

# ARUP

Monmouthshire County Council and Strategic Partners

## Chepstow Transport Study WelTAG / TAG Stage Two

### Stage Report

Final Draft (273037-00)

22 March 2021



Source : Pexels (Krisztina Papp) <https://www.pexels.com/photo/road-beside-a-green-field-2486258>

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## Section 1

### 1.1 Introduction

#### Background and the Stage Two Study

A Welsh transport appraisal guidance (WelTAG)<sup>1</sup> **Stage One** (Strategic Outline Case) Chepstow Transport Study was previously undertaken between April 2018 and December 2018<sup>2</sup>, which was jointly commissioned by Monmouthshire County Council, Gloucestershire County Council and Forest of Dean District Council. The 2018 Stage One Study focussed upon the strategic corridor of the A48, which included wider issues and impacts along the corridor from Lydney in the east to Chepstow in the west.

Arup has been commissioned to undertake a WelTAG / Transport Analysis Guidance (TAG)<sup>3</sup> **Stage Two** (Outline Business Case) (referred to as ‘this study’ or the ‘**Chepstow Transport Study**’) by Monmouthshire County Council, on behalf of several Strategy partner organisations.

Partner organisations that helped Monmouthshire County Council to fund and/or steer the Stage Two study included:

- Welsh Government
- Department for Transport
- Highways England
- Welsh Office
- Forest of Dean District Council
- Gloucestershire County Council
- South Gloucestershire Council
- Members of the Senedd
- Members of Parliament
- County Councillors

#### Study Approach

The approach taken to appraising potential transport interventions for the Chepstow Transport Study (‘the Study’) follows the WelTAG and WebTAG guidance. This is important given the cross-boundary nature of the transport system in connecting Chepstow on its Welsh and English borders.

##### WelTAG ‘Transport Appraisal Guidance’

WelTAG is the framework for considering any proposed changes to the transport system. It cross refers to the Department for Transport’s WebTAG or ‘TAG’ for UK Government transport analysis guidance where appropriate.

As well as embedding the Well-being of Future Generations (Wales) Act 2015 (WFGA), WelTAG combines the principles of the HM Treasury Green Book and the Five Case Model for Better Business Cases, with WebTAG best practice for transport appraisal. The output of each WelTAG Stage is the ‘**Stage Report**’ (‘this report’).

[This WelTAG Stage Report provides a summary of the key study findings and is supported by the WelTAG Impact Assessment Report \(IAR\), which forms a detailed evidence and analysis compendium.](#)

WelTAG 2017 guidance explains that at Stage Two, an Outline Business Case should be presented to further investigate shortlisted options and select a preferred option.

Building on the outputs of Stage One, this should include:

- A re-statement of the problem(s) to be addressed;
- A review of any relevant changes in the transport system and its wider context;
- A description of each of the shortlisted options and how each would meet the objectives;
- A Five Cases assessment for each of the shortlisted options, with a separate presentation of the transport, delivery, financial and commercial case for each option; and,
- Recommendations on the preferred option to be taken forward to WelTAG Stage Three appraisal.

The **Five Cases** are set out below as:

1. **Strategic case:** Case for change, fit with other policies and objectives.
2. **Transport case:** The social and cultural, environment and economic impacts of the change including a value for money assessment.
3. **Delivery case:** Can the Scheme be delivered?
4. **Financial case:** Is the proposed spend affordable?
5. **Commercial case:** How can the Scheme be procured, is it attractive to the private sector, is it commercially viable?

The methodology adopted in appraising the significance and scale of impacts is set out in Figure 1:

Figure 1: WelTAG Seven Point Assessment Scale

Large Beneficial (+++)	Moderate Beneficial (++)	Slight Beneficial (+)	Neutral (0)	Slight Adverse (-)	Moderate Adverse (--)	Large Adverse (---)
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## Section 1

### 1.1 Introduction (continued)

#### WebTAG

WebTAG guidance advises that the following principles should be incorporated:

- A clear rationale for any proposal, based on a clear presentation of the problems and challenges that establish the ‘need’ for a project.
- A range of genuine, discrete solutions considered across networks and modes.
- An auditable and documented process which identifies the best performing options to be taken forward for further appraisal.
- An appropriate level of public and stakeholder participation and engagement at suitable stages.

Whilst not directly aligned with the WelTAG process, the following two stages are appropriate and proportionate for the current study:

- Stage One – Option Development, which requires an understanding of the current and future context and conditions in the study area, and to establish the need for interventions. Interventions should then be defined, as should the geographical area for the intervention to address, and an initial sift undertaken. Options should be developed and appraised, and the appraisal process documented.
- Stage Two – Further Appraisal, which requires further appraisal to be undertaken, and the public consultation to be undertaken on options. The Sponsoring Organisation is to consider the case for funding and intervention.

#### Stage One and Stage Two Report: Baseline Review

Since Stage One was carried out, there have been a number of significant political, transport, economic and social changes influential to this study and WelTAG / TAG guidance recommends that reviews and updates are carried out at each stage.

Key changes since the publication of Stage One of this study include but are not limited to:

- The evolving global pandemic coronavirus or ‘COVID-19’ and its associated impact on society, culture, the environment and economy;
- The withdrawal of the UK from the European Union and associated impacts on finance, funding and governance;
- The removal of Severn Bridge Tolls and associated impacts on travel choices, traffic levels and land/property value changes;
- The publication of the draft Future Wales: National Development Framework and the cross-boundary nature of planning with Strategic Development Plans forming part of the Planning (Wales) Act;
- Planning Policy Wales Edition 10 and the refocused agenda for placemaking, sustainable development and the hierarchy for transport;
- The production of new / updated Local Development Plans for Monmouthshire, the Forest of Dean and adjoining authority areas;
- Strategic development allocations and the increase in demand for development and infrastructure investment within south east Monmouthshire and the Lydney area;

- Implementation of the Cardiff City Region Regeneration Plan and the associated transport aspirations including implementation of the Metro, considered alongside opportunities through the City Deal;
- Decision on the second M4 relief road and Welsh Government review of transport interventions on the M4 corridor around Newport;
- Declaration of a climate emergency by the Welsh Government in April 2019 and Monmouthshire in May 2019, and announcement of the Ten Point Plan by the UK Government in 2020;
- UK Government announcement of the Western Powerhouse and its associated plans for growth and investment.

As a result of a number of significant and unprecedented changes since the WelTAG Stage One study concluded in December 2018, a review of the baseline and likely future trends has been critical in order to reconsider the problems and objectives for this study, as well as revisit potential options for intervention.



## Section 2 Strategic Case

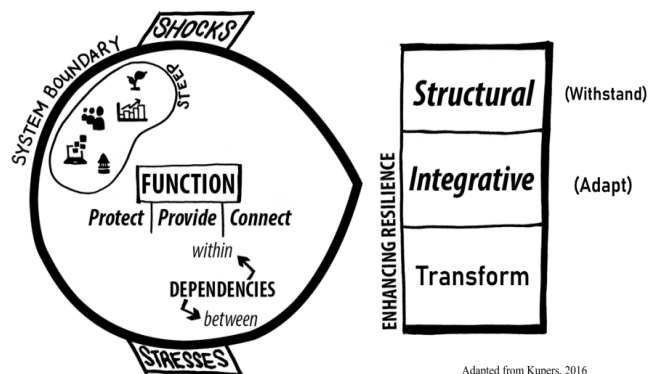
### Overview

By reviewing the existing policy and legislative context, and the Scheme's relationship to the wider transport network, the Strategic Case seeks to establish a 'case for change'. This has also sought the views of stakeholders through engagement, which is set out within Section 2.10 of the IAR.

### Resilience Framework and Systems Lens

The Strategic Case has been developed through a resilience lens. Specifically, this has included the 'Fish' Resilience assessment tool to define a 'system' by which transport study operates in, before capturing an understanding of resilience issues within these parameters. The 'tail' of the Fish Resilience Assessment is therefore to understand how overall resilience of the system could be improved (see Figure 2).

Figure 2: 'Fish' Assessment Tool



### System Definition: The Study Area

Due to the cross-border nature of Chepstow and the local as well as regional or strategic nature of its transport network, this Stage Two Study has defined two tiers of study area, which form the 'system' area (see Figures 3 and 4).

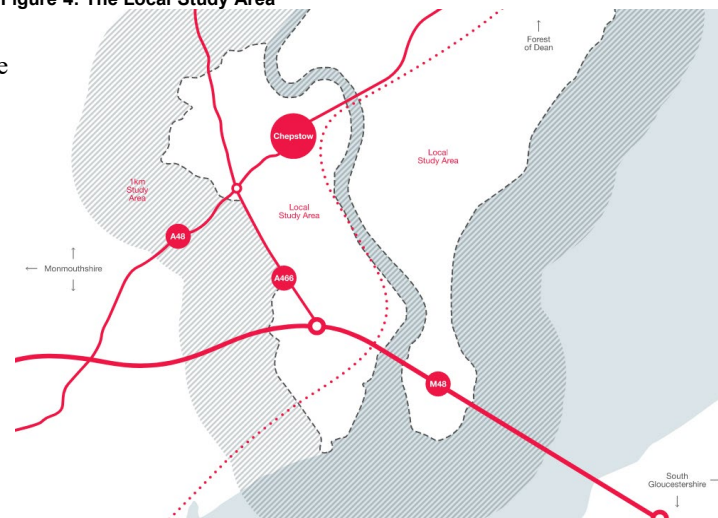
- The **local study area** – within 1km of Chepstow (including the wards of Thornwell, St Mary's, St Kingsmark, St Christopher's, Larkfeld and Tidenham). This seeks to better explore the transport and wider resilience systems and issues pertinent to the communities within Chepstow and its local networks.
- The **regional or 'strategic' study area** – primarily comprises Monmouthshire, South Gloucestershire and the Forest of Dean but also considers the strategic transport, economic, social, cultural and environmental connections with the Cardiff City Region and the 'Western Powerhouse'. This seeks to help ensure the interrelationships, interdependencies and wider resilience of the strategic networks connecting Chepstow to its wider context are carefully considered.

Alongside timescales associated with effects, this seeks to help ensure that interrelationships, interdependencies and wider resilience of the strategic networks connecting Chepstow to its wider context are carefully considered.

Figure 3: The Regional Study Area



Figure 4: The Local Study Area



## Section 2

### Strategic Case (continued)

#### 2.1.4 Legislation and Policy Context

The Study Area covers both England and Wales, and therefore both sets of legislation and policy is relevant. This is detailed in section 2.5 of the IAR and summarised in Figure 5.

Chepstow is located within Monmouthshire, adjacent to a boundary shared with the Forest of Dean. Monmouthshire is part of the Cardiff Capital Region, and alongside Bristol and Bath and North East Somerset, South Gloucestershire forms part of the West of England Combined Authority. As a two-tier authority, Gloucestershire County Council provide the transport services for the Gloucestershire area, of which Forest of Dean District Council forms part. Regional transport powers also reside with the West of England Combined Authority and the Cardiff Capital Region Transport Authority.

#### Welsh Legislation

The [Well-being of Future Generations \(Wales\) Act 2015](#)<sup>4</sup> places a duty on public bodies to work to improve the social, economic, environmental and cultural well-being of Wales. It sets out seven well-being goals and five ways of working to achieve this, which WeITAG requires consideration of: A prosperous Wales; A resilient Wales; A healthier Wales; A more equal Wales; A Wales of cohesive communities; A Wales of vibrant culture and thriving Welsh language; and A globally responsible Wales.

[Taking Wales Forward 2016-2021](#) is the latest Programme for Government, and sets out how Wales will deliver more and better jobs through a stronger, fairer economy, improve and reform its public services, and build a united, connected and sustainable Wales. The supporting [Prosperity for All: The National Strategy 2017-2021](#) sets out transport commitments, which include the creation of a South Wales Metro.

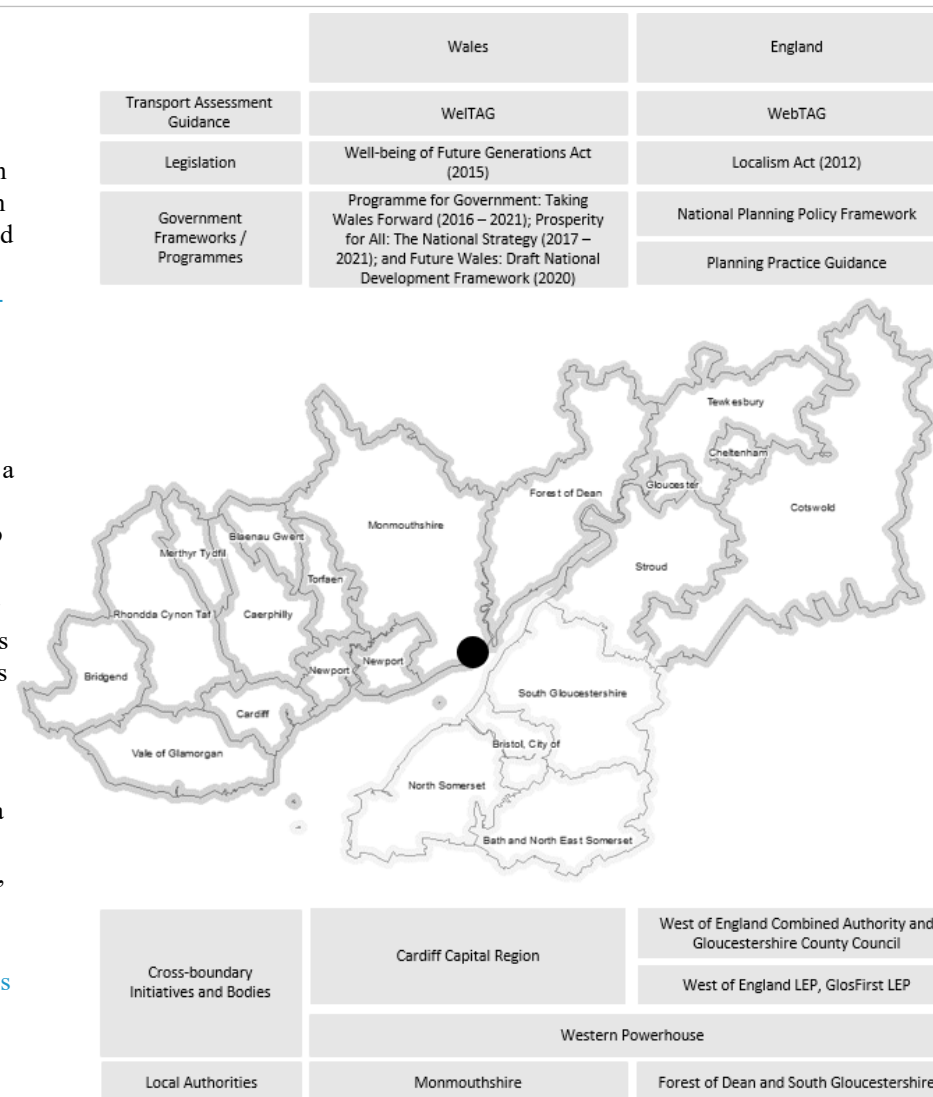
[Prosperity for All: A Low Carbon Wales 2019](#) establishes the foundation for Wales to transition to a low carbon nation. This requires a reduction in emissions of greenhouse gases in Wales by at least 80% for the year 2050. It also sets a target that in 2017, Wales will seek to achieve a carbon neutral public sector by 2030.

Other relevant legislation for the Study includes the [Environment \(Wales\) Act 2016](#) which seeks to ensure that managing natural resources sustainably will be a core consideration in decision making.

The [Active Travel \(Wales\) Act 2013](#) makes it a legal requirement for local authorities to map and plan for sustainable routes for active travel, and to build and improve infrastructure for cycling each year.

During the course of the study, the [Bus Services \(Wales\) Bill](#) (16 March 2020), was later withdrawn (July 2020) following the early effects of COVID-19.

Figure 5: Legislative and Policy Context for the Study Area



## Section 2

### Strategic Case (continued)

#### Welsh National Policy and Strategy Context

A number of policy documents emerged or advanced during the course of the study.

The [Wales Transport Strategy](#), which was published for consultation throughout January 2021, sets out a number of five-year priorities in order to deliver the vision of ‘an accessible, sustainable transport system’. Priorities typically reflect the effects of the pandemic, and focus on:

1. Reduction in greenhouse gas emissions by planning for better physical and digital connectivity, more local services, home and remote working and active travel;
2. Growth in public transport use in Wales by providing services that everyone can use, wants to and does use;
3. Safe, accessible, well-maintained and managed transport infrastructure that is future-proofed to support public transport, electrification and active travel;
4. Making sustainable transport choices attractive and affordable to people and businesses, whilst respecting the fact that many people may not have options;
5. Supporting innovations that help more people and businesses adopt more sustainable transport choices.

In the meantime, the [Wales Transport Study \(2008\)](#) continues to form the basis for transport policy. The main principles within this are to ensure effects on the environment are reduced, local transport is integrated as much as possible, safety and security are improved and both international and national connectivity are maximised. This is supported by the [National Transport Finance Plan \(2018\)](#),

which sets out priorities for funding of schemes that the Plan seeks to deliver. These predominantly focus on active travel measures and accessibility for all, intelligent transport, collaboration with all transport partners and both safety and noise improvements.

In relation to strategic planning and land use, the [draft Future Wales: The National Plan 2040 \(formerly the ‘NDF’ or National Development Framework\)](#) sets out spatial planning priorities at a national level. Travel and sustainable transport is featured repeatedly throughout Future Wales. Indeed, outcomes seek to achieve a Wales where people live and work in connected, inclusive and healthy places, and where travel is sustainable. This will be achieved through better physical and digital connectivity of places within Wales, and by requiring all methods of travel to have low environmental impact and low emissions.

Alongside the emerging Future Wales document, land use policies will continue to be established within [Planning Policy Wales \(PPW\)](#). Published in December 2018, PPW encourages a new focus on place-making whilst encouraging access to employment through shorter and more sustainable journeys.

#### English National Policy and Strategy Context

English national policy context is set by the [National Planning Policy Framework](#) (revised 2019) and [Planning Practice Guidance](#) (2019).

Chapter 9 of the NPPF aims to promote sustainable transport, within the context of: supporting a strong and responsive economy, promoting vibrant communities and

contributing to protecting and enhancing the natural and built environment. The NPPF encourages transport issues to be considered from the earliest stages of plan-making, whilst also seeking to encourage focussing growth only on locations which are both sustainable and offer a genuine choice of transport modes.

The [Planning Practice Guidance](#) recommends the use of the principles of WebTAG to assess the potential impacts of development and transport infrastructure. Information should be collected for a Local Plan, in partnership with all relevant transport and planning authorities, transport providers and key stakeholders.

In relation to other national level objectives, the UK is committed to the [Sustainable Development Goals](#) as part of the United Nations Agenda 2030 for Sustainable Development. It recognises that the most effective way of doing this is to ensure that the Goals are embedded in planned activity of each Government department (Figure 6).

Figure 6: Sustainable Development Goals





## Section 2

### Strategic Case (continued)

Central Government published its [Budget](#)<sup>5</sup> in March 2020 setting out infrastructure plans and proposals across the UK. The budget allowed for over £27 billion of investment in English strategic roads, funding for the Shared Rural Network and investment in electric vehicle charging. As the budget was published in advance of a series of stringent social ‘lockdown’ measures following the March COVID-19 outbreak, and the effects are therefore unclear. The next Budget (2021) will be published on 3 March 2021.

Other national strategies that are relevant in the broadest sense to the study are as follows: Highways England Road Investment Strategy 2 (2020 – 2025) and Network Rail Railway Upgrade Plan (2019 – 2024)<sup>6</sup>, both of which set out schemes detailed in Figure 8. Relevant ambitions also include:

- [Clean Air Strategy](#) (DEFRA, 2019), which sets out to reduce particulate matter emissions by 46% by 2030.
- [25-year Environment Plan](#) (HM Government, 2018): Shift towards restoring the natural world and tackling climate change, through ‘environmental net gain’.
- [Road to Zero](#) (DfT, 2018): Plans to enable an expansion of green infrastructure, reduce zero emissions from vehicles already on the UK’s roads and drive the uptake of zero emission cars, vans and trucks.
- [Clean Growth Strategy](#) (BEIS, 2017): Seeks to accelerate clean growth through a shift to low carbon transport.
- [Cycling and Walking Investment Strategy](#) (DfT, 2017), which aims to double the level of cycling by 2025 and reverse the decline in walking.

Publications later in 2020 included the [National Infrastructure Strategy](#) (November 2020), which sets out ambitions for an infrastructure revolution. In seeking to level-up all geographies within the Union, the Strategy aims to deliver infrastructure which decarbonises the economy, encourage gigabit-capable broadband, and maximise use of electric vehicles (EV).

In addition, Central Government released [the Ten-Point Plan for a Green Industrial Revolution](#) (November 2020). Specifically, this covered clean energy, transport, nature and innovative technologies. Again, alongside encouraging the use of EV, the plan shifted an emphasis onto making cycling and walking more attractive ways to travel and investing in zero-emission public transport.

Figure 7: Monmouthshire County Council declared a Climate Emergency



A number of authorities across the Study area [declared climate emergencies](#) in 2019. These include the Welsh Government (April 2019), Monmouthshire (May 2019), and a number of authorities within the region. These aimed to prioritised actions which tackled climate change through collective actions. In relation to transport, these actions include:

- Reducing the need to travel;
- Prioritising sustainable transport; and,
- Minimising the impact of road travel.

### Regional Context

Figure 8 overleaf sets out the main messages from a review of the regional policy context. This is explored in extensive detail within section 2.5.4 of the IAR, and includes a review of strategies and initiatives prepared by:

- Cardiff Capital Region, as transport authority for Monmouthshire;
- Gloucestershire County Council as transport authority for Forest of Dean, alongside major scheme aspirations proposed gFirst Local Enterprise Partnership and identified within the Glos50 vision and Local Industrial Strategy;
- West of England Combined Authority, which holds power over transport spending across the Combined Authority area; and
- Pan-Severn Initiatives such as Western Gateway.

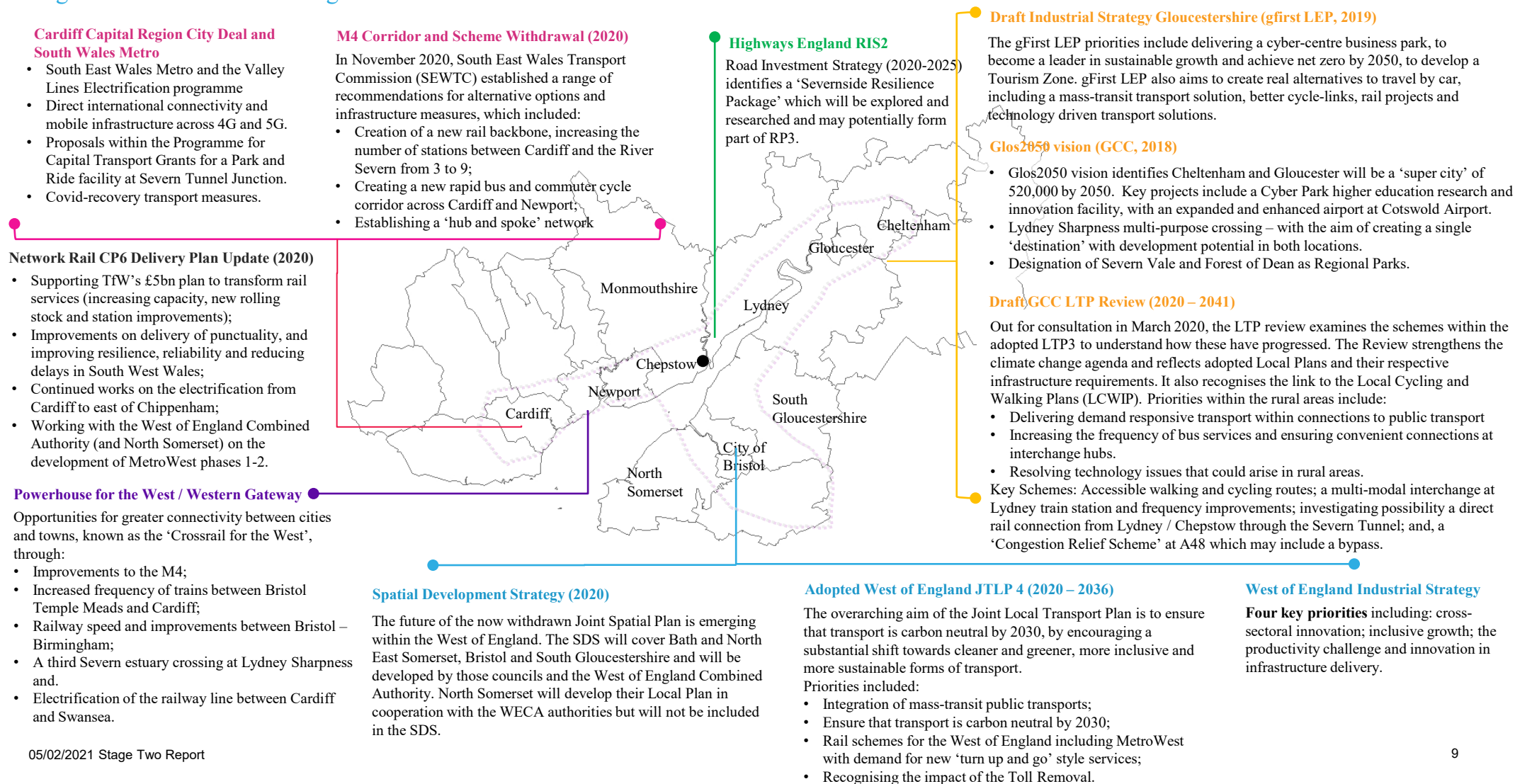


## Section 2

### Strategic Case (continued)

Figure 8: Overview of Regional Initiatives and Strategies

#### Regional Initiatives and Strategies



## Section 2

### Strategic Case (continued)

#### Local Policy and Strategy Context

A detailed local policy review is undertaken within section 2.5.9 of the IAR.

**Monmouthshire:** The Local Development Plan (LDP) 2011-2021 was adopted in 2014. The Main Town is identified for the location of an ‘Identified Industrial and Business Site’ and a ‘Strategic Mixed Use Site’. Policy S16 *Transport* endorses the development of the main towns (including Chepstow) around which high capacity sustainable transport links can be developed. The Regional Transport Plan identifies a series of strategic schemes which are then enshrined within this policy. These include Severn Tunnel Junction Interchange, M48 Interchange, Monmouth Links Connect 2 and Severn Tunnel and Chepstow Park and Rides.

It is anticipated that the emerging plan for Monmouthshire will be adopted by Autumn 2023. The Replacement Local Development Plan Preferred Strategy (March 2020) sets out the importance of digital infrastructure, reducing the need to travel and active travel options. Chepstow is identified as a ‘Primary Settlement’ and a ‘Strategic Area of Growth’. Potential growth options are identified in Chepstow: Land north of the Bayfield Estate; Land between the Bayfield Estate; and Land between the A48 and M48. Growth is also proposed around Caldicott.

In addition to the Local Plan, the [Corporate Business Plan Midterm Refresh 2017-2022](#) and the [Monmouthshire Public Service Board Draft Well-being Plan](#) (2018) sets out five policy priorities and well-being policy objectives to action between 2017 and 2022. These have informed the Chepstow Transport Study Objectives.

**Forest of Dean:** The Local Plan for the Forest of Dean consists of the Core Strategy (2012), the Allocations Plan (2018) and Cinderford Northern Quarter (CNQAAP) (2012). The amount of development proposed within the Core Strategy (between 2006 and 2026) was 6,200 new homes (of which around 2000 are existing commitments), with only a small number of these proposed at Tutshill and Sedbury.

However, the emerging plan for Forest of Dean, known as ‘Plan 41’ will provide for at least an additional 8,162 new dwellings over the next 10 years. The Plan is currently consulting on a Preferred Option, with the consultation ending on 29 January 2021.

Within The Preferred Option, Tutshill and Sedbury are described as functioning as part of Chepstow and as areas currently experiencing considerable housebuilding activity. Further to this, it is anticipated that the Beachley (MoD) Camp will close by 2027 and therefore the site will need to be considered for other potential uses. Accessibility issues associated with the A48 are recognised.

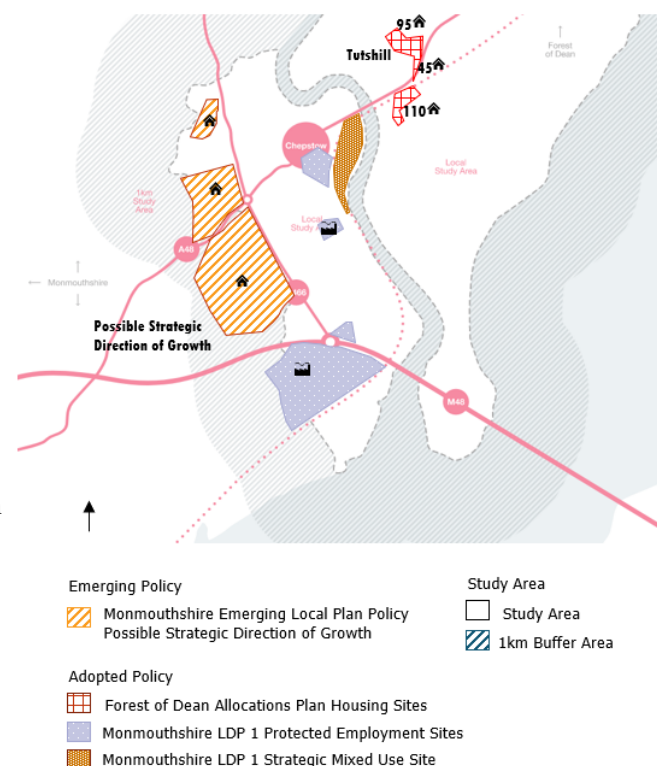
**South Gloucestershire:** The adopted Development Plan for South Gloucestershire comprises the Core Strategy (2006 – 2027) (adopted 2013), and the Policies Sites and Places Plan (PSP) (adopted 2017), alongside the Joint Waste Core Strategy (adopted 2011). The Core Strategy makes provision for 28,355 new homes in the period 2006 – 2027.

Development in the North Fringe of Bristol is focussed at two key areas – Patchway / Cribbs Causeway (Policy CS26) where an additional 5,700 homes and 50ha of employment are proposed land bounded by the Hallen railway line, the M5 motorway and the existing residential community of Patchway.

Alongside the two ‘new neighbourhoods’ at ‘Patchway / Cribbs Causeway’ and ‘East of Harry Stoke’, the PSP establishes local allocations elsewhere.

The Plan recognises the role of Avonmouth Severnside Enterprise Area as a focus for employment and set out to work with partners to deliver the approved Metrobus network.

Figure 9: Proposed and existing allocations within Development Plans



## Section 2

### Strategic Case (continued)

#### Transport Context

The current transport situation has been investigated using data gathered predominantly through desktop analysis and a wide range of sources. The transport context is detailed further within 2.6 of the IAR, with main messages below.

##### Highways Network

Access to / from Chepstow by car is possible via a number of local and strategic routes, including the A48, the A466, the M48 and B4228.

Traffic flows are considered. It can be seen that the peak hour flows through Chepstow are very tidal, suggesting heavy commuter traffic. One of the key considerations of the Chepstow Transport Study is how travel patterns have changed and will continue to change in response to the removal of the Severn tolls, with average traffic flows increasing across the Severn by around 27% between 2015 and 2019.

There are several car parks situated within Chepstow itself, which offer opportunities for residents and visitors to park for retail, employment and leisure purposes. These are operated by MCC and hold standard rates for car-parking.

Generally, there does not appear to be a significant clustering of accidents within the study area for the time-period investigated; and no fatal accidents have occurred within Chepstow within the last 5 years. The current problem in the context of accidents is considered to be in relation to the perception of safety for residents due to the lack of infrastructure for walking but particularly cycling e.g. along the A48 River Wye crossing in Chepstow.

##### Public Transport (Rail)

Rail service provision within the study area is fairly limited due to the fact that there is no direct service from Chepstow to Bristol (both Bristol Parkway and Bristol Temple Meads). Passengers are therefore required to drive to, or change at, Severn Tunnel Junction which often includes a wait on the platform for the connecting service.

Currently bus and rail services within Chepstow are not integrated enough to allow combined journeys which results in long wait times at the transport interchanges. This limits the potential for combined bus and rail journeys as an alternative method of transport to the private car.

However, all four stations within, or near the areas (including Chepstow, Lydney, Severn Tunnel Junction and Caldicot) have experienced a steady increase in patronage since 2008. Severn Tunnel Junction has experienced the most significant growth, with a significant proportion of travel to/from the station is to/from Bristol.

Chepstow, Lydney, Caldicot and Severn Tunnel Junction stations are all locations where some rail Park and Ride opportunities are available. There is limited parking provision at stations within the study area. In addition, the requirement to pay for parking in addition to actual travel time to/from Severn Tunnel Junction station is also likely to be a constraint for passengers who reside within the Chepstow area.

##### Public Transport (Bus)

There is very few alternatives to the private car for those travelling southbound along the A48 to Chepstow, particularly from the communities of Tutshill and Sedbury across the River Wye into Chepstow.

The X7 (otherwise known as the Severn Express) operates between Newport, Chepstow and Bristol and offered a service of good frequency from Chepstow towards Bristol. However, as of 14 June 2020, the Severn Express and X14 services between Newport, Chepstow and Bristol are withdrawn due to operational cost. NAT Group, in partnership with TrawsCymru and Monmouthshire Council have recently revealed plans to operate the X7 service via Cribbs Causeway (for a 6 month pilot scheme).

The bus timetable provides a reasonable level of service into Newport via the 73 and 74, but only one service is possible from Chepstow into Newport in the AM peak period. There is no viable commuting journey option by bus into Cardiff which is likely to increase reliance on the private car (however, there is a direct rail service into Cardiff).

##### Active Travel Network

There is generally adequate provision for walking in the area, with pedestrian footways generally prominent within Chepstow town centre. A large proportion of Chepstow can be reached within a short / reasonable walking distance and time. However, the WelTAG Stage One study highlighted a perception that walking and cycling along this route is unattractive or unsafe due to the dominance of the highway and parking.

The Active Travel (Wales) Act requires local authorities in Wales to produce active travel maps for certain named settlements (including Chepstow in Monmouthshire) and deliver year on year improvements in active travel routes and facilities. Monmouthshire County Council are currently in the process of updating their Active Travel Integrated Network Maps (INMs).

## Section 2

### Strategic Case (continued)

#### Electric Vehicle Charging

The local study area currently has electric vehicle charging points at six locations. Four of the six charging locations are public and the other two have restricted access.

Overall, there is a scarcity of public charging points in Chepstow to enable the mass uptake of electric vehicles. The low number of chargers available around the town is likely a major restriction for residents presently owning an electric vehicle and a constraint to residents who are intending to transition to electric in the future.

Monmouthshire County Council is one of the five councils in Gwent who has recently been awarded a share of £459,000 by the Office of Low Emission Vehicles (OLEV) with match funding by all five authorities.

#### Journey to Work data

Journey to Work commuting patterns (2011 Census JtW) have been extracted for all modes to investigate commuting patterns to/from and within Chepstow and the wider area. The data presented within the IAR shows that within the [local study area](#):

- There is a fairly similar proportion of in-commuting (9,312 | 55%) as out commuting (7,542 | 45%);
- Of those travelling to the Chepstow local area, 79% are doing so by car (car driver and passenger), compared to 78% of those travelling from the Chepstow local area which clearly illustrates the dominance of the private car when commuting;
- Public transport (bus and rail) makes up only 4% of those travelling to work in the Chepstow local area, compared to 3% of those travelling from Chepstow;

- A small proportion cycle to work both to and from Chepstow local area, however, however a fairly significant percentage walk to work comprising 14% of two-way movements.

For the [wider Chepstow Study Area](#), the IAR highlights :

- There is more in-commuting (31,096 | 59%) than out commuting (21,657 | 41%). This is likely due to the size of and the number of aggregated MSOAs which make up the Chepstow wider study area;
- Of those travelling to the Chepstow, 82% are doing so by car (car driver and passenger), compared to 80% of those travelling from the Chepstow wider study area;
- Public transport (bus and rail) makes up only 4% of those travelling to work in the Chepstow wider study area, compared to 3% of those travelling from Chepstow; and
- A small proportion cycle to work both to and from Chepstow wider study area, however a fairly significant percentage walk to work comprising 11% of two-way movements to work.

For Chepstow, nearly 1 in 4 journeys to work comprise less than a 2km journey of which should be theoretically more possible to be made by public transport or active travel journeys. However, there is also a large proportion of commuters travelling over 20km to work each day, representing just over 27% of the resident population in Chepstow.

#### Journey Time Reliability

The IAR demonstrates in sections 2.6.10 and 2.6.11 that there is currently poor journey time reliability with journey times varying up to 40 minutes (Chepstow to Bristol). This is a key problem identified on the network, particularly along the A48, where the road network is at or near capacity in a number of locations and the network is not currently resilient enough to cope with these flows.

#### Journey Costs

Journeys by car between some of the key origins and destinations are cheaper than those made by rail. For example, a rail ticket between Lydney and Bristol made in the AM peak can cost up to £24.10 by rail, compared against a cost of £4.40 by car. Similarly, journeys between Chepstow and Bristol by rail can cost up to £26.80, whilst costing only £3.00 by car.



## Section 2

### Strategic Case (continued)

#### Economic Case

Section 2.7 of the IAR explores the economic performance of the Study Area in detail. In summary:

- GVA per filled job is highest within South Gloucestershire at £72,618, having also experienced the greatest growth over the most recent five-year data period. The neighbouring and nearby local authorities of Forest of Dean and Monmouthshire present significantly lower figures and have experienced considerably slower growth.
- However, Monmouthshire is a relatively high-wage economy in comparison to Wales as a whole for both residents and workers. Workers in Monmouthshire earn on average higher salaries in comparison to the Wales average, but less than average for workers and residents in England.
- The key industries are ‘wholesale and retail trade’ and ‘repair of motor vehicles and motorcycles’. For Chepstow, this industry represents a significant 23% of total industry. This type of industry often requires puts pressure on the transport network, for instance, for deliveries.
- Monmouthshire has a significantly higher qualified population in comparison to the other areas studied, with 48.0% qualified to Level 4. There is also a relatively low proportion of the population with no qualifications, in comparison to the wider study area.
- Chepstow has a relatively economically active population (72.2%) compared to national figures at a Wales and England level.

- Whilst the rate of unemployment is lower within Monmouthshire compared to the national averages, conversely, the rate is highest within Chepstow compared to the wider study area. The proportion of people in self-employment is proportionately higher for the areas of Monmouthshire and Forest of Dean in comparison to national figures.
- Monmouthshire’s Well-being Plan identifies Monmouthshire as having lower than the average wage levels compared to Wales and the UK as a whole. The Plan recognises that this, coupled with high property prices and limited land available for future housing development, makes it challenging for young people and future generations to live and work locally.

#### Social and Cultural Context

Section 2.8 of the IAR summarises main cultural and social events within the area.

Chepstow is home to a number of key services and leisure and tourism facilities. These include Chepstow Castle, Chepstow Museum and the High Street are located within 10 minutes’ walk of the train station. Many tourists are likely to take linked trips to include Tintern Abbey further north along the River Wye for which private car is likely to be more appropriate.

Various events held on both a regular and annual basis are held within Chepstow. Venues include the Chepstow Town Market and Chepstow Racecourse, which hosts the Coral Welsh Grand National and the annual Chepstow Agricultural Show held in August. The Wye Valley River Festival takes place in May, and the Severn Bridge 10km and half marathon annual events.



Figure 10: Chepstow High Street (Source: Yulia Bogomolova)

## Section 2

### Strategic Case (continued)

#### Social Context

Section 2.8 of the IAR explores the population profile of the local and wider study area. A summary is provided below.

##### Population

Monmouthshire is home to a relatively high proportion of people aged 65 and over, 4.1 percentage points (pp) higher than the proportion for Wales overall and 6.7pp higher than for England overall. The proportion of those aged between 16 and 64 and those aged under 15 are also lower than for the Welsh and English averages. The Monmouthshire Well-being Plan identifies the opportunities and challenges this could bring, for example, that 5,515 people aged 65 and over live alone.

Chepstow's residential population is also ageing with a proportionate increase of 3.2pp in the population aged over 65. A slight decrease in proportion has been recognised for residents aged between 16 and 64, whilst a significant proportionate reduction recorded of 2.3pp for those aged 15 and under.

Census data (2011) on household composition shows that Monmouthshire also has higher than national average proportions of households where all members are aged 65 and over. 14.4% of all households are single-person households aged 65 and over, and 11.3% are single-family households where all are aged 65 and over. The corresponding figures for Wales are 12.4% and 8.1% respectively.

In terms of health, 80% of Monmouthshire's population consider their general health to be good or very good, this is higher than the Welsh percentage of 77.8%.

The amount of people in Chepstow and the Lower Wye Valley with reported good or very good health is also higher than Wales overall at 83%<sup>7</sup>.

Census data from 2011 shows 98% of Monmouthshire's population are of white ethnicity<sup>7</sup>. The proportion of black and minority ethnic residents in Monmouthshire is low in relation to national averages.

##### Access to Transport

Car ownership in Chepstow, Monmouthshire, Forest of Dean and South Gloucestershire is significantly higher than the Wales and England averages. It is clear that South Gloucestershire has significantly high levels of car ownership reflecting its predominant rural characteristics, affluence in areas and limited public transport connectivity / competitiveness.

Chepstow has slightly lower levels of car ownership in comparison to the wider county area of Monmouthshire. This is reflective of the urban nature and relatively high population density compared to Monmouthshire's wider rural hinterlands

##### Housing

The average house price in Monmouthshire in January 2020 (for all property types) was £277,049, and in Forest of Dean, it was £241,384. Whilst Forest of Dean was slightly below the English average, both Monmouthshire and Forest of Dean were well above the Welsh average of £162,532<sup>8</sup>. House prices have been increasing steadily within Monmouthshire across the last ten years. However, wages have not kept pace with house price increases; resulting in an overall median house price to median income ratio which has increased from 6.33 in 2013 through to 7.33 in 2019<sup>9</sup>.

#### Index of Multiple Deprivation

Whilst overall Chepstow is within the 50% least deprived in comparison to Wales and England as a whole<sup>10</sup>, there are certain geographical areas of Chepstow that have been classified as more deprived.

- It is evident that Thornwell 1 and Thornwell 2 have been considered relatively deprived in comparison to other areas in Chepstow. Both LSOAs are located towards the south of Chepstow. Thornwell 1 is within the 10-20% most deprived LSOAs for income and health.
- St Mary's also falls within the 10-20% most deprived category for both community safety and physical environment.
- Conversely, St Kingsmark 1 is one of the least deprived LSOAs in Wales, with St Kingsmark 2 and Larkfield also performing well against the criteria applied.

The LDP identified the Welsh Language as part of the social and cultural fabric of Wales, however, at 7.2% Monmouthshire has a relatively low proportion of population that speak, read and write Welsh when compared to the Welsh average of 14.6% in 2011.

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## Section 2

### Strategic Case (continued)

#### Environmental Context

A desk-based review of environmental constraints is set out within section 2.9 of the IAR. Larger versions of maps are available within the IAR appendices.

##### Air Quality

A review of the existing air quality baseline has identified areas of poor air quality in Chepstow due to congestion along the A48, in addition to the road's steep topography. The area with the poorest air quality is known as Hardwick Hill (A48) and is included in the Chepstow Air Quality Management Area (AQMA)<sup>11</sup> (**Figure 11**).

The Monmouthshire Air Quality Management Plan<sup>12</sup> identified measures for improving air quality which included measures of encouraging modal shift through existing infrastructure enhancements, investigating the feasibility of a bypass around Chepstow and improvements in traffic management.

The Forest of Dean District Council also declared an AQMA in Lydney for exceedances of the annual mean NO<sub>2</sub> standard in 2007 (**Figure 12**).

##### Noise

There is a Noise Action Plan Priority Area (NAPPA) spanning approximately 545m within the local study area. This priority area for road noise is located along the corridor of the A48 within Chepstow, at a location between approximately 40m east of High Beech roundabout and where the B4293 intersects the A48. There are a number of sensitive receptors adjacent to this Area.

#### Landscape and Townscape

The town of Chepstow and local study area is surrounded by a mix of rural landscapes. The Area of Outstanding Natural Beauty (AONB) Wye Valley is located within Chepstow with rolling lowlands surrounding the study area. The Wye Valley and gorge is of outstanding scenic quality and extends across the border in England. The wooded scarps and meandering River Wye provide a key setting to the historic town of Chepstow (see **Figure 13**).

##### Agriculture

The study area predominantly comprises of urban land in and surrounding the Chepstow town area (see **Figure 14**). Within the wider study area, the land is largely sub-grade 3b (moderate quality), with some small areas of grade 4 (poor quality) and 5 (very poor quality), located along the River Wye. The western border of the study area is bound by grade 2 good quality agricultural land.

##### Cultural Heritage

The study area consists of a rich heritage landscape that borders England and Wales and includes the 8th Century Offa's Dyke Trail. Offa's Dyke is designated as a Scheduled Monument (SM) that follows this border (see **Figure 15**).

The study area is also partly located within Chepstow Conservation Area, and Mathern Conservation Area is located south of High Beech roundabout. There are approximately 315 Listed Buildings within the local study area and its 1km radius. Clusters of these are found along High Street, Chepstow and east of the River Wye in Tutshill. Chepstow Castle, a Scheduled Monument (SM), is located south of the River Wye, and approximately 300m north of the A48.

#### Flood Risk

A review of flood zones within the environmental study area has identified areas of Flood Zone 2 & 3 within proximity of the main water bodies including the River Wye, Severn Estuary and Mounton Brook to the west of the study area. The remainder of the study area is located in flood zone 1, land assessed as having a less than 1 in 1000 annual probability of river or sea flooding (**Figure 16**).

#### Biodiversity

There are four Special Areas of Conservation (SAC) within the study area, the closest being the River Wye. The Wye Valley Woodlands SAC and River Wye and Forest of Dean bat sites SAC are both approximately 1.3km north of the A48 within the study area. The Severn Estuary SAC is located approximately 1.9km south of the A48 (**Figure 17**).

The Severn Estuary is also designated as a Special Protection Area (SPA) and Ramsar due to its coverage of wetland and its importance in hosting internationally important populations of birds and fish species. Nine Sites of Special Scientific Interest (SSSI) are present within the study area, including the River Wye and Severn Estuary.

Within the study area there are sections of Ancient and Semi-Ancient Woodland located on the western and eastern boundary of the Wye Valley, as well as the western boundary of the ward of Tidenham. Great Barnets wood is located north-west of the A48. East Vaga wood is located approximately 1.7km north of the A48 and approximately 700m east of the River Wye.

Located to the north of the Ward of Tidenham, and encompassed by a meander of the River Wye, Ban-y-gor wood and Lancut Nature Reserve are sited.



## Section 2 Strategic Case (continued)

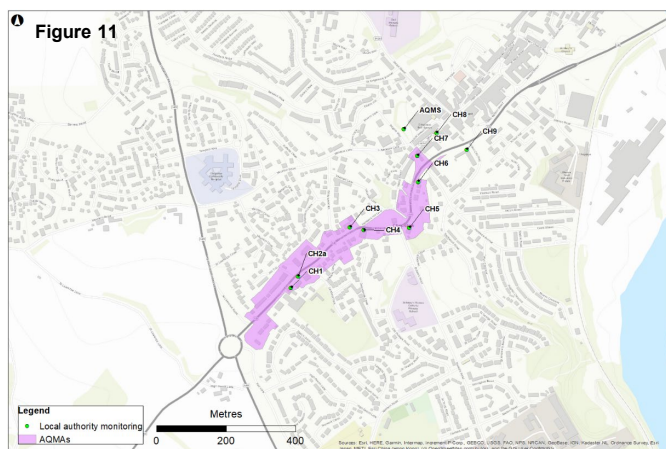


Figure 11: Chepstow AQMA (Hardwick Hill) and local monitoring sites

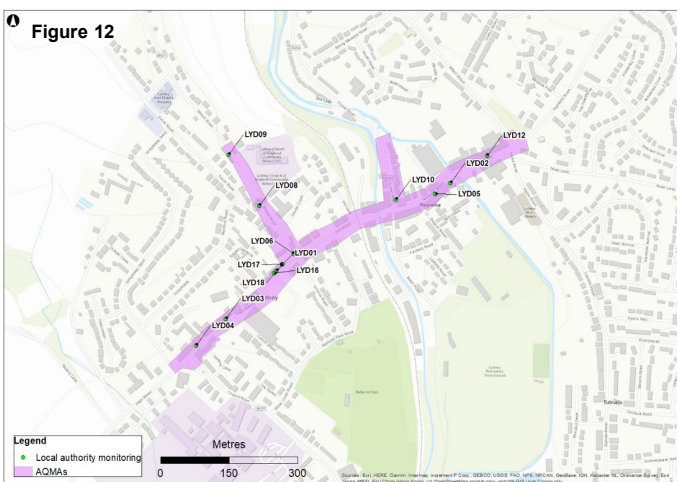


Figure 12: Lydney AQMA and local monitoring sites

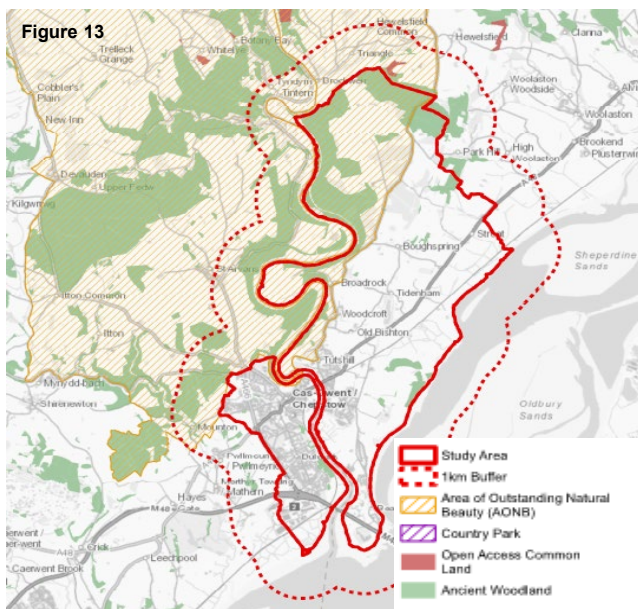


Figure 13: Landscape Designations (Contains OS data © Crown Copyright and database right 2019)

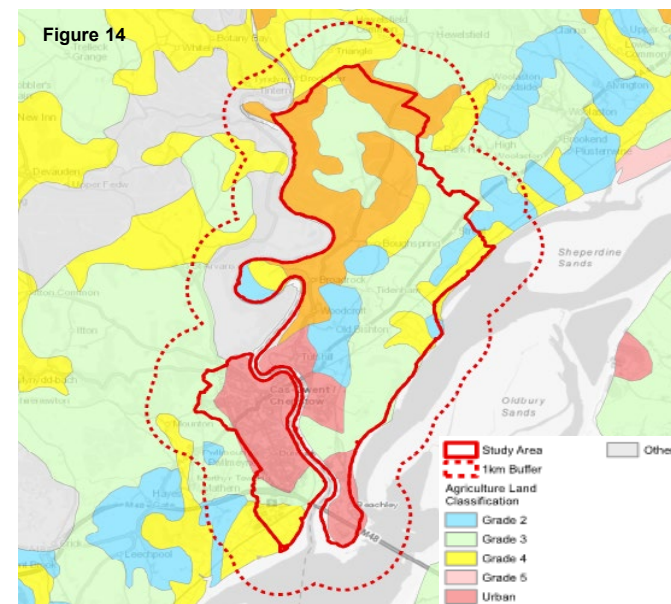


Figure 14: Agricultural Land Classification (Contains OS data © Crown Copyright and database right 2019 )



## Section 2

### Strategic Case (continued)

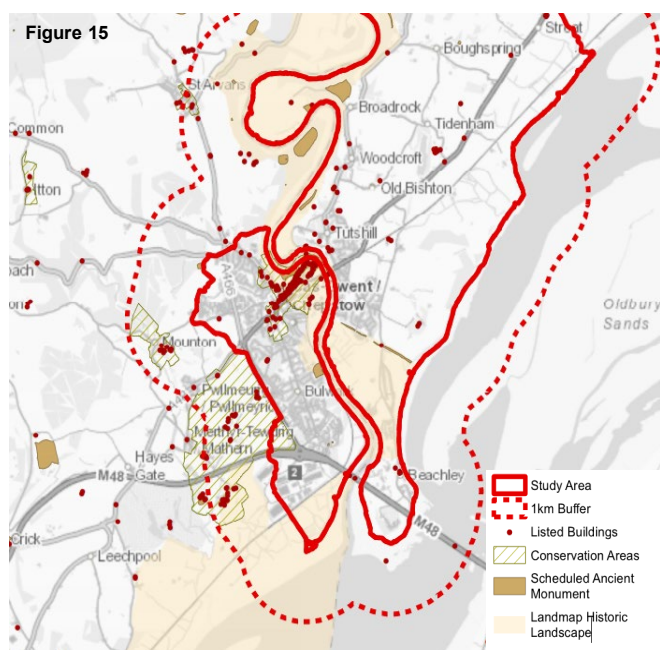


Figure 15: Listed buildings in the Study Area (contains OS data © Crown Copyright and database right 2019)

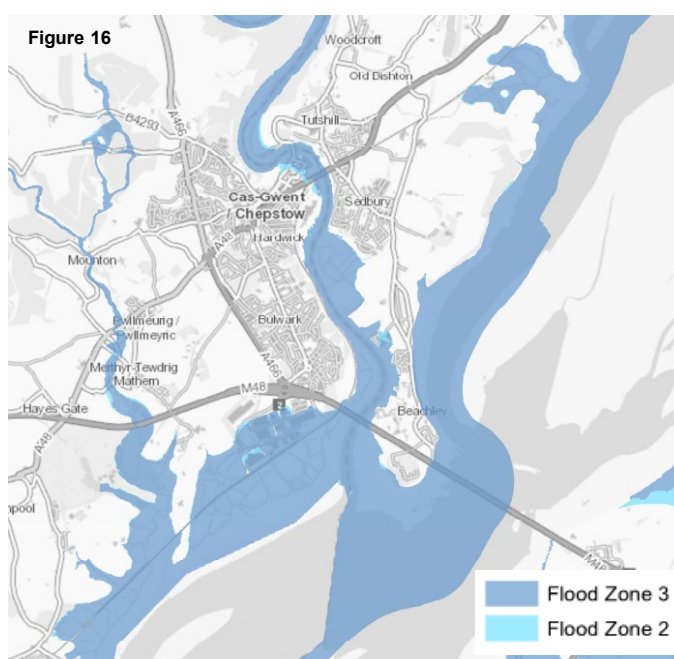


Figure 16: Flood Zone Map (Contains OS data © Crown Copyright and database right 2019))

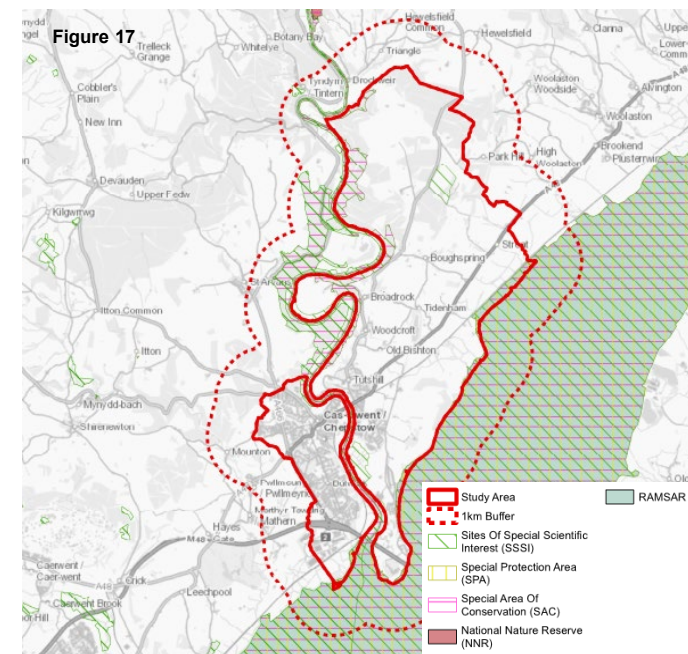


Figure 17 Nature Conservation Designations (1km Study Area)

## Section 2

### Strategic Case (continued)

#### Engagement

WeITAG recommends stakeholder engagement to help shape its outcomes. Participation has informed this Stage Two Study as follows:

- **WeITAG / WebTAG Review Group** comprising client partners – has overseen the successful delivery of the Study by considering key information / analysis and making informed decisions (see Management Case);
- **Focused meetings** with local Councillors and groups such as the Chepstow Town Council and ‘Transition Chepstow’, to help consider available information, views and align visioning for the study area;
- **Stakeholder digital workshop one** – to bring together key stakeholders and consider and review the problems, objectives, options and resilience systems for the study areas;
- **Stakeholder digital workshop two** – to bring together key stakeholders and consider option appraisal, risks, opportunities and delivery seeking to select a preferred option or package of options; and
- **Public consultation** – to offer all individuals and organisations with the opportunity to feed back on the proposals and inform study findings.

The outcomes of the engagement and public consultation exercises are detailed further within section 2.10 of the IAR. This explores the feedback raised by stakeholders in relation to problems and objective refinement, alongside issues raised in relation to resilience and option appraisal.

#### Refining Stage One Problems and Objectives

Based on the comprehensive review undertaken and the resilience lens, it is clear that the problems and objectives at Stage One should be revisited and updated.

A new list of problems at Stage Two will help ensure that the objectives and potential transport interventions reflect and respond to the latest context, needs, shocks and stresses.

It is considered that the problems present themselves on different spatial scales, with some problems occurring at a local level pertinent to Chepstow, and others relevant at a regional or strategic level. This is explored further within sections 2.13 and 2.14 of the IAR.

The revised problems for Stage Two are presented opposite, offering a mix of strategic and locally focused problems (grey); strategic (blue); and local (pink).

#### Revised Stage Two Problems

Strategic	Local
<ul style="list-style-type: none"> <li>• <b>P1:</b> High levels of congestion and increasing traffic flows leading to increased journey times, reduced journey time reliability and adverse environmental impacts.</li> <li>• <b>P2:</b> Limited bus connectivity and facilities within Chepstow and between key locations.</li> <li>• <b>P3:</b> Higher relative cost of public transport journeys in comparison to travel by the private car leads to an increased reliance on this transport mode.</li> <li>• <b>P4:</b> Poor facilities for Ultra Low Emission Vehicles including limited electric vehicle charging infrastructure.</li> <li>• <b>P5:</b> Limited network resilience with few alternatives for crossing the River Wye.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>P8:</b> Air quality issues within Chepstow owing to high traffic and congestion levels and high number of HGV movements.</li> <li>• <b>P9:</b> The highway network dominates Chepstow, with perceived safety issues and limited priority given to active travel users.</li> <li>• <b>P10:</b> The A48 causes community severance through Chepstow.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>P6:</b> Limited rail connectivity and facilities at and between Chepstow and key locations.</li> <li>• <b>P7:</b> High number of commuting journeys as a result of work / cultural norms and existing constraints in digital connectivity at home.</li> </ul>	

## Section 2

### Strategic Case (continued)

#### Revised Stage Two Objectives

Responding to the revised Stage Two Problems and the updated evidence base underpinning them, a review has also been undertaken of the objectives identified at Stage One of the study.

It is clear that revised objectives at Stage Two should seek to reflect and respond to the latest evidence base including addressing the existing situation, future trends, stakeholder priorities and legislative / policy drivers.

Each objective aims to address one or more of the identified problems, therefore, if a transport intervention is appraised to perform positively in addressing the objectives it is given it would also help overcome the problems identified.

Taking into account the key legislative and policy drivers, the objectives also aim to help achieve the goals for the locality and surrounding region (including the well-being goals and Sustainable Development Goals). As such, in revisiting the objectives, a review has been undertaken against Monmouthshire County Council's well-being objectives (see 2.4.10 of the IAR); the Well-being of Future Generations (Wales) Act 2015 Well-being Goals and also the UN Sustainable Development Goals 2015.

As with the problems, it is considered that the objectives are relevant to different spatial scales, with some pertinent at a local level, and others relevant at a strategic level. As with the study problems, the study objectives have been consolidated following feedback from stakeholders.

#### Strategic

- O1:** To [reduce congestion within Chepstow](#) and [along transport corridors](#) connecting Chepstow with the wider region during the peak periods, improving journey times and journey time reliability for all users.
- O2:** To [promote and improve accessibility to integrated, sustainable and low carbon transport modes](#) for strategic journeys so that these are available to all, to create a more equal society with reduced regional inequalities.
- O3:** To improve [network resilience](#) through:
  - The provision of viable strategic journey alternatives and resilient infrastructure; and
  - Mitigating and adapting to identified shocks and stresses to build social, cultural, economic and environmental resilience.
  - To create safe, equal and cohesive built environments where severance is reduced, for all transport users, now and in the future.
- O4:** To be more [globally responsible](#), by:
  - Reducing carbon and vehicular emissions associated with transport to net zero carbon by 2050 in order to improve air quality and reduce contribution to climate change; and
  - Encouraging people to become more aware of their actions on the environment by promoting healthy lifestyles and enabling sustainable travel;
  - Enabling active travel that can create healthier, liveable centres and creating stronger interaction with the natural environment through green infrastructure links; and
  - Supporting schemes which protect the natural environment and use resources efficiently.
- O5:** To [reduce the need to travel through innovation](#) and [better digital connectivity](#).
- O6:** To [create safe, equal and cohesive built environments](#) where severance is reduced, for all transport users, now and in the future.
- O7:** To [enable inclusive economic development](#) and [sustainable growth](#) within Chepstow and the wider region through:
  - Unlocking housing and employment development;
  - Providing access to decent employment or better skills and educational opportunities to allow all age groups to achieve their potential and improve well-being;
  - Ensuring affordability of travel for all users to allow people to take advantage of prosperity generated through securing decent work; and
  - Enhancing international connectivity.

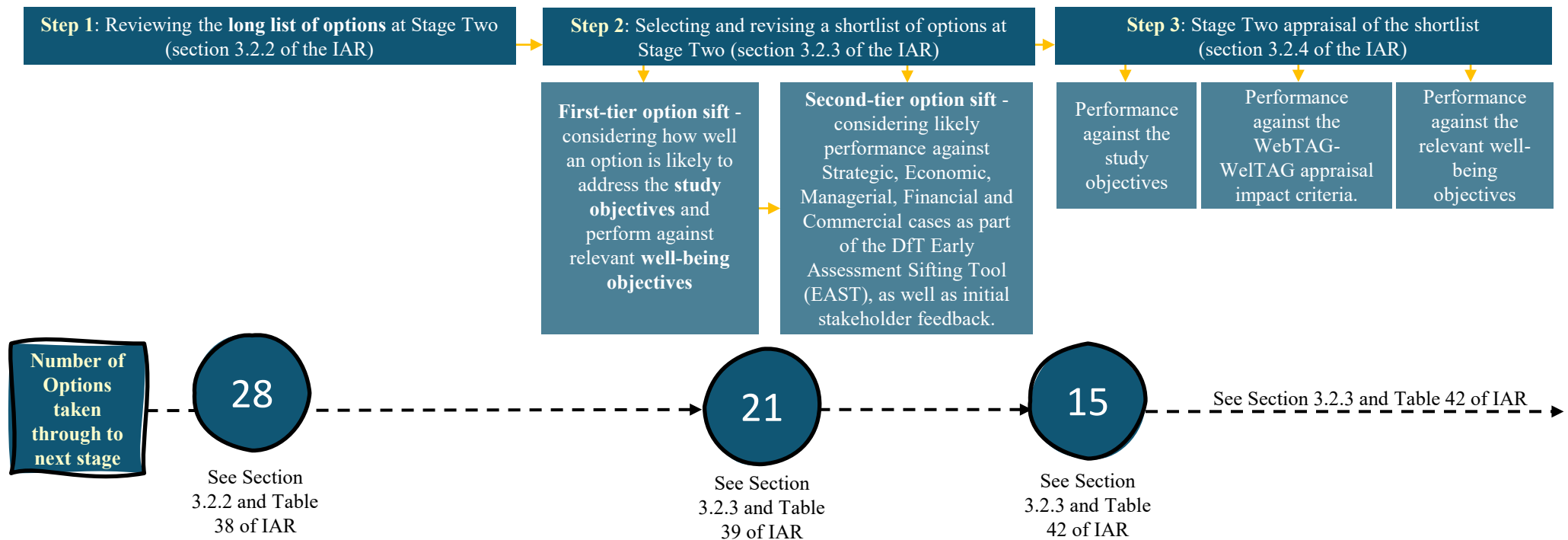
#### Local

- O8** To [promote active travel](#) through [good place-making](#) and to [provide opportunities for short trips](#), to support better wellbeing and healthy lifestyles.
- O9** To make Chepstow a more [attractive place to live, work and visit](#), helping create a more prosperous and resilient community.
- O10** To protect and [promote Welsh culture](#) and [language](#) through improving access to, from and within Chepstow.

## Section 3 Transport Case

### Overview

This Transport Case is structured into various sections within Section 3 of the IAR to demonstrate how the option development process has progressed. It comprises three stages:





## Section 3

### Transport Case (continued)



#### Options not taken forward through WelTAG / WebTAG

Based on the outcomes of the EAST appraisal and Stakeholder feedback from Workshop One, a small number of options have not been taken forward for inclusion in the WelTAG / WebTAG Stage Two appraisal. These options are summarised in Section 3.2.3 of the IAR, along with a brief explanation as to why they were not taken further as part of the Chepstow Transport Study and where they could be considered outside of this study.

##### **B4 Vehicle User Charging:**

Vehicle user charging is likely to be best progressed as a regional or national measure by Welsh Government on this basis. As a result, this option is not considered suitable to take forward as a 'Chepstow' only measure. This option also received no votes as a priority measure by Stakeholders.

##### **PT1 Public Transport Integration:**

Despite scoring well with stakeholders in terms of agreement and priority, this option is considered to be best implemented on a regional / national basis under the remit of TfW. Improvements to rail timetabling for services that serve Chepstow and Severn Tunnel Junction will be considered under Options PT4 and PT5, whilst timetabled connections with local bus services is considered under Option PT8 instead.

##### **H1 Localised modifications along A48 and A466 and at High Beech Roundabout**

It was agreed that this option would not be progressed as part of this study, as it is currently subject to a separate study under the Welsh Government.

##### **H4 New Severn Crossing – Newnham to M5 Link**

Whilst it is considered that a new strategic Severn crossing could potentially help to alleviate congestion in Chepstow, after careful consideration by the Review Group, it was acknowledged that this option would require its own study given its major scale and likely significant cost and impacts on the wider road network, including those managed by Highways England. The Welsh Government and Highways England will consider how best to progress this option in the future. Similar to H3, as this study develops, it will be mindful of the potential traffic implications should this option proceed in the future.

##### **PT3 New Railway Stations and Services:**

This option scored reasonably well with stakeholders in terms of agreement and priority. However, assuming that the new rail services would operate on a more regional basis, for instance between Cardiff/Newport and Gloucester, there would be wider network capacity limitations. The timetable of existing regional/national rail services stopping at new local stations would result in an impact on journey times to through passengers. Given the potential wider impacts in delivering this option, it is felt that it would be best taken forward by TfW as part of a long-term strategy to enhance the South Wales Metro system.

##### **PT6 Park and Ride (Bus)/Park and Share**

This option scored reasonably well with stakeholders in terms of agreement, although it was not deemed a priority by any respondents. It has been considered that this option would be considered as part of other public transport options and not in isolation.

##### **H3 New M48 Junction (Possible locations Hayes Gate/St Pierre Golf Course)**

This option did not score highly in the initial sifting exercise as although it is likely to help reduce congestion at High Beech roundabout, it is unlikely to have further, sufficient benefits in the wider Chepstow area.

This option was identified during Stage One. Since then, the options have been reviewed and updated in light of the revised identified problems and objectives, and a review of current legislation and policy. Whilst the option did not perform as well against the study appraisal criteria, the option could serve the purpose of alleviating motorway congestion on the M4 and the M48 and improve connections by the private car to key centres (i.e. with different and more strategic highway objectives).

Following discussions with the Review Group, it was decided that the option should be progressed by the Welsh Government as part of a separate study. As this study develops, it will be mindful of the potential traffic implications should this option proceed in the future.

## Section 3

### Transport Case (continued)

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#### Options taken through Stage Two

The options (section 3.2.3 of the IAR) taken forward for more detailed appraisal are shown opposite.

Appraisal Summary Tables provide a more detailed appraisal against WebTAG criteria, the scheme objectives and the Monmouthshire well-being objectives (see Appendix T.1 of the IAR). A comparative summary of the Appraisal Summary Tables is provided at IAR Table 57.

The remainder of this Chapter provides a summary of appraisal against the following criteria, as outlined within WeITAG / WebTAG guidance:

- a) Study Objectives;
- b) Local Well-being Objectives;
- c) Social and Cultural considerations;
- d) Environmental considerations;
- e) Economic and public account considerations; and
- f) Stakeholder and public feedback.

This assessment is supplemented by technical studies including an Air Quality Report and a Transport Modelling Report. They have been produced in support of the Impact Assessment Report. The key findings of the reports have been summarised within this chapter.

Category 1: Influencing Travel Behaviours	Category 2: Active Travel – Walking and Cycling	Category 3: Public Transport	Category 4: Highways and Ultra Low Emissions Vehicles	
<p><b>B1:</b> Reducing the need to travel</p> <p><b>B2:</b> Encouraging sustainable travel behaviour change</p> <p><b>B3:</b> Freight Delivery and Service Plans (DSPs)</p>	<p><b>AT1:</b> Active Travel Upgrades and Additions</p> <p><b>AT2:</b> Walking Friendly Chepstow High Street</p> <p><b>AT3:</b> Chepstow Bike Share Scheme</p>	<p><b>PT2:</b> Chepstow Transport Hub</p> <p><b>PT4:</b> West-facing Regional Public Transport Upgrades</p> <p><b>PT5:</b> East-facing Regional Public Transport Upgrades</p> <p><b>PT7:</b> Park and Ride (Rail)</p> <p><b>PT8:</b> Local Bus Service Upgrades</p> <p><b>PT9:</b> On-demand Taxi (Demand Responsive Transport) service</p>	<p><b>ULEV1:</b> Electric Vehicle Charging Points</p>	<p><b>H2a:</b> Chepstow Bypass (Beachley and Sedbury) 60mph</p> <p><b>H2b:</b> Chepstow Bypass (Beachley and Sedbury) 40mph (Lower Carbon)</p>

## Section 3

### Transport Case: Appraisal of Shortlist

#### B1, B2, B3 Behavioural Change

This option combines previous options B1, B2 and B3 into a single option of measures targeting a change in transport behaviour with a strong focus on reducing the need to travel and making sustainable travel choices where possible. This Option includes:

1. Provision of high-quality digital infrastructure
2. Active marketing the benefits or incentivising behavioural change
3. Promotion of more (or enabling) working from home.
4. Promotion of local businesses including through the enhancement of delivery capabilities
5. Sustainable travel campaigns
6. Educational campaigns and travel planning in schools to encourage sustainable travel behaviours
7. Workplace travel planning
8. Influencing Local Development and planning decision making to align to sustainable/transit orientated developments and transition Chepstow towards a concept of a 15-minute town where all residents are able to access the facilities they need on a daily basis within 15 minutes travel by sustainable modes
9. Promotion/development of mobile applications to help facilitate active travel and public transport
10. Considering 20mph zones or low traffic neighbourhoods to improve safety Considering Clean Air Zones
11. Promotion of the local sourcing of goods and products
12. Coordination/consolidation of deliveries to reduce trips
13. Restriction of operational hours for businesses / deliveries
14. Encouragement of more local businesses to offer customer delivery services
15. Use of cargo bicycles / e-bikes for local deliveries

Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	Covid-19 has resulted in a sudden shock to typical travel patterns, particularly office commuting, that could have a lasting effect. The same challenges have also increased awareness of delivery from local businesses. Higher levels of working from home have had a significant impact on transport demand and particularly in reducing peak period congestion issues.	High
	Delivery of improved digital infrastructure will make this a more sustainable way of working going forward. Reduced travel has a significant impact on congestion, air quality, noise and many other associated factors but is likely to increase deliveries and freight however these operations are typically well planned and result in less total mileage.	
	It is considered that a focus should be provided on enabling these sustainable practices that have been brought into the current ‘normal’ such as working from home.	
	By promoting a reduced need to travel and encourage behaviour change away from the private car, it is considered that there could be substantial impacts upon reducing congestion for example.	
Constraints	Provision of improved digital infrastructure is primarily reliant on private sector providers and national level initiatives. Employers may be resistant to homeworking and it is not an option for all jobs. The ability and desire to travel is cultural and has associated economic, wellbeing and cultural benefits.	Medium
Capital Expenditure	What is the expected level of capital expenditure to deliver the intervention?	Low (<£1m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Low
Value for Money	Upgrades in digital infrastructure typically demonstrate high value for money. Reducing total travel demand means existing infrastructure is sufficient for demand and congestion and journey times are lower. Likely to have very high value for money.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Medium term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>• Review and evaluation of freight and deliveries in Chepstow</li> <li>• Review of campaign measured used to encourage behavioural change by Local Authorities and provide recommendations for promotion of sustainable travel behaviours</li> <li>• Review of existing digital infrastructure and identify areas to improve</li> <li>• Development of more focused travel plan measures for new and existing development</li> <li>• Review of existing policy measures for sustainable travel and recommend new policy opportunities e.g. for enabling working from home, sufficient digital infrastructure, electric vehicle charging infrastructure etc.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### AT1 Active Travel Upgrades and Additions

The option includes:

1. Active travel improvements to prioritise active travel along the A48 and A466 corridors in Chepstow.
2. Active travel connectivity between residential areas, the town centre, railway station, healthcare, schools and leisure facilities including cycle lanes, paths and route signage.
3. Potential closure of the Old Wye Bridge (also known as Town Bridge/Chepstow Bridge) which crosses the River Wye to vehicular traffic.
4. Co-ordination with Monmouthshire's proposed Integrated Network Map (INM) routes and early delivery of the routes proposed in the INM.
5. Improved connectivity with longer-distance leisure/tourism routes for active travel.
6. Establishing a network of 'Greenways' in Chepstow.
7. Optimising promotion of active travel journeys as the 'new normal', following increases in walking and cycling as a result of the pandemic.

Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<p>The option would have a primarily local impact but could represent a realistic alternative for a high number of short trips within Chepstow particularly in conjunction with other measures such as a cycle hire scheme.</p> <p>The combination of improvements to public transport and active travel would also enable more journeys to be made by walking and cycling in combination with rail or bus.</p> <p>This option would bring benefits for physical activity and increase the feeling of safety for pedestrians and cyclists within Chepstow. This would provide significant benefits to journey quality.</p> <p>This option would likely result in the reduction of some highway space in some places, and therefore could slow down traffic. Should other public transport measures be effective in reducing vehicular trips, it is considered that the impact of reducing highway space would be less adverse for car users.</p> <p>Dependent on the number of trips switched from the private car to active travel, there could be various environmental benefits from this scheme including in relation to air quality, noise and greenhouse gases.</p>	Medium
<b>Constraints</b>	There are relatively few constraints to delivery. The option is aligned with policy and plans for a network are already well advanced. The remaining constraints are budget, stakeholder and political.	Low
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m) to High (£5m - <£10m)
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Low
<b>Value for Money</b>	UK Government review of Active Travel indicates that schemes can have a BCR in excess of 5.	
<b>Implementation Programme</b>	What are the likely timescales for the scheme to be delivered?	Short term (1-2 years) Mid term (2-5 years)
<b>Further Work</b>	<ul style="list-style-type: none"> <li>• Conduct a detailed analysis of Chepstow and the surrounding area in terms of existing walking and cycling provision, identifying key areas for improvements for active travel.</li> <li>• Meaningful engagement with the local community and key stakeholders, including schools, to identify priority measures that would be well used by the community.</li> <li>• Prioritisation and phasing of delivery.</li> <li>• Preparation of funding bids.</li> <li>• Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	



## Section 3

### Transport Case: Appraisal of Shortlist

#### AT2 – Walking Friendly Chepstow High Street

This option could include:

1. Public realm improvements to create a walking friendly environment along Chepstow High Street
2. Pedestrianisation of the High Street with associated urban design improvements facilitated by restricting vehicular movements, for example closure for vehicular traffic, temporary closures during busy periods/event days or closure to specific vehicle types
3. A complementary car parking management strategy
4. As part of this option, Disabled access should be maintained and where possible enhanced to include drop off locations and car parks situated close to any pedestrianised areas.

**Figure 18: Walking Friendly Chepstow Highstreet.**

Image © Yulia Bogomolova.



Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	<ul style="list-style-type: none"> <li>The impacts of this option will depend heavily on the measures that are taken forward as part of Stage Three; the amount of space taken away from vehicles for active travel users would have very different impacts.</li> <li>All options would see improvements for walking and cycling with the creation of a safer and less trafficked area.</li> <li>By reducing accessibility for vehicles, this could lead to longer journeys being taken which could potentially increase congestion on other sections of the network.</li> <li>It is recommended that an evaluation needs to be undertaken of the current measures along the High Street, brought forward as a result of the pandemic.</li> <li>A more friendly walking and cycling environment within the town centre, coupled with potentially less opportunities for parking, could lead to an increased number of active travel local trips.</li> <li>Consultation with the public and stakeholders have nonetheless raised some concerns over a potential adverse impact upon the high street due to reduced accessibility by cars. There is considerable research relating to the benefits of pedestrianizing areas on high streets however it is considered that meaningful engagement would be recommended with the local community in order to create a detailed, optimal design that would be sustainable for this community.</li> </ul>	Medium/High
Constraints	There are relatively few constraints to delivery. The option is aligned with policy and plans for a network are already well advanced. The remaining constraints are budget, stakeholder and political.	Medium/High
Capital Expenditure	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Low
Value for Money	Pedestrianisation of the High Street would be likely to provide economic benefits to Chepstow town centre through providing a better space for walking and cycling and access to retail. Some vehicle journeys could be longer or slower than currently. Active Travel infrastructure schemes typically represent good value for money.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Short term (1-2 years) Mid term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>Review of measures carried out as a result of COVID-19, engaging with the local community for feedback.</li> <li>Town centre transport management and coordination strategy (considering car parking, servicing, public transport, active travel, vehicular access – also for consideration within Package 2)</li> <li>Meaningful engagement with the local community and key stakeholders.</li> <li>Prioritisation and phasing of delivery.</li> <li>Preparation of funding bids.</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### AT3 Chepstow Bike Share Scheme

This option could include:

1. A bike sharing scheme (similar to NextBike operating in Cardiff)
2. Potential to include standard bikes, electric bikes/e-scooters
3. Co-ordination with other bike share schemes across the region to increase flexibility and usage of the service. There may also be potential to expand to other nearby areas such as Tutshill, Sedbury, Beachley along with other areas.
4. A local community and business survey could help support identification of appropriate locations for 'docks' combined with the INM work, initial locations should include active travel interchanges including bus and train station as well as key community services, visitor destinations and employment centres e.g., Chepstow Castle, High Street / Library
5. Stakeholders also suggested the potential for the scheme to be set up and owned by the local community. This option could be explored further at Stage Three.

Figure 19: Bike Share Scheme

Image © Arup



Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<ul style="list-style-type: none"> <li>The option would have a primarily local impact but could represent a realistic alternative for a high number of short trips within Chepstow particularly in conjunction with other measures such as an upgraded local Active Travel Route network.</li> <li>It is particularly considered that electric vehicles would have the greatest impact due to the challenging, hilly topography of Chepstow.</li> <li>This option could increase accessibility to bicycles for those who may not be able to afford the upfront costs or maintenance of owning one.</li> <li>Depending on uptake, this option could see some slight beneficial impacts for the environment from reduced reliance upon the private car.</li> </ul>	Medium
<b>Constraints</b>	There are relatively few constraints to delivery as the option is aligned with policy. The remaining constraints are budget, stakeholder and political. It is unlikely that MCC would wish to operate the scheme therefore it is likely that the best delivery route would be to procure a supplier via a tendering process.	Low
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m)
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Medium
<b>Value for Money</b>	Bike sharing schemes typically require significant capital investment and can also require ongoing support for operating costs. Schemes typically encourage high levels of usage particularly from users who do not have access to a personal bicycle and therefore has significant health and wellbeing benefits in addition to direct transport benefits.	
<b>Implementation Programme</b>	What are the likely timescales for the scheme to be delivered?	Short term (1-2 years)
<b>Further Work</b>	<ul style="list-style-type: none"> <li>Feasibility study to establish the costs, benefits and most appropriate scale of bikeshare scheme. Carry out a lessons learned discussion with Cardiff Council and liaison with a potential operator.</li> <li>Identification of locations for bikeshare scheme.</li> <li>Meaningful engagement with the local community and key stakeholders.</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	

## Section 3

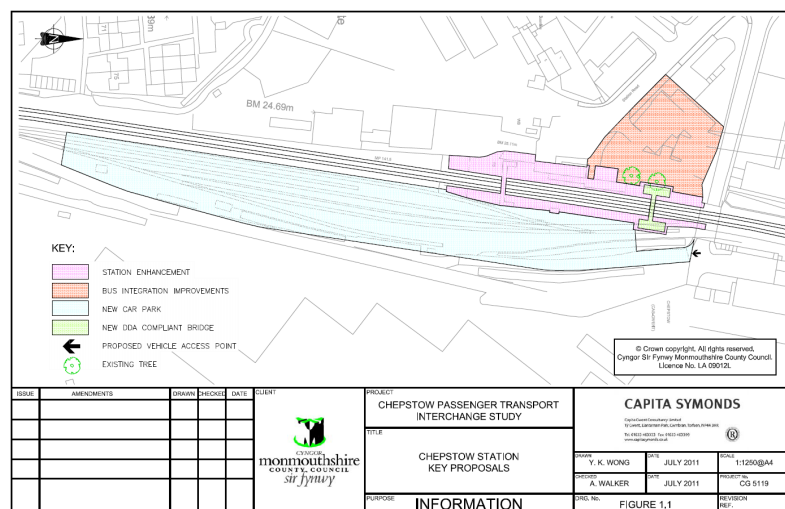
### Transport Case: Appraisal of Shortlist

#### PT2 Chepstow Transport Hub

This option involves:

1. Relocating Chepstow Bus Station adjacent to the railway station to create a 'Chepstow Transport Hub'
2. Complementary measures including associated active travel connections and facilities such as cycle parking
3. Town centre bus stops would remain as part of this option
4. Integrated as part of a wider multi-modal system, with integrated ticketing

**Figure 20: Indicative Arrangement for Chepstow Transport Hub (Chepstow Passenger Transport Interchange Study, Capital Symonds, 2011)**



Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	<ul style="list-style-type: none"> <li>The option would improve passenger experience and enhance public transport connections. A Transport Hub will enable better linkage between modes but overall demand will primarily relate to the services available.</li> <li>The scheme would provide reduced severance by improving connections between rail and bus journeys.</li> <li>The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to public transport but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity.</li> <li>It is considered that the option would have the potential for adverse impacts upon the historic environment owing to its closer location to the railway station which is a listed building. Careful consideration must be taken as to ensure that no adverse heritage impacts occur.</li> <li>It is also considered that there could be a slight adverse impact upon biodiversity during construction.</li> </ul>	Low
Constraints	Bus operators need to agree to revise services and this is not under MCC control. Land purchase and planning constraints (e.g. car parking)	Medium
Capital Expenditure	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Medium
Value for Money	The 2011 Capita Symonds report estimated that options with a capital cost of £4.6m scheme would have a Benefit to Cost Ratio of between 1 and 2. It is anticipated that the option as described would be at the upper end of this range.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Mid term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>Feasibility stage design of bus facilities to include updated costs, benefits and funding options</li> <li>Liaison with Transport for Wales (TfW) and Transport for Wales Rail Services (TfWRS) to establish planned enhancements and preferred schemes</li> <li>Liaison with bus operators</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys (including Ecology, Heritage Assessment, Landscape and Visual, and Noise), and potential planning / highways consents.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### PT4 West/North-facing Public Transport Upgrades

The option involves:

1. Improvements to rail service frequency at Chepstow for routes between Newport/Cardiff and Gloucester/Cheltenham (and beyond)
2. Improvements to the current irregular timetable at Chepstow
3. Improved connectivity between Chepstow and Severn Tunnel Junction and beyond

Figure 21 Existing Typical Hour Public Transport Provision (West-facing)[1]

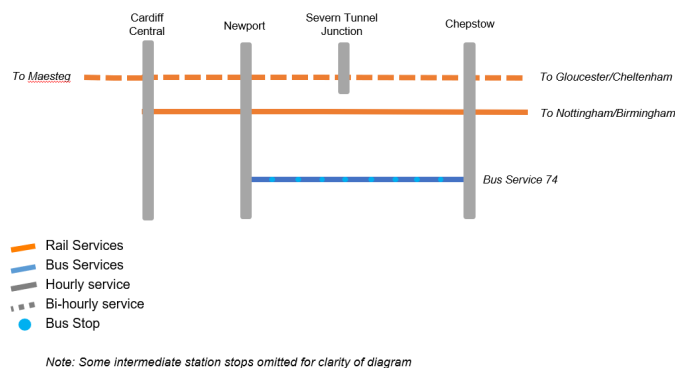
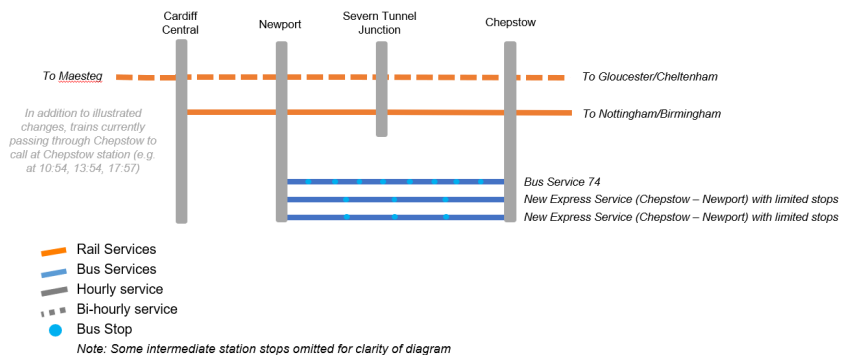


Figure 22 Proposed Typical Hour Public Transport Provision (West-facing)



Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	The option would provide a public transport option for regional journeys which may be competitive in terms of cost/time. Demand would require a consistent service over an extended period. The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to public transport but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity. Chepstow suffers from a significant volume of through traffic, therefore focusing upon local bus service upgrades and active travel measures would be unlikely to have a significant impact upon congestion problems within Chepstow. Attractive public transport options would be the most effective therefore in addressing many of the identified issues.	Medium
Constraints	Bus/rail operator willingness to alter services	Medium
Capital Expenditure	Rail timetabling constraints What is the expected level of capital expenditure to deliver the intervention?	Low (<£1m) to Medium (£1m - <£5m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Medium
Value for Money	The value for money of the bus element will depend on how the service is operated. Similar recent commercial services have been discontinued. The value for money of the rail element will depend on how services are provided. Any new services or rail infrastructure would impact value for money but stopping existing services could represent good value for money if impacts to through journeys can be avoided/mitigated.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Mid term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>• Rail operations study to investigate feasibility of stopping current through services (including at Chepstow and Severn Tunnel Junction) including patronage forecasting and cost benefit analysis</li> <li>• Liaison with Transport for Wales (TfW) and Transport for Wales Rail Services (TfWRS) to better understand future service commitments/aspirations</li> <li>• Liaison with bus operators to understand post Covid-19 regional services</li> <li>• Overarching strategic public transport feasibility study for Chepstow best undertaken as a holistic study covering PT-4 and PT-5 to include costs, benefits, accessibility and mode shift analysis</li> <li>• Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	



## Section 3

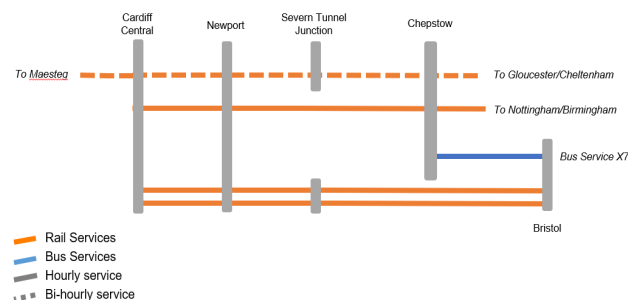
### Transport Case: Appraisal of Shortlist

#### PT5 East-facing Regional Public Transport Upgrades

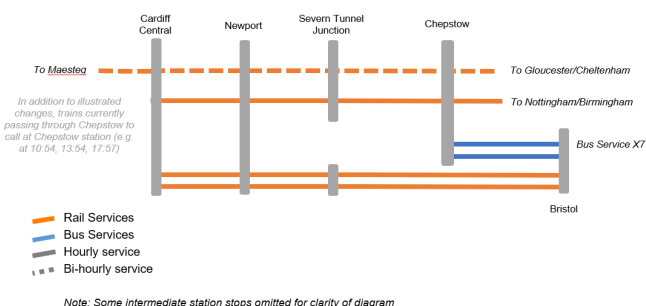
The option involves:

1. Improvements to rail service frequency between Chepstow and Severn Tunnel Junction and Bristol Parkway, Bristol Temple Meads and beyond
2. Improvements to the current irregular timetable at Chepstow
3. Express bus service between Chepstow and Bristol with associated priority measures
4. Consideration for multiple employment centres within Bristol, not only central Bristol

**Figure 23 Existing Typical Hour Public Transport Provision (East-facing)**



**Figure 24 Proposed Typical Hour Public Transport Provision (East-facing)**



Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<ul style="list-style-type: none"> <li>The option would provide a public transport option for regional journeys which may be competitive in terms of cost/time. Demand would require a consistent service over an extended period.</li> <li>The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to public transport but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity.</li> <li>Chepstow suffers from a significant volume of through traffic, therefore focusing upon local bus service upgrades and active travel measures would be unlikely to have a significant impact upon congestion problems within Chepstow. Attractive public transport options would be the most effective therefore in addressing many of the identified issues.</li> </ul>	Medium
<b>Constraints</b>	Bus/rail operator willingness to alter services Rail timetabling constraints	Medium
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Low (<£1m) to Medium (£1m - <£5m)
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	High
<b>Value for Money</b>	<p>The value for money of the bus element will depend on how the service is operated and patronage. Recent challenges to continuity of a commercial service indicate that existing demand is low and significant subsidy support is likely to be required.</p> <p>The value for money of the rail element will depend on how services are provided. Any new services or rail infrastructure would impact value for money but stopping existing services could represent good value for money if impacts to through journeys are minimised.</p>	
<b>Implementation Programme</b>	What are the likely timescales for the scheme to be delivered?	Mid term (2-5 years)
<b>Further Work</b>	<ul style="list-style-type: none"> <li>Rail operations study to investigate feasibility of stopping current through services (at Chepstow and Severn Tunnel Junction) including patronage forecasting and cost benefit analysis</li> <li>Liaison with Transport for Wales (TfW) and Transport for Wales Rail Services (TfWRS) to better understand future service commitments/aspirations</li> <li>Liaison with bus operators to understand post Covid-19 regional services</li> <li>Overarching strategic public transport feasibility study for Chepstow best undertaken as a holistic study covering PT-4 and PT-5 to include costs, benefits, accessibility and mode shift analysis</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### PT7 Park and Ride (Rail)

The option involves:

1. Increasing car parking capacity at Chepstow Railway Station; and
2. Increasing car parking capacity at Severn Tunnel Railway Station

Figure 25 Proposed Park and Ride Improvements (Source: Arup and Google Maps)



Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	<p>Parking at both stations is considered to act as a constraint on demand as there are insufficient spaces for passengers to rely on being able to park. Additional parking would encourage further P&amp;R demand and increases the catchment of railway stations beyond the immediate environment. Passengers using P&amp;R will typically do so as part of a longer distance regional or national journey.</p> <p>The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to rail (even for only part of the journey as associated with this option) but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity.</p>	Medium
Constraints	The availability of land and capital cost of constructing parking is a constraint. It is understood that Transport for Wales Rail Services have identified both stations for an increase in parking provision. Planning permission and associated considerations may also represent a constraint. Charges for parking may act to limit the potential of this measure.	Medium
Capital Expenditure	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Low
Value for Money	Provision of P&R spaces typically demonstrates good value for money subject to the availability of suitable land for a surface car park. In high demand locations and where car parking charges are in place P&R provision may lead to revenue generation.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Medium term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>• Liaison with Transport for Wales (TfW) and Transport for Wales Rail Services (TfWRS) to establish planned enhancements and preferred schemes</li> <li>• Identification of funding</li> <li>• Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### PT8 Local Bus Service Upgrades

The option involves:

1. New bus services
2. Improved service integration
3. Increased service frequency
4. Providing enhanced bus priority measures
5. Improving bus journey times
6. Enhancing bus stops

Figure 26 Local Bus Service Upgrades (Image Source: Arup)



Consideration	Description	Scale / Impact
Key Impacts – Summary of Appraisal Summary Table	<p>A co-ordinated bus network is likely to have a significant impact on how attractive local bus journeys are. This would be likely to grow local bus use but the baseline patronage is low so impacts will take time to accumulate.</p> <p>The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to public transport but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity.</p>	Medium
Constraints	<ul style="list-style-type: none"> <li>Bus operator willingness to alter services</li> <li>Subsidy funding</li> <li>Political/stakeholder views on reallocation of road space</li> </ul>	Medium
Capital Expenditure	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - £5m)
Subsidy Liability	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Medium
Value for Money	A revised and local bus network could be planned on improving service level with the same operating resources (vehicles, drivers, subsidy). Delivered on this basis this option should represent good value for money but will be dependent on the co-operation of private and potentially competing operators.	
Implementation Programme	What are the likely timescales for the scheme to be delivered?	Short-term (2-5 years) Mid-term (2-5 years)
Further Work	<ul style="list-style-type: none"> <li>Undertake a review of Chepstow local area accessibility by public transport to identify gaps and disparities in current provision</li> <li>Review of existing bus infrastructure (including bus stops and priority measures)</li> <li>Local network feasibility study to investigate the potential to improve local bus based public transport at the same or reduced cost base including consideration of innovative delivery models, costs, benefits and mode shift potential to include consideration of Option PT9</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	

## Section 3

### Transport Case: Appraisal of Shortlist

#### PT9 Demand Responsive Transport Service

This option involves:

1. A new innovative and integrated demand responsive transport service within Chepstow offering a more flexible and responsive service in comparison to existing public transport services
2. Stakeholder suggestion that this could be run as a community service, with a helpful advanced booking option. This could be explored further at Stage Three as an option.

**Figure 27 Comparison of Flexible Bus Services; the diagram below shows how Grass Routes compares with other demand responsive services (Arup image)**



Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<p>Improved and flexible bus transport would make public transport an option for a greater range of journeys in the local area.</p> <p>The scheme would attract more people to travel within multi-occupancy vehicles as opposed to single private car trips. The impact upon a range of environmental criteria would rely heavily on the numbers of people switching from the private car to public transport but could lead to benefits such as for noise, air quality, greenhouse gases and biodiversity.</p> <p>This option may also provide a betterment in journey quality to those currently travelling by bus through providing more direct journeys.</p>	Medium
<b>Constraints</b>	<ul style="list-style-type: none"> <li>Funding</li> <li>Passenger familiarity</li> <li>Regulation and competition issues</li> </ul>	Medium
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - £5m)
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	High
<b>Value for Money</b>	Schemes introduced elsewhere have required significant subsidy support and several have been withdrawn as a result. Schemes are often popular with users but smaller vehicles are limited in the volume of passengers that can be transported.	
<b>Implementation Programme</b>	What are the likely timescales for the scheme to be delivered?	Short term (1-2 years)
<b>Further Work</b>	See Option PT8	



## Section 3

### Transport Case: Appraisal of Shortlist

#### ULEV1 Electric Vehicle Charging Points

This option involves:

1. Providing additional EV charging points, including within existing car parks and residential areas
2. Facilitation of private suppliers
3. Support for residential facilities
4. Study of grid capacity and energy supply

Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<ul style="list-style-type: none"> <li>The electric vehicle fleet is increasing and as a result there is an increasing demand for charging facilities. Provision of facilitation of charging facilities either at residential properties, in residential areas or public parking areas will support the uptake of electric vehicles and in particular alleviate range anxiety issues.</li> <li>There is also evidence to suggest that the uptake of electric vehicles is currently being hindered by the lack of charging facilities and associated range anxiety.</li> <li>This option would help to promote and facilitate electric vehicles. The option would likely to significantly reduce transport-based emissions and improve air quality but it will not reduce congestion issues.</li> <li>It is considered that there could be a slight adverse impact upon townscape owing to the visual impact and space required for charging points. However, careful design considerations should mitigate harmful effects.</li> <li>By providing chargepoints, it would increase accessibility to Chepstow by electric car users which could also have benefits to the local economy.</li> </ul>	Low
<b>Constraints</b>	Constraints to installation are likely to be related to grid capacity, evolution of charging standards and installation permissions. Some of these issues may be alleviated by installation by private sector organisations	Medium
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Medium (£1m - <£5m)
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	Low
<b>Value for Money</b>	Value for money will vary based on the need for upgrades in the electrical network and procurement method.	
<b>Implementation Programme</b>	What are the likely timescales for the scheme to be delivered?	Medium term (2-5 years)
<b>Further Work</b>	<ul style="list-style-type: none"> <li>Liaison with Welsh Government about wider strategy</li> <li>Feasibility study to identify demand, most beneficial charging locations, costs, benefits and electrical grid capacity</li> <li>Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.</li> </ul>	



## Section 3

### Transport Case: Appraisal of Shortlist

#### H2A Chepstow Bypass – Beachley and Sedbury (60mph)

Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<ul style="list-style-type: none"> <li>Both bypasses reduce through traffic and congestion through Chepstow and generally decrease journey times on the network around Chepstow with a congestion relieving effect, especially along the A48 through Chepstow. Decreases in journey times through various routes within Chepstow have been identified within the region of 3-14%</li> <li>Journey times along the H2a bypass range from 3-4 minutes compared to 4-5 minutes for H2b</li> <li>Both schemes result in some accident disbenefits. Over a 60-year period, H2a would be expected to result in 3 additional fatal accidents, 32 additional serious accidents and 202 slight accidents. H2b would also result in additional accidents in comparison to the do minimum. H2b would result in fewer additional fatal accidents compared with H2a but additional serious and slight accidents. There would be 1 additional fatal accident, 30 additional serious accidents and 292 additional slight accidents.</li> <li>Scheme would attract traffic from Gloucester and Bristol in the PM, slowing down routes into Chepstow from locations like the M5 southbound and the M48 westbound.</li> <li>Between M4 Junction 29 and 23, there would be a decreased of around 2-3% in journey times as the bypass would make routes that join the M48 more attractive, which may draw away traffic entering Newport further west along the M4 and slowing carriageway traffic when joining the M4</li> <li>Increased network resilience through the provision of an additional River Wye Crossing</li> <li>Potential for increase in congestion during construction due to traffic management, temporary road closures, and propensity to drive during operation</li> <li>The proposed bypass would result in a visually prominent road infrastructure, including the bridge structure over the River Wye, which would significantly impact on local views and result in adverse impacts on the character of local landscape and townscape. There would be a significant adverse impact on the historic environment due to the crossing of the Scheduled Monument Offa's Dyke and the associated National Trail. Careful construction techniques would be required to mitigate against any direct physical impact but a permanent setting impact would remain.</li> <li>The highways alignment will also be in close proximity to the Grade II listed Standing Stones at Offa's Dyke, as well as others in the area. The proximity to the Scheduled Monument also highlights the potential for buried archaeology in the area.</li> <li>This option includes a bypass crossing through a section of Ancient Woodland to the east of Thornwell and would result in the loss of important ecological habitats and connectivity. The highway alignment would also cross the River Wye designated as a SAC and SSSI due to its ecological importance. The design of the bridge structure assumes that construction work directly within the watercourse will be avoided however disturbance effects during construction due to the proximity of construction activity is likely and could potentially impact on protected species. The height of the crossing may also impact on a number of bird species in the area particularly in such close proximity to the Severn Estuary SAC, SPA Ramsar, SSSI and could impact on bird flight lines. The highways alignment is also in close proximity to Key Wildlife Sites and Wye Valley and Forest of Dean Bat Site SAC and could cause further disturbance effects on associated habitats and species. The new highway alignment would be within Flood Zone 2 and 3 which would have a moderate adverse impact on the water environment.</li> <li>Would provide environmental benefits through Chepstow such as improved air quality and reduced noise pollution, however there would be adverse impacts on noise and air quality along the proposed route, including within a semi-rural area of Chepstow and areas which are considered to be more deprived.</li> <li>Likely adverse noise impacts during construction and increased noise pollution along the route;</li> <li>Moderate adverse impacts on the water environment due to the construction adjacent to Flood Zones 2&amp;3</li> <li>Slight reduction in greenhouse gases over a 60 year appraisal period anticipated.</li> <li>Option would facilitate and potentially promote travel by the private car, as opposed to facilitating and promoting low carbon transport modes.</li> <li>In terms of distributional impacts, this option would increase the level of movements within an area that is considered to be more deprived within Chepstow.</li> <li>The option would also not include active travel enhancements due to the high speeds of the road.</li> </ul>	High

## Section 3

### Transport Case: Appraisal of Shortlist

#### H2A Chepstow Bypass – Beachley and Sedbury (60mph)

Consideration	Description	Scale / Impact
<b>Constraints</b>	<ul style="list-style-type: none"> <li>Park Redding woods is designated as Ancient semi natural Woodland</li> <li>River Wye SAC and SSSI</li> <li>Severn Estuary SAC, SPA Ramsar.</li> <li>Pennsylvania Fields SSSI</li> <li>Offa's Dyke Scheduled Monument</li> <li>Listed Buildings including Grade II listed Standing Stones</li> <li>Key wildlife sites in proximity to the highway alignment</li> <li>Newport to Gloucester Rail Line</li> <li>Land ownership</li> </ul>	High
<b>Capital Expenditure</b>	What is the expected level of capital expenditure to deliver the intervention?	Very High
<b>Subsidy Liability</b>	Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?	High (>£100m)
<b>Value for Money</b>	Initial transport modelling results show: Present Value of Benefit – £134,236,000 Scheme cost - £108,707,200 (includes optimism bias 44%) BCR - 1.4.	
<b>Implementation Programme</b>	~5 years.	Medium
<b>Further Work</b>	<ul style="list-style-type: none"> <li>Next stage of preliminary design including technical studies including geotechnical desk based study.</li> <li>Environmental surveys and assessments will be necessary as part of Stage Three if this option is progressed. These include but are not limited to the following:</li> <li>Landscape and Visual Impact Assessment</li> <li>Noise Impact Assessment</li> <li>Preliminary Ecological Assessment (PEA) including Extended Phase 1 Habitat Surveys to inform the presence of protected species and habitats and the requirements of Phase 2 Habitat Surveys.</li> <li>Habitat Regulation Assessment (HRA) for impacts on European designated sites</li> <li>Historic Environment Desk Based Assessment (DBA) to assess the impacts on designated and non-designated heritage assets, as well As the potential for buried archaeology and the need for further surveys.</li> <li>Arboricultural Assessment for removal of trees.</li> <li>Air Quality Assessment [detailed]</li> <li>Water Framework Directive (WFD) assessment for any works affecting the hydro-morphology, ecology or water quality any classified waterbody.</li> <li>Environmental Statement is likely to be required but will be subject to Screening. If an Environmental Statement is required, a Scoping Report will determine the scope of environmental assessments.</li> <li>Planning consent and associated permits.</li> </ul>	



## Section 3

### Transport Case: Appraisal of Shortlist

#### H2B Chepstow Bypass Beachley and Sedbury 40mph (Lower Carbon)

The option aims to provide an efficient eastern bypass of Chepstow by minimising construction of new infrastructure and maximising the use of existing roads. It seeks to minimise capital carbon and help reduce user carbon when compared to the H2A option and comprises of a number of sections:

- The route starts at the eastern end of the Thornwell residential estate where an enlarged roundabout would be provided at Conway Drive.
- Crossing through Park Redding Ancient semi-natural Woodland, the route then crosses the River Wye on a significant structure and connects to Beachley Road near Severn Bridge park.
- The route uses Beachley Road as far north as Sedbury Lane.
- Sedbury Lane is widened using a combination of on and offline construction to provide a new route to the Mead Farm.
- From this point the new road crosses over the railway and connects to the A48 at a new roundabout.
- A kerbed single carriageway with a 40mph speed limit is proposed at sections of new road which would also incorporate an active travel facility within the cross section.

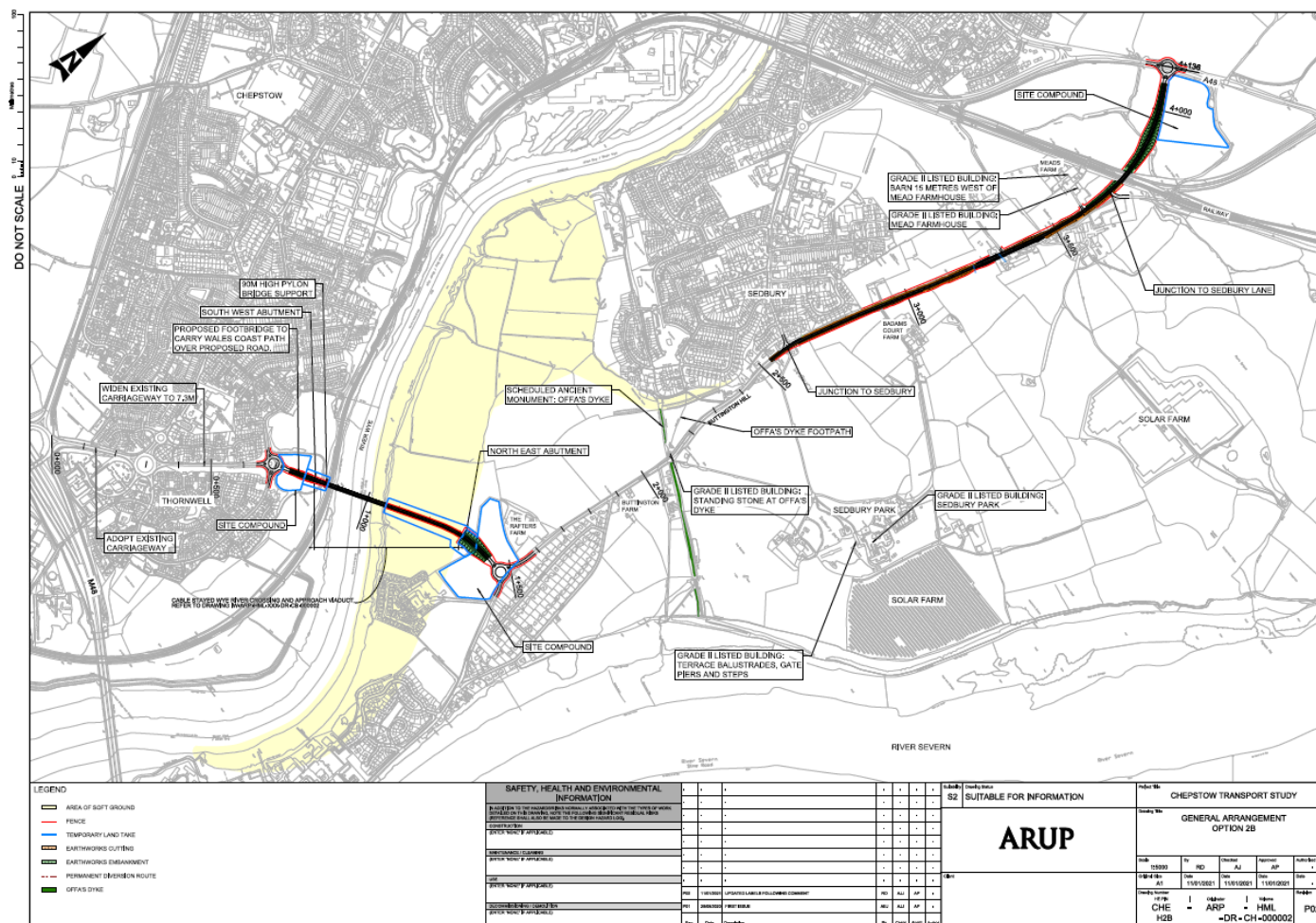


Figure 29 General Arrangement for H2(b)

## Section 3

### Transport Case: Appraisal of Shortlist

#### H2B Chepstow Bypass Beachley and Sedbury 40mph (Lower Carbon)

Consideration	Description	Scale / Impact
<b>Key Impacts – Summary of Appraisal Summary Table</b>	<ul style="list-style-type: none"> <li>Both bypasses reduce through traffic and congestion through Chepstow and generally decrease journey times on the network around Chepstow with a congestion relieving effect, especially along the A48 through Chepstow. Decreases in journey times through various routes within Chepstow have been identified within the region of 3-14%</li> <li>Journey times along the H2a bypass range from 3-4 minutes compared to 4-5 minutes for H2b</li> <li>Both schemes result in some accident disbenefits. Over a 60-year period, H2a would be expected to result in 3 additional fatal accidents, 32 additional serious accidents and 202 slight accidents. H2b would also result in additional accidents in comparison to the do minimum. H2b would result in fewer additional fatal accidents compared with H2a but additional serious and slight accidents. There would be 1 additional fatal accident, 30 additional serious accidents and 292 additional slight accidents.</li> <li>Scheme would attract traffic from Gloucester and Bristol in the PM, slowing down routes into Chepstow from locations like the M5 southbound and the M48 westbound.</li> <li>Between M4 Junction 29 and 23, there would be a decreased of around 2-3% in journey times as the bypass would make routes that join the M48 more attractive, which may draw away traffic entering Newport further west along the M4 and slowing carriageway traffic when joining the M4</li> <li>Increased network resilience through the provision of an additional River Wye Crossing</li> <li>Safer strategic route, less accesses fronting onto the carriageway</li> <li>Potential for increase in congestion during construction due to traffic management, temporary road closures, and propensity to drive during operation</li> <li>The proposed bypass would result in visually prominent road infrastructure, including the bridge structure over the River Wye, which would significantly impact on local views and result in adverse impacts on the character of local landscape and townscape. There would be an adverse impact on the historic environment due to the increased traffic volumes that pass the Scheduled Monument Offa's Dyke on existing highways. This option would also impact on the use of the associated National Trail. Careful consideration during construction would be required to avoid any direct physical impact. The setting of listed heritage assets in the vicinity are likely to be affected including the Grade II listed Standing Stones at Offa's Dyke, Grade II* listed Meads Farmhouse and the adjacent Grade II listed barn. The proximity to the scheduled monument also highlights the potential for buried archaeology in the area.</li> <li>This option includes a bypass crossing through a section of Ancient Woodland to the east of Thornwell and would result in the loss of important ecological habitats and connectivity. The highway alignment would also cross the River Wye designated as a SAC and SSSI due to its ecological importance. The design of the bridge structure assumes that construction work directly within the watercourse will be avoided however disturbance effects during construction due to the proximity of construction activity is likely and could potentially impact on protected species. The height of the crossing may also impact on a number of bird species in the area particularly in such close proximity to the Severn Estuary SAC, SPA Ramsar, SSSI and could impact on bird flight lines. The highways alignment is also in close proximity to key wildlife sites and Wye Valley and Forest of Dean Bat Site SAC and could cause further disturbance effects on associated habitats and species. The new highway alignment would be within Flood Zone 2 and 3 which would have a moderate adverse impact on the water environment.</li> <li>Moderate adverse impacts on landscape and heritage assets including impacts on the setting of heritage assets including Offa's Dyke, Listed Buildings and views from nearby receptors including Thornwell due to the height of the Wye Crossing structure.</li> <li>Would provide environmental benefits through Chepstow such as improved air quality and reduced noise pollution. This would particularly provide benefits to the Chepstow AQMA, however there would be adverse impacts along the highway route, including for more deprived, semi-rural areas.</li> <li>Likely adverse noise impacts during construction and increased noise pollution along the route during operation;</li> <li>Benefits for active travel through the inclusion of enhanced active travel measures. The route would also reduce traffic through Chepstow which would the walking and cycling environment more attractive to users, with significant benefits to perceived safety.</li> <li>Moderate adverse impacts on the water environment due to the construction adjacent to Flood Zones 2&amp;3.</li> <li>Slight reduction in greenhouse gases over a 60 year appraisal period anticipated.</li> </ul>	High

## Section 3

### Transport Case: Appraisal of Shortlist

#### H2B Chepstow Bypass Beachley and Sedbury 40mph (Lower Carbon)

Consideration	Description	Scale / Impact
<b>Constraints</b>	<ul style="list-style-type: none"> <li>Park Redding woods is designated as Ancient semi natural Woodland</li> <li>River Wye SAC and SSSI</li> <li>Severn Estuary SAC, SPA Ramsar.</li> <li>Pennsylvania Fields SSSI</li> <li>Offa's Dyke Scheduled Monument</li> <li>Listed Buildings including Grade II listed Standing Stones</li> <li>Key wildlife sites in proximity to the highway alignment</li> <li>Newport to Gloucester Rail Line</li> <li>Property access</li> <li>Existing traffic</li> </ul>	High
<b>Capital Expenditure</b>	<ul style="list-style-type: none"> <li>What is the expected level of capital expenditure to deliver the intervention?</li> </ul>	Very High (£60m)
<b>Subsidy Liability</b>	<ul style="list-style-type: none"> <li>Beyond intervention delivery, is there a risk that the public sector may need to provide an ongoing subsidy to maintain operation?</li> </ul>	High
<b>Value for Money</b>	Initial transport modelling results show: Present Value of Benefit - £106,217,000 Scheme cost - £59,928,000 (including optimism bias 44%) BCR – 2.0	
<b>Implementation Programme</b>	~5 years	Medium
<b>Further Work</b>	<ul style="list-style-type: none"> <li>Next stage of preliminary design including technical studies including geotechnical desk based study.</li> <li>Environmental surveys and assessments will be necessary as part of Stage Three if this option is progressed. These include but are not limited to the following:</li> <li>Landscape and Visual Impact Assessment</li> <li>Noise Impact Assessment</li> <li>Preliminary Ecological Assessment (PEA) including Extended Phase 1 Habitat Surveys to inform the presence of protected species and habitats and the requirements of Phase 2 Habitat Surveys.</li> <li>Habitat Regulation Assessment (HRA) for impacts on European designated sites</li> <li>Historic Environment Desk Based Assessment (DBA) to assess the impacts on designated and non-designated heritage assets, as well as the potential for buried archaeology and the need for further field surveys and evaluation. The Historic Environment Record lists many known undesigned heritage assets.</li> <li>Arboricultural Assessment for removal of trees.</li> <li>Air Quality Assessment [detailed]</li> <li>Water Framework Directive (WFD) assessment for any works affecting the hydro-morphology, ecology or water quality any classified waterbody.</li> <li>Environmental Statement is likely to be required but will be subject to Screening. If an Environmental Statement is required, a Scoping Report will determine the scope of environmental assessments.</li> <li>Planning consent and associated permits.</li> </ul>	

## Section 4

### Financial Case

#### High-level Capital Cost Estimates

Costs for each scheme are set out within pages 23 to 39.

Schemes are in early development, and it is likely that options would be delivered on a phased basis and packaged in different ways depending on needs and affordability.

Broad capital cost estimates have been provided for the purposes of this Stage Two study given the early nature of feasibility work, with the proportionality principle applied:

- Low (<£1M);
- Medium (£1M-5M);
- High (£100k to <£5M-10M); and
- Very High (£10M+).

At Stage Three, a whole-life costing will be required for each progressed option. This will include consideration of maintenance / revenue costs, which should be minimised through the use of materials which will likely have a greater lifespan and by installing long-life assets.

Costs are indicative at this stage but nevertheless have been included below given that they may serve to identify and help address any affordability issues. Costs have been estimated by considering similar schemes as benchmarks and refining these costs with appropriate experts.

Costs require allowance for Optimism Bias following Welsh Government guidelines.

#### Revenue Costs

Options included in the shortlist which provide new active travel connections (e.g. footways, footpaths) would result in increased maintenance as a new section is being provided.

However, it is expected that these costs would be low. For highway-based interventions that are included in the shortlist of options, there would be an increase in maintenance costs if a new section of highway is being provided. However, it would be hoped that these would be kept to a minimum through the use of materials which will likely have a greater life span. Public transport options can have high operational costs, due to the ongoing revenue that is required to operate services.

#### Potential Funding Opportunities

Some of the options included on the shortlist require significant capital funding. Securing funding to take forward any of the identified options will likely require funding from one of or a range of sources.

Potential funding for scheme implementation are set out below, however further analysis will be required as schemes progress to Stage Three (see Table 62 in IAR):

- **Section 106 / Community Infrastructure Levy (CIL):** CIL / Section 106 could be used to fund or contribute towards some of the proposed smaller scale highway improvements, active travel or small scale public transport infrastructure improvements.
- **Welsh Government – Local Transport Fund:** Welsh Government provides capital funding to Local Authorities as part of an annual bidding programme. It could be used to fund some of the smaller active travel infrastructure improvement.
- **Welsh Government Active Travel Fund Grant:** Welsh Government's Active Travel Fund objectives are to: increase levels of active travel; connect communities;

improve active travel access to employment, education and key services, destinations and public transport.

- **Safe Routes in Communities:** Welsh Government's Safe Routes in Communities fund is available to Local Authorities for schemes which increase levels of active travel among children travelling to school or in the wider community.
- **Road Safety Capital:** The Road Safety Capital is available to local authorities with active travel proposals which aim to reduce the number of people killed and seriously injured in Wales.
- **Welsh Government – Local Transport Network Fund:** Capital funding available as part of an annual bidding programme. This can be used to fund: to improve the local transport network in terms of improving public transport journey times and reliability, connecting communities and enabling access to economic opportunities and improving air quality.
- **Welsh Government Emergency Funding (COVID-19):** grant funding to allow local authorities to respond quickly to the transport opportunities and challenges that the Covid-19 crisis brings, due to the expectation that social distancing will need to be observed for many months to come. The aims of the fund are to: protect public health and safety, and address potential increases in car use.

It is assumed that maintenance costs would be considered as part of existing and future Monmouthshire County Council maintenance budgets.



## Section 5

### Commercial Case

#### Overview

The Commercial Case considers whether it is going to prove possible to procure a scheme and then to continue with it in the future. Key considerations include the approach to procurement and payment, income and / or charging characteristics, risk allocation, contract length, and resource availability.

A procurement plan with outline criteria for assessment would be prepared for any options that Monmouthshire County Council or its partners decide to progress following this Stage Two study. That could be incorporated into any Stage Three study in the future.

A high-level preliminary view of Commercial Case issues for each option are set out in the following section. This is also explored further within Section 6 of the IAR.

#### Procurement

It is clear that the options considered could be grouped into packages to assist with procurement and funding opportunities. The following approach is recommended, subject to further assessment work and funding opportunities:

1. Active travel focused measures, seeking opportunities for funding through:
  - Welsh Government Emergency Funding (COVID-19)
  - Welsh Government Active Travel Fund Grant
  - Safe Routes in Communities
  - Section 106 / Community Infrastructure Levy (CIL)
  - Local Authority and Welsh Government capital through transport budgets

2. Public transport focused measures, seeking opportunities for funding through:
  - Welsh Government – Local Transport Fund
  - Welsh Government – Local Transport Network Fund
  - Local Authority and Welsh Government capital through transport budgets
3. Highways and EV focused measures, seeking opportunities for funding through:
  - Local Authority and Welsh Government capital through transport budgets
  - Section 106 / Community Infrastructure Levy (CIL)
  - Road Safety fund

The procurement process would follow the UK Public Contract Regulations 2015, or whichever regulations are approved by Monmouthshire County Council or its Partners at the time.

The following details should be explored as part of further study:

- a) Estimate of number of likely suppliers;
- b) Contract length;
- c) Specification of required outputs;
- d) Allocation of risk;
- e) Outline potential payment mechanism; and
- f) Outline contractual arrangements.

#### Considering Social Value in Procurement

Social value should be a key focus within the procurement strategy; with an emphasis on creating the best possible outcomes for society. Changes have been introduced in 2020 to strengthen the requirements of the Social Value Act 2012 for the UK Central Government, seeking to:

- Increase the additional social value generated as a result of central government procurement.
- Provide greater opportunities for SME and VCSE sectors to access opportunities.
- Link the social value requirements in central government procurement to the government's priorities and policies
- Ensure consistency of approach across government departments which will help the supply chain be prepared.
- Learn from the progress made by local government on social value at a central government level.

#### Consenting

At Stage Three, a full consenting strategy would be established for the preferred scheme(s).

At this stage it is likely that the options would require processing through a mix of consenting routes involving the Highways Act 1980, Transport and Works Act 1992, the Town and Country Planning Act 1990 and the Town and Country Planning (General Permitted Development) Order 1995.

## Section 6

### Management Case

#### Overview

The Management Case covers the delivery arrangements for the project and then its management during its lifetime (see IAR Section 7). It covers procurement, construction and on-going operation of the intervention. Issues include:

- a) Its delivery based on tried and tested methods;
- b) Any legal requirements e.g. environmental assessments, health impact assessments, planning consents, legal powers;
- c) Governance, organisational structure and roles during subsequent stages;
- d) Any risk in respect of stakeholder and public acceptability; and
- e) Any risk that benefits will not be realised.

This Case will need to be updated if / when Monmouthshire County Council (or another deliver body) decides to progress with any of the options considered as part of this Stage Two study. This could be undertaken at Stage Three and / or when a contractor(s) is procured.

Monmouthshire County Council or its Partners would prepare a Project Plan for any individual or packages of measures progressed, as considered as options within this Stage Two study.

It is recommended where appropriate that the Key Stage process provides a staged financial approval system to manage the process of projects from inception, through to construction and initial maintenance and complies with the principles of PRINCE2 project management.

Further information should be provided in relation to the likely:

1. Construction programme (overall duration and sequence of operations);
2. Construction Management Plan (including Health and Safety Management, Construction Environmental Management, Quality Management and Public Relations where appropriate); and
3. Register of Environmental Actions and Commitments (where appropriate).
4. The Plan should also consider where delivery is also based on tried and tested methods or whether there is any innovative approach.

#### Government and Organisation Structure

The core parties involved in the delivery of the project are:

- **Monmouthshire County Council (the Employer)** – the commissioning authority for this study, leading on the consideration and any potential progression of transport interventions.
- **Key strategic partner organisations**, namely Welsh Government, the Department of Transport, Highways England, the Welsh Office, the Forest of Dean District Council, Gloucestershire County Council, South Gloucestershire Council, and Respective Member of Parliament, Members of the Senedd and County Councillors.
- **Arup (the consultant)** – employed by Monmouthshire County Council to carry out the appropriate WelTAG / WebTAG Stage Two for the Chepstow Transport Study.

WelTAG 2017 specifically requires a Review Group to help steer the appraisal process.

A Review Group for the study was established at the outset of the previous Stage One study in order to help ensure that key stakeholders were identified and meet on a regular basis to be involved in any decision making.

It is considered that the project risk is low to medium for most of the options (excluding the bypass options, which carry greater risk), in light that despite there being some sensitivities in terms of potential environmental impacts and the potential need for land acquisition, the study is in its early stages of option identification appraisal and recommendation. The project risks should be reviewed subject to Monmouthshire County Council deciding to progress with any of the options considered.

As such, the Review Group comprises the key representatives from the aforementioned organisations.

The Review Group met at key milestones in each of the WelTAG / WebTAG Stages in order to consider the content of the WelTAG / WebTAG reports and actions to be taken forward to the next stage of the process. The Review Group played a key role in advising on the methods to be adopted in assessing impacts of the option(s) to be taken forward for subsequent Stages and should make recommendations in relation to any specific additional evidence as necessary e.g. modelling requirements.

#### Programme

It is expected that further Stage 3 studies (Full Business Case) for any of the options could be commissioned in late 2021 and conclude in 2023, to enable contractors to be appointed and progress to detailed design and construction in 2023/24 onwards.

## Section 6

### Management Case (continued)

#### Project Management and Reporting

The study has been progressed in accordance with the latest WelTAG/TAG guidance, reported in the Impact Assessment Report (and its appendices) and this Stage Report. In addition to the Review Group meetings, Monmouthshire County Council and Arup held regular (at least monthly) progress meetings to discuss and address any pertinent matters to assist the development of the Stage 2 reports.

#### Communications and stakeholder engagement

The study has been progressed in accordance with the latest WelTAG and TAG guidance, and as such an appropriate level of stakeholder engagement has been undertaken to help inform decision making.

Details and results of stakeholder and public engagement are provided within the Participation Report contained within the IAR. The results are summarised in Chapter 2 Strategic Case. This approach is in accordance with the principle of proportionality advocated in WelTAG 2017.

Further stakeholder and public consultation is recommended at Stage Three to provide an opportunity for meaningful engagement on any option or package of options likely to be progressed by Monmouthshire County Council (or another delivery body).

Early engagement would be recommended with potentially affected landowners to help mitigate any adverse impacts and to develop optimal solutions.

Effective engagement should be ensured to prevent conflicts of interests and to maximise wider benefits.

A land registry search would be recommended for early Stage Three to identify all relevant landowners and tenants.

#### Benefits Realisation Plan

It is recommended that any appointed contractor that may be procured to help deliver any of the options considered as part of this study, has requirements placed upon it, to help ensure benefits are derived from future works.

A Benefits Realisation Plan could be prepared to help support this process at the appropriate stage.

#### Monitoring and Evaluation Plan

A Monitoring and Evaluation Plan should be prepared at Stage Three. That Plan could include:

1. Environmental Aftercare and Management (potentially including Environmental Performance and Monitoring Report);
2. Traffic and accident data; and
3. Stakeholder feedback.

In line with the revised WelTAG 2017 guidance, there may be additional requirements for the Contractor to undertake evaluation of the Scheme against the objectives set in WelTAG once they are appointed (being responsible for Stages Four and Five of WelTAG 2017).

The WelTAG Stage Four Report would record an immediate post opening evaluation recording the actual outputs delivered and the initial impacts. This should cover the first six months of operation and be completed within 12 months post opening or completing of the intervention.

Then at Stage 5 the Welsh Government should produce a record of what was delivered, an evaluation of the process of delivering the option, a record of the actual impacts compared to the anticipated impacts and an assessment into the extent to which it met the original objectives.

#### Five Ways of Working

A commentary of how the project has / would embed the five ways of working is provided below.

1. Looking to the long term: IAR Section 2 sets out the transport, social, cultural, environmental and economic problems / challenges that need to be addressed now. Section 3 sets out proposed solutions to help ensure a long term and sustainable outcome.
2. Taking an integrated approach: IAR Section 2 explains how the relevant well-being objectives were taken into account during the development of the scheme objectives, as well as how the proposed solution would contribute to the well-being objectives.
3. Involving a diversity of the population: the project has been developed through engagement with a wide range of stakeholders. Feedback has informed the design and development process by helping identify challenges and opportunities. This has also involved public consultation. Further engagement and consultation should be undertaken at Stage Three.
4. Working with others in a collaborative way: the project team has collaborated with stakeholders to help ensure a range of community, business and environmental issues have been considered in a holistic way when considering the transport-focused problems and objectives.
5. Understanding the root causes of issues to prevent them: a robust approach to problem identification is outlined in IAR section 2. The involvement of the Review Group and other stakeholders has also informed problem identification. The scheme objectives and the development and design of options has responded to the problems and objectives.

## Section 7

### Preferred Option and Recommendations

#### Preferred Option

WelTAG 2017 clarifies that a preferred option or package of options should be taken forward to Stage Three appraisal (Full Business Case).

This Stage Two study has included a detailed appraisal process, looking at how each of the shortlisted options has responded to the appraisal criteria and in addressing the problems and achieving the objectives for the study.

Given the identified need for improvements to address the study problems and meet the study objectives now and in the future, **it is recommended that a ‘do something’ scenario is progressed for further consideration and that the ‘do minimum’ (or do nothing scenario) is not appropriate.**

Throughout the development and appraisal of options, the aim of creating a resilient transport system which has the ability to absorb and adapt in a changing environment has been central. It is considered that the options recommended for further study would be considered to help enable the transport system to better withstand an increasing population, adapt to a changing climate and economy and help to transform people’s travel behaviours. It is nonetheless acknowledged that each of the options would have varying impacts on the transport system’s ability to **withstand, adapt and transform.**

In summary, based on the results of the Strategic, Transport, Management, Financial and Commercial Cases it is considered that the following options should be taken forward for further study at WelTAG Stage Three (and in accordance with relevant TAG), grouped into three distinct packages:

#### Package 1: Active Travel Improvements

[AT1 - Active Travel Upgrades and Additions; AT2 - Walking Friendly Chepstow High Street; AT3 – Chepstow Bike Share Scheme]

#### Package 2: Chepstow Transport Hub and Connectivity Improvements

[PT2 – Chepstow Transport Hub; PT7 Park and Ride (Rail); PT4 – West/North-facing Regional Public Transport Upgrades; PT5 – East-facing Regional Public Transport Upgrades; PT8 – Local Bus Service Upgrades; Option B1, 2 and 3: Influencing travel behaviours; Option ULEV1: Electric vehicle charging points; Option PT9 – On-demand taxi (Demand Responsive Transport Services)]

#### Package 3: Chepstow Bypass

[Option H2B– Beachley and Sedbury 40mph ‘Lower Carbon’ Single Carriageway]

It is considered that it would be most appropriate to undertake separate studies for each package, acknowledging the strong dependencies and opportunities present from planning some schemes in conjunction with each other. Whilst all options / packages would have some interconnections with others, for expediency, the packages have been recommended in order of priority and ability to be delivered in the short, medium and longer term.

It is considered that each package would help address the identified problems and achieve the study objectives and the well-being objectives, as well as perform positively against most of the WebTAG appraisal impact criteria. The delivery of all of the packages would deliver the greatest results but each could be progressed individually without compromising or depending on another.

**It is recommended that one of the Stage Two options should not proceed to Stage Three: Option H2A: Chepstow Bypass – Beachley and Sedbury 60mph.**

Further detail on each of the packages is set out within Section 8.1 of the IAR.



## Section 7

### Preferred Option and Recommendations

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#### Next Steps

It is recommended that the Stage Three studies seek to provide further work and detail on the following, as appropriate and proportionate:

##### **General recommendations (all options):**

1. Continued stakeholder and public engagement and consultation, to seek feedback and to assist with the development of the packages of options to maximise benefits and minimise adverse impacts upon potentially affected communities etc. Effort should be made to reach a diversity of groups;
2. Updated and refined cost estimates relating to each package;
3. Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents; and
4. Further details and information around the Transport Case, Delivery, Financial and Commercial Cases for any option to be progressed to construction / operation.

#### Package 1 Recommendations

##### **Package 1: Active Travel Improvements**

1. Review of measures carried out as a result of COVID-19, engaging with the local community for feedback.
2. Town centre transport management and coordination strategy (considering car parking, servicing, public transport, active travel, vehicular access – also for consideration within Package 2). This needs to help ensure disabled access is maintained and suitable parking alternatives.
3. Conduct a detailed analysis of Chepstow and the surrounding area in terms of existing walking and cycling provision, identifying key areas for improvements for active travel.
4. Meaningful engagement with the local community and key stakeholders with an interest in walking, cycling and horse riding, including safe routes to schools, to identify priority measures that would be well used by the community.
5. Prioritisation and phasing of delivery.
6. Preparation of funding bids.
7. Carrying out of the necessary assessments, surveys and consents including environmental surveys and potential planning / highways consents.
8. Feasibility study to establish the costs, benefits and most appropriate scale of bikeshare scheme. Carry out a lesson's learned discussion with Cardiff Council and liaison with a potential operator such as Next Bike.

## Section 7

### Preferred Option and Recommendations

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#### Package 2 Recommendations

##### **Package 2: Chepstow Transport Hub and Connectivity Improvements**

1. Review and evaluation of freight and deliveries in Chepstow. Collaboration needed between the local council and businesses, with practical options considered for service deliveries.
2. Review of campaign measures used to encourage behavioural change by Local Authorities and provide recommendations for promotion of sustainable travel behaviours.
3. Review of existing digital infrastructure and identify areas to improve.
4. Development of more focused travel plan measures for new and existing development.
5. Review of existing policy measures for sustainable travel and recommend new policy opportunities e.g. for enabling working from home, sufficient digital infrastructure, electric vehicle charging infrastructure etc.
6. Town centre transport management and coordination strategy (considering car parking, servicing, public transport, active travel, vehicular access – also for consideration within Package 2).
7. Feasibility and design of bus facilities including update to costs, realisation of benefits and funding opportunities for the Transport Hub.
8. Overarching strategic public transport feasibility for Chepstow covering east, west, north rail – including costs, benefits, accessibility and mode shift analysis.
9. Local bus network service review, investigating the potential to improve local bus based public transport at the same or reduced cost base including consideration of innovative delivery models, costs, benefits and modal shift to also include inclusion of demand responsive transport.
10. Liaison with Transport for Wales (TfW) and TfW Rail Services to establish planned enhancements.
11. Liaison with bus operators including to understand post Covid-19 regional services.
12. Carrying out of the necessary assessments, surveys and consents including environmental surveys, potential planning / highways consents, heritage and visual impact assessments.
13. Rail operations study to investigate the feasibility of stopping the current through services (at Chepstow and Severn Tunnel Junction) including patronage forecasting and cost benefit analysis.
14. Liaison with Welsh Government regarding wider electric vehicle charging infrastructure strategy.
15. Feasibility study to identify demand for electric vehicles, most beneficial charging locations, costs, benefits, electrical grid capacity and funding / delivery mechanisms.

## Section 7

### Preferred Option and Recommendations

#### Package 3 Recommendations

##### Package 3: Chepstow Bypass

1. Traffic modelling at a local level to assess detailed traffic impacts and provide a more robust value for money calculation.
2. Environmental surveys and assessments will be necessary as part of Stage Three and these include but are not limited to the following:
  - Landscape and Visual Impact Assessment;
  - Noise Impact Assessment;
  - Preliminary Ecological Assessment (PEA) including Extended Phase 1 Habitat Surveys to inform the presence of protected species and habitats and the requirements of Phase 2 Habitat Surveys;
  - Devise and undertake a programme of ecological surveys including European protected species and Ancient Woodland surveys, agreeing scope with the County ecologist and Natural Resources Wales / Natural England;
  - Habitat Regulation Assessment (HRA) for impacts on European designated sites;
  - Historic Environment Desk Based Assessment (DBA) to assess the impacts on designated and non-designated heritage assets, as well as the potential for buried archaeology and the need for further surveys and consents;
  - Arboricultural Assessment for removal of trees;
  - Air Quality Assessment [detailed];
  - Carbon Assessment [with an opportunity to utilise PAS2080]; and
  - Water Framework Directive (WFD) assessment for any works affecting the hydro-morphology, ecology or water quality any classified waterbody.
3. Environmental Impact Assessment is very likely to be required and will be subject to Screening. If an Environmental Statement is required, a Scoping Report will determine the scope of environmental assessments.
4. Consultation with Statutory Consultees including (but not limited to): Local Authorities, Cadw, Historic England, Natural England, Natural Resources Wales and the Environment Agency.
5. Planning consents and associated licences and permits.
6. A topographical survey and utilities survey as well as land ownership details to ascertain deliverability of schemes and identify any potential requirement for third party land acquisition.
7. Walking, cycling and horse-riding assessment in accordance with the Design Manual for Roads and Bridges.
8. Consultation with Network Rail regarding the feasibility of construction over the railway.
9. Development of a detailed construction phasing plan for the bypass to fully understand the impacts and challenges of construction.
10. Development of a detailed construction schedule understand the realistic timescale of delivery.
11. Geophysical survey to inform likely impacts on archaeology, followed by potential need for trial trenching and watching briefs.
12. 3D visualisation of the proposed bypass.
13. Pursuit of consents including those through the Highways and Town and Country Planning Acts.

## Section 7

# Preferred Option and Recommendations

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### WelTAG Stages Four and Five

Should Monmouthshire County Council or its Partners decide to proceed with any of the options recommended at Stage Three of study, Stage Four focuses on recording what is actually delivered, the wider content at the time at which the option(s) are delivered and to record the impacts that actually occur during implementation.

That Stage therefore aims to allow for an immediate alert if there are any unintended adverse impacts during implementation and can assist in the realisation of any benefits. It also acts as a record of what is actually delivered, which is required in the Stage Five evaluation work.

The aim of Stages Four and Five is to record what happens so that lessons can be learnt. It may lead to alterations to a current scheme and would also form valuable evidence for use in future WelTAG / WebTAG appraisals.

Records should be kept of the impacts during implementation as these will be required to evaluate both the process of implementation and the outcomes. It will be important to consider how the outcomes have achieved the study objectives set at earlier stages.

External events which could affect the evaluation should be recorded as they occur, such as adverse weather events, changes in legislation, the outcomes regarding key risks identified at Stage Three and any changes made to the options during implementation.

If the observed impacts differ from the anticipated impacts then an interim Stage Four report should be produced to record this, and to offer ways of maximising any unintended benefits or to mitigate any unintended adverse impacts. The final Stage Four report will record an immediate post opening evaluation recording the actual outputs delivered and the initial impacts. This should cover the first six months of operation and be completed within 12 months' post opening or completing of the intervention(s).

At Stage Five, the impacts of the scheme(s) should be recorded including an evaluation of the process of delivering the option(s), a record of the actual impacts compared to the anticipated impacts and an assessment into the extent to which it met the original objectives.



## Reference List

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9. [ONS \(2020\) Ratio of median house price to median gross annual \(where available\) residence-based earnings by local authority district, England and Wales, 2002 to 2019](#)
10. [Index of Multiple Deprivation for LSOAs in Chepstow \(Wales and England categories\)](#)
11. [Monmouthshire County Council \(2019\) Air Quality Progress Report](#)
12. [Monmouthshire County Council \(2011\) The Monmouthshire Air Quality Management Plan: Chepstow, Monmouthshire](#)