





## Shropshire County Council / Midlands Connect / Welsh Government

# MID WALES AND SHROPSHIRE CROSS-BORDER STUDY

**Final Strategy** 



Shropshire County Council / Midlands Connect / Welsh Government

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**Final Strategy** 

FINAL (VERSION 1)

**PROJECT NO. 70054978** 

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# Shropshire County Council / Midlands Connect / Welsh Government

## MID WALES AND SHROPSHIRE CROSS-BORDER STUDY

**Final Strategy** 

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### OVERVIEW

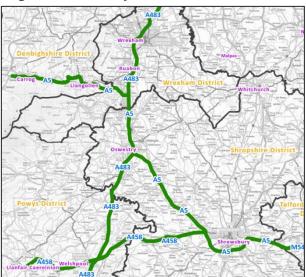
The Cross-Border Preferred Strategy brings together the Welsh Government, Midlands Connect, Shropshire Council and partners to investigate the potential to improve connections between Wales and Shropshire. The geographic scope of the Cross-Border Study is within the study area as shown in **Figure 1-1**.

Midlands Connect

The Cross-Border Strategy captures the existing transport barriers that limit connectivity and growth in the area. These barriers contribute to lengthy journey times, significant safety concerns for network users and negatively impact the wellbeing of both urban and rural Cross-Border communities. This Strategy presents the opportunity to rebalance inclusive economic growth and quality of life in this part of the UK.

#### Figure 1-1 – Study Area

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In understanding the strategic need for intervention, and the challenges presented in the area, the following objectives have been identified:

- To reduce the cost, and increase the journey time reliability, of transport movements to, from, within and through the Cross-Border area.
- To support the economic growth and prosperity of the Cross-Border area by stimulating new (and safeguarding existing) inward investment, providing employment and opportunities for increased productivity and growth
- To increase the safety of the transport network in the Cross-Border area, thereby reducing the cost of accidents / incidents on the economy, and health and well-being
- To reduce noise pollution and improve air quality in targeted locations in the Cross-Border area, particularly greenhouse gases, particulate matter and nitrogen dioxide thereby reducing the environmental and social cost of congestion and pollution.
- To minimise as far as possible the negative impacts of transport (social and health costs) on residents and communities of the Cross-Border area.

Earlier deliverables in the process of the Cross-Border Study have supported the development of this Preferred Strategy. This study has been progressed through the three main deliverables (**Figure 1-2**) with the Strategy forming the Final Report to present a preferred way forward through a shortlist of options which support improved Cross-Border connectivity.

#### Figure 1-2 – Cross-Border Study: Main Deliverables



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### WALES-SHROPSHIRE CROSS-BORDER AREA

The Cross-Border Study aims to capture the existing transport barriers that limit connectivity and growth in the area. These barriers contribute to lengthy journey times and poor journey time reliability, as well as negatively affecting the wellbeing of both urban and rural Cross-Border communities. There is a significant opportunity to support inclusive and rebalanced economic growth in this part of the UK.

There are several key strategic themes which highlight the need for investment in Wales and Shropshire to strengthen Cross-Border growth and support communities in the area.

### CHALLENGING THE AREA'S BESPOKE TRANSPORT BARRIERS

The Cross-Border area covers a diverse landscape, with natural transport barriers including flood risk areas and key strategic routes with steep inclines / declines and bends, particularly within the Mid Wales region where the road network is largely single carriageway. This contributes to limited overtaking opportunities, extended journey times and poor network resilience.

These transport barriers need to be addressed to unlock inclusive economic growth across the area by increasing productivity and the number of high skilled, higher value employment opportunities. The diverse landscape of the Cross-Border area, with a significant range of land use and economy industries, requires consideration of a full range of interventions to address these barriers which have an adverse impact on the ability for growth and the economic potential of the area.

Transport barriers affect network resilience, where roads become inaccessible for users. These can be challenging and potentially costly, resulting in often extended journeys via significantly extended diversion routes. Therefore, it is recommended that investment is focused on key areas of the network to improve resilience and avoid disruption. Compared to other parts of the UK, the difference between straight line and actual road distances between locations is often longer with a consequential impact on journey times and speeds.

The area is prone to flooding in certain areas the A5 near Oswestry, Montford Bridge and Shrewsbury and the A458 and A483 near Welshpool in Powys. Flooding events affect multi-modal network resilience whereby roads become inaccessible for users often resulting in extended journeys via diversion routes. In October 2019 for example flash flooding led to numerous rail line closures, including between Shrewsbury and Welshpool, bus replacement services were organised but flooding on roads meant buses were unable to run between Shrewsbury and Newport. Furthermore, schemes tackling these resilience issues such as the Dyfi bridge in Wales, have recently received funding which highlights the value of resilient key routes in rural areas.

### IMPROVING TRANSPORT AND CONNECTIVITY

It is important that journey time and journey time reliability are considered for both short localised journeys and long-distance journeys, supporting the different economies of the area, including freight and public transport. AM peak 2016 Trafficmaster data, collected as part of this study and presented in the Options Assessment Report (OAR), shows journey time reliability in the Cross-Border area, with the most unreliable locations (AM peak compared to free flow) including radial A roads from Shrewsbury such as the A5 between Shrewsbury and Oswestry, onto the A483 cross border to north of Wrexham.

Journey time may be of a greater importance for short, localised journeys, including local trips for work, shopping or leisure, where users have experience of the transport network. In such cases the user has an idea of the approximate time it is likely to take to travel from origin to destination.

Reliability may be of a greater importance for longer distance strategic journeys, such as freight trips or national rail links. Interventions should maximise journey time reliability and focus on key locations to benefit all users. The 'last mile' journey time uncertainty after leaving the Strategic Road Network (SRN) in The Marches on to single carriageway routes, with limited overtaking opportunities and the risk of lengthy diversion routes in the case of an incident, can have serious implications on the costs of business and the local economy.

### **IMPROVING SAFETY**

A review of the Department for Transport's Road Safety Data shows some clusters of road traffic collisions on the study network between 2014 and 2018. Locations where the most serious incidents occurred include A458 near the B4473 / A5 Shrewsbury Ring Road and on the A483, with clusters of incidents both within Welshpool and at junctions with the B4393, B4396, B5069 and Maesbury Road. A number of hotspots have been identified along the A5 including around the Queen's Head, the Five Crosses Roundabout, between Llangollen and Berwyn and the junctions with B5009, B5605 and B5070.

Where collisions occur on the network this can result in diversions and impact network resilience, especially on sections of single carriageway network where there are limited opportunities to pull over or overtake. In some locations, incidents on the network lead to lengthy diversions which have a significant impact on journey length and time.

### SUPPORTING THE CROSS-BORDER ECONOMY

Shropshire, Powys and Wrexham have a higher rate of economic activity in comparison to the national average, with these three areas contributing over £11 billion of Gross Value Added (GVA) to the UK economy in 2016. There is potential for the Cross-Border area to unlock inclusive growth and prosper further by focusing interventions to benefit more deprived areas within Shrewsbury and Wrexham.

### SUPPORTING FUTURE GROWTH

Interventions should accommodate and plan for future growth, but also support the growing agenda around climate change, behaviour change, sustainable transport and future technologies.

During development of this study, several authorities declared an official climate emergency, as well as the Welsh Government and West Midlands Combined Authority. The strategy looks at improving network efficiency through shortening journey times, improving journey time reliability and well-being. Reducing journey times and time spent in slow or stop-start traffic will also reduce carbon emissions and improve air quality. This supports the Welsh Government's Future Generations Act as well as the rising climate and decarbonisation agenda.

There is a requirement in The Marches to reduce air pollutants in AQMAs and a need to support a healthier Wales as part of the Welsh Government's Wellbeing Goals. This needs to be supported by the most effective transport interventions, minimising the negative impact of travel on air quality while still providing a high-quality transport service. Actions have already been taken in parts of the Cross-Border area, such as speed restrictions along the A483 (junctions 5 to 6) in Wrexham to mitigate air quality issues (50mph speed limit enforced by average speed check cameras). AQMAs exist within the vicinity of the study area, in Shrewsbury, Nantwich, Chester City Centre and Bridgnorth. Further interventions that support reducing congestion and more sustainable transport movements will support additional improvements in air quality.

Within Wales and Shropshire, growth locations have been identified by Spatial Plans and Strategies. The Marches market towns are places of opportunity, each with distinct strengths and specialisms. The Marches



Shropshire

Opportunity Towns include Oswestry, Shrewsbury and Whitchurch. Wales growth areas include Llanidloes, Newtown and Welshpool as key hubs. The Midlands Connect Strategy also outlines growth locations including Hortonwood / Hortonwood West, Oswestry Innovation Park, Telford T54 and Central Telford. These centres need to be supported by a robust transport network that enables prosperity through the right connectivity.

Digital connectivity should also be considered to ensure that the Cross-Border area moves forward and meets demand. This includes enabling connectivity while reducing the need to travel. While the major settlements have access to at least superfast broadband connections, much of the area only has the standard level connection. Connections across the study area for outdoor 4G suggests most areas are likely to have good coverage. The hills west of Oswestry have the most unreliable signal.

In terms of future demographic change, Local Authorities in the study area have a higher than average ageing population; with the study area containing a lower proportion of 15-44-year-olds than the national average. Access to services and care for an ageing, dispersed population is important and supporting the limited number of high skilled jobs in the area highlights the need for a rebalancing of industry and economic activity in this part of the UK to reduce out migration of young people in parts of the study area.



### **OPPORTUNITIES AND CONSTRAINTS**

The strengths and opportunities to be unlocked in the Cross-Border area to rebalance growth and prosperity in the UK are highlighted as follows:

#### Strengths

- Quality of life and environment
- Agricultural economy
- Available land for development
- Natural, cultural and heritage assets
- Urban centres and market towns
- Innovation in industries including manufacturing technologies, health and social care, cyber and business security
- Comparatively high levels of SMEs
- Proximity to markets within the Midlands Engine, Growing Mid Wales and the Northern Powerhouse

#### Weaknesses

- Poor infrastructure and access to markets and services
- Low productivity and income related jobs
- Ageing population / workforce
- Topographical challenges to the transport network, with steep gradients and tight bends on key highway routes

#### Threats

- Global competition and the need to maintain competitive in economic markets - including being digitally connected
- Lack of investment in infrastructure to date
- Disconnect between skills and business needs
- Flood risk (particularly or near to the road network)
- Declaration of climate emergency across the study area

#### Opportunities

- Utilise natural environment, agricultural products and landscape
- Support innovative and advanced solutions in businesses to better enable their growth and competitiveness
- Strengthen local and regional growth zones and strategic corridors
- Grow the knowledge economy
- Ageing population a test bed for new health and care approaches
- Strengthen key strategic economic and transport connections between the North West, West Midlands, South West, Wales and The Marches
- To improve well-being for future generations
- Utilise future mobility solutions

## Midlands Connect Transport | Investment | Growth



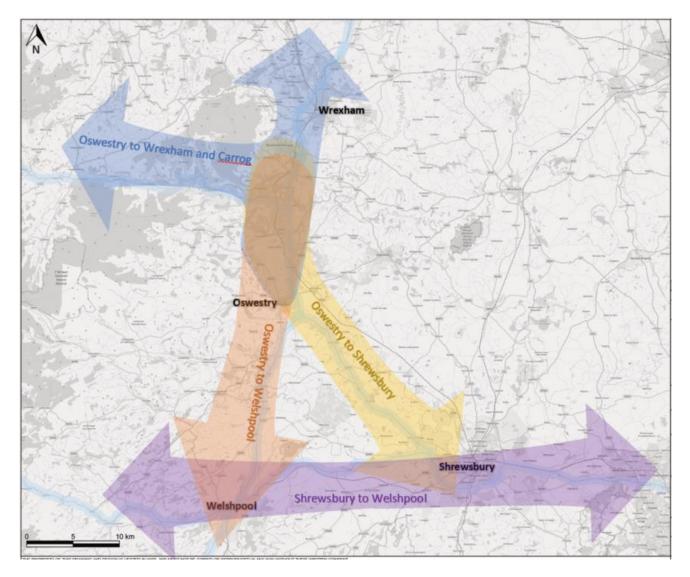
### **CROSS-BORDER KEY CORRIDORS**

The interventions set out in Chapter 2 provide potential interventions across the whole study area.

In order to focus efforts on key routes, the study area can be broken down into four focused corridors which represent key movements across the Wales – England border. These are set out in **Figure 3-1**:

- Welshpool to Shrewsbury
- Welshpool to Oswestry
- Oswestry to Wrexham and Carrog
- Oswestry to Shrewsbury

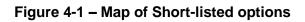
### Figure 3-1 – Cross-Border Key Corridors

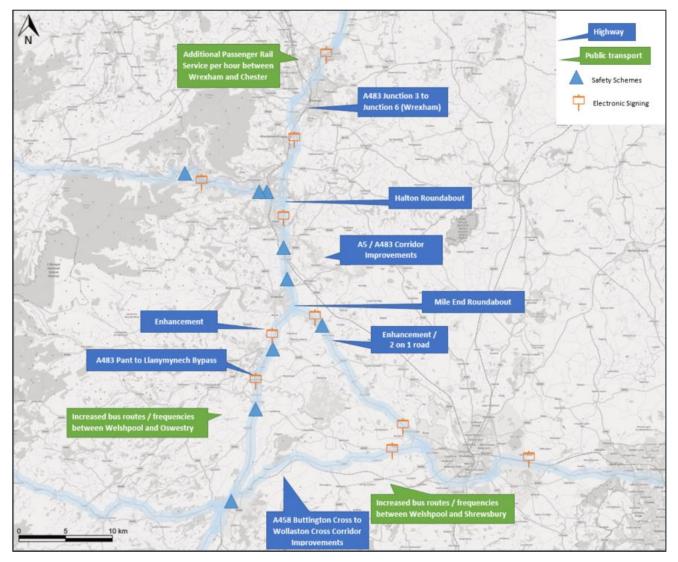




### PREFERRED STRATEGY

The earlier stages of this study informed development of a short list of 13 interventions to take forward for further development, these are shown in **Figure 4-1**. The approach to sequencing these interventions was informed and agreed with key stakeholders including Midlands Connect, Welsh Government, Shropshire Council, Highways England and Growing Mid Wales Partnership.





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The Cross-Border Joint Appraisal Framework Tool (JAF) has been developed in line with DfT's Transport Analysis Guidance and Welsh Transport Appraisal Guidance (WebTAG and WelTAG respectively). It considers the network's distinctive needs compared to other areas of the UK and reflects the transport characteristics of the study area.

The tool objectively assessed a long list of interventions using a robust evidence base against criteria. This includes criteria covering all areas of the 'five cases model': conditional outcomes, economic, affordability, acceptability, management (risk & constraints) and environmental considerations.

Intervention assessment used a combination of transport planning judgement and quantitative evidence in the form of Trafficmaster data (outlined in the **Options Assessment Report**). This assessment process has delivered a transparent and objective assessment of each intervention which can reliably inform a future investment programme.

The shortlist of interventions assessed in terms of their feasibility and strategic benefit are shown in **Table 4-1**. These interventions include a range of locations and modes, with a number of interventions taken from other studies in the Cross-Border area to ensure consistency and collaboration in approach.

### Table 4-1 – Short-list of Interventions

Ref	Interventions Description
S60	<b>Mile End Roundabout Improvements (A5 / A483)</b> Options to upgrade existing roundabout have been considered and a dumbbell arrangement with a new, offline roundabout, realignment of existing A5 and link road to existing roundabout is the preferred option. A planning application is submitted. The project is currently at detailed design stage and Highways England are engaged.
S16	A458 Buttington Cross to Wollaston Cross Corridor Improvements To improve about 9km of road which is not up to standard.
S51	<b>A483 Junction 3 to Junction 6 (Wrexham)</b> The Welsh Government are working with the North and Mid-Wales Trunk Road Agent (NMWTRA) and Wrexham County Borough Council on plans to improve the A483 corridor between junctions 3 to 6. A short List of options are being developed.
S28	Implement Highway Safety Schemes Potential locations identified using the latest available accident data (2014-2018) to find sections of the study network that have experienced clusters of accidents such as on the A483, Including within Welshpool, the junction with the B4393 and B4396, the section of the A5 around the Queen's Head and to the north of the study area around the Five Crosses Roundabout, junctions of the A5/B5009, A5/B5605 and A5/B5070 and the section of the A5 between Llangollen and Berwyn. As more up-to-date data becomes available these locations should be reviewed and include incidents such as on the A5 near West Felton in 2019. A review of detailed accident reports will be used to identify the causes behind the high number of incidents and specific solutions.
S23	Sections of 2 on 1 roads Short sections of carriageway of at least 13.5 metres in width which allow overtaking in one direction for a stretch of the highway for at least 600 metres and up to 2,000 metres. To include locations on the A5 north of the Wolfshead Roundabout (B4396) such as around West Felton and the Oswestry Bypass and the section of the A483 south of Mile End.
S30	<b>A483 Pant to Llanymynech Bypass</b> Bypass of two villages on the A483 between Welshpool and Oswestry.



Interventions Description
Increased bus routes / frequencies Opportunity for specific sustainable transport links at targeted growth areas and strategic employment sites e.g. Welshpool to Newtown (improved bus 'shuttle' service), Current T12 service between Welshpool and Oswestry runs approximately twice a day, and X75 service between Welshpool and Shrewsbury runs approximately every two hours.
<b>New rail stations</b> Located on existing lines: Wolverhampton to Shrewsbury (park and rail to the east of Shrewsbury). Shrewsbury to Chester (park and rail to the north of Shrewsbury). Whittington, Cefn Mawr, Rhosllannerchrugog, park and rail to Wrexham (J3). Cambrian Line / Welsh Marches Line (park and rail to the south of Shrewsbury).
Halton Roundabout (Junction of A5 and A483) The North and Mid Wales Trunk Road Agent (NMWTRA) is progressing Stage 2 work. The location was identified in the Welsh Government's Congestion Pinch-Points Programme and options to upgrade the existing roundabout are being considered, with preferred option still to be decided.
<b>A5 / A483 Corridor Improvements</b> Dualling or partial dualling of the A5 / A483 between Shrewsbury and Ruabon; and improved junction capacity on the A5 Shrewsbury and Oswestry bypasses.
Advance electronic messaging signing Using Trafficmaster data in the identification of unreliable sections such as the M54/ A5 Wolverhampton to Shrewsbury, key driver decision points on approaches to the Shrewsbury, Oswestry and Wrexham Ring Roads, around the A483 approach to the junction with A539 and A5 section around Chirk, south of Llanymynech and the A539 at Ruabon and Llangollen.
Additional Passenger Rail Service per hour between Wrexham and Chester Redoubling of the remaining single line section between Rossett and Wrexham, as well as general layout changes at Wrexham General Railway Station.
<b>On line enhancements to the trunk road network</b> Such as straightening, removing bends and widening of narrow sections at selected locations. Locations within the study area identified using Trafficmaster speed outputs include the section of the A5 between Llangollen and Glyndyfrdwy, narrow sections of the A458 between Welshpool / Buttington and Wollaston and the A5 between the Halton roundabout and Llangollen



### FUNDING SOURCES

The area geography defines every aspect of the Infrastructure Fund approach. The larger the geographical area, the greater the leverage of Government funding as a larger area will influence a greater impact on the national economy.

A collaborative voice would be more influential and support an inclusive and coordinated vision for the Cross-Border area including Mid-Wales, Shropshire and The Marches. It would improve their competitive position for capital funding and mean that strategic decisions are made by a combination of local and regional leaders who share interests in terms of Cross-Border operations.

Strong, local governance is key in the approach to funding including risk sharing between the region's stakeholders and buy in from leaders and chief executives from the start through a top-down approach to progress.

Many shortlisted schemes require significant capital investment if they were to go ahead, which would likely come from multiple sources. **Table 5-1** gives a very high-level indication of where funding could come from, this is subject to more detailed appraisal and funding availability.

	Local Authorities	Welsh Government	Highways England	Department for Transport	Growing Mid-Wales Funding
Mile End Roundabout Improvements (A5 / A483)	$\checkmark$		✓	$\checkmark$	
A458 Buttington Cross to Wollaston Cross Corridor Improvements	√	✓	$\checkmark$		✓
A483 Junction 3 to Junction 6 (Wrexham)		$\checkmark$			$\checkmark$
Implement Highway Safety Schemes	$\checkmark$	$\checkmark$	✓	$\checkmark$	$\checkmark$
Sections of 2 on 1 roads	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
A483 Pant to Llanymynech Bypass	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Increased bus routes / frequencies	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$
New rail stations	$\checkmark$	$\checkmark$		$\checkmark$	$\checkmark$
Halton Roundabout (Junction of A5 and A483)	$\checkmark$	$\checkmark$			$\checkmark$
A5 / A483 Corridor Improvements	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Advance electronic messaging signing	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
Additional Passenger Rail Service per hour between Wrexham and Chester	✓	V		✓	✓
On line enhancements to the trunk road network	$\checkmark$	$\checkmark$	~	$\checkmark$	$\checkmark$

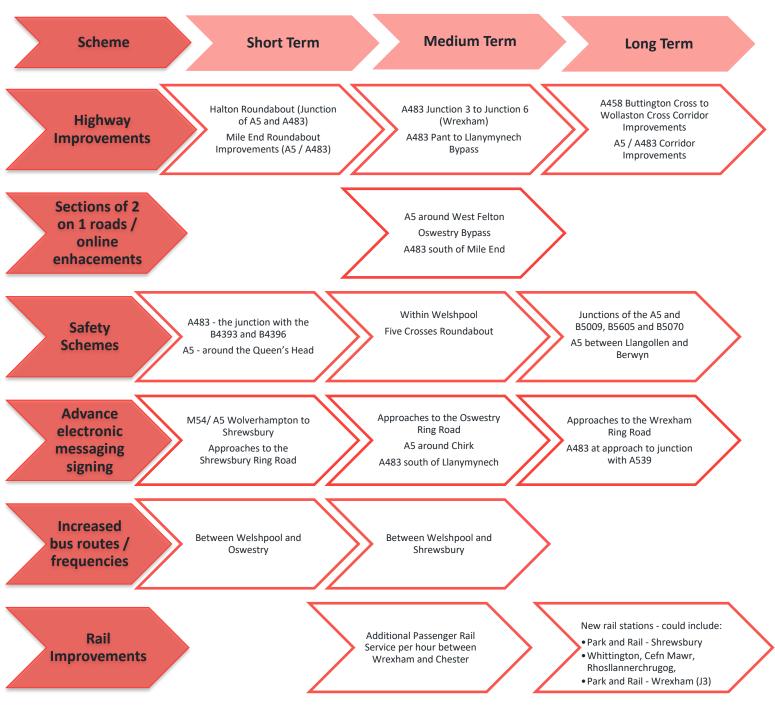
### Table 5-1 – Identification of Potential Funding Bodies

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### Sequenced Shortlist

The shortlist has been categorised into six main modal themes. Each of these has a sequenced set of actions in terms of what can and should be brought forward first, considering deliverability and strategic need. Whilst all interventions are a priority and required to fulfil the overall objectives of the strategy, sequencing highlights 'quick wins' and interventions already at a more progressed stage of development. The practical order of schemes are subject to changes in priorities and funding availability.





Mid Wales and Shropshire CROSS-BORDER STUDY No.: 70054978 shire County Council / Midlands Connect / Welsh Government

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### Midlands Connect Transport | Investment | Growth



### SUMMARY AND NEXT STEPS

The Cross-Border Preferred Strategy brings together the Welsh Government, Midlands Connect, Shropshire Council and partners to investigate the potential to improve connections between Wales and Shropshire.

By targeting identified transport barriers, there are significant opportunities to support inclusive and rebalanced economic growth across Shropshire and Mid Wales. These transport barriers limit connectivity both within and across the region, contribute to lengthy journey times and poor journey time reliability, as well as negatively affecting the wellbeing of Cross-Border communities.

This Cross-Border Study aims to capture the effects of these existing transport barriers and identify schemes most suited to addressing the area's distinct challenges.

There are several key strategic themes which highlight the need for investment in Wales and Shropshire to strengthen cross border growth and support communities in the area:

- Challenging the area's bespoke transport barriers including flood risk and steep topography which affect journey time reliability, particularly in areas where long sections of single carriageway limit the overtaking opportunities.
- Improving transport and connectivity both journey time and journey time reliability are important to supporting the area's different economies, including freight and public transport. Locations where these issues present a barrier to growth are evidenced through the collection of Trafficmaster data for the area (presented in the Options Assessment Report).
- Improving safety collisions on the network can result in diversions and impact network resilience where sections of road have to be closed following a serious incident. A number of hotspots have been identified across the study area.
- Supporting the Cross-Border economy Counties forming the focus of this study show potential for the Cross-Border area to prosper further as we move into times of economic uncertainty. And provide opportunities to help balance the economy and promote inclusive growth.
- Supporting future growth Interventions should accommodate and plan for future growth, but also support the growing agenda around climate change, behaviour change, sustainable transport, digital connectivity and future technologies.

A review of the long-list of options has identified 13 schemes which best deliver against the Cross-Border study objectives. It is the prime recommendation of this study that all the shortlisted options are taken forward to their next stage of delivery. Evidence set out within this study presents the need for these schemes to come forward. The shortlist, and their action for the next stage are:

Scheme	Details	Next Steps
Halton Roundabout (Junction of A5 and A483)	The North and Mid Wales Trunk Road Agent (NMWTRA) is progressing Stage 2 work. The location was identified in the Welsh Government's Congestion Pinch-Points Programme and options to upgrade existing roundabout are being considered, with the preferred option still to be decided.	WeITAG Stage 3 development





Scheme	Details	Next Steps
Mile End Roundabout Improvements (A5 / A483)	Options to upgrade existing roundabout have been considered and a dumbbell arrangement with a new, offline roundabout, realignment of existing A5 and link road to existing roundabout is the preferred option. A planning application is submitted. The project is currently at detailed design stage and Highways England are engaged.	Continue through detailed design
Implement Highway Safety Schemes	Potential locations include: the A483 within Welshpool, the junction with the B4393 and B4396; the section of the A5 around the Queen's Head and to the north of the study area around the Five Crosses Roundabout; junctions of the A5/B5009, A5/B5605 and A5/B5070; and the section of the A5 between Llangollen and Berwyn.	Undertake safety audit(s) of identified locations to determine type of scheme that could be effective and associated costs
Advance electronic messaging signing	Potential locations include: the M54/ A5 Wolverhampton to Shrewsbury, key driver decision points on approaches to the Shrewsbury, Oswestry and Wrexham Ring Roads, around the A483 approach to the junction with A539 and A5 section around Chirk, A483 south of Llanymynech and the A539 at Ruabon and Llangollen.	Review of suitable specific locations and determination of costs
Increased bus routes / frequencies	Potential locations include: Welshpool to Newtown (improved bus 'shuttle' service), Current T12 service between Welshpool and Oswestry runs approximately twice a day, and X75 service between Welshpool and Shrewsbury runs approximately every two hours.	Engage with public transport providers to identify scope and opportunity for improved services
A483 Pant to Llanymynech Bypass	Bypass of two villages on the A483 between Welshpool and Oswestry	Take forward through WeITAG staged development
A483 Junction 3 to Junction 6 (Wrexham)	The Welsh Government are working with the North and Mid- Wales Trunk Road Agent (NMWTRA) and Wrexham County Borough Council on plans to improve the A483 corridor between junctions 3 to 6. A short List of options are being developed	Take forward through WeITAG business case development
A5 / A483 Corridor Improvements	Dualling or partial dualling of the A5 / A483 between Shrewsbury and Ruabon; and improved junction capacity on the A5 Shrewsbury and Oswestry bypasses.	Take forward through WebTAG / WeITAG scheme development
Additional Passenger Rail Service per hour between Wrexham and Chester	Redoubling of the remaining single line section between Rossett and Wrexham, as well as general and layout changes at Wrexham General Railway Station.	Engage with public transport providers to identify scope and opportunity for improved services
Sections of 2 on 1 roads	Short sections of carriageway of at least 13.5 metres in width which allow overtaking in one direction for a stretch of the highway for at least 600 metres and up to 2,000 metres. To include locations on the A5 north of the Wolfshead Roundabout (B4396) such as around West Felton and the Oswestry Bypass and the section of the A483 south of Mile End.	Further study required to confirm optimum locations
On line enhancements to the trunk road network	Such as straightening, removing bends and widening of narrow sections at selected locations. Potential locations include: the A5 section between Llangollen and Glyndyfrdwy, narrow sections of the A458 between Welshpool / Buttington and Wollaston and the A5 between the Halton roundabout and Llangollen	Further study required to confirm optimum locations





Scheme	Details	Next Steps
A458 Buttington Cross to Wollaston Cross Corridor Improvements	To improve about 9km of road which is not up to standard.	Take forward through WeITAG staged development
New rail stations	Located on existing lines, such as: Wolverhampton to Shrewsbury (park and rail to the east of Shrewsbury). Shrewsbury to Chester (park and rail to the north of Shrewsbury). Whittington, Cefn Mawr, Rhosllannerchrugog, park and rail to Wrexham (J3). Cambrian Line / Welsh Marches Line (park and rail to the south of Shrewsbury).	Further study required to confirm optimum locations

It is noted that other similar studies are being undertaken which cover / neighbour the Cross-Border area. These studies have different focuses in their objectives and geographies and therefore may identify alternative schemes to progress first. Collectively these studies should provide an overall improvement to Cross-Border opportunities.

### NEXT STEPS

 Recommendation A – Identify funding to progress each shortlisted option to the next stage of scheme development

The sequencing of these 13 options will largely depend on availability of appropriate funding. The next stage of this study will involve identification of funding streams for all of the shortlisted options to be developed to their next stage. This might be a scheme specific option assessment or the next stage of business case.

### Recommendation B – engage in refresh / development of wider strategies

For example, where the Midlands Connect strategy refresh is being undertaken, changes in focuses or ambitions should be reflected in sequencing of schemes. This includes being conscious of and responsive to the wider social well-being and environmental agenda.

### • Recommendation C – remain flexible and responsive to other developments in the region

Other schemes being progressed as part of other agendas may present opportunities for unlocking additional benefits by providing complimentary schemes.

This may raise the need for review of borderline schemes that didn't quite make the shortlist, such as Differential Acceleration Lanes (DALs) / Crawler lanes, Shrewsbury/Welshpool to Birmingham Railway Line Frequency Enhancements and Train Lengthening, Park and ride sites (to include locations outside Shrewsbury Town) and Park and rail sites (to include locations outside Shrewsbury Town and at Welshpool).

Alternatively, some schemes may alleviate problems and reduce the impetus for intervention at a particular location or journey for a particular mode.

### Recommendation D – continue to work collaboratively on the ambitions of the Cross-Border area

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### ACTION PLAN

To drive forward the Cross-Border Strategy, a set of study level and intervention level actions are provided. Some schemes already have support from partners and are looking to be progressed. As part of this action plan it is imperative that all stakeholders, including Highways England, Welsh Government, Growing Mid Wales Partnership and the DfT are engaged in this strategy, and that the necessary studies are undertaken to drive interventions forward. These actions will maintain momentum on the delivery of the Strategy and provide the next steps required.

### Actions - Study Level

- Hold a Stakeholder workshop for a peer review to further validate and moderate the Strategy.
- Establish a Cross-Border Working Group who meet regularly and push forward the Strategy.
- Engage at a senior political level for progression of individual interventions.
- Undertake a full review potential funding sources to further inform the sequencing of interventions.
- Consideration of how the interventions will be 'future ready' and integral to supporting the UK requirement for net zero carbon emissions by 2050, including the role of future technologies in achieving this.
- Consideration of whether 'future mobility' could be applied to the study area to enhance and supplement the existing recommendations. Such an approach would focus in more detail on the people, places and activities in the area and focus on interventions that consider new modes, cleaner transport, automation, new business models and sharing, data and connectivity, and changing user attitudes and behaviours.

### Actions - Intervention Level

- Progress the Halton Roundabout (Junction of A5 and A483) study through WeITAG stage 3
- Continue development of Mile End Roundabout improvements (A5 / A483) through detailed design
- Undertake safety audit(s) of identified locations for highway safety schemes to determine type of intervention required and associated costs
- Review suitable specific locations for advance electronic messaging signing and determine costs
- Engage with public transport providers to identify scope and opportunity for improved bus frequencies and services
- Progress the A483 Pant to Llanymynech Bypass through WeITAG staged development
- Take forward the A483 Junction 3 to Junction 6 (Wrexham) to WebTAG business case development
- Take forward the A5 / A483 Corridor Improvements to WebTAG scheme development
- Engage with public transport providers to identify scope and opportunity for additional passenger rail services between Wrexham and Chester
- Undertake study to confirm optimum locations for sections of 2 on 1 roads
- Undertake study to confirm optimum locations of on-line enhancements to the trunk road network
- Develop the A458 Buttington Cross to Wollaston Cross corridor improvements forward through WelTAG process
- Undertake study to confirm optimum locations of new rail stations in the study area



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