



Cyngor Gwynedd

# WELTAG STAGE 2 REPORT

Llanbedr Transport Improvements - WelTAG  
Stage 2





Cyngor Gwynedd

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Llanbedr Transport Improvements - WelTAG Stage 2

**PROJECT NO. 70115176**

**DATE: SEPTEMBER 2025**

WSP

1 Capital Quarter  
Tyndall Street  
Cardiff  
CF10 4BZ

Phone: +44 2920 769 200










WSP.com

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# 1 INTRODUCTION

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## 1.1 OVERVIEW

This report presents the findings of the WelTAG Stage 2 study, commissioned by Cyngor Gwynedd (CG), to improve the transport network in Llanbedr. The study follows on from the WelTAG Stage 1 study completed in 2024.

The study has been developed in the context of WelTAG 2024 Guidance, which takes into account the ambitious targets, priorities, and ambitions set out by Llwybr Newydd. As agreed with CG, the study has been developed as a 'WelTAG Standard' Stage 2 study. On this basis, the purpose of this study is to narrow down the potential options identified at Stage 1, and to recommend a preferred solution for which a Full Business Case can be developed.

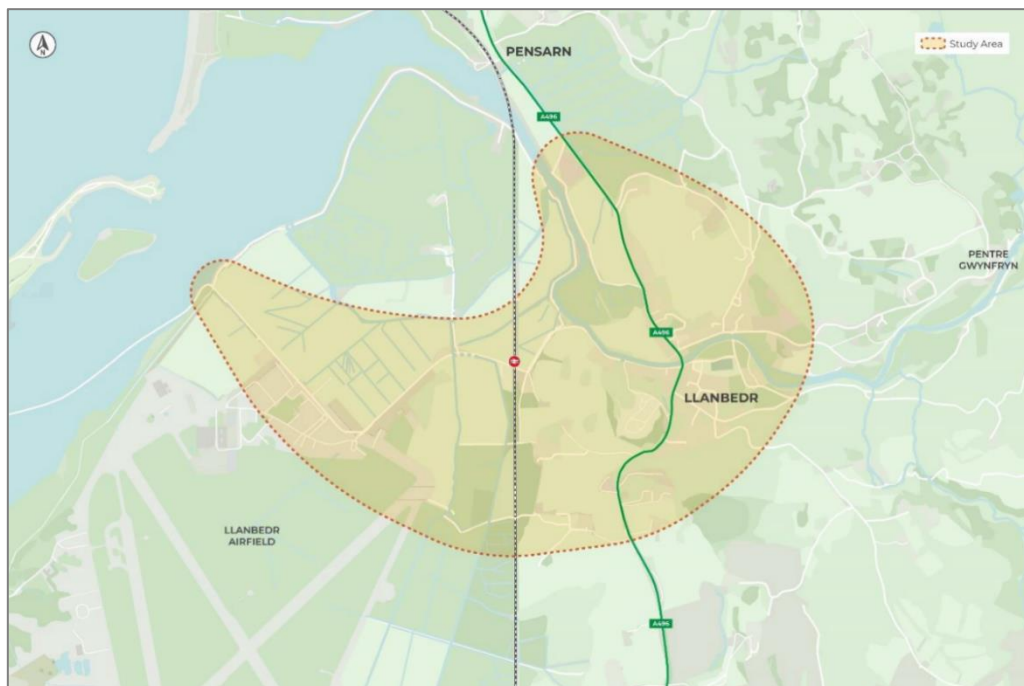
Acting as a summary report, this document should be read in conjunction with the accompanying Integrated Well-Being Appraisal (IWBA) (70115176-WSP-GEN-LBR-RP-TR-0035), which provides further detail of the assessments undertaken.

## 1.2 STUDY AREA

Llanbedr is a small rural settlement in Gwynedd's Ardudwy region, home to around 650 residents, and located within the Eryri National Park. The village is served by the single-carriageway A496, an hourly bus service, and two-hourly rail services. However, as has been identified at Stage 1, the constrained road network causes disruption and has a negative impact on the community.

Whilst being considerate of the wider region, options have been developed to improve the transport network in Llanbedr, with the study area illustrated in **Figure 1-1**. As shown, Llanbedr Airfield is located to the west of the village. The Airfield is recognised within the Local Development Plan as a strategic site due to its potential for aerospace and related industries.

**Figure 1-1 - Study Area**



## 1.3 BACKGROUND

In 2015, a WelTAG Stage 1 Study proposed a new 1.5km bypass in Llanbedr to address the negative impacts of traffic on the community and to support the development of Llanbedr Airfield. A planning application for the construction of a new road was submitted, with consent granted in 2020. However, in 2021, the Welsh Government's (WG) Roads Review Panel assessed the scheme and advised against its progression, instead encouraging discussions on alternative measures to address the existing transport issues in Llanbedr.

In response to this, CG received funding from WG to undertake a WelTAG Stage 1 and 2 study to investigate the potential interventions that could be implemented. The Stage 1 study was undertaken in 2024 and identified a number of options for further consideration and development at WelTAG Stage 2.

## 1.4 WELTAG STAGE 1

The WelTAG Stage 1 study assessed over 100 potential options and recommended a short-list of options for further consideration. It was highlighted that if an intervention is not developed, the existing issues (discussed ahead in **Section 2**) will continue to worsen, impacting on the economy of the local area, the well-being of the community, and the setting of the historic village of Llanbedr within the Eryri National Park. It was also identified that the existing transport network limits the future development of Llanbedr Airfield, which has been formally allocated in the Eryri Local Development Plan (2016-2031) through a Welsh Government Enterprise Zone Designation, and could provide significant economic benefits should it be developed.

The study recommended that all seven Option Packages<sup>1</sup> should be taken through to Stage 2 for further development and consideration, on the basis that all are aligned with transport policies and programmes (Strategic Fit) and could contribute positively to well-being. It was however noted that no individual Option Package meets all criteria and therefore a combination of Option Packages will likely be required to ensure that the preferred solution at Llanbedr maximises its contribution to transport policies and its benefits to well-being.

## 1.5 STAKEHOLDER ENGAGEMENT

This study has been informed by engagement with key stakeholders and the public. The key engagement undertaken at Stage 2 has been the public consultation which involved drop-in sessions and a survey. Building on the stakeholder engagement undertaken at Stage 1, the purpose of the engagement at this stage aimed to expand outreach to a wider audience, ensuring that all those potentially affected by the proposals had the opportunity to contribute their views.

The feedback received throughout the project has been utilised to develop the potential options and proposals. A summary of the key points raised is contained within **Section 4.7**, with further detail in the IWBA.

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<sup>1</sup> 1. Low-speed Relief Road, 2. Reducing the Need to travel, 3. Behaviour Change, 4. Public Transport Services, 5. Llanbedr Railway Station, 6. Llanbedr Village Improvements and 7. Mochras Road Improvements.

## 2 CASE FOR CHANGE & OBJECTIVES

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### 2.1 CASE FOR CHANGE

A Case for Change was established at Stage 1; this chapter summarises its content. The findings from a review of the local area are summarised below and illustrated in **Figure 2-1**.

- Private car use is the dominant mode of transport, likely due to the rurality of the area and how access to key services and employment requires long distance travel;
- There is little incentive to use public transport given that the network is limited. Due to the type of journeys being made to the area by visitors (primarily long-distance, weekend trips), the propensity for travelling by public transport to the region is low. There is also limited awareness of specific service offerings for tourists;
- The village is severed by the A496 with pedestrians required to share the road space with vehicles due to the lack of footways. This causes safety issues, as indicated by the comparably high collision rate and collisions recorded from 2018-2022.
- Improvements to infrastructure are constrained by direct frontages onto the A496, with no footways, and the Grade II listed A496 Afon Artro bridge;
- The constrained road network induces stop-start movements, some congestion and journey time inconsistencies. This is exacerbated by parked cars, although these vehicles are used as physical barriers by pedestrians to assist movement through the village;
- Existing issues are exacerbated during the summer when there is a large influx of visitors;
- Potential development of Llanbedr Airfield is constrained by the existing highway layout, with safety concerns with any larger vehicles requiring use of Mochras Road to access the site; and,
- The A496 lies within a flood risk area, with flooding events likely to increase with climate change.

A summary of the transport problems and opportunities are provided below. For further information, see the Case for Change report (70115176-WSP-GEN-LBR-RP-TR-0002).

#### Transport Problems

1. Safety;
2. Reliance on the Private Car;
3. Access to Services & Employment;
4. Community Severance & Sense of Place;
5. The Visitor Economy; and
6. Resilience.

#### Opportunities

1. Active Travel;
2. Public Transport;
3. Employment;
4. Reducing the Need to Travel;
5. Safety Improvements; and
6. Sense of Place.

Based on the problems and opportunities identified, the study objectives are as follows:

1. Reduce the need to travel for key services and employment.
2. Improve safety for all transport modes.
3. Prioritise journeys on-foot and by cycle within Llanbedr village.
4. Improve access by sustainable modes to and from Llanbedr and areas to the west of the village.
5. Enhance the local built environment to improve the sense of place and contribute to the vibrancy of the village.
6. Reduce the impact of the visitor economy on the local road network.
7. Improve the resilience of the transport network in and around Llanbedr.
8. Reduce the impact of climate change on the local community.

Figure 2-1 - Key Transport Statistics and Issues

**6 collisions** recorded in Llanbedr from 2018-2022.



Llanbedr has a collision rate of **888 per billion vehicle miles** compared with 170 for **typical rural A-roads**.

Car ownership levels in Llanbedr are broadly similar to rural areas, with both being **higher than the national level**.



Daily weekday traffic demand in August (>5,000 vehicles) is **more than 3x** December and January (approx. 1,600).



On average, **there are 14% more journeys of more than 20km made to work** from Llanbedr, compared to the national rural average.

**80%** of people travel by private car to work. This is higher than the national average of 77%, but slightly lower than the average for rural areas in Wales (82%).

**29%** of people work from home in Llanbedr, compared to 28% across all rural areas in Wales.



**Parked cars** are present along the A496 throughout the day.

Only **9,782** passengers used Llanbedr Railway Station in 2022/2023.



Travel times through Llanbedr are slightly higher and **more variable during August**. 95th percentile travel times in peak periods exceed 150s in August, compared with 100s in Autumn.



The population of Gwynedd declined by **3.7%** between 2011 and 2021.



**70** listed buildings and structures within 2km of Llanbedr.

- The A496 crosses a **Grade II listed bridge of the Afon Artro** in Llanbedr.
- Surrounding settlements are **beyond a reasonable walking distance** for Llanbedr residents.



Pedestrians sharing the road space with vehicles



Lack of footways along the A496



Direct frontages onto the A496



Stop-start traffic along the A496

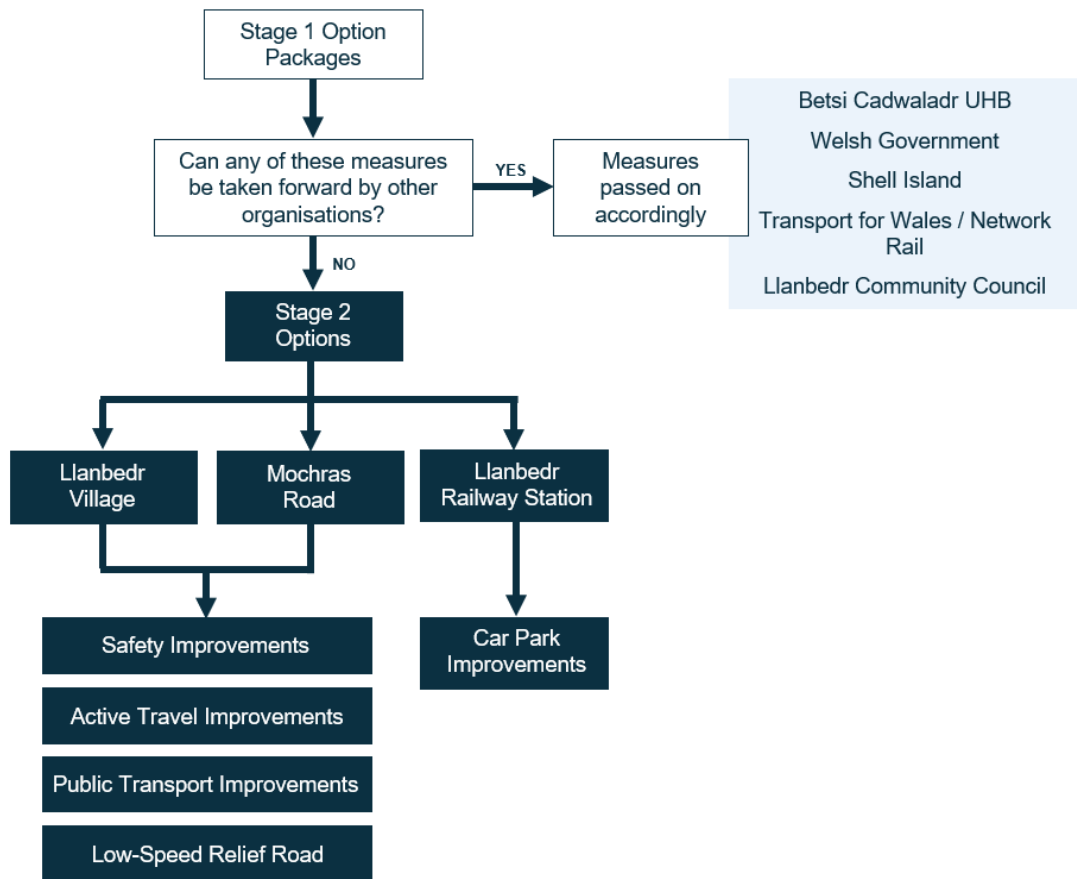
### 3 OPTIONS

#### 3.1 OPTION DEVELOPMENT

The seven option packages identified at Stage 1 have been progressed to Stage 2 for further appraisal. Some measures contained within the packages were discounted from the WelTAG process at the outset as they were deemed the responsibility of other organisations to progress. This includes broader measures which align with the study objective to ‘Reduce the need to travel’ such as remote working policies, which fall under the remit of the Welsh Government to develop.

The option development process is shown in **Figure 3-1**.

**Figure 3-1 - WelTAG Stage 2 Option Development Process**



The option packages were reorganised into twelve distinct options, each incorporating the measures previously identified. As shown, these are tailored to specific geographic areas – Llanbedr Village, Mochras Road and Llanbedr Railway Station<sup>2</sup> – and are grouped accordingly. For ease of reference, and to demonstrate their different impacts, the individual measures within each option are

<sup>2</sup> It is likely that these improvements would need to be developed in collaboration with TfW.

categorised into subgroups: Safety, Active Travel, Public Transport Improvements and a Low-speed Relief Road.

**Table 3-1** provides a general overview of the types of measures included within each of the subgroups. Note that not all measures described in **Table 3-1** are included within every option, and other miscellaneous measures such as delivery lockers and public realm improvements are not referenced here. Where there are other significant measures included in an option (such as traffic signals, off-street parking) these are specified within the option heading.

**Table 3-1 - Subgroups within Option Naming**

Subgroup	Location	
	Llanbedr Village	Mochras Road
Safety Improvements	Speed limit reductions and signage, parking restrictions, yellow boxes, signage directing to car parking, improved lighting, raised table, HGV restrictions.	Speed limit reductions and signage, parking restrictions, traffic calming measures such as chicanes.
Active Travel Improvements	Improvements to existing walking and cycling routes (dropped kerbs, tactile paving), proposed new active travel routes (shared-use paths, painted walkways), cycle parking/storage, pedestrian crossings.	Improved and proposed new footway along Mochras Road between the village and the Railway Station (reallocation of road space, new footbridge), and onwards towards Shell Island.
Public Transport Improvements	A new bus stop – A496 northbound (South of Afon Artro).	N/A
Low-Speed Relief Road	A 40mph relief road located to the west of Llanbedr.	

It should be noted that whilst the safety, public transport and active travel improvements within the Llanbedr Village and Mochras Road options differ, they remain consistent within Options 2, 3, 4 and 6 (Llanbedr Village options), with one key distinction in Option 6. Option 6, which includes a low-speed relief road, features a painted walkway at the centre of village, whereas in this location, the other options propose a shared-use path located behind the houses, not directly along the A496.

Along Mochras Road, the safety improvements generally remain the same between Options 7-10, whilst the active travel improvements differ depending on the inclusion of a low-speed relief road. With a road, provision is achieved through reallocation of road space, and without, by a route on the opposite side of the Afon Artro River, connected by a footbridge.

Options 11 and 12 propose improvements to the existing car park, and a new car park adjacent to the Railway Station, respectively. The measures contained within these include designated disabled parking bays, electric vehicle charging bays, cycle parking, a pay & display machine, improved lighting, seating, and carriageway construction. Option 12 also proposes dedicated pick-up and drop-off areas within the car park.

## 3.2 LOW-SPEED RELIEF ROAD

The Low-Speed Relief Road is a 1.5km north-south road to the west of Llanbedr, featuring two junctions with the A496 to the north and south of the village, and a junction connecting to Mochras

Road to provide access to the Railway Station, Shell Island and the Airfield. At this stage, no provision for active travel has been included along the low-speed relief road.

The analysis undertaken at Stage 1 identified that an alignment to the West of Llanbedr is the most suitable route for a low-speed relief road. Further design development has considered feedback from the WG's Roads Review Panel and incorporates changes to the previous design which received planning consent in 2020. This includes:

- A lower design speed; from 60mph to 40mph.
- Reduced lane widths; resulting in reduced earthworks.

Further detail on these changes and their justification is provided within the Low-Speed Relief Road Design Speed Report (70115176-WSP-GEN-LBR-RP-TR-0023). This note also assessed whether the design speed of 30mph or 40mph would be more appropriate, concluding that the preferred design speed is 40mph. It is considered that a 40mph speed limit is more consistent with limits set in the rest of the UK, due to the location of the low-speed relief road in a non-built-up rural setting. This is particularly pertinent here, as it is highly unlikely that the proposed low-speed relief road will be street lit, due to Eryri's status as a Dark Skies reserve and the conditions imposed on the existing planning consent, whereas 30mph road links are typically lit.

As the WeITAG Stage 1 study concluded, a low-speed relief road option would need to be included as part of an option package with measures also implemented within the village to satisfy the study objectives which aim to maximise modal shift, minimise carbon emissions and provide benefits to well-being.

### 3.3 OPTIONS

A summary of the Options 1-12 is provided below, with further detail of the specific measures within each option discussed within the IWBA, and associated design drawings in **Appendix A**.

1. Llanbedr Village: Safety improvements.
2. Llanbedr Village: Safety, active travel & public transport improvements.
3. Llanbedr Village: Safety, active travel, public transport improvements & traffic signals.
4. Llanbedr Village: Safety, active travel, public transport improvements & off-street parking.
5. Llanbedr Village: Safety improvements & a low-speed relief road.
6. Llanbedr Village: Safety, active travel, public transport improvements & a low-speed relief road.
7. Mochras Road: Safety improvements.
8. Mochras Road: Safety & active travel improvements.
9. Mochras Road: Safety improvements & a low-speed relief road.
10. Mochras Road: Safety, active travel improvements & a low-speed relief road.
11. Llanbedr Railway Station: Improvements to the existing car park (can be developed with or without a low-speed relief road).
12. Llanbedr Railway Station: New car park (can be developed with or without a low-speed relief road).

## 4 SUMMARY OF BUSINESS CASE

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### 4.1 METHODOLOGY

The options have been appraised with reference to the five dimensions of a business case (as outlined within the WelTAG 2024 guidance), the Study Objectives and the Future Road Building Tests.

The appraisal against the study objectives and the Strategic Fit and Well-being dimensions has been undertaken utilising a seven-point scale between large beneficial impacts / alignment with policy (+++) through to large adverse impacts / non-alignment with policy (---), in order to enable comparison between options with a view to identifying the best performing option.

Further detail of the assessment undertaken is provided in the accompanying IWBA. The Strategic Fit and Well-being Appraisal Summary Tables are provided in **Appendix B**.

### 4.2 TRAFFIC MODELLING

A microsimulation model has been developed in support of the WelTAG Stage 2 Study. The Vissim microsimulation model was developed for a base scenario, reflecting a Friday and Sunday (during peak Summer Holiday conditions) and an out of peak Saturday. This has been used to test eight options and understand the predicted operation of each. The modelling highlighted the following:

- A496 journey times are predicted to improve with a low-speed relief road in place (Options 5 and 6); between the baseline and a road alone, approximately 40s reduction in journey time southbound and a minimum of 40s northbound (the largest reduction is by ~200s northbound during the Friday).
- With a low-speed relief road in place and the closure of the Afon Artro Bridge to general traffic, this equates to a reduction of over 200 vehicles travelling through Llanbedr during the peak hour. Some trips will be longer in terms of distance compared to the existing layout. For example, the journey between the north and south of Llanbedr could increase by 900m. With improvements to the network, it is considered that some of these trips could be undertaken by walking, wheeling and cycling.
- Additional road capacity (e.g. off-street parking, instead of on-street (Option 4)) is predicted to provide some benefit to network operation within Llanbedr, with this benefit noted to be greater during the busiest period (i.e. Friday during the holidays).
- The addition of signals in Llanbedr, with the retention of the parking to the north of the bridge (Option 3) is predicted to cause delays (of up to ~200s for southbound travel during the Friday scenario). This is due to southbound travelling vehicles arriving where the cars are parked and waiting for some northbound vehicles to overtake the parked cars. Whilst operation may improve if paired with the relocation of the on-street parking, it is noted that during periods of lower demand, the implementation of signals will naturally introduce delay.

The outputs of the traffic model have also informed the assessment of the options against the study objectives.

## 4.3 STRATEGIC FIT

### TRANSPORT POLICY AND PROGRAMMES

A summary of the appraisal undertaken in the context of key transport priorities set out in national, regional and local policy and programmes is provided in **Table 4-1**.

While none of the proposed options make a significant contribution to Priority 1 of Llwybr Newydd, they generally align well with national, regional, and local policies. Each option promotes sustainable travel through improvements to infrastructure and safety, thereby supporting Priorities 2 and 3. These enhancements also contribute to placemaking - benefiting both residents and visitors - and help stimulate the local and visitor economy in line with regional and local development goals.

Options 1 and 7 focus exclusively on safety improvements, which limits their effectiveness. Although these measures may help create safer, more appealing conditions for walking and cycling, their ability to drive substantial modal shift is more limited when compared to options that include dedicated infrastructure for active travel.

In contrast, options that incorporate a low-speed relief road, particularly Options 6 and 10, offer greater contribution. These offer active travel infrastructure improvements and a reduction in traffic within Llanbedr village, enabling safer and more sustainable travel. These options also support regional objectives such as those outlined in the North Wales Regional Transport Plan and Eryri Local Development Plan, including improved access to employment sites like Llanbedr Airfield, which if developed, would provide significant future employment opportunities.

Overall, while all options align positively with policy, those that combine a low-speed relief road with safety and active travel measures stand out as they more strongly support Llwybr Newydd's priorities as well as long-term transport resilience.

**Table 4-1 -Summary of Appraisal – Strategic Fit: Policy and Programmes**

Location	Option No.	Option Description	Scenario (with/without LSRR)	Llwybr Newydd			Net Zero Wales	Future Wales: The National Plan 2040	North Wales RTP 2025-2030 (DRAFT)	Cyngor Gwynedd Plan 2023-2028	Eryri LDP 2016-2031
				Priority 1	Priority 2	Priority 3					
Llanbedr Village	1	Safety improvements	Without LSRR	0	+	+	0	+	+	+	+
	2	Safety, active travel and public transport improvements	Without LSRR	+	+	++	+	+	+	++	++
	3	Safety, active travel, public transport improvements and traffic signals	Without LSRR	+	+	++	+	+	+	++	++
	4	Safety, active travel, public transport improvements and off-street parking	Without LSRR	+	+	++	+	+	++	++	++
	5	Safety improvements	With LSRR	0	++	++	+	++	+++	+++	+++
	6	Safety, active travel, public transport improvements	With LSRR	+	+++	+++	++	++	+++	+++	+++
Mochras Road	7	Safety improvements	Without LSRR	0	+	+	0	+	+	+	+
	8	Safety and active travel improvements	Without LSRR	0	++	++	++	+	+	++	++
	9	Safety improvements	With LSRR	0	++	++	+	++	+++	+++	+++
	10	Safety and active travel improvements	With LSRR	0	+++	+++	++	++	+++	+++	+++
Llanbedr Railway Station	11	Improvements to Existing Car Park	Without and with LSRR	0	+	++	+	+	++	+	++
	12	New Car Park	Without and with LSRR	0	+	++	+	+	++	++	++

## STUDY OBJECTIVES

A summary of the appraisal undertaken in the context of the study objectives (SO) is provided in **Table 4-2**.

The options that include delivery lockers are those that score positively against SO1. The options that include a new road, coupled with safety and active travel improvements (such as Option 6), consistently score the highest across the board. This is because these options help to shift traffic away from the A496, improving safety (SO2), and support and allow for better pedestrian and cyclists infrastructure (SO3). Improved links to sustainable transport, such as to the Railway Station and wider walking and cycling routes, also score well (SO4). Options that reduce vehicle dominance and enhance the public realm score positively (SO5), and those that include a low-speed relief road provide greater network resilience (SO7) and reduce seasonal congestion (SO6).

SO6 applies a scoring criteria which assesses seasonal variations in travel times. Those options that significantly reduce the impact during peak summer periods score most positively (Options 5 & 6), while those that score negatively reduce the impact to a lesser extent (Options 1-4).

SO8 utilises the potential flood risk and user emissions impacts to understand how the options can contribute to reducing the impact on climate change. Options that avoid flood-prone areas and enable a greater avoidance of user emissions are assessed more favourably, as they better support long-term environmental resilience. Of note, a low-speed road is expected to result in a greater avoidance of user emissions over a 60-year appraisal period, given improved traffic flow.

The assessment of the options against the study objectives has demonstrated that the inclusion of a low-speed relief road is critical to meeting the study's intended outcomes, especially SO6 and SO2, highlighting the need for a low-speed relief road to improve safety and minimise the impact on the road network during peak periods when there is a large influx of visitors to the area. The significant benefit provided to improving the resilience of the network is also demonstrated as only achievable by a low-speed relief road. Options that do not include a low-speed relief do not adequately support the study objectives, due to their inability to prioritise active modes, improve resilience and reduce the impact of the visitor economy and climate change on the transport network.

**Table 4-2 - Summary of Appraisal – Strategic Fit: Study Objectives**

Location	Option No.	Option Description	Scenario (with/without LSRR)	Study Objectives							
				1 – Reduce the need to travel for key services and employment	2 – Improve safety for all transport modes	3 – Prioritise journeys on-foot and by cycle within Llanbedr village	4 – Improve access by sustainable modes to and from Llanbedr and areas to the west of the village	5 – Enhance the local built environment to improve the sense of place and contribute to the vibrancy of the village	6 – Reduce the impact of the visitor economy on the local road network	7 – Improve the resilience of the transport network in and around Llanbedr	8 – Reduce the impact of climate change on the local community
Llanbedr Village	1	Safety improvements	Without LSRR	0	+	0	0	0	-	0	0
	2	Safety, active travel and public transport improvements	Without LSRR	+	+	+	+	+	-	+	-
	3	Safety, active travel, public transport improvements and traffic signals	Without LSRR	+	+	+	+	+	-	++	-
	4	Safety, active travel, public transport improvements and off-street parking	Without LSRR	+	+	+	+	+	-	+	-
	5	Safety improvements	With LSRR	0	+++	0	+	++	++	+++	0
	6	Safety, active travel, public transport improvements	With LSRR	+	+++	+++	+++	+++	++	+++	0
Mochras Road	7	Safety improvements	Without LSRR	0	+	0	0	0	-	0	0
	8	Safety and active travel improvements	Without LSRR	0	+	0	++	0	-	0	0
	9	Safety improvements	With LSRR	0	++	0	+	+	++	+++	0
	10	Safety and active travel improvements	With LSRR	0	++	0	+++	+	++	+++	0
Llanbedr Railway Station	11	Improvements to Existing Car Park	Without and with LSRR	0	0	0	++	0	+	0	0
	12	New Car Park	Without and with LSRR	0	0	0	++	0	+	0	-

## FUTURE ROAD BUILDING TESTS

The need to assess options that propose new road infrastructure against the Welsh Government’s Future Road Building Tests was formally incorporated into WelTAG Guidance as of July 2025. The principles of the Future Road Building Tests have been used throughout option development to inform design. The assessment of the low-speed relief road in this context is summarised in **Table 4-3**, with the full appraisal provided in the Future Road Building Tests Assessment (70115176-WSP-GEN-LBR-RP-TR-0036).

**Table 4-3 – Summary of Appraisal – Strategic Fit: Future Road Building Tests**

Option Ref	Tests			
	1 - Support modal shift and reduce carbon emissions	2 - Improve safety through proportionate changes	3 - Adapt roads to the impacts of climate change	4 - Provide access and connectivity to jobs and centres of economic activity in a way that supports modal shift.
5	X	X	✓	✓
6	✓	X	✓	✓
9	X	X	✓	✓
10	✓	X	✓	✓

The assessment has demonstrated that all options align to at least one of the four Future Road Building Tests. Of particular note, Option 6 and Option 10 are considered to meet three of the four tests. This is due to their inclusion of active travel improvements within the village, alongside the proposed relief road. The active travel enhancements are critical in supporting modal shift and reducing carbon emissions (Test 1), as well as improving access and connectivity to jobs and economic centres in a way that prioritises sustainable transport (Test 4).

The existing A496 and area to the west of Llanbedr are located within both river and coastal flood zones which are likely to be affected more significantly in the future due to the impact of climate change. It is therefore considered that providing a low-speed relief road, that is designed to minimise the likelihood of flood events impacting on the road network, could reduce the frequency of potential severe climate events impacting on the local community. It is also noted that there are a number of constraints which mean that it is not possible to adapt the existing road network to the impacts of climate change as effectively.

Whilst the low-speed relief road contributes to improving safety, it is considered not to meet Test 2– Improve Safety through Proportionate Changes – as it is greater in scale in comparison to the other options under consideration within this study. However, it should be noted that its design has been revised since the previous iteration to enhance its proportionality. Some of the changes result from the decision to lower the proposed speed limit along the road from 60mph to 40mph.

## 4.4 WELL-BEING

This section presents a summary of the well-being assessment, whereby the options have been considered in the context of how they could impact on each of the well-being ambitions outlined in Llwyr Newydd: the Wales Transport Strategy 2021.

A summary of the outcome of the well-being assessment is provided in **Table 4-4**.

The well-being assessment highlights that options incorporating a new road - particularly Options 6 and 10 - consistently score higher across most categories due to their combined inclusion of active travel infrastructure, safety improvements, and traffic diversion from the village of Llanbedr. These measures work to create a safer, more inclusive environment for pedestrians and cyclists, compared to other options that may not incorporate all of these measures combined. Options 5 and 9 can be seen as lighter-touch approaches to enhancing well-being. Whilst their impact is more modest compared to the stronger benefits offered by Options 6 and 10, they still contribute positively and may be suitable where a subtler intervention is preferred.

The options with a road come with trade-offs: although their construction has a higher carbon impact, generates more waste, and has potential to negatively impact habitats and historic landscapes, they also enable greater avoidance in user emissions over a 60-year appraisal period and align well with other well-being categories. Despite the negative scoring, it is considered that with mitigation in place, the impacts on the environment can be reduced.

Option 6 stands out due to the proposed improvements to public realm, transport services, and active travel routes, reinforcing its strong contribution to People and Communities and Culture and Welsh Language. This is also due to how the road-inclusive options provide logistical advantages - diverting HGVs from the village and supporting more fuel-efficient journeys - while improving affordability through better access to walking and cycling routes. These enhancements foster a more pleasant village environment and support long-term sustainability goals.

The Mochras Road options that include a low-speed relief road – Options 9 and 10 - have been assessed as having less of a beneficial impact compared to the village options that include a road in some instances due to their limited geographical impact. Whilst Mochras Road provides a key connection to the village, the majority of trip attractors and generators are located within the village itself, limiting the option's influence.

Options 2, 3, 4 and 6 provide a particularly positive contribution to Equality and Welsh Language, given the proposed active travel improvements to Ysgol Gynradd Llanbedr.

**Table 4-4 - Summary of Appraisal: Well-being**

Location	Option No.	Option Description	Scenario (with/without LSRR)	People and Communities			Environment				Economy and Places				Culture and Welsh Language		
				Equality	Health	Safety and Confidence	Carbon Emissions	Biodiversity	Soils and Water	Waste	Cohesive Communities	Innovation	Distribution of Goods	Affordability	Welsh Language	Arts, Sports and Culture	Historic Environment
Llanbedr Village	1	Safety improvements	Without LSRR	0	0	+	0	+	0	0	+	0	0	0	0	+	0
	2	Safety, active travel and public transport improvements	Without LSRR	++	+	+	-	+	0	0	+	0	+	+	++	++	-
	3	Safety, active travel, public transport improvements & traffic signals	Without LSRR	++	+	+	+	+	0	0	+	0	+	+	++	++	-
	4	Safety, active travel, public transport improvements & off-street parking	Without LSRR	++	+	+	+	+	0	0	+	0	+	+	++	++	-
	5	Safety improvements	With LSRR	+	++	++	--	-	0	-	++	0	+	+	+	++	--
	6	Safety, active travel, public transport improvements	With LSRR	++	+++	+++	--	-	0	-	+++	0	++	++	++	+++	--
Mochras Road	7	Safety improvements	Without LSRR	+	+	+	0	0	0	0	0	0	0	0	+	0	
	8	Safety and active travel improvements	Without LSRR	++	+	+	+	-	0	0	0	0	+	+	+	++	0
	9	Safety improvements	With LSRR	+	++	++	--	-	0	-	+	0	+	+	+	++	--
	10	Safety and active travel improvements	With LSRR	++	++	+++	--	-	0	-	++	0	++	++	+	+++	--
Llanbedr Railway Station	11	Improvements to Existing Car Park	Without and with LSRR	+	0	+	0	0	0	0	+	0	0	0	+	++	0
	12	New Car Park	Without and with LSRR	+	0	+	0	+	0	0	+	0	0	0	+	++	0

## 4.5 AFFORDABILITY

### OVERVIEW

The affordability dimension informs whether an option is cost-effective and presents its long-term financial viability. It covers capital cost requirements over the scheme's preparation and construction cycle.

### METHODOLOGY AND KEY ASSUMPTIONS

The scheme costs for each option are in current (2025) prices. The scheme costs have been developed in-house by Ymgynghoriaeth Gwynedd Consultancy (YGC), using SPON's price book, based on the Bill of Quantities and account for significant recent inflation compared to previous estimates. The cost's account for the cost of preliminaries, construction, works with statutory undertakers, as well as additional external support and any specialist support which may be required. Also, the costs are inclusive of risk and Optimism Bias based on the DfT Optimism Bias Study based on the level of design development - 5% Optimism bias applied to low-speed relief road and 46% applied to all other options. The low-speed relief road includes a lower level of optimism bias to reflect the level of design already undertaken as part of the previous planning application and the known risks.

### COST ESTIMATES

The cost estimates are set out in **Table 4-5**. Note that the total cost of a 40mph relief road alone is £39,437,762.

**Table 4-5 - Scheme Costs**

Option	Construction	Project Management Fees	Land	Statutory Bodies	Risk (15%)	Optimism Bias (5%/46%)	Total
1	£36,270	£837	-	£3,627	£5,441	£21,240	<b>£67,415</b>
2	£3,400,756	£78,479	£5,189	£340,076	£510,113	£1,993,922	<b>£6,328,536</b>
3	£3,569,756	£82,379	£5,189	£356,976	£535,463	£2,092,891	<b>£6,642,655</b>
4	£4,845,498	£111,819	£5,189	£484,550	£726,825	£2,839,985	<b>£9,013,867</b>
5	£29,187,228	£890,680	£238,000	£2,918,723	£4,378,084	£1,885,796	<b>£39,498,511</b>
6	£33,103,055	£981,046	£238,000	£3,310,306	£4,965,458	£4,178,964	<b>£46,776,829</b>
7	£37,936	£875	-	£3,794	£5,690	£22,216	<b>£70,512</b>
8	£2,748,614	£63,430	£10,378	£274,861	£412,292	£1,614,405	<b>£5,123,981</b>
9	£29,197,604	£890,920	£238,000	£2,919,760	£4,379,641	£1,891,872	<b>£39,517,796</b>
10	£31,665,027	£947,860	£239,730	£3,166,503	£4,749,754	£3,337,629	<b>£44,106,502</b>
11	£787,599	£18,175	-	£78,760	£118,140	£461,230	<b>£1,463,903</b>
12	£974,025	£22,478	£1,038	£97,403	£146,104	£570,881	<b>£1,811,928</b>

Note: 5% Optimism bias applied to LSRR while 46% applied to all other options

## COST PROFILING

Based on the delivery plan set out in the management dimension (**Section 4.7**), the indicative spend for each of the option elements, including those independent of a low-speed relief road, could be split across multiple years, as set out below.

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
<b>Active Travel &amp; Safety Improvements Independent of LSRR</b>						
Preparatory (design & procurement)			33%	33%	33%	
Construction					50%	50%
Supervision				20%	40%	40%
Preliminaries				100%		
Land				100%		

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
<b>Active Travel &amp; Safety Improvements Dependent of LSRR</b>						
Preparatory (design & procurement)	33%	33%	33%			
Construction			50%	50%		
Supervision		20%	40%	40%		
Preliminaries		50%	50%			
Land		100%				

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31
<b>Low Speed Relief Road</b>						
Preparatory (design & procurement)	33%	67%				
Construction			50%	50%		
Supervision		20%	40%	40%		
Preliminaries		100%				
Land		100%				

## FUNDING ALLOCATION AND SOURCES

The delivery of the options considered as part of this study is likely to require cooperation between several partner organisations (CG, Tfw, WG, Network Rail etc.) and potentially require funding from a number of different sources.

Due to the estimated costs of several of the options considered, the primary source of funding would be Welsh Government either via direct Capital funding or through the North Wales Corporate Joint Committee and the Regional Transport Plan. It should be noted that grant modernisation is in process at the time of writing. Going forward, it will be the responsibility of CJsCs to allocate funding through the RTP. The mechanism for deciding how much funding is allocated to each region is currently under review although the scheme is included as a high priority in the emerging North Wales Regional Transport Plan.

There are also several other potential funding streams including:

- Welsh Government Non-Profit Distributing Model (NPD);
- Prudential borrowing;

Smaller-scale options could also be funded via Developer Contribution through S106 agreements or the Community Infrastructure Levy. These could be obtained from developments across southwest Gwynedd, particularly the proposed Airfield Development site. Funding for improvements to the railway station (Options 11 and 12) could be sourced via the Department for Transport / Network Rail although no engagement regarding funding has been undertaken at this time.

Up to £540,000 has been made available for the financial year April 2025 – March 2026, following a successful application to the Welsh Government Local Transport fund, to undertake a WelTAG Stage 3 study.

## 4.6 DELIVERABILITY

### OVERVIEW

The Deliverability dimension considers how each of the options will be procured and delivered and by whom. It also sets out the key legal consents required to deliver the proposed options, as well as the key delivery risks. Consideration has been given as to the potential approaches to obtaining the required legal consents to enable delivery of the potential options within this report.

### PROCUREMENT STRATEGY

A WelTAG Stage 3 study would need to be commissioned to progress development of the full business case for the preferred option(s).

At this stage, options to be delivered by other partner organisations such as TfW for Options 11 and 12 (Llanbedr Railway Station Car Parking Improvements) could be developed separately.

A consultant, contractor or a combination of both would be required to take the project forward through the statutory process, detailed design, construction and post-implementation, including WelTAG Stages 4 & 5.

It is assumed that the preferred option(s) is likely to be procured through different delivery frameworks. The appropriate delivery frameworks will be agreed as part future discussions between stakeholders. Whilst there are potential complexities relating to the allocation of procurement activities, it is considered that all main organisations involved in the scheme have considerable experience in successfully procuring schemes of a similar nature and therefore it is likely to be achievable. In addition, it is considered that Contract Procedure Rules could be put in place to set clear rules for the procurement of goods, services and works to obtain best value for money.

The above should be considered further at WelTAG Stage 3 for the preferred solution, alongside further consideration of:

- Potential suppliers;
- Contract length;
- Specification of required outputs;
- Allocation of risk;
- Potential payment mechanisms;
- Potential contractual arrangements; and,

- A Monitoring and Evaluation Plan, which could be prepared to help support realisation of key project milestones and ambitions.

## **LEGAL REQUIREMENTS, CONSENTS AND ORDERS**

At the outset of the next stage, it is recommended that a Consenting Strategy is prepared. This will enable early identification of the required consents and will present the relevant legislation and potential risks associated with each.

### **Active Travel & Local Safety Improvements**

It is considered likely that for the proposed options which include active travel and local safety improvements the Local Authority will be able to utilise powers to implement the schemes without the need for other legal consents. These powers also cover works adjacent to the highway and therefore can be utilised in the occurrence that third-party land is required. In this situation, land negotiations would be required with the landowner to agree a purchase or agreement of access to the land, or implementation of the compulsory purchase process.

It is however noted that if environmental screening identifies that proposals could have a significant environmental impact, a planning permission under the Town and Country Planning Act 1990 may be required.

### **Low Speed Relief Road**

CG currently has planning consent (2020) for a new road. The current design for the Low-Speed Relief Road is not deemed to be materially different to that which already has consent. If the design materially changes, either an amendment to the current application or a new planning permission will be required as part of the Town and Country Planning Act 1990 to deliver the scheme. For major planning applications (site area over 1 hectare), statutory pre-application consultation will be required, and draft application documents and environmental assessments must be publicised for a minimum of 28 days alongside a Consultation Report that must be submitted with the application setting out the process and the outcome of any feedback received from stakeholders and members of the public.

## **LAND ACQUISITION**

Land is required for the low-speed relief road and for some sections of the active travel proposals. The land required is mainly agricultural. CG will seek to acquire the land by agreement. If this is not possible, a Compulsory Purchase Order (CPO) would need to be progressed. In addition, a Side Roads Order is required to improve lengths of highway, stop up lengths of highway, and to construct new highways.

## **4.7 MANAGEMENT**

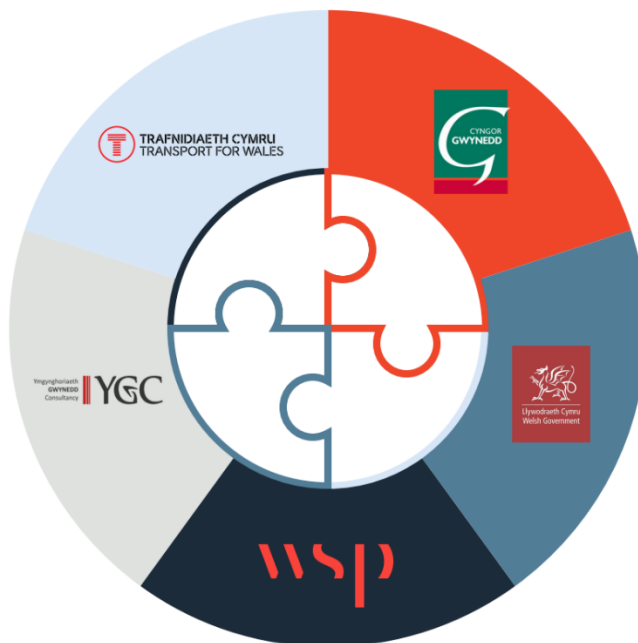
### **OVERVIEW**

At this stage, CG are leading the project working with Welsh Government, TfW, and Network Rail. This will be reviewed during later stages as the project develops.

## PROJECT GOVERNANCE

As per the WelTAG Stage 1 study, a Working Group has been established for the Llanbedr Transport Improvements project, consisting of representatives from the organisations illustrated in **Figure 4-1**<sup>3</sup>, which meet monthly.

**Figure 4-1 Working Group – Llanbedr Transport Improvements**



Due to this ongoing working partnership between key organisations, the Working Group has formed the Review Group for this WelTAG study, and it is expected that this will continue throughout the WelTAG process.

The Review Group meeting held on 13<sup>th</sup> August 2025 provided a forum to discuss potential enhancements to the WelTAG Stage 2 Report. In addition to the feedback shared during the meeting, further written comments were received via email from Welsh Government (WG) and Transport for Wales (TfW). All feedback has been collated, addressed, and agreed as appropriate.

## STAKEHOLDER ENGAGEMENT

WSP have undertaken engagement in the form of:

- Direct engagement with stakeholders;
- Community updates;
- Public engagement activities;
- A community workshop; and,

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<sup>3</sup> Representatives from both the Environment and Economy departments of Cyngor Gwynedd are part of the Working Group. Eryri National Park Authority are also invited to the ongoing Working Group meetings.

- Written feedback.

## Public Engagement

Over 400 survey responses were received to the survey during the engagement period. The results of the survey illustrated the following:

- Clear majority - 77% - expressed agreement with the project's objectives.
- A significant majority of respondents - 80% - believe that improvements are needed to the A496 and the local road network, with 85% in support of a low-speed relief road, and 80% in support of a 40mph speed limit along the proposed low-speed relief road
- Strong support for initiatives that enhance safety, encourage active travel, and improve public transport.
- The majority of respondents are opposed to closing the Artro River Bridge to motor vehicles, with 61% expressing disagreement with the proposal.
- Regarding the closure of Mochras Road to motor vehicles, 55% of respondents were in favour of this and 45% not in support.
- The most popular option was Option 5, favoured by 44% of respondents, followed by Option 6, favoured by 40%.
  - For Mochras Road, Option 9 and 10 (with low-speed relief road) - 38% and 35% support respectively. By contrast, Option 7 and 8 (without low-speed relief road) were the least favoured, with only 9% and 7% support.
  - There was an option for the low-speed relief road alone (Option 0). This received 35% support.
  - 57% of respondents were in support of Option 12 and 55% for Option 11.
- Objections were received from Maes Artro residents regarding the proposed route through the site.
- Many people raised concerns about the proposed changes within the village that would impact on their ability to park along the A496 near their homes, whereas a number of people also suggested that parking restrictions could help the traffic issues.

The detailed results of the public engagement are appended to the IWBA.

## OUTLINE PROGRAMME

An outline Delivery Plan, illustrated in **Figure 4-2** below, has been developed to set out the potential timescales for implementation of the proposed options. This Delivery Plan includes the following assumptions and key interdependencies:

- **Active Travel** – no requirement for planning consent and land acquired via agreement.
- **Safety Improvements** – no requirement for planning consent.
- **Low Speed Relief Road** – current planning consent retained but possible requirement for CPO.

As the Local Highway Authority, it is expected that CG will lead on the delivery of the preferred solution(s) recommended as part of the WelTAG process. It is however noted that due to the ongoing working relationship between the Eryri National Park Authority, TfW and CG, the delivery of some measures may be possible through either the Eryri National Park Authority or TfW, with support from CG.

**Figure 4-2 - Delivery Plan**

Preliminary Design		Design & Build		Interventions Dependent of LSRR		Delivery of Interventions Independent of LSRR	
Statutory Processes		LSRR					
2025/2026 Financial Year	2026/2027 Financial Year	2027/2028 Financial Year	2028/2029 Financial Year	2029/2030 Financial Year	2030/2031 Financial Year		

WelTAG Stage 3  
 Decision to Proceed

Based on this programme, interventions which are independent of the low-speed relief road could be delivered following completion of the low-speed relief road, such as the active travel route to Ysgol Gynradd Llanbedr. Construction of the low-speed relief road is programmed to commence in early 2027 with a 24 month build programme, and completion in early 2029, if land can be acquired by agreement. This would also include measures which are dependent of the low-speed relief road, such as the closure of Mochras road and associated active travel improvements along this route from the village to the Railway Station. If CPO is required, this programme could be delayed by approximately 12 months.

**MONITORING AND EVALUATION**

Some of the monitoring that would be required to be undertaken during the life of the project are outlined below:

- Active travel and traffic counts at key locations;
- Updated passenger demand at stations and bus routes through the village;
- Latest collision information; and,
- Environmental and ecological surveys.

WelTAG includes the requirement for a detailed Monitoring and Evaluation Plan to be drawn up at Stage 3 for completion at Stage 5. This plan would describe what evidence would be used in the project’s evaluation report and how it will be collected. Evidence is required on the actual inputs used when implementing the scheme and during its on-going operation, what was actually delivered, the impacts experienced, to what extent the intervention met its objectives and how they were achieved.

**RISK MANAGEMENT SCHEDULE**

The Risk Management Schedule developed as part of this study is appended to the IWBA. The following key risks to delivery have been identified:

- Options that require a low-speed relief road require significant funding, circa £40M. Although Llanbedr has been included as a high priority in the emerging North Wales Regional Transport Plan, this level of funding has not been secured from the North Wales CJC at this time.
- The location of the study area within the Eryri National Park increases the risk of potential assessments required associated with scheme development, including Heritage Impact

Assessments and/or Listed Building Consent. The proposal to improve lighting within the village may also be limited by the National Park Policy;

- There are several listed buildings and structures within Llanbedr, including the A496 Afon Artro Bridge, several Protected Sites, including two Sites of Special Scientific Interest (SSSI) and Ancient Woodland areas;
- Planning permission may be required to facilitate some of the measures within the options;
- If the design of the low-speed relief road changes, the extent of the change should be assessed to determine whether it constitutes a material change to the approved planning permission. If this is a material change either an amendment to or a new planning application will be required.
- In some cases, it would not be possible to provide infrastructure to standards due to the area being limited and constrained in terms of available space. This may require more intrusive work, which could be challenging to deliver within the National Park;
- Several measures could require Traffic Regulation Orders and Side Road Orders (such as speed limit reductions through the village and the low-speed relief road);
- Several measures require the purchase of third-party land or agreement to be made with landowners. It has been noted that some local landowners object to the delivery of some measures, and therefore the CPO process may need to be followed. If a CPO is required this would be dependent on obtaining funding for the best performing option, and would lengthen the delivery time;
- If significant improvements are not made to the local transport network, development may be constrained in the future at Llanbedr Airfield, reducing the potential for high-quality jobs to be provided in the local area; and,
- If options recommended to be taken forward by other organisations do not align with their priorities, they may not be considered deliverable.

## 5 SUMMARY AND CONCLUSION

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### 5.1 SUMMARY

The Llanbedr Transport Improvements WelTAG Stage 1 and 2 studies have demonstrated the need for a transport intervention in Llanbedr to improve safety, access to sustainable modes and the resilience of the transport network, whilst also reducing the impact of the visitors on the network.

Twelve options have been developed at Stage 2, proposing combinations of safety, active travel and public transport improvements within the village, along Mochras Road and at the Railway Station. Some options also include the provision of a low-speed relief to the west of Llanbedr. The twelve options have been appraised in the context of their Strategic Fit and Well-being, as well as being considered in terms of Affordability, Deliverability and Management dimensions.

Traffic modelling has been undertaken to inform the appraisal. This illustrated that the options that include a low-speed relief road reduce traffic through the village by approximately 200 vehicles per hour during peak hours. This reduces vehicle dominance and journey time delay, which has a significant benefit to safety for all transport modes and improves the environment of the community. Options that do not include a relief road have shown some benefit within this context, but not to an extent that is considered significant enough to fully address the issues identified.

The Strategic Fit appraisal has demonstrated that the options incorporating a low-speed relief road offer the most positive contributions to policy and the study objectives. Notably, Options 6 and 10 stand out for the benefits they deliver as they combine safety enhancements, active travel infrastructure and public transport improvements, with a low-speed relief road. Options 5 and 9 also perform well, albeit to a slight lesser extent than Options 6 and 10, given that they propose safety improvements only alongside the low-speed relief road.

The options which include a low-speed relief road also perform well within the well-being assessment for similar reasons – allowing for people, communities, the economy, and the Welsh language to be prioritised. However, the low-speed relief road is also responsible for the negative scoring against the environment categories. Whilst this negative impact is acknowledged, it is noted that the existing planning consent for a low-speed relief road in Llanbedr along a similar route demonstrates effective environmental mitigation. Whilst the negative carbon infrastructure impact is acknowledged, it is considered that this could be further mitigated at the next stage through a detailed Carbon Management Plan.

The Mochras Road options (Options 7-10) have been assessed as having less of a beneficial impact against well-being due to their limited geographical impact. Whilst Mochras Road provides a key connection to the village, the majority of trip attractors and generators are located within the village itself, limiting the option's influence. The benefits are however enhanced for Options 9 and 10 when a low-speed relief road is included. Options 2, 3, 4 and 6 provide a particularly positive contribution to Welsh Language, due to proposed active travel improvements towards Ysgol Gynradd Llanbedr.

The affordability dimension has identified that the options that include a low-speed relief road have the highest associated costs, circa £40 million. Those that do not include a road are significantly less expensive, ranging between ~£70,000 - £9 million. Various sources of funding for delivery of the Options have been identified, including WG, the North Wales CJC and CG, or via developer contributions.

This study has also been informed by engagement with key stakeholders and the public. This indicated strong beliefs that improvements are needed to the A496 and the local road network, with 85% of respondents in support of a road. The most popular option was Option 5, followed closely by Option 6. Opposition to the closure of the Afon Artro Bridge was expressed.

## 5.2 RECOMMENDATION

The WeITAG appraisal has demonstrated that the best performing options are those that combine a low-speed relief road with measures that enhance sustainable transport. It is therefore recommended that Option 6 and Option 10 are progressed to the next stage of WeITAG for further consideration. Option 6 and 10 propose safety, active travel and public transport improvements in the village and along Mochras Road, in combination with a low-speed relief road. This includes the following specific measures:

- A 40mph relief road.
- Option 6 (in the village): speed management (speed limit reduction and signage), shared space over Afon Artro Bridge, parking restrictions, cycle parking, delivery lockers, bus stop, improved street lighting, welcome signage and public realm improvements, public transport services departure boards, raised table and pedestrian crossing, restriction of HGVs through the village and active travel route improvements along the A496, to the Mill Caravan Park (footway with on-road cycling), and footway improvements to Public Footpath 41 and through Bryn Deiliog.
- Option 10 (along Mochras Road): speed management (speed limit reduction and signage), closure of Mochras Road to motor vehicles, traffic calming measures and an active travel route through Maes Artro, from the village to the Railway Station (reallocation of road space), and from the Railway Station to Shell Island (footway with on-road cycling).

Whilst Options 6 and 10 are recommended based on their performance, throughout the engagement process, concerns have been raised around the removal of parking along the A496, and the closure of the Afon Artro Bridge to motor vehicles (except for access), which are incorporated within Option 6. In light of this, further consideration should be given to the design of the active travel route along the A496 within Llanbedr village centre between the Afon Artro Bridge and where the houses end on the northbound side of the carriageway (which impacts on-street parking), and the enforcement across the bridge, during the next stage. This should be considered in collaboration with YGC, TfW and other partners. The active travel route proposed through the Maes Artro site as part of Option 10 should also be further reviewed and reconsidered given landowner objection.

It is also recommended that a new car park is provided at Llanbedr Railway Station, as per Option 12. This includes dedicated pick-up and drop-off areas, designated disabled parking bays, electric vehicle charging bays, cycle parking, a pay & display machine, improved lighting, seating, and carriageway construction. In combination with the above recommended options, this provides additional benefits but is not significant to addressing the majority of the key transport issues in Llanbedr. It is therefore recommended that this option is taken forward separately by TfW with funding from Welsh Government. If not considered deliverable, the delivery of Option 11 should be considered.

Within Option 6 and 10, some measures are considered to be independent of the low-speed relief road, such as the active travel route from the village to the Mill Caravan Park, passing Ysgol Gynradd Llanbedr. This distinction is presented in **Table 5-1**, which also illustrates the funding required per year to deliver Option 6 and 10.

**Table 5-1 – Recommended Option Cost Breakdown & Spend Profile**

Option		Estimate	Spend Profile				
			26/27	27/28	28/29	29/30	30/31
			£6,996,051	£17,196,222	£17,196,222	£4,100,664	£5,956,410
Option 6	VMS signs	£27,546					
	Extend 20mph & 40mph A496	£12,323					
	Unsuitable for HGV's signs	£4,108					
	Llanbedr Welcome Signage	£ 9,665					
	Shell Island Tidal Car Parking signs	£4,108					
	Cycle Parking	£48,326					
	Secure delivery lockers	£15,706					
	Street Lighting	£15,706					
	Wayfinding	£28,996					
	Existing Footway Improvements - Bryn Deiliog	£290,077					
	New Hatch Markings - A496	£12,082					
	Extend 20mph / 30mph to Llanbedr Railway Station	£2,054					
	Active Travel A496	£3,950,837					
	Active Travel improvements Llanbedr Village to the Mill	£1,462,968					
	Active Travel route Bryn Deiliog to Llanbedr Primary School	£665,767					
Arto Bridge changed to shared space	£788,801						
Option 10	Traffic Calming Measures	£66,402					
	20/40mph From LSRR to Railway Station	£2,055					
	Extend 20mph to 30mph to Shell Island from Railway Station	£2,055					
	New Turning Head	£2,416					
	Mochras Road Closure	£3,483					
	Active Travel - Railway to Shell Island	£3,506,187					
	Active Travel - Maes Arto	£68,398					
	Active Travel - Village to Railway Station	£1,017,746					
Low Speed Relief Road	£39,437,761						

The overall combined cost of delivering Option 6 and 10 is circa £51.4 million. Approximately £39.4 million of this comprises the cost for a low-speed relief road alone, and £12 million for other measures. Given this high cost, funding from Welsh Government and the North Wales CJC will be a key consideration at the next stage and remains a risk to delivery given that allocations are yet to be

confirmed. However, the scheme is contained within the North Wales Regional Transport Plan as a high priority scheme.

The delivery programme is dependent on acquiring land by agreement for the low-speed relief road and some of the active travel measures. If acquiring land by agreement is not possible then a CPO would be required which would add additional delay to the delivery programme.

To conclude, it has been identified that the preferred option is a combination of Option 6 and Option 10, which comprises a low-speed relief road and safety, public transport and active travel improvements. The active travel improvements within and connecting to Llanbedr, however, will continue to be reviewed from the perspective of what provision can be achieved along the A496 in the centre of the village, taking on board concerns of the local community and issues arising from the engagement.

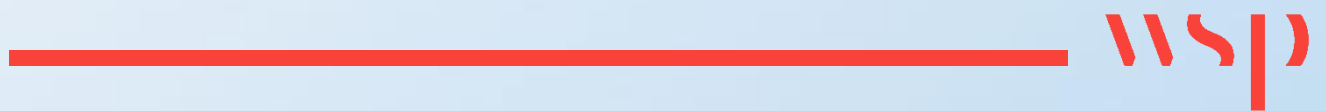
### 5.3 NEXT STEPS

Based on this recommendation, Option 6 and 10 should be taken forward for further development and appraisal at WelTAG Stage 3. As part of this, the following key activities should be undertaken:

- Preliminary design of Options 6 and 10, with further consideration of environmental mitigation;
- Further engagement with landowners, the local community and public transport users and accessibility groups, particularly those who could be impacted by the options and final design considerations, or would be responsible for their management;
- Consideration of running the CPO process in parallel to land agreement negotiations;
- Continued evaluation of funding streams, which will remain a key consideration and a risk to delivery throughout the next stage;
- Further consideration of the potential impacts of the options and further detailed quantification of the benefits where possible;
- Development of a procurement strategy;
- Development of separate Carbon Management and Monitoring and Evaluation Plans; and,
- Continued discussion and agreement on the final layout and design of the proposed low-speed relief road, including what level of active travel provision could be achieved and the potential alterations to the tie-in to the village.
- Review of the level of active travel provision that can be provided along the A496, whilst also considering feedback on parking provision in this area.
- Review of the proposals to close the Afon Artro Bridge for access only, in light of feedback.
- Continued monitoring and discussion on the progress of the options discounted at the outset of Stage 2 which were passed on to other organisations.

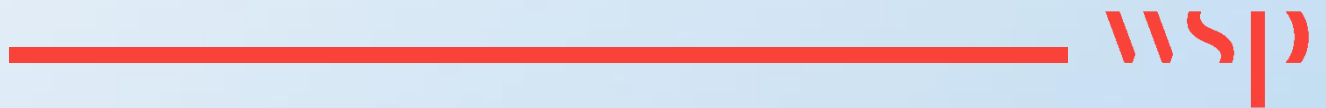
# Appendix A

## OPTION DESIGN DRAWINGS



# Appendix B

## APPRAISAL SUMMARY TABLES





1 Capital Quarter  
Tyndall Street  
Cardiff  
CF10 4BZ

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