. The Strategic Board comprises senior personnel from the Transport Division within the Welsh Government.

The scheme also includes a Project Board responsible for strategically managing the scheme between key milestones. The Project Board forms a link between the Strategic Board and the Core Management Team. It comprises senior personnel from the Welsh Government and the contractors for each of the schemes.

Figure C.3: The Welsh Government governance structure and responsibilities for highways projects



Source: Welsh Government, adapted by SQW

Annex D: Logic model and theory of change

A **logic model and theory of change** have been developed to provide a framework for **the evaluation** of the road operations. The logic model and theory of change have been informed by the background document review and the consultations with relevant stakeholders.

Road operations logic models

Logic models have been developed to show the inputs, activities, operation outputs, and intended outcomes from the road operations. They also set out the underpinning rationale and the objectives for the operations. The rationale and objectives were included to both test whether the outcomes and impacts properly reflect the rationale and objectives, and to identify key questions and hypotheses for the theory of change (and subsequently the overall evaluation). As a tool, the logic model ensures that the range of effects and routes to effects are set out, understood and agreed by key stakeholders at the outset, as these will inform key metrics and evaluation methodology. The logic models, set out in Figure D.2, Figure D.3, and Figure D.4, have been agreed with the Welsh Government.

Overview of the logic models

The context and rationale describe the current challenges with the existing road infrastructure and the issues that the operations are seeking to address. For example:

- A40 improvements: the highway passes through the middle of Llanddewi Velfrey village which splits the community and reduces the speed limit, leading to community severance, safety hazards and increased journey times
- A55 Abergwyngregyn: the existing road does not comply with current highway standards which is a detriment to the free flow of traffic and creates safety hazards. Gaps in the central reservation are a detriment to the free and safe flow of traffic. Frequent flooding also results in road closures

The **programme objectives** outlined in the logic model set out the key aims for the operations. The objectives have been informed by background documentation including the operation business cases and the WelTAG process undertaken on the schemes. Across the three operations, the programme objectives are focused primarily on the delivery of:

- improved highways infrastructure
- improved journey times, reliability and network resilience
- increased connectivity to economic opportunities

- enhanced health and safety benefits (including from reduced community severance)
- environmental benefits.

The main input to the operations is the ERDF funding and funding from the Welsh Government. Other **inputs** include staffing inputs from the Welsh Government, local authority representatives, and WEFO. Note that there are standardised costs associated with road improvement projects that are not included in ERDF Project Expenditure, these include but are not exclusively; land costs, legal fees, utilities, and statutory undertaking costs.

Activities include the preliminary works, such as the scoping work and design, and public consultation; and the main construction activities, such as the construction of the highway, junctions and the slip roads, and highways improvement works. Broader project delivery activities are included, such as ongoing project management and grant administration and evaluation.

The **outputs** are the short-term deliverables expected from the programme and are generally monitored throughout programme delivery (and collated on programme completion). They provide an indication of progress and can be used to highlight areas of over and underperformance. As part of the conditions of the ERDF funding, it is a requirement that the operations identify which of the ERDF output indicators the schemes will deliver against. The relevant ERDF output indicators for each of the operations include:

- **Total length of reconstructed or upgraded roads (including TEN-T)**
 - A40 improvements: 6.1km
 - A55 Abergwyngregyn: 2.2km
- **Footpath or cycleway created or reconstructed**
 - A40 improvements: 1km
 - A55 Abergwyngregyn: 2km

Construction years of employment⁶⁷ is listed as an output in each of the logic models. While the jobs are not central to the fundamental rationale for investment, they are an ancillary effect and are considered to be a relevant output from the construction activities by the evaluation. This estimated figure will be updated once scheme specific data is available regarding the number of construction jobs.

⁶⁷ Construction years of employment is calculated using a labour coefficient benchmark from a [Homes & Communities Agency best practice note](#). This is based on 2011 values which inflation rates have been applied to.

The outputs outlined flow through to the intended outcomes, which are presented under three headings: short-term, longer-term, and Cross Cutting Themes. The short-term outcomes are those outcomes that are expected to be realised on completion of the operation, or in the 12 months following completion of the scheme. This includes the ERDF Result Indicator:

- **Average speed on TEN-T road (kmph)**

- A40 improvements: 3-8% increase in average speed along the A40 road (from a baseline average of 58kmph)
- A55 Abergwyngregyn: 5-10% increase in average speed along the A55 road (from a baseline average of 86kmph)

A potential dis-benefit of the operations is that the journey time improvements may result in increased use of private vehicles along the routes, which increases emissions and reduces the air quality. The volume of traffic on the roads will need to be monitored as part of the evaluation.

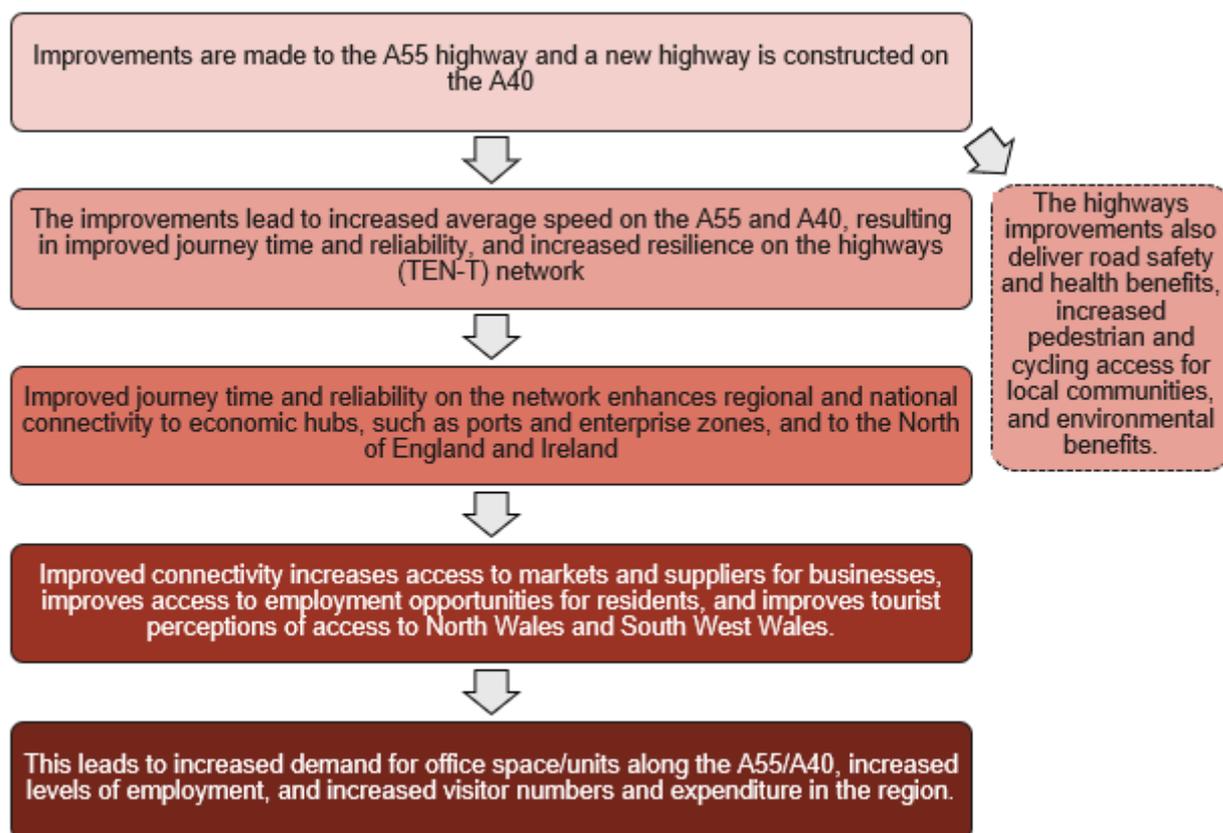
The longer-term outcomes describe the benefits that are expected to be realised as a result of the operation in approximately one to three years after completion of the operation. This includes tangible outcomes for businesses such as reduced costs associated with journey time savings, and increased access to markets, and improved tourist perceptions of access to North Wales and South West Wales.

The intended impacts identified in the logic models include: increased visitor expenditure, increased demand from businesses for office space/units along the A55/A40, increased business productivity, and increased viability and attractiveness for new housing along the A55/A40. It is expected that while those things listed under impacts may not be directly the result of the road operations in isolation, they may be observable and realised if the outcomes identified are delivered.

Theory of change

The logic model is underpinned by a “theory of change” (ToC) which sets out how and why the operations are expected to bring about the intended outcomes and impacts, and the assumptions and risks that might impact upon success. The theory of change from an economic perspective is as follows:

Figure D.1: Theory of change for the ERDF-funded road operations



Source: SQW

There are a number of **underlying drivers and assumptions of the ToC**. The main underlying assumptions include:

- **Background and rationale:** that the existing highway infrastructure on the A55 and A40 is the primary issue which is creating congestion, safety incidents, environmental issues, and community severance. Also, that congestion issues on the A40 and A55 are deterring tourists from visiting North Wales and South West Wales; the improved journey time on the routes will make the area more appealing as a tourist destination.
- **Delivery:** the highways improvements enable increased average speeds and create safer conditions on the A55 and A40; as a result, there are fewer collisions.
- **Outcomes:** the increased average speed on the A40 and A55 will lead to improved journey reliability and resilience of the road network; as a result of improved journey time and reliability, residents seek employment opportunities in areas along the A55 and A40 that they would not have done otherwise; and businesses experience tangible benefits from improved connectivity, including access to markets and suppliers and improved productivity - this increases demand for office/units along the A55/A40. In addition, local

communities' access and utilise the additional pedestrian and cycling infrastructure, reducing community severance.

These assumptions will be tested qualitatively through the consultations with stakeholders, and through analysis of secondary quantitative data.

The **alternative/ complementary factors that are likely to impact or influence the effects** includes: wider economic conditions, including those associated with Brexit and COVID-19; the broader social conditions resulting from the COVID-19 outbreak; and other environmental policies, such as those that emphasise greener modes of transport. The economic impacts of COVID-19 and the future trade arrangements with the European Union (EU) are expected to be significant during the delivery period of the operations:

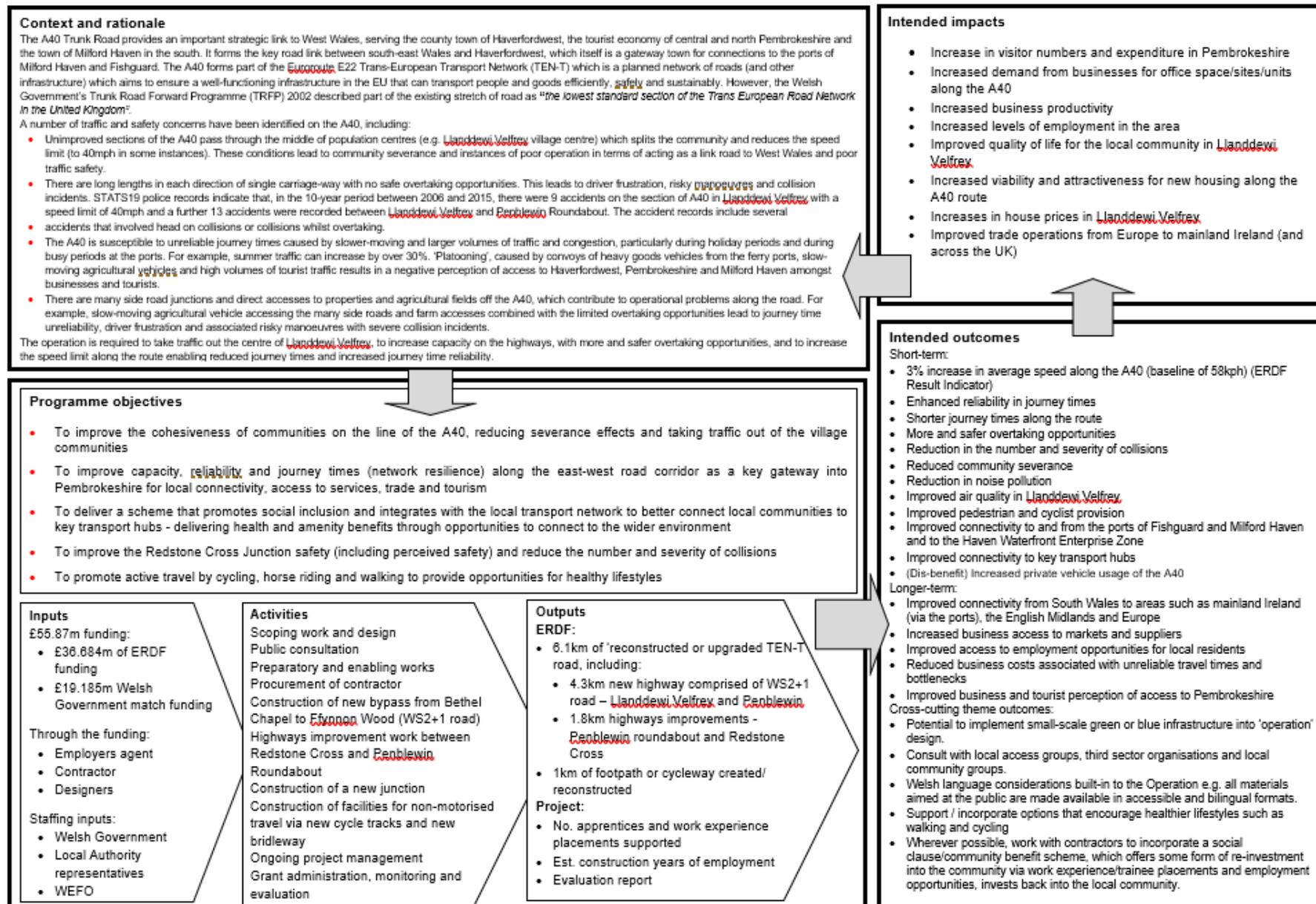
- Future trade arrangements may have significant implications for demand from European markets for products and services from the United Kingdom; this may result in fewer exports and imports, and reduced usage of the TEN-T roads.
- The economic implications of Brexit are not yet clear, however, there may be greater reluctance from businesses to re-locate, or to create new employment opportunities, due to the current economic uncertainties.
- Similarly, the full implications of COVID-19 are not yet known. The greatest change may be reduced travel and highways usage, as a result of working from home arrangements or more flexible work patterns; this is likely to reduce peak-time pressures. From an economic perspective, current forecasts indicate a relatively fast rebound with positive impacts for those sectors worst affected by the pandemic, due to high consumer demand in tourism and hospitality.
- In contrast, there are opportunities which may result from the COVID-19 outbreak: communities may be more likely to use active forms of travel, such as footpaths and cycle lanes, rather than private transport; domestic tourism may also increase due to the travel restrictions imposed by the UK government. This could result in increased visitors and visitor expenditure in North Wales and South West Wales.
- It is also possible that the COVID-19 pandemic will accelerate the trend towards increasing remote and homeworking. In the 2011 census, 11% of Wales' workplace population worked, or mainly worked, from home. However, UK-wide data indicate that there has been a growth in the incidence of home working since then (with particularly high volumes of home working in information and communications and professional,

scientific and technical services)⁶⁸: this has increased substantially in the past year and may in some cases prove permanent.

These factors will be tested through the evaluation research to assess the contribution of the road operations to the observed outcomes, or anticipated outcomes, in contrast to other factors and in the context of a period of great change and uncertainty.

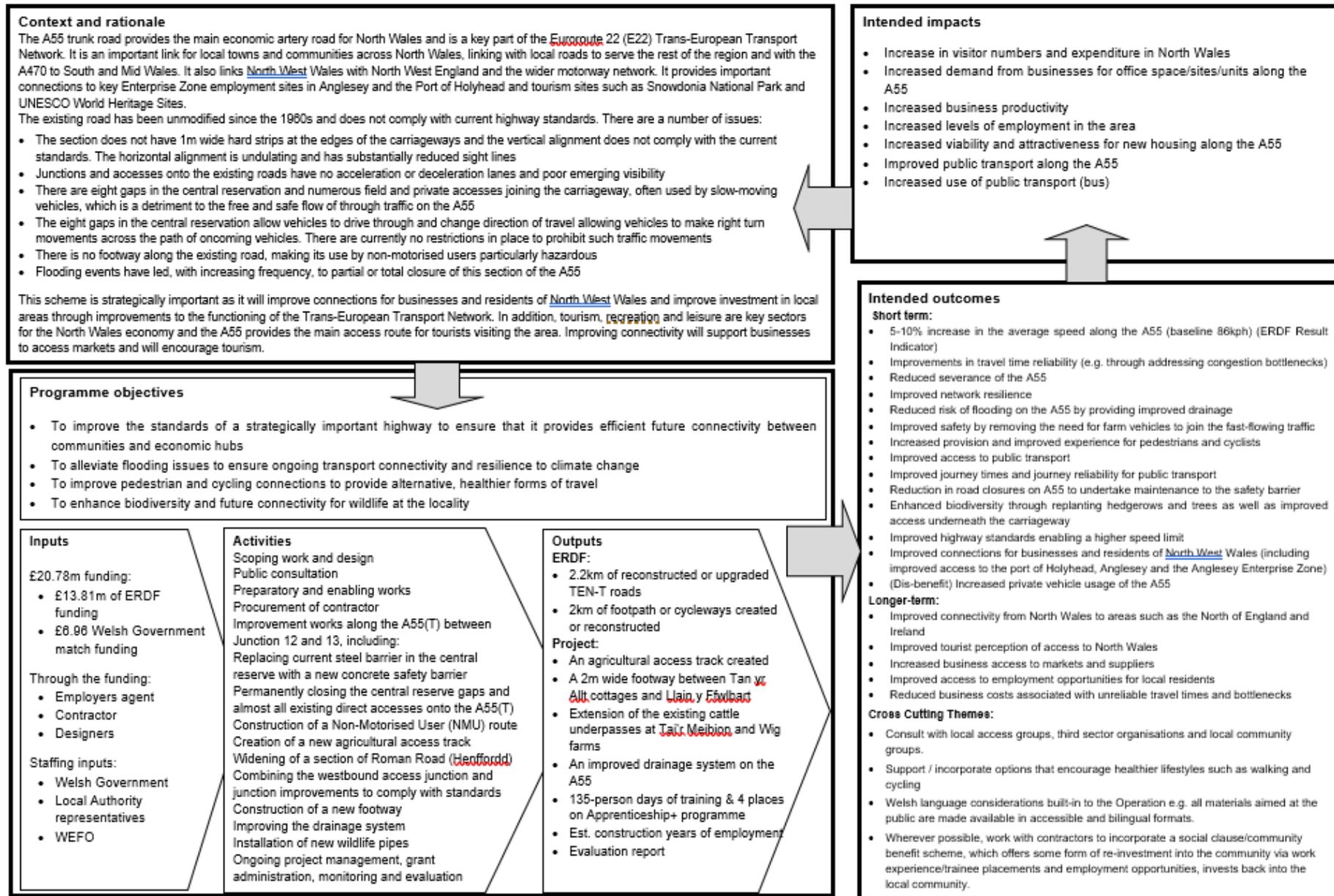
⁶⁸ SQW/ Welsh Government (2020), *Commercial Property: Market analysis and potential interventions*, p.25

Figure D.2: A40 improvements logic model



Source: SQW

Figure D.3: A55 Abergwyngregyn logic model



Source: SQW

Annex E: Appraisal of counterfactual evaluation options

The methodology for the evaluation of the ERDF-funded road operations is set out in the Evaluation Plan, which was finalised with the Welsh Government in November 2020. This set out that a quasi-experimental approach, which provides binary evidence as to whether an outcome has been realised or not, is not feasible as many of the operation outcomes will not be realised within the timeframe of the evaluation. However, if the evaluation were delivered over a longer period, there are further options that could be considered for a counterfactual approach. This section sets out the appraisal of four counterfactual options.

Counterfactual options appraisal

The counterfactual options that have been considered are based primarily on the outcome variable: an increase in average speed on the A40 and A55 (ERDF Result Indicator). Table E.1 sets out an overview of each of the four options, including the evaluation design, evidence generated, limitations and whether the option is feasible.

While it is not possible to adopt these approaches within the scope and timeframe of this evaluation, they could be considered in the evaluation of future road schemes in Wales.

Table E.1: Counterfactual options appraisal

Counterfactual option	Evaluation design	Evidence generated	Limitations	Feasible for consideration
RCT design	-	-	-	No – it is not possible to implement an RCT due to the nature of the funding and focus of the intervention (e.g., highways)
Comparable road schemes in Wales/ UK	<ul style="list-style-type: none"> • Compile data about similar highways in Wales with variables (e.g., length of road, average speed, journey times, location, vehicle usage) correlating with the ERDF operations • Use statistical matching to identify an appropriate counterfactual road 	<ul style="list-style-type: none"> • Impact of highways improvements through Difference in Difference (DiD) analysis on road speed, journey times, air quality, number of accidents 	To allow for time lags in secondary data, evidence may not be available until 2024/25. This does not meet WEFO’s requirements for ERDF evaluations. Further theory-based evaluation may be required to account for wider factors that may influence road outcomes.	No – a suitable comparable road scheme has not been identified in Wales

Pipeline design counterfactual	<ul style="list-style-type: none"> • Deliver the A55 schemes and the two components of the A40 in stages • Compile data about the A55 and A40 variables (e.g., length of road, average speed, journey times, vehicle usage) on the different stretches of the road 	<ul style="list-style-type: none"> • Impact of highways improvements through DiD analysis on road speed, journey times, air quality, number of accidents on the different stretch of roads 	<p>The highways work for the first stage of the schemes is likely to have an impact on the road outcomes for the other stretch of road.</p> <p>To allow for time lags in secondary data, evidence may not be available until 2024/25. This does not meet WEFO's requirements for ERDF evaluations.</p>	<p>No – this would require that the A55 A40 operations are delivered in stages – the proximity of the schemes are also likely to impact on observable road outcomes</p>
Time series analysis	<ul style="list-style-type: none"> • Compile annual average data about the A55 and A40 variables (e.g., length of road, average speed, journey times, vehicle usage) from 2000-2010 (pre-announcement), 2010-2020 (post-announcement, pre-construction), and post-construction, 2022/2023-2032/33. 	<ul style="list-style-type: none"> • Changes in road variables pre-announcement, pre-construction and post-construction • Impact of highways improvements through time series DiD analysis on road speed, journey times, air quality, number of accidents 	<p>To allow for time lags in secondary data, evidence may not be available until 2024/25. This does not meet WEFO's requirements for ERDF evaluations.</p> <p>Further theory-based evaluation may be required to account for wider factors that may influence road outcomes.</p>	<p>Yes – however, it would be dependent on the available data over the periods.</p>

The DiD approach compares how the outcome measures for a treatment group changes over time relative to how the same measures change over time for a control group. This accounts for the fact that not all changes observed in the treatment group happen because of the treatment, some of them would have happened regardless. The basic version of the difference-in-difference estimator requires data from two periods (before and after the treatment) for two groups

(treatment and comparison/control). The differences in outcomes between the two groups are calculated in both periods and then compared to determine if the programme has had any impact.

Source: SQW

Annex F: Improvements to A55 Junctions 15 and 16 at Llanfairfechan and Penmaenmawr

At the time of writing this report, a review of highway schemes across Wales is underway⁶⁹. This review has been initiated following an announcement in June 2021 by the Deputy Minister for Climate Change of a freeze on new road building projects⁷⁰. An independent panel has been appointed to carry out the review⁷¹. The A55 Junctions⁷² is going to be considered under the remit of the review. The improvements on the A55 Abergwyngregyn to Tai'r Meibion and improvements to the A40⁷³ Llanddewi Velfrey to Redstone Cross are not to be included in the review. To enable the A55 Junctions scheme to form part of the Welsh Government Roads Review The Deputy Minister for Climate Change announced the decision to postpone the public inquiry for A55 Junctions on 15th September 2021. The subsequent delays to the construction programme for the A55 Junctions Operation beyond summer 2023 mean it will be beyond the scope of the ERDF programme. As a result, Welsh Government Officials have requested it is withdrawn from the ERDF programme.

Following the request to withdraw the A55 Junctions Operation from the ERDF programme, the operation will no longer be considered as part of the final evaluation, however the research conducted up to this point has been included in this interim report for information purposes.

Rationale for the A55 junctions operation

As highlighted earlier in paragraph 4.1, the issues identified in relation to the A55 were first acknowledged in “*Driving Wales Forward*” produced by the Welsh Office in 1998. This recognised a lack of safe turning arrangements on the A55 between Tal-y-Bont and Abergwyngregyn, prompting the need for highway re-construction.

In particular, key issues have been identified in relation to the two roundabouts on the A55. This was identified in the 2014 Draft version of the National Transport Finance Plan (NTFP)⁷⁴, which stated, “*There are a number of capacity issues on the North Wales network on the A55, linked with ferry traffic and summer traffic, in particular around Junctions 15 and 16...*”⁷⁵

The two roundabouts at Junctions 15 and 16 are the only roundabouts on the Trans-European Network route from Holyhead to Hull, and constrain the free flow of traffic. This has led to increased

⁶⁹ [Roads review | GOV.WALES](#)

⁷⁰ [Plenary 22/06/2021 - Welsh Parliament \(assembly.wales\)](#) Deputy Minister's [Statement to the Senedd](#)

⁷¹ [Panel of leading UK transport and climate change experts to carry out roads review | GOV.WALES](#)

⁷² [Written Statement: A55 improvements junctions 14 to 16 \(15 September 2021\) | GOV.WALES](#)

⁷³ [A40: Llanddewi Velfrey to Redstone Cross improvements | GOV.WALES](#)

⁷⁴ Note that a [final version of the NTFP](#) was published in 2015.

⁷⁵ Welsh Government (2019) *A55: Junctions 15 and 16 Improvements; Consultation – summary of responses*

journey times and poor journey time reliability. They also contribute to the incidence of stationary traffic backing up into Pen-y-Clip and Penmaenbach tunnels, which in turn can be a safety hazard.

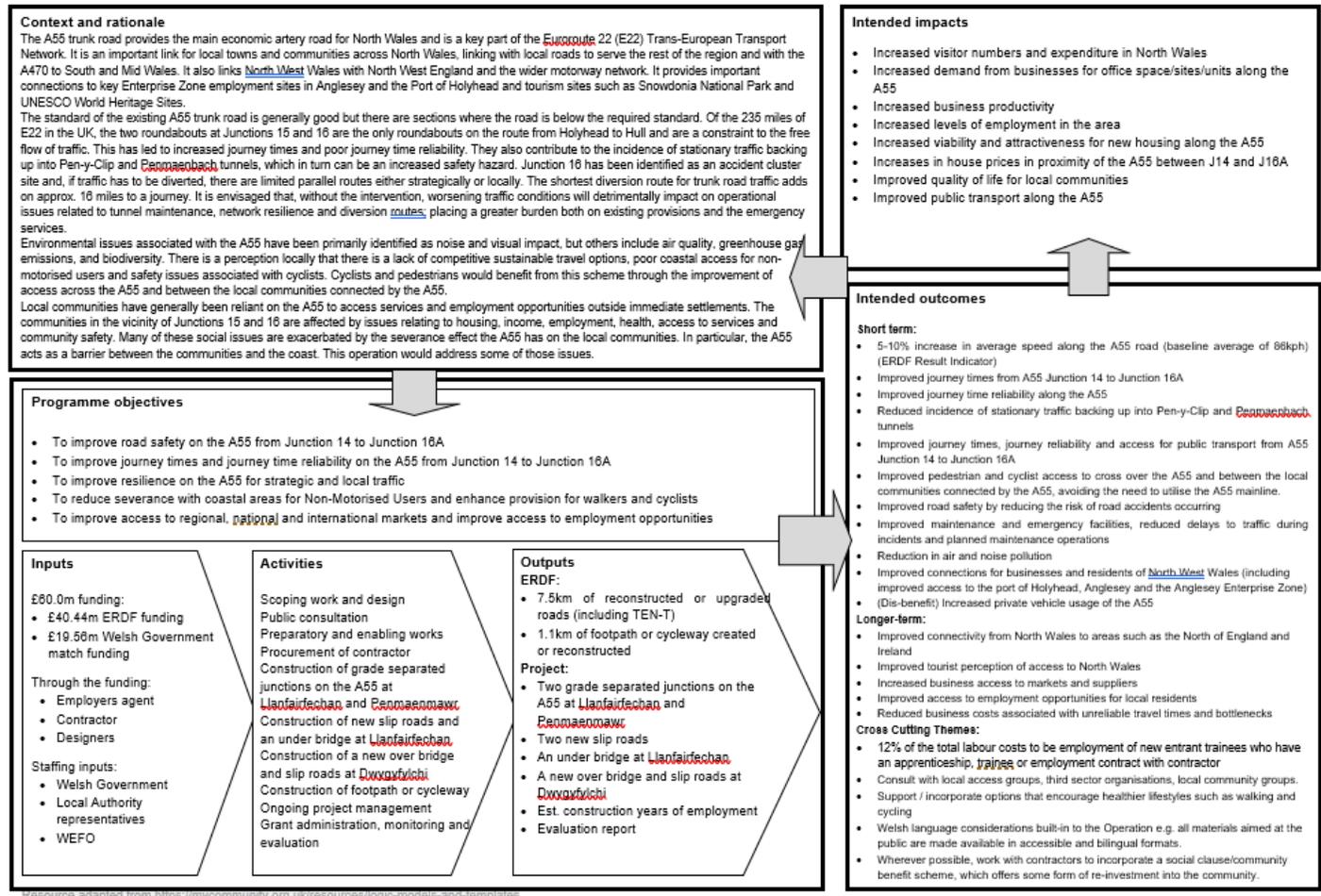
Junction 16 has been identified as an accident cluster site and, if traffic has to be diverted, there are limited parallel routes either strategically or locally. The shortest diversion route for trunk road traffic adds on approximately 16 miles to a journey. It is envisaged that, without the intervention, worsening traffic conditions will detrimentally impact on operational issues related to tunnel maintenance, network resilience and diversion routes, placing a greater burden both on existing provisions and the emergency services.

Environmental issues associated with the A55 have been primarily identified as noise and visual impact, but others include air quality, greenhouse gas emissions, and biodiversity. There is a perception locally that there is a lack of competitive sustainable travel options, poor coastal access for non-motorised users and safety issues associated with cyclists.

Local communities have generally been reliant on the A55 to access services and employment opportunities outside immediate settlements. The communities in the vicinity of Junctions 15 and 16 are affected by issues relating to housing, income, employment, health, access to services and community safety. Many of these social issues are exacerbated by the severance effect the A55 has on the local communities. In particular, the A55 acts as a barrier between the communities and the coast. For example, Penmaenmawr reportedly endured some economic hardship when the A55 was first built as it separated the village from sea, reduced tourism, and made it harder to access local shops.

A logic model and theory of change have been developed (Figure F.1) to provide a framework for the evaluation of the Improvements to the A55 Junctions. The logic model and theory of change have been informed by the background document review and the consultations with relevant stakeholders and was developed at the same time as the logic models for the A55 Abergwyngregyn and A40.

Figure F.1: A55 junctions logic model



Source: SQW

Description of the operation

The operation is located in North Wales between Conwy and Bangor, as shown in Figure F.2. The improvements to the A55 Junctions 15 and 16 in Conwy involves the removal of the two existing roundabouts and their replacement with grade-separated junctions. The project will also deliver new slip roads and an under bridge at Llanfairfechan, and a new over bridge and slip roads at Dwygyfylchi. There will be 7.5km of reconstructed or upgraded roads, and 1.1km of footpath or cycleway created or reconstructed.

The **total cost of the scheme is £60.0m**, comprising £40.44m of ERDF funding and £19.56m of Welsh Government match funding.

Note that there are standardised costs associated with road improvement projects that are ineligible for ERDF funding. These costs are incurred by Welsh Government and are additional to the total WEFO project costs listed above⁷⁶.

Figure F.2: Map of the A55 Junctions Operation



Source: Produced by SQW 2019. Licence 100030994. Contains OS data © Crown copyright [and database right] 2020.

Aims and objectives

Originally approved for funding by the ERDF 2014-2020 Operation Programme, under Specific Objective 4.1, the aim of the **operation is to address issues of peripherality and improve private investment in local areas through improvements to the functioning of the Trans-European Transport Network (TEN-T)**. The **ERDF Result Indicator is 4-9%**

⁷⁶ [A55: junctions 15 and 16 \(overview\) | GOV.WALES](#)

increase in average speed along the A55 road (from a baseline average of 84kph – Junctions 14-17). The **ERDF Output Indicators were:**

- Total length of reconstructed or upgraded roads (including TEN-T): 7.5km
- Footpath or cycleway created or reconstructed: 1.1km

The **specific objectives** of the operation, taken from the Welsh Government A55 Junctions 15 and 16 Business Plan:

- reduce greenhouse gas emissions and other environmental impacts from transport
- integrate local transport
- enhance international connectivity
- increase safety and security
- facilitate economic regeneration in the Anglesey / Menai area.

Further to this, a presentation on the preliminary design proposals⁷⁷ set out more detailed objectives, including to:

- improve road safety on the A55 from Junction 14 to Junction 16A
- improve journey times and journey time reliability on the A55 from Junction 14 to Junction 16A
- improve resilience on the A55 for strategic and local traffic
- reduce severance with coastal areas for the Non-Motorised Users and enhance provision made for walkers and cyclists
- take reasonable steps to build healthier communities and better environments
- improve access to regional, national and international markets and improve access to employment opportunities
- provide increased opportunities for integrated transport⁷⁸
- minimise technical departures from standard (to improve safety)
- minimise the need to reduce speed limits (to reduce delays)
- minimise disruption during construction (to local residents and business, as well as along the A55 itself).

Cross-cutting themes

⁷⁷ Welsh Government (2018) [A55 Junctions 15 & 16 Improvements: Preliminary design proposals presentation to Llanfairfechan Town Council](#)

⁷⁸ This is primarily by joining together proposals for road, rail and public transport to enable people and freight to travel more efficiently and sustainably.

The key CCT activities that the A55 junctions operation proposed to address are in the table below:

Table F.1: A55 junctions contribution to CCT actions (taken from operation Business Plan)

Cross Cutting Themes	Agreed actions	Actions to date
Tackling poverty and social inclusion	Consult with local access groups, 3rd Sector organisations and local community groups.	<p>The scheme has and will continue to be subject to extensive consultation with local community groups.</p> <p>It is essential that successful relationships are established and maintained with all interested third parties, through effective Public Liaison.</p> <p>This process will primarily be facilitated by the project’s Public Liaison Officer, an Environmental Coordinator as well as the Project Director and Project Engineer.</p>
<ul style="list-style-type: none"> Equal Opportunities and Gender Mainstreaming 	<p>Language / Accessibility</p> <ul style="list-style-type: none"> The operation also needs to build-in Welsh language considerations. For example, ensure all materials, websites and publicity aimed at the public are made available in accessible and bilingual formats. <p>Social Clauses / Community Benefit Schemes</p> <ul style="list-style-type: none"> Wherever possible, work with contractors to incorporate a social clause / community benefit scheme, which offer some form of re-investment into the community via work experience / trainee placements and employment opportunities, invests back into the local community for example: sponsoring local football teams or paying to have community centre redecorated etc. 	<p>The operation will take the Welsh Language into consideration and ensure that Welsh is not treated less favourably than English, particularly in terms of information to the public and residents about the scheme and the signage.</p> <p>The scheme will be delivered in line with best practice identified in the Welsh Government guide, Community Benefits: Delivering Maximum Value for the Welsh Pound.</p> <p>As part of its efforts in addressing community benefit themes, the Welsh Government requires that throughout the duration of the scheme and all contractors identify and record all benefits associated with the community.</p>

The Community Benefits Measurement Tool (CBMT) is an Excel spreadsheet that captures the full range of Community Benefits outcomes not just those aspects that can be easily monetised and to provide a consistent way of measuring Community Benefit objectives.

The tool is built around the concept of the local economic multiplier and uses the outcomes of the range of Community Benefits selected on a procurement project to generate a Welsh Local Multiplier.

The Contractor will be required to maintain and populate the CBMT for issue annually to the Employer following review with the Project Manager.

The Contractor will be required to complete a Community Benefits Report within 6 months of the completion of construction project. The exact scope of the report shall be agreed with the Welsh Government but shall record details of all Community Benefit activities undertaken through the scheme, including Targeted Recruitment and Training as detailed below.

The Contractor will also be required to carry out a Wider Economic Impact Assessment in order to determine what impact the bypass will have on businesses and the community

Support / incorporate options that encourage healthier lifestyles such as walking and cycling

in Llanfairfechan and Penmaenmawr and the surrounding areas.

As a minimum, the Contractor will be required to allow provision for 12% of the total labour costs to be employment of new entrant trainees who have an apprenticeship, trainee or employment contract with the Contractor or a subcontractor and are engaged in a training programme that is accepted by the Project Manager.

The Contractor is also encouraged to provide training and accreditation opportunities for existing personnel.

By providing safe walking and cycling routes within the village the schemes will encourage active travel and healthier lifestyles.

Source: A55 Junctions 15 & 16 Business Plan, WEFO (April 2020)

Timescales and delivery progress to date

Progress to date

The operation was approved for £26.3m funding in December 2016, and work started on the operation in October 2017; the operation was originally due to complete in winter 2022. In 2017, Carillion was appointed under an Early Contractor Involvement procurement, with Ramboll sub-contracted as the lead designer. However, in January 2018, Carillion went into liquidation and Ramboll was appointed to complete Key Stage 2, 3 and 4.⁷⁹ Corderoy has been commissioned as the Employer's Agent for the scheme.

The **following key tasks have been undertaken to date:**

Key Stages 1 and 2, Design and Preliminary Investigation:

- The scheme utilised earlier work from WeITAG Stage 1 undertaken between 2008 and 2010.
- Project objectives were developed, and a long list of junction options were considered. The project objectives and a shortlist of options for each junction was presented at Public Information Exhibitions held during December 2017.
- The feedback on the objectives and junction operations was reviewed. Further alternative options were developed, which were assessed during the early part of WeITAG Stage 2 and presented at a public consultation between June and August 2018.⁸⁰

Key Stage 3, Announcement of preferred route and Order Publication Report

- Following some additional work, the preferred junction options for Junctions 15 and 16 were announced in April 2019.⁸¹ Since then, preliminary design work has been undertaken.
- The scheme has completed Key Stage 3 and the draft Orders were published in March 2021. An engagement website⁸² was set up with an online exhibition due to COVID-19 restrictions. Objections or feedback on the scheme could be submitted until early May 2021. Following this, the scheme will proceed through the statutory process and may be required to hold a public inquiry.

⁷⁹ Welsh Government [A55 Junctions 15 and 16 Improvements: Preliminary Design Proposals Presentation to Llanfairfechan Town Council](#).

⁸⁰ Welsh Government, Consultation – summary of responses. A55: Junction 15 and 16 Improvements

⁸¹ Welsh Government, Consultation – summary of responses. A55: Junction 15 and 16 Improvements

⁸² Welsh Government [A55 Junctions 14/15 & 16/16A Engagement](#)

Timescales

The original⁸³ timescale for the operation is set out in Table F.2, against the actual or the revised timetable for the operation.

Table F.2: Original and revised timetable for the A55 junctions operation

	Original timetable	Estimated revised timetable
Option and design development	Autumn 2017 to Winter 2019/20	Autumn 2017 to Autumn 2020
Statutory process and public inquiry	Winter 2019/20 to Winter 2020/21	Winter 2020 to Autumn 2021
Detailed design and construction	2021 to 2022	Winter 2021/2022
Anticipated opening	Winter 2022	Summer (June) 2023

Source: Welsh Government, [A55: Junctions 15 and 16 \(overview\)](#) and consultations with the project team

This indicates that the **operation has encountered a number of delays**. The reason for the delays include:

- the collapse of Carillion and subsequent appointment of Ramboll delayed the scheme
- additional public consultation to understand the local issues and incorporate these into the design work was required with the local community which took longer than planned⁸⁴
- the time needed to prepare the draft Orders was underestimated by the project team
- issues with a supplier and the quality of their work
- a complicated land ownership situation with lots of very small parcels of land.

At the time of writing, the project team had published the draft Orders and were awaiting objections and public feedback on the scheme. The Public Local Inquiry into the schemes has been postponed until further notice so that the schemes can form part of the Welsh Government Roads Review.

⁸³ Welsh Government, [A55: Junctions 15 and 16 \(overview\)](#)

⁸⁴ This took longer than planned as public objections were raised to the initial scheme design which meant an alternative design for the junctions had to be developed and subsequently consulted on.

Process evaluation findings

Project management

The overall management and delivery model are the same for each of the three schemes. The Welsh Government's Transport Infrastructure Delivery Division is responsible for the delivery of the operations through the procurement of a private sector contractor which is responsible for construction. Further detail regarding the arrangements is set out in Annex C.

There was clarity across the Project Delivery Team regarding the project management arrangements, roles and responsibilities for the A55 operation. The specific arrangements are as follows:

- a Project Director and Project Engineer at the Welsh Government are responsible for overseeing the scheme
- Welsh Government is represented by an appointed Employer's Agent, Corderoy, which ensure the works are done in accordance with the specification and contract; Corderoy have appointed sub-consultants, WSP as technical advisors and TACP as environmental advisors
- Ramboll have been appointed as the design consultants
- regular project team meetings take place at least once a month, and increase in frequency as and when appropriate in the scheme's delivery; at critical phases of the project, team meetings have been held three times a week or daily
- monthly progress meetings are held which are attended by the Welsh Government, Corderoy and Ramboll
- a risk register is updated at the start of every Key Stage at a risk management workshop; at the design stage, risks are reviewed every quarter as a minimum.

The project management arrangements were described as effective, the project team have strong working relationships and a collaborative working arrangement. Three main reasons were cited for this:

- holding frequent meetings: this ensures the delivery team is kept updated with key tasks and actions, can discuss any issues and transfer information quickly and easily
- there is good collaboration and partnership working in the project delivery team: one consultee described they can be open and honest with one another which supports effective communication and progress.

As a result of the effective project management arrangements, any issues that have arisen have been dealt with promptly and appropriately. For example, where a supply sub-contractor was not performing as expected, this was identified promptly by the design consultant and there was open

dialogue between the project team and the Welsh Government which resulted in a quick resolution and an alternative way agreed to deliver that element of the scheme.

Communication and engagement

To date, there has been extensive consultation with the local community and engagement with local councils on the operation. This has included several exhibitions and a full public consultation, as would be expected of a large scheme of this nature. After publishing the draft Orders, the standard procedure is to hold in-person exhibitions for the public to come and view the proposals. Due to COVID-19 restrictions, this was not possible, and the project delivery team had to adapt and prepare a virtual exhibition. This included the development of a website with detailed information on the proposals for the scheme and guidance on how the public can submit feedback or objections. The operation team also employed a PLO who is responsible for building relationships with local residents and community groups and providing updates on operation progress.

Feedback from consultees recognised the challenging circumstances (surrounding the COVID-19 restrictions) in which the delivery team had to deliver the public consultation and were broadly positive about the accessibility of the information provided. The PLO position and their level of engagement with the local community was also described positively by consultees.

“The liaison officer has been excellent, and it is nice to have a named contact to make enquiries to direct. That’s a real positive – he has been good to work with and is first class”.

However, as the situation with the COVID-19 outbreak and the associated restrictions is changing, some consultees suggested that it may be beneficial to reengage with local stakeholders to update on progress and next steps.

Monitoring systems

Project monitoring systems are in place at various levels, including the Project Delivery Team, the Welsh Government and WEFO.

Project delivery team

The project monitoring systems were considered to be working well by consultees and support the effective and efficient delivery of the scheme. The systems in place have enabled the team to monitor progress of the scheme, manage and respond to risks, and ensure alignment across the various teams. Based on an updated delivery profile (which was re-profiled in September 2020), the latest project Progress Report (March 2021) confirms that the financial expenditure is in line

with the delivery profile. Progress against the original forecast expenditure will be reviewed in more detail in the Final Evaluation Report. The monitoring systems in place include:

- a programme of work which is updated by Ramboll on a monthly basis and reviewed by the Employer's Agent before being shared with the Welsh Government
- a monthly progress report which includes both programme and financial information; the Employer's Agent and Project Engineer at the Welsh Government meet to review this ahead of the wider monthly progress meeting
- a project risk register which is regularly reviewed and updated; it is reported on in the monthly progress reports and discussed at the monthly progress meetings.

Welsh Government Infrastructure Delivery Team and WEFO

Welsh Government has various systems in place to monitor delivery:

- During delivery, the Welsh Government is kept informed of progress through monthly progress reports and meetings. The monthly progress report includes sections on progress updates, profile against spend, the forward plan, CCT, monitoring and evaluation, publicity, procurement and risks.
- In terms of financial management, the Employer's Agent administers the contract by reviewing and accepting programmes to check the operation is on track as well as administering the financial payments on the scheme. The Employer's Agent receives payment application from Ramboll, the design consultants, and recommends and certifies payments on behalf of the Welsh Government. Any payments above a certain amount have to be accepted by the Welsh Government.

Engagement with WEFO has (to date) been undertaken on an ad-hoc basis, as and when required, due to the limited operation expenditure/ progress. For example, the Employer's Agent met with staff from WEFO to discuss the virtual exhibition. There is currently no formal regular meeting between the Welsh Government and WEFO and therefore progress against CCT is not currently reviewed regularly, but at the appropriate time. As the scheme progresses and moves into the construction phase, quarterly progress meetings will be established which will include CCT progress as an agenda item.

Welsh Government representatives said that the monitoring processes are working well which is well evidenced. All programmes have been submitted on time to date and accepted. The scheme is experiencing notable delays, however, this is partly due to factors outside of the project delivery team's control, such as the COVID-19 outbreak and delays with ministerial reviews within the Welsh Government. The scheme had to wait for approval to publish the draft Orders, but this has

now been granted. The changes required to the design of the scheme, to reflect feedback from local stakeholders, have also been a key factor in the delays experienced.

Cross Cutting Themes

To date, the project has not formally reported against the CCT objectives as set out in section 2 to WEFO. However, as set out above, it is expected that formal reporting will be undertaken in the construction phase of delivery. Progress made against the broad CCT is provided in the operation's quarterly Progress Report. This demonstrates that, to date, good progress is being made across all the CCT:

- *Sustainable development*
 - Welsh Government has been provided with all the documentation, such as Sustainable Development reports and an Environmental Statement, and their consultants have liaised with the relevant parties. The feedback the Welsh Government has had from them has all been positive.
 - An Environmental Statement has been prepared and the Design Consultant has undertaken an Assessment of Implications for European Sites, as specified in operation's CCT objectives (see section 2).
 - A carbon assessment of the indicative carbon footprint associated with the delivery of the project and its operations has been undertaken.
 - An assessment of waste management has been undertaken.
- *Tackling Poverty and Social Inclusion*
 - There has been extensive consultation with local community groups as well as public exhibitions and consultation. The project has a PLO whose role is to be an initial point of contact and to provide updates to local residents and communities. This has addressed the CCT as the PLO has ensured that all stakeholders are aware of the operation, its progress and timescales and that local people have an opportunity to contribute their views on the scheme. Consultees from a local community council felt that this had been working well and the PLO had "*done a great job of keeping us informed*".
 - The scheme will seek to improve access to public transport. For instance, the scheme design will aim to ensure bus stops are located in areas where people have limited access to private vehicles. If successful, this will improve accessibility of the area for the local community.
 - Some of the villages on the coastal side of the road are quite isolated due to the geographic nature of the headlands and there are a couple of villages that are completely separate because of the road layout. For example, the original construction of the A55 separated Penmaenmawr from the

sea, with reported negative impacts on tourism and retail. The scheme has been designed to alleviate some of these issues by offering training and work experience placements and employment opportunities to local communities, including young people. The scheme also seeks to improve access to public transport and allow easier access to these communities. However, the scheme remains in the early delivery stages and one community consultee said details regarding employment and training opportunities are vague.

- *Equal Opportunities and Gender Mainstreaming*

- All documents produced and disseminated fully adhere to the Welsh Government language policies. Welsh speakers were available at public exhibition events and easily identifiable for people to talk to. The online exhibition was available in both English and Welsh and the public could switch between the two languages easily.
- Feedback from the community consultations suggests that local feeling about the scheme is mixed. For example one community consultee said that some local residents feel the key objectives of the scheme are strategic rather than local, such as speeding up traffic moving along the A55, and so the community will have to endure the disruption of the construction work for the benefit of others. However, others recognised the safety benefits of the scheme as well as the improvements related to access and traffic flow for local people. Community benefits were felt to be far off at the moment, with practical issues at the forefront of people's minds and it was suggested that these "*should have been sold more effectively to the community*". Environmental benefits and impacts are a key concern of local residents, and it was felt the project delivery team could pay more attention to environmental landscaping.
- Active Travel is a key element of the scheme and has been designed in a way that will link communities together. The Welsh Government want to encourage people to use more sustainable modes of transport, so part of this scheme is about having safe and attractive links between local communities. The Welsh Government has consulted with Cycling UK, Sustrans and the local councils to ask for their input on how the scheme can improve Active Travel and encourage people to use sustainable transport options.

Interim Impact Evaluation Findings

Outputs

The outputs all remain valid but as the scheme has not yet started construction, there are no outputs to report on. Once completed, the scheme is expected to deliver the following outputs:

ERDF outputs

- 7.5km of reconstructed or upgraded roads (including TEN-T) (ERDF indicator)

- 1.1km of footpath or cycleway created or reconstructed (ERDF indicator)

Project outputs

- Two grade separated junctions on the A55 at Llanfairfechan and Penmaenmawr
- Two new slip roads (elevated at approx. 7m above the existing A55 level)
- An under bridge at Llanfairfechan
- A new over bridge and slip roads (approximately 7m above current A55) at Dwygyfylchi
- Estimated construction years of employment - this output is not set out in the operation business case but has been identified and calculated by the evaluator as a construction activity output ⁸⁵

Outcomes

The outcomes from the A55 Junctions scheme are dependent on the completion of the scheme. As this is not expected until 2023, no outcomes have been realised to date. The key outcomes at completion include:

- 5-10% increase in average speed along the A55 road (baseline average of 86kph) (ERDF Result Indicator)
- Improved journey times from A55 Junction 14 to Junction 16A
- Improved journey time reliability along the A55
- Reduced incidence of stationary traffic backing up into Pen-y-Clip and Penmaenbach tunnels
- Improved road safety by reducing the risk of road accidents occurring
- Reduction in air and noise pollution.

Assessment of wider outcomes

Various wider outcomes are anticipated as a result of the A55 Junctions, as set out in the logic model (see Figure F.1). This section sets out stakeholder perspectives on the outcomes that are likely to be realised and, where relevant, presents baseline data for those outcomes.

Improved road safety by reducing the risk of road accidents occurring

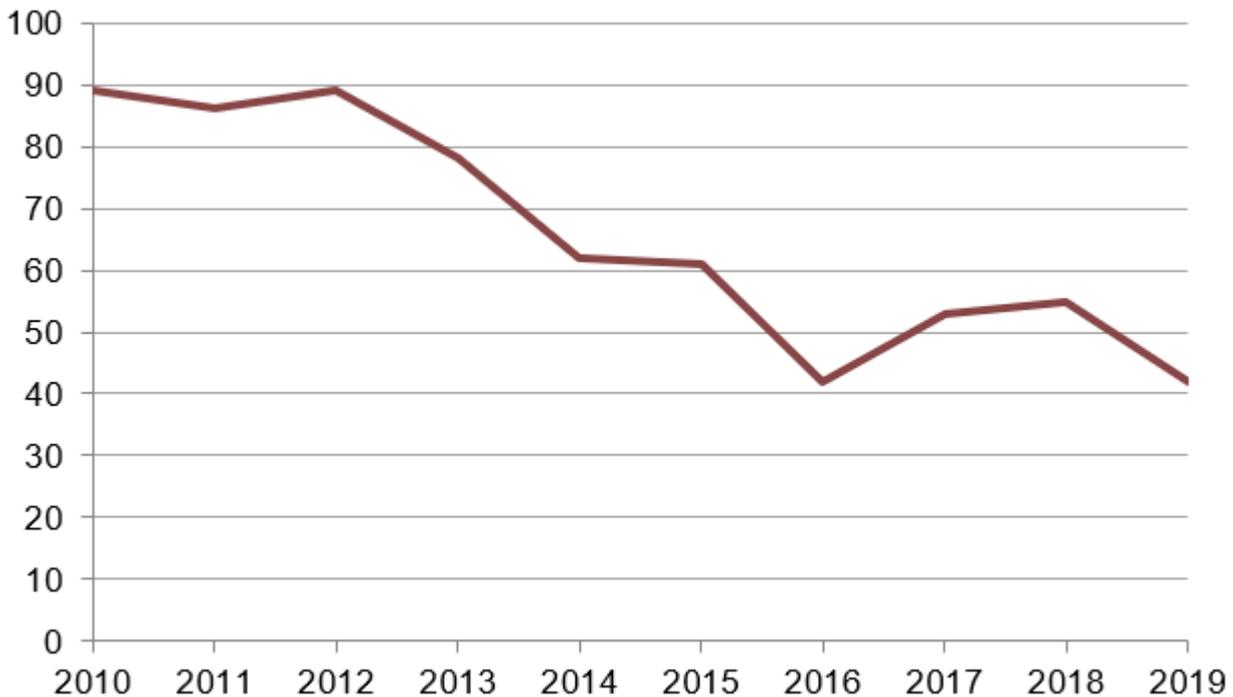
Improved safety was the most commonly cited anticipated outcome of the improvements to the A55 Junctions. One community consultee said that safety at Junction 15 is a particular concern due to difficulties accessing the A55 at peak times; the consultee noted there are frequent accidents there. In addition, the traffic speeds approaching the junctions can be “*quite scary for local road users who are trying to access or leave the roundabout*”. The removal of the roundabout

⁸⁵ Estimated 712 construction years of employment. Construction years of employment is calculated using a labour coefficient benchmark from a [Homes & Communities Agency best practice note](#). This is based on 2011 values which inflation rates have been applied to. Note that while the jobs are not central to the fundamental rationale for investment, they are an ancillary effect and are considered a relevant output from the construction activities. The output estimate will be updated at the final evaluation stage when scheme specific information is available from project delivery.

and the improved entry and exit points are expected to have notable benefits for road safety at the junctions.

Analysis of accident data on the A55 shows that from 2010 to 2019 there were, on average, 66 accidents per annum (see Figure F.3). Over this period, the highest number of accidents were observed in 2012 (89). Since then, the number of accidents per annum has steadily declined to 42 in 2019.

Figure F.3: Number of accidents per annum recorded on the A55

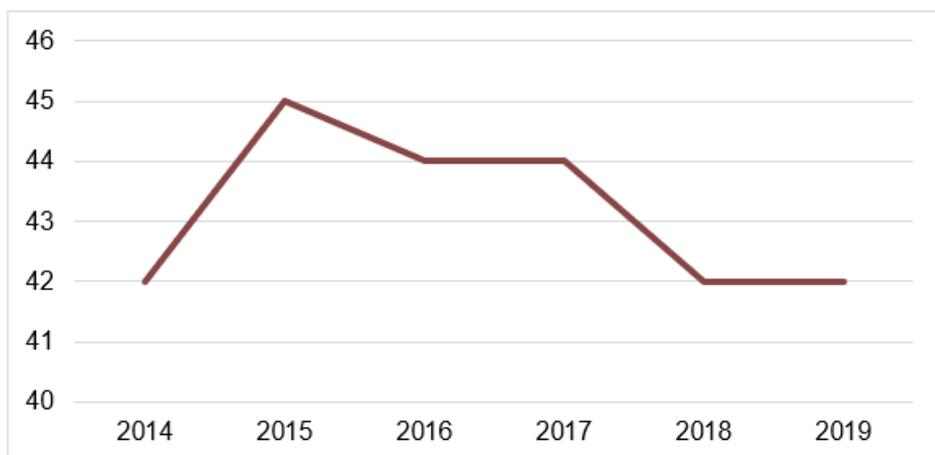


Source: SQW analysis of Accident level data, StatsWales

Improved journey times from A55 Junction 14 to Junction 16A / Improved journey time reliability along the A55

Many consultees described the current challenges presented by Junctions 15 and 16 in terms of the congestion and delays caused in accessing the A55. For local residents, one consultee described that members of the local community are often sat waiting for long periods at the roundabout at Junction 16 to join the A55. The operation is expected to address these issues and reduce journey times by improving traffic flow onto the A55, and therefore access to the A55 for local people.

Figure F.4: Average travel time on the A55 per annum (minutes); Tal-y-Bont (Bangor) (J11) to Conwy (J17)

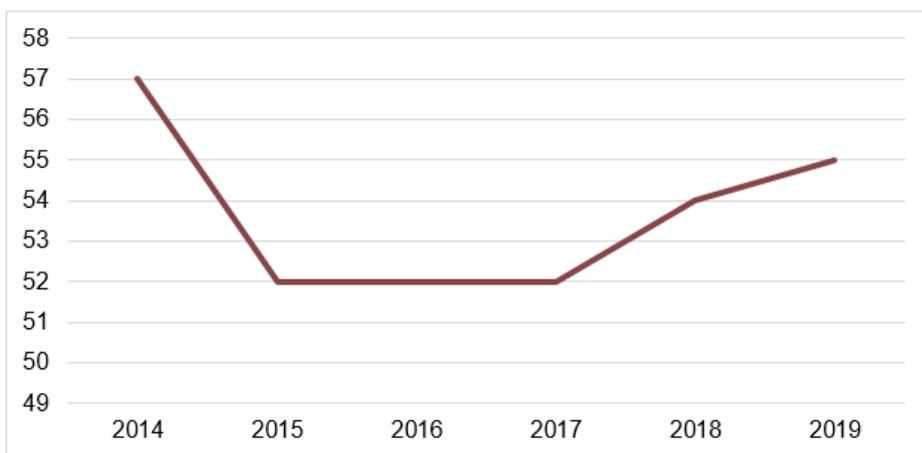


Source: SQW analysis of INRIX travel data, StatsWales

INRIX highway data⁸⁶, from Tal-y-Bont to Conwy, has been analysed to understand changes in the average travel time (minutes) on the A55 and any changes over time.

This shows that the average travel time has remained relatively static from 2014 to 2019, at an average of 42 minutes in both years. However, an increase in average travel speed was observed in 2015 to 45 minutes (+3 minutes), which then decreased year on year to an average of 42 minutes in 2018. This data will be updated and analysed as part of the final evaluation of the A55 operation to assess any changes in journey times.

Figure F.5: Average travel speed on the A55 per annum (mph); Tal-y-Bont (Bangor) (J11) to Conwy (J17)



Source: SQW analysis of INRIX travel data, StatsWales

⁸⁶ [UK Highways Agency – INRIX data](#)

Analysis of INRIX data shows that the average travel speed (mph) per annum on the A55 has reduced slightly from 57 in 2014, to 55 2019, despite a small year on year increase from 2017 to 2019. This data will be updated and analysed as part of the final evaluation of the A55 operation to assess the extent to which the ERDF Result Indicator is achieved: 5-10% increase in average speed along the A55.

Improved journey times, journey reliability and access for public transport from A55 Junction 14 to Junction 16A

As a result of the junction improvements, it is expected that journey times and journey reliability will also improve for public transport, namely buses operating on the route. This will be enabled by increased traffic flow through the two junctions and a reduction in safety issues and accidents.

Improved pedestrian and cyclist access to cross over the A55 and between the local communities connected by the A55, avoiding the need to utilise the A55 mainline

There are significant improvements planned for active travel and non-motorised usage around the A55 Junctions 15 and 16⁸⁷ to reduce severance across the A55 corridor and to improve safety along the existing Sustrans National Cycle Network Route 5 (NCNR5).

There was some awareness among community consultees regarding the provision for active travel as part of the A55 Junctions operation. One consultee described that the provision for active travel was welcomed by the local community and is expected to increase permeability of the area. Feedback from one local authority consultee suggested while there is support for the plans, they could be enhanced through improvements to active travel infrastructure within the local villages, creating better linkages to the local communities.

⁸⁷ [A55 Junctions 14 & 15 Improvements Stage 3 Scheme Assessment Report | GOV.Wales](#)