

M4 Around Newport Review

Options for further action

Summer 2026



Contents

page <u>03</u>	Summary
page <u>04</u>	Key Findings
page <u>20</u>	Introduction
page <u>23</u>	History of the M4 around Newport and Associated Alternatives
page <u>24</u>	Review of key changes since the M4 Corridor around Newport Public Local Inquiry
page <u>30</u>	Option Overview
page <u>31</u>	Option 1.1 Widening of the Brynglas Tunnels
page <u>34</u>	Option 1.2 A48 and A4810 works (previously known as ‘The Blue Route’)
page <u>37</u>	Option 1.3 Capacity Increases to the A48 Southern Distributor Road
page <u>39</u>	Option 1.4 Changes to the existing M4 and its management to improve traffic flow
page <u>41</u>	Option 1.5 Traffic management measures including re-routing via A465
page <u>44</u>	Option 2.1 Additional rail services on the existing mainline
page <u>56</u>	Option 2.2 New rail stations and services
page <u>49</u>	Option 2.3 Newport-Cardiff Bus Rapid Transit
page <u>51</u>	Combinations of options
page <u>56</u>	Conclusion
page <u>57</u>	Next Steps



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Summary

The M4 around Newport is not just a road, it is the gateway between Wales and England; keeping it moving is essential for jobs, investment, trade and everyday journeys across South Wales.

This review has considered options to improve traffic flow on the M4 around Newport, other than a new motorway project which was cancelled in 2019. The problem remains: congestion, reliability and resilience issues on this section of the M4 are still significant. However, the policy, transport and environmental context has changed significantly since the M4 relief road was considered around a decade ago, and the options now need to be considered in that different context.

The challenge is not simply a capacity problem through the sub-standard sections of the motorway: it is a wider network problem. The motorway carries a high proportion of strategic, long-distance traffic, but it also acts as a local distributor, with trips joining and leaving at closely spaced junctions. This mix of movements, combined with a substandard two-lane pinch point at the Brynglas Tunnels and very limited alternative routes around Newport, means the corridor suffers from peak congestion, unreliable journey times and poor resilience when incidents or events occur.

This work does not create new evidence but builds on existing studies and assessments. It considers the likely performance, cost, impacts and delivery timescales of possible interventions, including online widening of the M4 and works to other existing roads, further public transport improvements and changes to the management of the network including M4 junctions.

The inclusion of options in this study does not confirm their feasibility or deliverability, which would be appraised in any further detailed study. Review has drawn upon existing appraisal and assessment to inform professional judgement, and next steps set out further technical requirements.

What the options can achieve: In combination, the options could deliver some congestion relief to users of the motorway, improve network resilience during incidents, make better use of the existing roads, and support a shift to public transport. Some more radical options would also help address pinch points such as the Brynglas tunnels.

What the options cannot achieve: None of the options or any combination of options considered as part of this review would fully resolve the M4 problem. As a guide, around 25% of traffic would need to be removed during peak periods to avoid congestion, unless the road's capacity were increased through online widening. This review suggests that a reduction of around 17% could be achieved, meaning that congestion and associated problems would likely persist in the longer term.

What remains uncertain: This review builds on existing evidence rather than undertaking new studies and transport modelling, so the traffic and cost figures are indicative. The durability of the benefits is also uncertain, as future growth and latent demand could take up some of the capacity created over time.

Individual options tend to address different problems, and without any intervention, demand will continue to grow, further increasing issues along the M4 but also likely pushing traffic onto other parts of the local highway network, such as the A48/A4810, which are simply not designed for strategic through traffic and may impede local operation. Public transport improvements will help but only to a limited extent.

The findings in this document will help to inform the new Welsh Government to help them consider a way forward.

Whatever happens next, formal processes would follow to appraise and consult on any options to appropriately comply with statutory processes and the need to involve stakeholders and the public in decision making.

Key findings

A long history of searching for a solution

The challenge of improving the M4 around Newport has been examined for more than 30 years. Since the early 1990s, successive governments have considered relief roads, motorway improvements, public transport measures and combinations of interventions to improve connectivity, reduce congestion, strengthen resilience and support the Welsh economy.

Through the M4 Corridor Enhancement Measures programme, a wide range of alternatives were assessed. At that time, the conclusion was that the new high-quality route south of Newport would provide the greatest reduction in congestion and the strongest response to the transport problems identified. While public transport improvements were recognised as important, they were not expected to resolve the M4 capacity constraints on their own.

That work led to the M4 Corridor around Newport scheme, which involved a new motorway to the south of Newport. Following detailed design, environmental assessment and a lengthy Public Local Inquiry (February 2017 to March 2018), the Inspector recommended that the necessary statutory approvals should be granted. However, in June 2019 Welsh Ministers decided not to proceed, placing significant weight on the scheme's estimated £1.4 billion cost and its environmental impacts, particularly on the Gwent Levels' Sites of Special Scientific Interest (SSSIs).

Following cancellation of the motorway project, the Welsh Government established the South East Wales Transport Commission, chaired by Lord Burns, to help identify alternative solutions.

This led to a programme of rail, bus, active travel and traffic management measures, which has since been taken forward through Transport for Wales, local authorities and the South East Wales Regional Transport Plan.

Despite substantial and ongoing investment in public transport and wider transport improvements, congestion and resilience problems continue at the Brynglas Tunnels and there is currently no agreed long-term solution to address the motorway's constraints.

What has changed since the Public Local Inquiry?

Traffic levels have largely recovered following the COVID-19 pandemic and the corridor continues to carry high traffic volumes. Congestion remains common at peak times, while incidents and events still cause significant disruption and reliability issues.

However, the context for future decisions around any transport interventions has changed significantly since the M4 Public Local Inquiry reported in 2018. While the transport problem remains, the Welsh economic, environmental, social, cultural and planning policy landscape is now different.

Wales has also seen major investment in alternatives to private car travel. The South Wales Metro has moved into delivery, the Burns programme has progressed new stations and public transport improvements, and Regional Transport Plans now coordinate future investment. Together, these provide a stronger public transport network than existed at the time of the Inquiry.

Transport policy has evolved, with greater emphasis on sustainable travel, carbon reduction and integrated economic, social and environmental outcomes. Any future intervention would need to support Wales' climate and wellbeing goals as well as addressing congestion.

The environmental context has become more complex. Since 2019, Wales has declared climate and nature emergencies, while planning policy places greater emphasis on biodiversity, ecological resilience and nature recovery. The Gwent Levels also benefit from stronger protection through national planning policy and strategic planning guidance.

The planning and legal framework has changed substantially. Route protection for the former motorway alignment was removed in 2021, meaning any similar future proposal would need to be developed and assessed afresh. In addition, the Infrastructure (Wales) Act 2024 has introduced a new Infrastructure Consent Order process, fundamentally changing how major transport schemes are consented in Wales.

Key findings

Options

This review considers a range of realistic interventions aimed at improving congestion, journey time reliability and network resilience on the M4 around Newport. The options comprise both highway-focused measures and public transport interventions.

Highway options include:

- Widening of the Brynglas Tunnels (Option 1.1)
- Works to the A48 Southern Distributor Road and A4810 Steelworks Access Road (Queen's Way) corridor (Option 1.2) ¹
- A targeted package of A48 Southern Distributor Road improvements (Option 1.3)
- Operational changes to the existing M4, including junction closures (Option 1.4)
- Traffic management measures and HGV stopping facilities encouraging greater use of the A465 corridor (Option 1.5).

Public transport options include:

- Additional rail services on the existing South Wales Mainline and improvements at Severn Tunnel Junction (Option 2.1)
- New rail stations on the South Wales Mainline (Option 2.2)
- A new Newport-Cardiff Bus Rapid Transit service (Option 2.3).

Together, these options represent a range of approaches to addressing the long-standing challenges affecting the M4 around Newport.

A new motorway and a new Magor-Castleton tunnel have been excluded due to the affordability, environmental and planning challenges they would likely face. Demand management measures, such as tolls and road user charging, are also outside the scope of the review as they are not currently being pursued by the Welsh Government. Instead, the review focuses on practical highway, public transport and traffic management measures to improve congestion and resilience on the M4.

Appraisal

Each option has been reviewed in a consistent way so that we can compare its likely benefits, costs, risks and how practical it would be to deliver. The assessment is based on existing studies, published information, available evidence and professional judgement. It looks at issues such as how much the option could reduce traffic on the M4, improve reliability when incidents occur, its likely cost, how long it could take to deliver, environmental and carbon impacts, planning and approval requirements, and the main risks to delivery. This is not a detailed business case, and no new transport modelling has been carried out. As a result, the findings should be seen as an informed guide rather than a definitive assessment. More detailed appraisal and business case work as well as statutory assessments would be needed before any definitive future decisions are made.

The following pages provide an overview of each option, while a comparison table allows them to be considered side by side.

The assessment looks ahead to a future year of 2042 as the baseline for traffic demand. This has been chosen because some options could take up to 14 years to deliver, and we must think longer term about what is needed for future generations. This helps us test how options might perform once traffic has continued to grow over time, as is expected. It also provides a broadly consistent basis for comparing options with different delivery timescales. As a guide, around 25% of traffic would need to be removed from the M4 during busy periods to avoid congestion in the longer term. However, if journey times improve, some people may choose to travel more often or switch routes, which could reduce some of the benefits over time. Cost estimates have been updated to reflect inflation and likely delivery dates.

Combining Options

A key finding of the review is that a combination of measures is likely to be more effective. For example, improvements to public transport, changes to how the network is managed, and targeted road improvements could work together to improve journey times, increase network resilience and give people more travel choices. However, the estimated traffic reductions for individual options should not simply be added together. Many options are aimed at the same users and journeys, so their effects can overlap and any package of combined measures would need to be tested and assessed in more detail before firm conclusions could be reached.

¹ Previously known as 'The Blue Route' at the M4 Public Local Inquiry

M4 around Newport - Options Summary Table

1. Options that include work on the existing road network

This summary should be read in conjunction with the full report. Values and impacts set out in this table are either sourced from previous studies or estimated by the review team.

Any subsequent work would be subject to more detailed analysis and appraisal.

Number	Option	Description	Cost	M4 Around Newport Traffic Reduction	Time (years)	Key Points
1.1	Widening of the Brynglas Tunnels	Widening the existing tunnels to create 3 lanes in each direction	£ 1.7 billion	NA – Provides more road capacity through the tunnels enabling free flow conditions.	12	Improves capacity of the M4 at the pinch point itself. High engineering/geotechnical risk, major construction disruption, property acquisition, and potential impacts on protected habitats and species. Other sections of the motorway (J24 to J25) will continue to have capacity constraints.
1.2	Changes to the A48 and A4810 to increase capacity	Work to increase capacity on the existing A48 Southern Distributor Road and A4810 Steelworks Access Road	£ 1.8 billion	6 %	8	Requires Newport Council agreement, challenging construction, affects the Gwent Levels SSSIs and River Usk SAC, impacts ~1,500 properties, conflicts with HSE hazardous substances controls along the A4810.
1.3	Works to the Newport A48 Southern Distributor Road	A reduced version of Option 1.2 focused on targeted improvements and works to the junctions along the A48 only	£ 1.7 billion	5 %	8	As above (1.2) but would involve significantly less disruption and impacts on properties including avoidance of the HSE risk at the Air Products site.
1.4	Changes to the existing M4 and its management to improve traffic flow	Junction closures on the M4 around Newport to prioritise longer distance motorway traffic	£ 14 million	3 %	2	Displaces traffic, causing disruption to local roads. Could involve temporary closures and trials.
1.5	Promoting the A465 as an Alternative Route	Encouraging the use of the A465 with variable message signs and HGV rest facilities	£ 49 million	1 %	3	Would benefit more drivers during delays on the M4. Signage and facilities could be phased. There is currently an under provision of HGV rest facilities, this option would support wider benefits for road freight.

2. Options that focus on public transport improvements

Number	Option	Description	Cost	M4 Around Newport Traffic Reduction	Time (years)	Key Points
2.1	Additional rail services on existing mainline	Additional east-west rail services and improvements to Severn Tunnel Junction	£ 30 million	1 % capacity for 500 pax/hr	5	Would provide increased rail capacity for longer distance trips as an alternative to driving on the M4 and make it easier for people to travel by train.
2.2	New rail stations and services	6 new rail stations and services on the South Wales mainline between Cardiff Central and Severn Tunnel Junction	£ 800 million	6 % capacity for 1,400 pax/hr	6	Generates ~2.2m new rail trips/year and funding is largely committed by UK Government.
2.3	Newport-Cardiff Bus Rapid Transit	A new high-quality Newport-Cardiff Bus Rapid Transit service	£ 335 million	2 % capacity for 1,320 pax/hr	5	Parts of the route are already being delivered to generally improve bus travel. Service will mainly serve local trips (~6km average). Would require local authority agreement and involve land acquisition. The bus priority may reduce road space for traffic, including an impact on Junction 28.
2.1, 2.2 and 2.3	Combination:	Additional rail services, new stations and Newport-Cardiff bus rapid transit system	£1.2 billion	7%	6	Operational costs and revenues for public transport options require further review.

M4 around Newport Options - Combinations Summary Table

This summary should be read in conjunction with the full report.

Values and impacts set out in this table are either sourced from previous studies or estimated by the review team. Any subsequent work would be subject to more detailed analysis and appraisal.

Option	Cost	M4 around Newport Traffic Reduction	Removes M4 pinch point	Time (years)	Combined delivery issues
1.1 Tunnel widening + 1.2 A48 and A4810 works	£3.5 billion	6%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate the impact of the BRT scheme (2.3).
1.1 Tunnel widening + 1.3 A48 works	£3.4 billion	5%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.4 Junction rationalisation	£1.7 billion	3%	Yes	12	Works on the M4 would create significant disruption and require diversions onto local roads during construction.
1.1 Tunnel widening + 1.5 A465 routeing	£1.8 billion	1%	Yes	12	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during M4 works.
1.2 A48 and A4810 works + 1.4 Junction rationalisation	£1.8 billion	6%	No	8	Works to the A48 and A4810 would help accommodate redistributed local traffic during M4 junction closures. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.2 A48 and A4810 works + 1.5 A465 routeing	£1.8 billion	7%	No	8	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to the A48 and A4810. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.3 A48 works + 1.4 Junction rationalisation	£1.7 billion	8%	No	8	Works to the A48 would help accommodate redistributed local traffic during M4 junction closures.
1.3 A48 works + 1.5 A465 routeing	£1.7 billion	6%	No	8	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to the A48. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.4 Junction rationalisation + 1.5 A465 routeing	£0.06 billion	4%	No	3	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4.
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.4 Junction rationalisation	£3.5 billion	9%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.5 A465 routeing	£3.5 billion	7%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).

Option	Cost	M4 around Newport Traffic Reduction	Removes M4 pinch point	Time (years)	Combined delivery issues
1.1 Tunnel widening + 1.3 A48 works + 1.4 Junction rationalisation	£3.4 billion	8%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.3 A48 works + 1.5 A465 routeing	£3.5 billion	6%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	4%	Yes	12	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to and delays on the M4.
1.2 A48 and A4810 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	10%	No	8	Works to the A48 and A4810 and alternative use of the A465 would help accommodate redistributed traffic during M4 junction closures or delays on the M4. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.3 A48 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	9%	No	8	Works to the A48 and alternative use of the A465 would help accommodate redistributed traffic during M4 junction closures or delays on the M4. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£3.5 billion	10%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.3 A48 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£3.5 billion	9%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).

Any of the above highway combinations may be combined with one or more of the public transport options with a potential total capital cost of £1.2 billion, M4 traffic reduction of 7% and delivery time of 6 years. Operational costs and revenues for public transport options require further review.

Scenarios for possible combinations considered as part of this review

Fastest and cheapest to deliver

Option 1.4 - Changes to the existing M4 and its management to improve traffic flow including junction closures + Option 1.5 - Promoting the A465 as an Alternative Route

- Would cost around £63 million
- Reduce up to 4% of traffic off the M4; and
- Take less than 3 years to implement

This option would help improve the flow of traffic during the busiest periods by reducing merging and weaving movements along the busiest sections. It would also encourage some HGV traffic onto the A465, supported by variable message signs directing traffic to the alternative route during periods of congestion around Newport. This option would have limited operational impact on the M4 during construction, though junction closures would disrupt traffic trying to join or leave the motorway, with impacts on local roads.

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around £1.23 billion;
- Reduce up to 11% of traffic off the M4; and
- Take 6 years to implement

Provides greatest capacity on the M4

Option 1.1 - Widening of the Brynglas Tunnels + Option 1.4 - Changes to the existing M4 and its management to improve traffic flow including junction closures

- Would cost around £1.7 billion
- Increases capacity around the Brynglas Tunnels;
- Reduce up to 3% of traffic off the M4; and
- Take 12 years to implement

This option widens the motorway from two lanes to three lanes in each direction, alongside closing some existing junctions to help improve the flow of traffic on the M4. The tunnel widening would cause significant disruption for several years during construction. The junction closures would disrupt traffic trying to join or leave the motorway, with impacts on local roads.

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around £ 2.9 billion;
- Reduce up to 10% of traffic off the M4;
- Increases capacity around the Brynglas Tunnels; and
- Take 12 years to implement

Reduces the most traffic along the M4

Option 1.2 - A48 with or without A4810 works + Option 1.4 - Changes to the existing M4 and its management to improve traffic flow including junction closures

+ Option 1.5 - Promoting the A465 as an Alternative Route

- Would cost around £1.8 billion
- Reduce up to 10% of traffic off the M4; and
- Take 8 years to implement

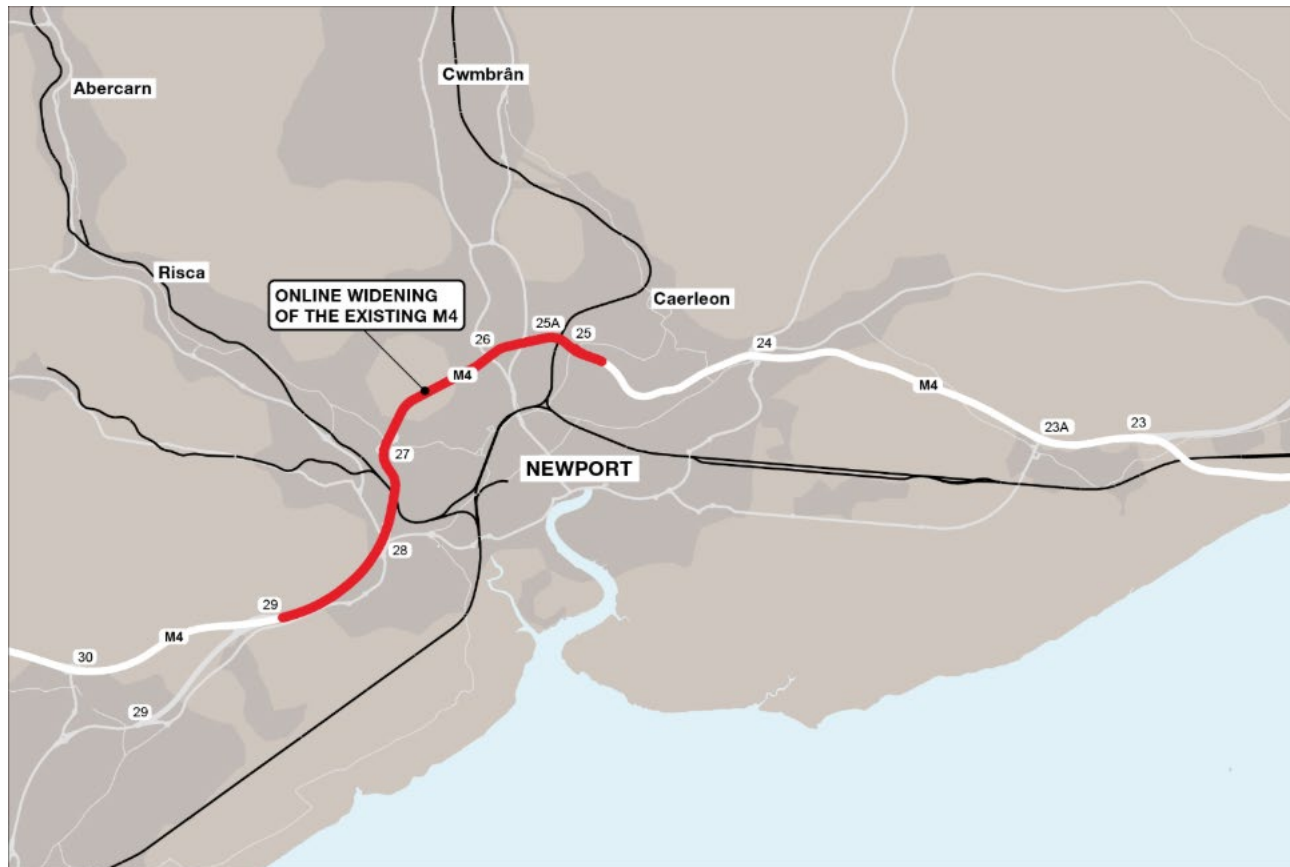
The A48 and A4810 capacity increases would offer a more attractive alternative corridor south of Newport, while the A465 provides a resilient route north of the South Wales Valleys. Combined with junction closures, this would improve flow on the M4 around the tunnels. The junction closures would disrupt traffic trying to join or leave the motorway, with impacts on local roads. This could be delivered without closing the M4 but sections of the A48 would need to close for up to four years during construction, causing major impacts on the local road network. Works along the A48 could be targeted and phased to assist affordability and delivery. It is likely that works would be undertaken sequentially to reduce local disruption.

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around £ 3 billion;
- Reduce up to 17% of traffic off the M4
- Take 8 years to implement

M4 junction closures would likely result in greater use of Junction 28 and alternative local routes. The Newport-Cardiff Bus Rapid Transit scheme could further constrain available capacity on sections of the local highway network through the reallocation of road space for buses and active travel, increasing pressure on remaining routes and junctions.

Option 1.1 | Widening of the Brynglas Tunnels



Option 1.1 Widening of the Brynglas Tunnels

Estimated cost: £1.7 billion

Estimated timescale for delivery: 12 years

Estimated Reduction in M4 Traffic: N/A (Would provide more road capacity through the tunnels enabling free flow conditions)

This would increase capacity at the Brynglas Tunnels, which would address the existing pinch point problem

Widening at the existing two-lane tunnels to create 3 lanes in each direction

Description

This option involves improvements to the existing M4 corridor by widening the existing carriageway to provide additional capacity. This comprises the following elements:

- Utilisation of the existing M4 hard shoulder to provide dual four-lane motorway between Junction 29 (Castleton) and Junction 26 (Malpas);
- To minimise impacts on land adjacent to the existing corridor, the scheme would operate as an all-lanes running motorway. However, due to the existing substandard horizontal and vertical geometry, it is anticipated that the current 50mph speed restriction would need to remain in place.
- A dual three-lane motorway between Junction 26 and Junction 25 (Caerleon); and

A new westbound three-lane tunnel would be constructed at Brynglas to increase capacity.

The existing Brynglas twin-bore tunnels would be retained and used to carry a total of three lanes of eastbound traffic.

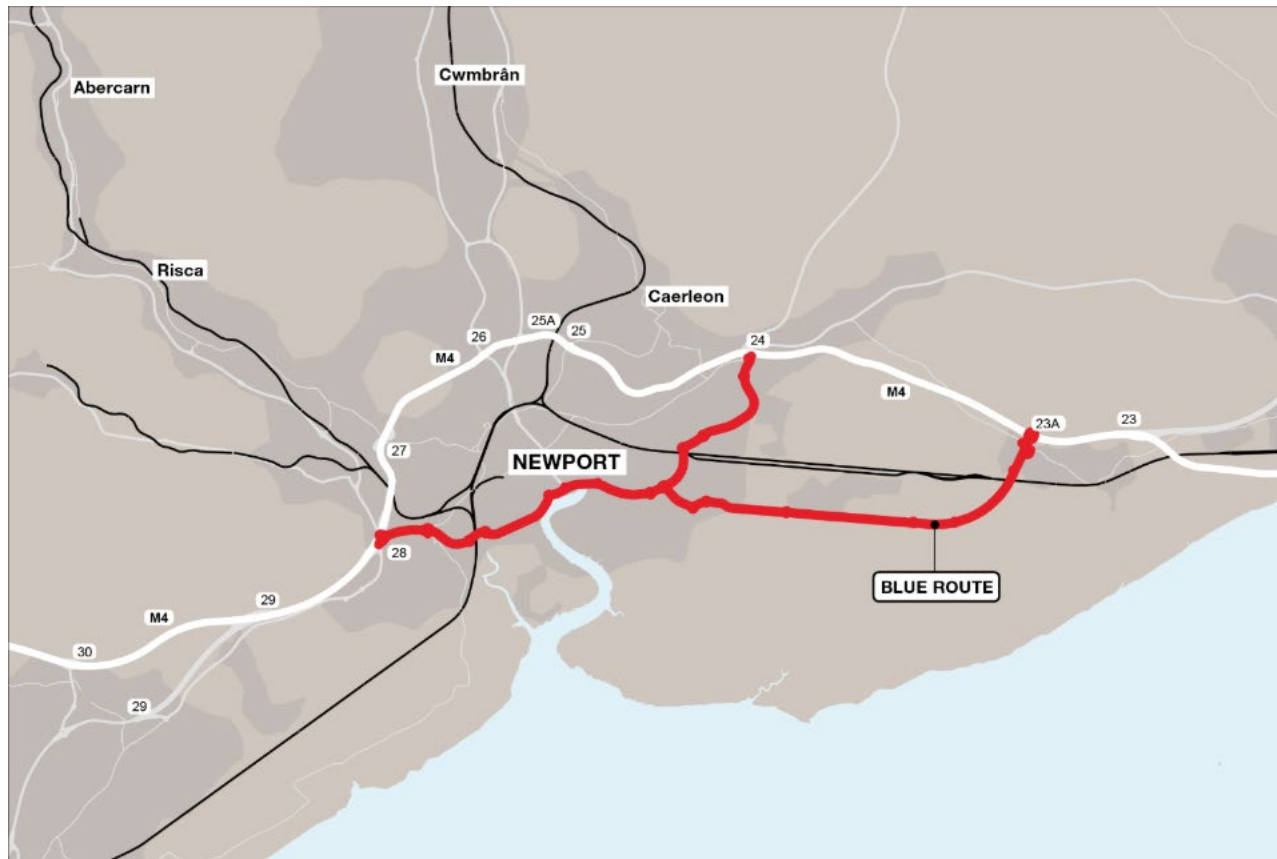
- Tunnel works would impact adjacent structures associated with Junction 25A and A4042, requiring significant modification or reconstruction to facilitate delivery of the scheme which would require reconstruction.

This option primarily addresses the Brynglas constraint and peak congestion through the tunnels, improving journey-time reliability, and providing some online resilience if there is an incident.

Key issues

- Would increase capacity and improve traffic flow through the Brynglas Tunnels, addressing a key pinch point on the M4 corridor.
- Would likely attract traffic onto the M4 and could shift congestion to other sections of the motorway.
- Whilst providing significant benefit to this section of the Motorway other sub standards sections, such as Junction 24 to 25 around Celtic Manor, will continue to operate over capacity.
- The option could not be delivered in isolation and would require complementary measures, including closure of selected junctions, particularly Junction 27, to achieve continuous all-lane running.
- Significant deliverability, safety and public acceptability challenges remain.
- Significant traffic management and disruption during construction, even with least disruptive techniques, which would likely divert some traffic onto alternative routes including local roads.
- High engineering and geotechnical risk associated with tunnel construction beneath an urban area.
- Land and property acquisition would be needed.
- Would involve property demolition and compensation.
- Risk of programme delay arising from likely local objections and statutory approvals needed.
- Potential impacts on environmentally sensitive habitats and protected species requiring mitigation and licensing.

Option 1.2 | A48 and A4810 works



Option 1.2 | A48 and A4810 works (previously known as 'The Blue Route')

Estimated cost: £1.8 billion

Estimated timescales for delivery: 8 years

Estimated reduction in M4 traffic: 6%

Improvements to the Newport A48 SDR and A4810

Description

This option increases capacity on the existing A48 Southern Distributor Road (SDR) and A4810 Steelworks Access Road, which run parallel to the M4. Both roads would become an urban dual carriageway, requiring changes to existing junctions. Changes would raise safe speed limits to make it a more attractive route

Key issues

- Newport City Council is the highway authority. Significant improvements would require the Council's agreement or alternatively could be authorised through statutory powers.
- Any existing contractual arrangements associated with the original Private Finance Initiative (PFI) concession would need to be reviewed during scheme development.
- Improvements could attract more traffic over time, reducing the benefits longer term.
- Impacts on the Gwent Levels SSSIs and the River Usk SAC, would likely require a Habitats Regulations Assessment and off-site compensation.
- Around 1,500 residential and commercial properties could be adversely affected through land take, with land acquisition required and property compensation likely. There would be increased negative noise and air quality impacts on Newport residents owing to increased traffic. There would be significant disruption during construction for several years.
- Could increase severance for pedestrians and cyclists, reducing active travel permeability.
- High engineering risk from multiple grade-separated junctions and major structures built online. Extensive utilities diversions needed (major gas pipelines, overhead power lines, drainage) adding programme and cost risk.
- Interaction with the Air Products COMAH facility along the A4810 corridor. Previous appraisal work identified potential conflicts with HSE consultation zones, hazardous substances controls, industrial access arrangements and associated pipeline infrastructure.
- Works along the A48 and A4810 could be targeted and phased to assist affordability and delivery.

Option 1.3 | Works to the Newport A48 Southern Distributor Road



Option 1.3 | Works to the Newport A48 Southern Distributor Road

Estimated cost: £1.7 billion

Estimated timescale for delivery: 8 years

Estimated Reduction in M4 Traffic: 5%

Targeted improvements to the A48 Southern Distributor Road through Newport

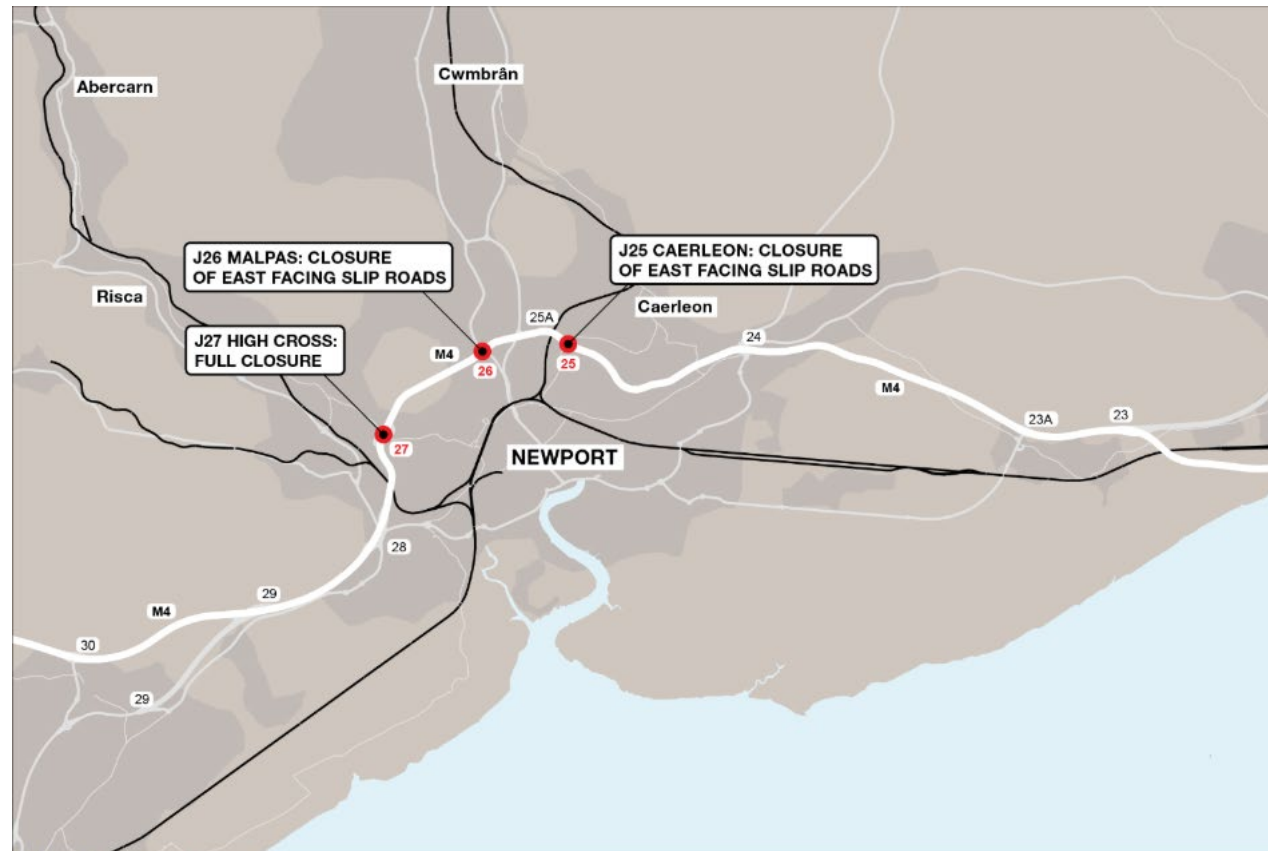
Description

This option focuses on the A48 SDR only, using grade separation of some junctions to support an at-grade SDR scheme. Changes would be made at Maesglas Road, Usk Way, Corporation Road, Nash Road, Queensway Meadows, Hartridge and Beatty Road, with local widening (for example at Junction 24 Coldra) and signalisation of key junctions. Unlike the A48 and A4810 works, it excludes the A4810 Steelworks Access Road, making it a more corridor-focused local capacity increase rather than a wider parallel strategic route.

Key issues

- Key issues would be similar to Option 1.2 but there would be around 50% less residential and commercial properties adversely affected compared through land take, with land acquisition required and property compensation likely. It would also avoid the Air Products COMAH facility.
- Disruption during construction would still take several years, although could be completed before Option 1.2.
- Works along the A48 could be targeted and phased to assist affordability and delivery.
- Option 2.3 (Newport-Cardiff BRT) includes dedicated bus priority at Junction 28, which may reduce traffic capacity. There is an opportunity to incorporate these BRT improvements into this option (and Option 1.2).

Option 1.4 | Changes to the existing M4 and its management to improve traffic flow



Option 1.4 | Changes to the existing M4 and its management to improve traffic flow

Estimated cost: £14 million

Estimated timescale for delivery: 2 years

Estimated Reduction in M4 Traffic: 3%

Junction closures on the M4 around Newport to prioritise longer distance motorway traffic

Description

This option would make operational changes to the existing M4, involving the full closure of Junction 27 (High Cross) and the closure of the east-facing slip roads at Junction 26 (Malpas) and Junction 25 (Caerleon). It aims to reduce use of the M4 by local traffic, particularly through the Brynglas Tunnels section. Reducing the opportunity for local traffic joining and/or leaving the motorway would help reduce potential incidents or delays caused by merging, diverging and weaving at these closely spaced junctions. Alternative combinations of partial or full closures could be explored in further studies.

Key issues

- The option would not address the capacity pinch point but would improve traffic flows and reduce the potential for incidents and delays caused by traffic joining and leaving the motorway so often along the route.
- Closing junctions on the motorway would displace traffic, increasing pressure on remaining junctions and queuing on local roads around Malpas, High Cross and Ridgeway.
- There would be disruption on local roads with reduced access for local people and businesses as well as increased congestion on alternative routes.
- Ramp metering could be subject to further review to explore closures at peak times only or ways to regulate the flow of traffic on to the M4.
- Could be trialled through temporary measures (road markings and signage) under an Experimental Traffic Regulation Order before any permanent intervention.

Option 1.5 | Promoting the A465 as an Alternative Route



Option 1.5 | Promoting the A465 as an Alternative Route

Estimated capital cost: £49m

Estimated timescale for delivery: 3 years

Estimated Reduction in M4 Traffic: 1 %

Measures to encourage better use of the A465 with signage and HGV rest facilities

Description

This option would promote greater use of the A465 as an alternative route to the M4, particularly for longer-distance and HGV traffic that could avoid the most congested sections of the M4 around Newport. The option would build on the significant improvements delivered along the A465 in recent years, which have removed key bottlenecks, improved safety and increased the route's attractiveness as a strategic east-west corridor. The approach would utilise fixed signage to direct suitable traffic to the A465 and variable message signs to enable active route management during periods of congestion, incidents or reduced capacity on the M4.

The option could be delivered in phases, with signage and traffic management measures implemented initially, followed by the development of HGV facilities as sites become available and approvals are secured.

Key issues

- Would have minimal impact on M4 traffic in normal conditions but would provide a clear and more attractive alternative route when there are delays on the M4.
- The A465 is often longer and less direct than the M4, so many freight operators may continue to use the motorway without strong operational benefits. There could be increased uptake by road freight including HGVs with new attractive rest stop facilities.
- A Wales Freight Strategy could help encourage some HGV movements away from the M4 around Newport and onto the A465 by creating a clearer policy and operational framework that recognises the different roles of each route.
- Increased traffic and HGVs along the route could raise noise, air quality, severance, safety and amenity concerns for communities along the A465 corridor.
- New or expanded HGV rest facilities would require a strategic assessment of need and location, supported by traffic modelling to understand operational and network impacts.
- Delivery would require engagement with Welsh Government, Transport for Wales and National Highways regarding implementation, funding, operation and integration with the wider strategic road network. Initial feasibility assessments would need to identify and appraise potential sites, including consideration of future demand, facility capacity, user requirements and operational specifications. This would be followed by high-level engineering, environmental, planning and land ownership assessments to identify key constraints and risks.
- Subject to the outcome of the feasibility stage, planning consent, site-specific environmental assessments, land acquisition and detailed design would be required prior to construction and implementation.
- Incremental measures could assist affordability and delivery, for example initial diversionary signage, variable message signs and then HGV rest facilities which are estimated to take 3 years with minimal impact to the existing highway network.

Option 2.1 | Additional rail services on existing mainline



Option 2.1 | Additional rail services on existing mainline

Estimated capital cost: £30 million

Estimated timescale for delivery: 5 years²

Estimated Reduction in M4 Traffic: 1%

Additional east-west rail services and improvements to Severn Tunnel Junction

Description

This package includes:

- an additional service every two hours between West Wales and Bristol Temple Meads,
- an extra hourly service between Cardiff and Gloucester; and
- an extra hourly service between Cardiff and Hereford.

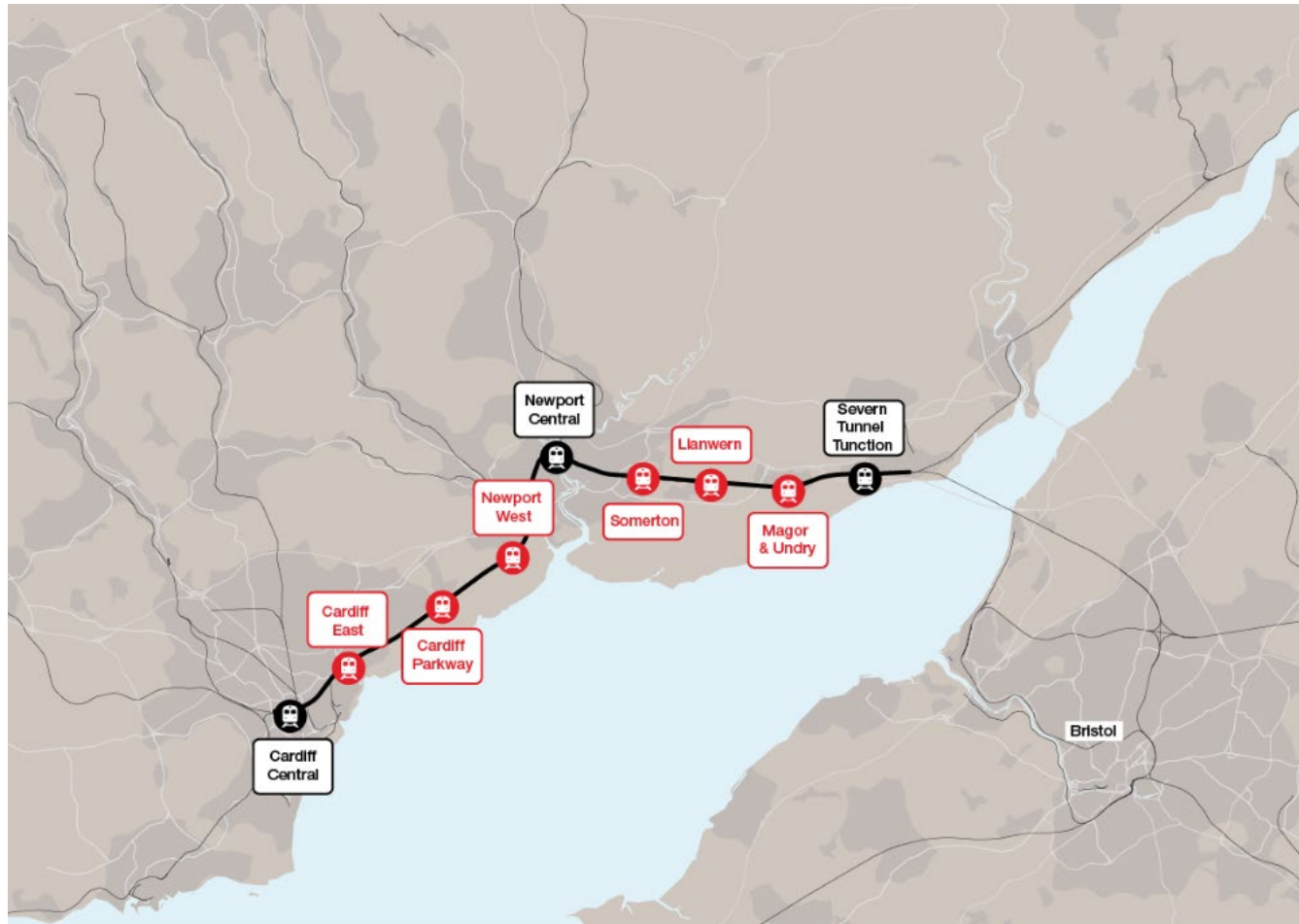
In addition, enhancements at Severn Tunnel Junction would improve access to the rail network through better station facilities, walking and cycling links, and connections to the new station car park.

Key issues

- The South Wales Main Line suffers from capacity constraints, particularly at peak times, so additional works would be needed to enable timetabling of extra services.
- Improvements to the Relief Line (Option 2.2) would help unlock line capacity, allowing new stopping services to run without constraining the fast intercity trains.
- Improvements at Severn Tunnel Junction may attract more local car trips, though these are likely to be negligible to the M4 corridor.
- More capacity on the M4 through mode shift could attract more traffic over time, reducing the benefits longer term.
- Rail service enhancements themselves would not require land-use consent, with works likely delivered largely under permitted development rights.
- Physical works at Severn Tunnel Junction (car park and new access road) would have a greater environmental footprint, involving land take and localised habitat loss.
- A business case has been issued to UK Government by TfW,
- detailed considerations ongoing.
- Operational costs and revenues require further review. It is estimated:
 - operation cost £26 million p/a
 - vehicle requirement of 9 trains at a vehicle cost of £121 million
 - Some costs would be offset by revenue income

² The Welsh Government and Transport for Wales estimate that initial works to new stations and car parking connectivity at Severn Tunnel Junction can be delivered in 2029 subject to securing the lease extension of legacy rolling stock

Option 2.2 | New rail stations and services



Option 2.2 | New rail stations and services

Estimated capital cost: £800 million

Estimated timescale for delivery: 6 years

Estimated Reduction in M4 Traffic: 6%

New rail stations and services between Cardiff Central and Severn Tunnel Junction

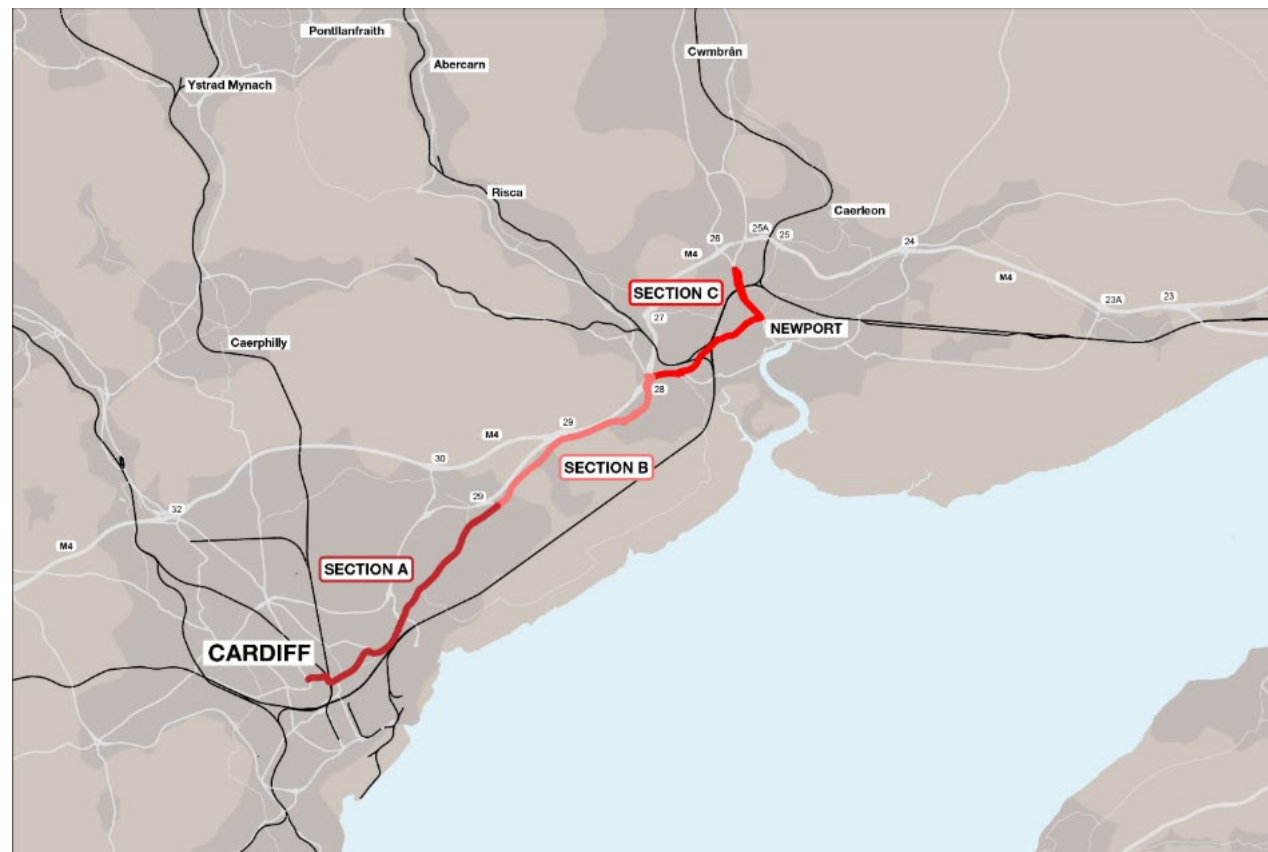
Description

This option would deliver new stations on the South Wales Main Line at Cardiff East, Newport West, Somerton (Newport East), Llanwern, Magor & Undy, and Cardiff Parkway at St Mellons (part of the wider Hendre Lakes development). It would be supported by the South Wales Relief Line Upgrade, renewing around 27 miles of track between Cardiff Central and Severn Tunnel Junction to enable passenger operation on the Up and Down Relief lines while preserving freight capacity and express passenger services. Service would include a new Cardiff–Bristol service and an enhanced Cardiff–Cheltenham service with an additional 4 trains per hour.

Key issues

- Would generate around 2.2 million new rail trips per year (about 7,000 per day)
- Modal shift is hard to forecast without further analysis, as many passengers are likely to move between stations rather than travelling the length of the corridor.
- More capacity on the M4 through mode shift could attract more traffic over time, reducing the benefits longer term.
- New stations within the Gwent Levels SSSI and NNRA would require assessment and mitigation measures. Ecological surveys, SSSI Assent, Protected Species Licensing and off-site compensation likely required to deliver a Net Benefit for Biodiversity.
- Delivered largely through non-devolved rail investment and already committed by UK Government, progressed mainly via Network Rail powers and permitted development.
- Detailed considerations are ongoing and led by TfW.
- Operational costs and revenues require further analysis. It is estimated:
 - operation cost £26 million p/a (from Op 2.1)
 - vehicle requirement of 8 trains at a vehicle cost of £116 million
 - Some costs would be offset by revenue income

Option 2.3 | Newport-Cardiff Bus Rapid Transit



Option 2.3 | Newport-Cardiff Bus Rapid Transit

Estimated capital cost: £335 million

Estimated timescale for delivery: 5 years

Estimated Reduction in M4 Traffic: 2%

A new Newport-Cardiff Bus Rapid Transit service

Description

The Newport–Cardiff Bus Rapid Transit scheme would provide a segregated, dedicated bus route between the two city centres, combined with active travel improvements, primarily along the A48 in three sections.

It would deliver a high frequency, reliable bus service up to a ‘gold standard’, that could carry over 12,000 people daily using a fleet of high-quality zero-emission vehicles with fully accessible level boarding, contactless ticketing and real time journey information.

Key issues

- Delivering all three sections would facilitate the best quality service, but each section could be delivered in isolation.
- Land acquisition would be required to facilitate the route.
- Mode shift could be higher if people were encouraged to use the service through incentives.
- More capacity on the M4 through mode shift could attract more traffic over time, reducing the benefits longer term.
- Average passenger trip length is around 6km, so the service is largely local, with reduced benefit for longer-distance M4 trips.
- There would be disruption to local authority roads and junctions with carriageway reassignment to accommodate buses and active travel.
- Part of Section A falls within the Gwent Levels NNRA, with mature trees and woodland (particularly Section B) at risk. Protected species likely present (dormice, bats), requiring targeted surveys, licences and off-site compensation to achieve a Net Benefit for Biodiversity.
- The scheme is being developed by TfW, working with Newport City Council and Cardiff Council, with detailed considerations ongoing.
- Operational costs and revenues require further analysis. It is estimated:
 - operation cost £8 million p/a
 - vehicle requirement of 24 buses at a vehicle cost of £24 million
 - Some costs would be offset by revenue income.



1. Introduction

Purpose, background and context to this review

Purpose

The Welsh Government is undertaking this review with support from Arup to provide an updated review of options for action to help alleviate congestion and associated transport problems on the M4 corridor around Newport.

This review has been prepared in response to concerns regarding the strategic function of the M4 as a key transport corridor for Wales and the wider United Kingdom. It experiences operational challenges associated with congestion, journey time reliability and network resilience, particularly in the vicinity of the Brynglas Tunnels. These challenges reflect a number of distinct but related problems, which include:

- Peak congestion during busy periods;
- Journey-time reliability, with unpredictable journey times along the corridor;
- The Brynglas constraint, a substandard two-lane pinch point that limits capacity;
- Incident resilience, given limited alternative routes when incidents or events occur; and
- The interaction between strategic and local traffic, where long-distance movements mix with local trips joining and leaving the motorway at closely spaced junctions.

This review provides technical advice to inform future ministerial consideration of available options and potential next steps.

The purpose of this study is to review previous assumptions on traffic levels and reflect upon changes since the cancellation of the M4 Corridor around Newport project in 2019. This will include a review of the latest and relevant policies, programmes and projects.

This study reviews the range of interventions that may contribute to alleviating the problems and to provide advice on their potential effectiveness, affordability, environmental implications, deliverability and possible routes to implementation.

The review also identifies appropriate next steps should any option be progressed for further development through formal appraisal and statutory processes.

Background

The M4 Public Local Inquiry held in 2018 identified a strong transport need for intervention to address congestion and resilience issues on the M4 around Newport. The evidence presented to the M4 Corridor around Newport Public Local Inquiry indicated that the proposed motorway would have substantially reduced congestion, and improved journey time reliability and resilience on the corridor.

Welsh Ministers subsequently decided not to proceed with the new motorway project in June 2019. Although the Inspector recommended that the Schemes and Orders should be made, the First Minister's decision letter placed decisive weight on the project's affordability within the Welsh Government's wider capital programme and on the adverse environmental impacts on the Gwent Levels SSSI, reed network, wildlife and historic landscape. The decision was also taken in the wider context of evolving Welsh climate policy, including the Welsh Government's April 2019 climate emergency declaration and its subsequent commitment to develop integrated, sustainable and low-carbon transport solutions for South East Wales.

It would be reasonable to assume the proposed new motorway and accompanying improvements to the existing route, could cost around £3bn when complete, and have similar impacts in addressing transport related problems on the M4 around Newport. It would also be likely to attract increased scrutiny around its environmental impacts, given the evolution of Welsh policy in relation to the declared climate and nature emergencies.

Context

The M4 around Newport has been the subject of extensive study and policy consideration since the 1990s. Previous work has included the M4 Corridor Enhancement Measures (CEM), the M4 Corridor around Newport Programme, the Public Local Inquiry process, and subsequent transport interventions developed through the South East Wales Transport Commission (Burns Commission). Since that time, a number of significant policy, economic, environmental and transport network changes have occurred which are relevant to the future consideration of interventions along the corridor.

These changes include the implementation of Llwybr Newydd (the Wales Transport Strategy), development of the South East Wales Regional Transport Plan, ongoing investment in rail, bus and active travel infrastructure, delivery of Core Valley Lines enhancements, progression of Burns Commission recommendations, changes in travel behaviour following the Covid-19 pandemic, increases in construction costs and inflation, evolving environmental and climate change policy, and the release of former local planning policy route protection associated with previous new motorway proposals.

This review therefore provides an updated baseline review against which a range of interventions can be considered. It is intended to bring together historic and current information and provide a strategic and high-level review of available options and their potential contribution towards improving the performance and resilience of the M4 around Newport. This review does not seek to introduce new evidence.



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The scope of this review

The review considers a range of options including highway interventions, rail-based measures, bus rapid transit proposals, traffic management approaches, combinations of highway and public transport interventions, and the cumulative effects of existing transport investment programmes.

The options assessed comprise:

- Improvements to the Brynglas Tunnels;
- Proposals along the A48 Southern Distributor Road and A4810 corridor;
- Improvements to the existing A48 corridor through Newport;
- Traffic management and operation of the existing motorway network including junction closures;
- Additional rail services;
- New railway stations proposed through the Burns Programme;
- Newport–Cardiff Bus Rapid Transit proposals; and
- Defined combination packages of highway and public transport interventions.

This review has also considered the potential impacts of existing projects, plans and programmes. Analysis of performance has been undertaken utilising traffic forecasting data provided by Transport for Wales for a future year including delivery of planned or committed transport interventions.

The following options are excluded from the scope of this review:

- A new tunnel between Magor and Castleton;
- New motorway solutions; and
- Demand management measures (such as road pricing or user charging).

A new tunnel between Magor and Castleton, when considered during the M4 Public Local Inquiry, was estimated to cost nearly £10bn. Today, that cost would be even greater and the proposal would likely represent poor value for money.

New motorway solutions are likely to continue to face similar challenges to the grounds of the Welsh Ministers’ decision to cancel the M4 Corridor around Newport project in 2019.

This review does not consider financial demand management measures such as road user pricing or workplace parking levies, which would have an impact on traffic levels by encouraging modal shift away from the private car.

This review is not a formal appraisal as per Welsh Transport Appraisal Guidance (WelTAG). The review does not undertake any new strategic transport modelling, but does benefit from that undertaken as part of other studies. The review provides a high-level comparative review of options based upon professional judgement, available evidence, previous studies and recent policy and programme information. The outputs should therefore be regarded as strategic and indicative rather than detailed appraisal findings. The review was undertaken over a rapid programme running from June to August 2026 to provide timely evidence to support Welsh Government consideration of next steps. Any options identified for future progression would require a proportionately detailed programme of appraisal, engagement, design development, environmental assessment and statutory process in accordance with WelTAG and relevant legislative requirements.

Approach and limitations to this review

Assessment has been informed by a review of previous studies, publicly available information, information provided by Welsh Government and Transport for Wales, available traffic data, previous appraisal work, published reports and the professional judgement of the project team. The approach comprises:

Updated Baseline Review

A review of changes since the 2018 M4 Corridor around Newport Public Local Inquiry include consideration of latest transport policy, transport investment, environmental designations, economic conditions, construction inflation and development affecting the former protected corridor.

Traffic Impact Assessment

A high-level assessment of the likely effect on traffic levels within the M4 corridor has been undertaken, expressed as indicative percentage reductions in peak-hour traffic demand. This has been qualified to attempt to explain whether the result of any intervention is likely to have a discernible change in the user experience. For example, it is generally fair to suggest that a 25% reduction in motorway traffic will produce a discernible improvement, particularly on a motorway that is already operating beyond capacity. Reductions of this order are generally sufficient to produce changes that are noticeable to road users and are comparable to the scale of traffic demand variations often observed between normal term-time and school holiday periods. However, any reduction in traffic would likely be eroded over time as population, demand and traffic volumes generally increase.

The traffic figures are drawn from Transport for Wales’s strategic model (SEWTM), using 2042 as the design year so that options are assessed once operational and against continued background growth. By 2042 the M4 corridor around Newport is estimated to be operating at around 114% of the theoretical capacity of the road during peak hours, although this varies by section: from around 86% between Junctions 23 and 24, to 110% between Junctions 24 and 25, and up to 114% through the Brynglas Tunnels. To provide resilience and maintain free-flow conditions, a road would typically be expected to operate at around 85% of theoretical capacity, known as practical capacity. On this basis, an indicative reduction of around 25% in peak-hour demand has been used throughout this report to simplify the message, representing the order of reduction needed to bring the most constrained sections back within practical capacity (unless the capacity constraint is removed through online works).

SEWTM is a DfT-compliant strategic multimodal model for the South East Wales region representing both highway and public transport. The base year model, representing 2023, includes recent changes such as the completed A465 dualling and the national 20mph default speed limit on the highway network and updated railway timetables on the public transport network. The future year models, representing 2032 and 2042, included committed future-year developments such as the Core Valley Lines (with increased frequencies), proposed stations and links within Cardiff. Background growth has been updated based on the National Trip End Model, employment, and residential development as well as route and mode choice reflect inflation and fare increases (9% bus, 8% rail).

As this is based on a distant-year model, the results carry some uncertainty. Were the proposed options to be coded into the model, some traffic could redistribute across the wider network, or back onto the M4, as freed-up capacity is taken up.

Traffic assessment has been developed using available information, evidence from previous studies, professional judgement and any supporting information supplied by Transport for Wales or the Welsh Government. No new transport modelling has been undertaken as part of this review.

Environmental and Planning Assessment

This review has considered in a qualitative way potential for environmental impacts, carbon implications, planning constraints, consenting requirements and associated legislative or planning policy risks. This has taken into account the legislative and planning policy position at the time of writing, and where appropriate has identified any relevant emerging guidance. A desk-based approach has been undertaken and the need for any future surveys, assessments and consents has been considered at a high level.

Cost and Affordability Assessment

High-level capital cost estimates have been developed using a combination of historic cost information, benchmark data, inflationary uplift factors, and professional judgement. These estimates provide a consistent basis for assessing the relative affordability of the options and informing strategic decision-making at this stage of development.

Historic costs have been normalised to a common price base using the Office for National Statistics (ONS) Construction Output Price Index (Infrastructure), which is a widely recognised measure of construction cost inflation within the UK infrastructure sector and is considered well aligned to the nature of the infrastructure interventions under consideration.

Costs have then been projected from 2026 prices to the assumed opening year using BCIS forecast indices to Q1 2031, with the average forecast rate applied beyond.

While the estimates are proportionate to the strategic nature of the assessment and do not include detailed capital cost planning or lifecycle cost analysis, they provide a robust and consistent basis for comparing options on a like-for-like cost basis.

Value for Money Assessment

The review provides qualitative commentary regarding value for money considerations. Economic appraisal, modelling and Benefit-Cost Ratios (BCR) are outside the scope of the review but any work previously undertaken through earlier review and assessment considered as part of the M4 Public Local Inquiry has helped inform professional judgment.

Review Limitations

This report has been developed within a short programme period and is intended to provide strategic-level advice rather than detailed appraisal or business case outputs.

The assessment relies upon information supplied by the Welsh Government, Transport for Wales and other third parties, together with information obtained from previous studies and publicly available sources. The project team has relied upon such information in good faith and has not independently verified the accuracy, completeness or validity of all underlying datasets, forecasts, assumptions or technical outputs.

In particular, any traffic modelling outputs, transport forecasts, programme information and option-specific evidence supplied by Transport for Wales, including information relating to regional transport models, Newport Bus Rapid Transit proposals and other ongoing programmes, remain the responsibility of the originating organisations. Any findings presented in this report which rely upon such information should be interpreted in that context.

The appraisal of options presented in this report should be regarded as indicative only and do not represent a conclusion on feasibility or deliverability. Professional judgement has been informed by available appraisal and assessment work undertaken to date. Any option taken forward would require further detailed technical assessment, as outlined in the recommended next steps.

The review does not replace the need for future WelTAG appraisal, Transport Assessment, Environmental Impact Assessment, Habitats Regulations Assessment, detailed engineering design, business case development or statutory consenting processes should any option be progressed further.

2. History of the M4 around Newport and Associated Alternatives

A summary of previous work and decision making

The history of the Welsh Government's work in relation to the M4 around Newport reflects four distinct phases:

- Relief road proposals and alternative options (1991–2009);
- The M4 Corridor Enhancement Measures programme and selection of a preferred option as a motorway to the south of Newport with complementary measures (2010–2014);
- M4 Corridor around Newport development work, draft Orders, Public Local Inquiry, and then cancellation (2014-2019); and
- The Burns alternatives programme, rail electrification and evolution of regional transport planning (2019 onwards).

Concerns regarding congestion, resilience and safety on the M4 around Newport have existed since the late 1980s. The Brynglas Tunnels section of the motorway was recognised as a strategic bottleneck on the principal transport corridor linking South Wales with England, and in 1991 the Welsh Office first proposed a relief road south of Newport to bypass this constrained section. Over the following two decades a series of relief road proposals were developed, revised and reviewed. Progress was interrupted by changing policy priorities, affordability concerns and environmental constraints, with major schemes paused in 2002, revisited in 2004 and ultimately cancelled in 2009 when estimated costs approached £1 billion.

In response, Welsh Government established the M4 Corridor Enhancement Measures (CEM) Programme to examine the problem in a wider strategic context. The programme considered the long-term transport, economic and environmental challenges affecting the corridor and assessed a broad range of options through the WelTAG process. The appraisal identified persistent congestion around the Brynglas Tunnels, unreliable journey times, limited network resilience, safety concerns and wider impacts on economic performance as the principal problems requiring intervention. Alternative highway routes, motorway widening, public transport measures and complementary demand-management interventions were all assessed.

The CEM appraisal concluded that a new high-quality road south of Newport offered the strongest fit with the transport planning objectives, provided the greatest congestion relief and delivered the best value for money. Although public transport improvements were considered important supporting measures, they were not expected to materially reduce traffic levels on the M4 if implemented in isolation. Environmental impacts, particularly on the Gwent Levels, were identified as a significant consideration for all major highway options.

Following publication of the CEM recommendations, Welsh Government announced in June 2013 that it would progress work on a preferred motorway solution and subsequently consulted on the M4 Corridor around Newport Draft Plan in September 2013. Around the same time, the first phase of the South Wales Metro was approved for development.

The M4 consultation considered the Black, Red and Purple route options, together with public transport and other complementary measures. Following this process the Black Route, comprising a new motorway south of Newport, was selected as the preferred strategy in 2014. The Red and Purple routes were discounted at the strategic appraisal stage. This selection reflected the policy and appraisal framework in place at the time. It should not be taken as an indication of the preferred approach under current policy, which places greater weight on modal shift, decarbonisation and environmental protections.

Between 2014 and 2019 Welsh Government developed the scheme in detail through engineering design, environmental assessment and economic appraisal. Draft Orders were published in 2016 and a Public Local Inquiry was held between February 2017 and March 2018. In parallel, Welsh Government developed the South Wales Metro proposition further, publishing “Rolling out our Metro” proposals and incorporating the Metro into wider Cardiff Capital Region transport and economic plans.

The M4 Public Local Inquiry examined the proposed scheme and a large number of alternatives presented by supporters and objectors. The Inspector ultimately recommended that the statutory Orders should be made, subject to modifications, and found a compelling case for the scheme.

On 4 June 2019, however, the First Minister announced that the project would not proceed. While accepting the severity of the transport problems and acknowledging the Inspector's conclusions, the decision cited the escalating capital cost of the scheme, estimated at approximately £1.4 billion, together with environmental impacts on the Gwent Levels and wider pressures on public expenditure.

This brought to an end nearly thirty years of work to develop a new motorway around Newport. Recognising that the underlying transport problems remained unresolved, Welsh Government established the South East Wales Transport Commission, chaired by Lord Burns, in 2019. Rather than seeking a replacement motorway scheme, the Commission was tasked with identifying alternative ways of addressing congestion and improving connectivity. Its final report, published in November 2020, recommended a “network of alternatives” comprising rail enhancements, new stations, improved bus services, active travel infrastructure, traffic management measures and land-use interventions.

From 2020 onwards, delivery has accelerated through the Core Valley Lines transformation, new rolling stock, electrification works, the Taff's Well depot, and subsequent Burns Delivery Unit programmes.

More recently, the Corporate Joint Committees have become responsible for preparing statutory Regional Transport Plans (RTPs). In South East Wales, the RTP was adopted in 2025 and became the mechanism through which many of the Burns recommendations, Metro enhancements, bus improvements and active travel interventions are prioritised, funded and coordinated across the region.

Despite decades of analysis and intervention, the fundamental challenges on the M4 around Newport remain unresolved. Congestion, poor resilience and safety concerns at the Brynglas Tunnels continue to affect one of Wales's most important transport corridors. While significant investment has been made in Metro, rail, bus and active travel improvements, there is currently no agreed long-term plan for addressing the motorway's underlying capacity and reliability constraints.

3. Review of key changes since the M4 Corridor around Newport Public Local Inquiry

The following items outline how different the transport network is today compared with what existed in 2018 at the time of the Public Local Inquiry. These changes reflect major developments in the local rail network, a significant shift in transport policy, and the response to the declared climate and nature emergencies - all of which mean the options now need to be considered in a very different context.

The current traffic situation and future trends

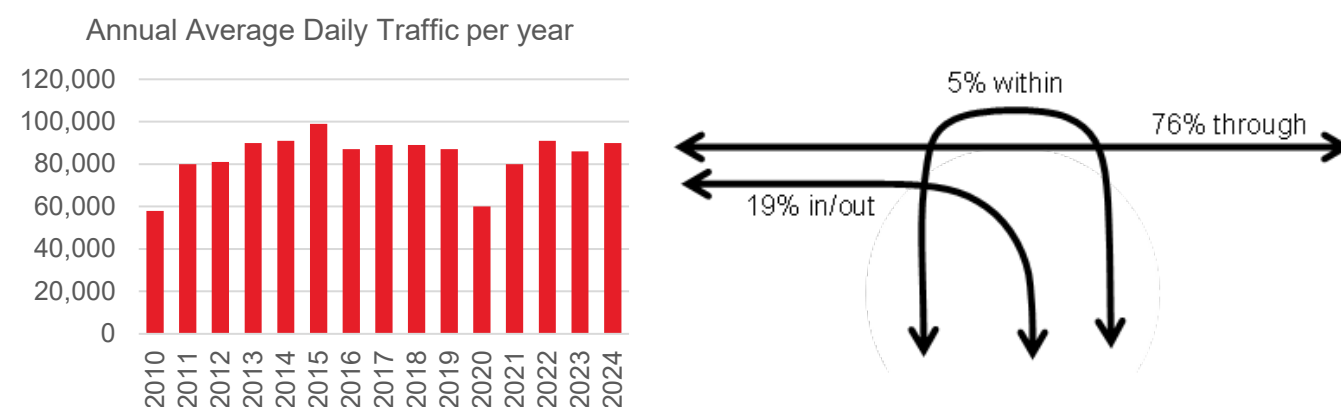
Traffic

Traffic levels post covid

Traffic volumes on the M4 around Newport have largely recovered from the COVID-19 period, although flows remain marginally below 2019 levels. DfT AADF data shows 2025 two-way flows of around 112,400 vehicles per day through the Brynglas Tunnels section, equivalent to approximately 91% of 2019 flows. This suggests that demand has substantially returned but has not fully recovered to the pre-pandemic baseline, possibly partially due to more people working remotely. The corridor therefore continues to carry very high traffic volumes and remains a critical strategic link between South Wales and England.

Freight

The M4 is a strategically important freight corridor, with HGVs making up around 14% of trips in the peak hour. The corridor plays a vital role in the South Wales economy, and disruption can have a significant impact on logistics operations. Taking up more road space than a car, an HGV is normally counted as equivalent to 2.5 cars, so a relatively small change in HGV traffic can have a disproportionate effect on operational and economic performance.



M4 traffic and congestion

The M4 corridor continues to experience congestion and journey time reliability issues, particularly during peak periods. INRIX data shows westbound delays are worst, with journey times 62% longer during the peak hours compared to free flow speeds (Travel Time Index of 1.62 between 4pm and 5pm).

Evidence considered at the Public Local Inquiry states that the Brynglas section of the motorway, a substandard two-lane section, has a theoretical capacity of around 3,200 vehicles per hour, and actual traffic flows reach this figure. The practical capacity of a link should normally sit at around 85% of the theoretical maximum to enable free-flow conditions. As flows at Brynglas are effectively at or over 100% of theoretical capacity, the section is operating well above its practical limit, meaning congestion forms readily and journey times become unreliable.

50mph speed limit

The 50mph limit was first introduced in June 2018 and later extended, covering J24 to J28 with camera enforcement. Traffic data shows that late lane changes and variable traffic speeds often lead to a breakdown in flow, particularly on the approaches to the Brynglas Tunnels. By slowing and harmonising traffic speeds, it aims to smooth flow and improve journey time reliability; this is effective during the inter-peak period but has limited impact during peak periods. The reduced limit has also delivered clear environmental benefits, lowering roadside noise and improving air quality.

Incidents, accidents and event delays

The M4 corridor is sensitive to disruption from incidents, collisions and major regional events. Due to the strategic role of the M4, limited alternative routes through Newport, and sections with limited or no hard shoulder, even minor incidents can result in significant delays and extended queuing. Major events in South Wales can place additional demand on the corridor, further reducing network reliability when event traffic coincides with peak periods. As a result, the M4 around Newport experiences both recurring congestion and a wider resilience issue, with disruption having a disproportionate impact on journey times.

Traffic on key links

The A48 Southern Distributor Road with the A4810 Steelworks Access Road, and the A465 Heads of the Valleys corridor provide key alternative routes to the M4. The A48 and A4810 form a parallel east-west route to the south of Newport and have previously been considered as part of options to relieve pressure on the M4 corridor. The A465 also provides a wider strategic route to the north that could help divert some longer-distance movements away from the most constrained sections of the M4. Better use of these corridors could help reduce the volume of traffic needing to use the M4 through Newport, particularly around the Brynglas Tunnels. For example, during the peak hour there are around 800 trips between the western and northern arms of the M4 through Junction 24 (in both directions), a portion of which would be longer-distance trips that could use the A465.

How people are using the corridor

Origin-destination analysis reinforces the strategic role of the M4 around Newport. Around 76% of traffic is through traffic, with neither the origin nor destination located within the study area. A further 19% of trips either enter or leave the motorway within the study area, whilst only around 5% both join and leave the motorway within the study area. The analysis also shows that many vehicles use only part of the motorway corridor, rather than travelling its full length between England and Cardiff, demonstrating the importance of the M4 for both strategic movements and trips accessing destinations within South East Wales.

The current transport policy and programme context

Transport policies and programmes

Llwybr Newydd: The Wales Transport Strategy

The policy context for transport planning in Wales has changed significantly since the M4 Public Local Inquiry through the introduction of Llwybr Newydd: The Wales Transport Strategy 2021. The Strategy places climate change and sustainable transport at the centre of decision-making and establishes a Sustainable Transport Hierarchy, prioritising walking, cycling and public transport ahead of private car travel. It promotes modal shift, reduced car dependency and supports Wales's wider decarbonisation objectives. Consequently, new transport schemes are expected to demonstrate not only their contribution to connectivity, resilience and economic growth, but also their alignment with carbon reduction targets, sustainable travel objectives and the transition to net zero. There is also greater emphasis on integrating transport, land-use planning and economic development, meaning schemes are increasingly assessed against their wider environmental, social and well-being outcomes.

Regional Transport Plans

The approval of the Regional Transport Plans in 2025 established the strategic framework for transport investment across Wales in support of Llwybr Newydd. In South East Wales, the RTP prioritises delivery of an integrated South Wales Metro network, including major rail enhancements, Cardiff Crossrail, new stations, public transport interchanges and active travel improvements. It also includes key highway and connectivity schemes, such as the Cynon Gateway Link Road and interventions arising from the Burns Commission. Collectively, these investments aim to improve connectivity, support economic growth and housing delivery, enable modal shift, and contribute to Wales's decarbonisation objectives through enhanced public transport, active travel, sustainable freight and electric vehicle infrastructure.

Rail Electrification in South Wales and the Core Valley Lines

Since the M4 Corridor around Newport Public Local Inquiry, significant progress has been made in the electrification of South Wales rail infrastructure. While the original Great Western Main Line electrification programme was not delivered in full to Swansea, the Core Valley Lines network has been transformed through a substantial programme of electrification, signalling upgrades and infrastructure modernisation led by Transport for Wales. The scheme supports the introduction of new tram-train style rolling stock and provides the foundation for higher-frequency services across the South Wales Metro network. The result is a significant enhancement of public transport capacity and connectivity across Cardiff and the Valleys, offering a sustainable alternative to private car travel and supporting wider decarbonisation objectives.

South Wales Metro

The South Wales Metro has evolved from a developing concept at the time of the M4 Inquiry into a major transport investment programme. The Metro combines improvements to rail, bus, active travel and interchange facilities to create a more integrated public transport network across South East Wales. Much of this investment is already in place: the Core Valley Lines have been largely electrified, new tri-mode trains have entered service, and stations and interchanges have been upgraded, with increased service frequencies being rolled out. These improvements are intended to improve accessibility, reduce car dependency and support economic growth. The Metro is now a key component of Welsh transport policy and provides an important alternative means of addressing connectivity and congestion challenges across the region.

Burns Stations

Following the recommendations of the Burns Commission, a programme of new railway stations has been developed to improve public transport access and reduce reliance on the M4 corridor. The programme includes stations at locations such as Magor and Undy, Llanwern, Somerton, Newport West, Cardiff Parkway, and Cardiff East.

Funding for the stations was confirmed by the UK Government in early 2026, with Magor and Undy expected to be the first completed, as it is not dependent on the South Wales Relief Line upgrade required for the other mainline stations. Cardiff Parkway is being taken forward separately backed by UKG, Welsh Government, and private investors and already benefits from planning permission.

Roads Review

The review between 2021 and 2023 reassessed future road investment against Wales's climate change commitments, the Wales Transport Strategy and Net Zero Wales. It concluded that future investment should focus on maintaining existing assets, improving safety, supporting modal shift and facilitating sustainable economic development, with a much stronger emphasis on reducing carbon emissions.

As a consequence, major new road schemes are now expected to demonstrate clear alignment with decarbonisation objectives and the Sustainable Transport Hierarchy, representing a markedly different policy environment from that which applied when the M4 Corridor around Newport proposals were being progressed.

Carbon and climate change

In 2019, Welsh Government declared a climate emergency and subsequently introduced a series of policies aimed at delivering net zero emissions, including Net Zero Wales (Carbon Budget 2) and Llwybr Newydd: The Wales Transport Strategy 2021. Together, these documents place decarbonisation at the heart of transport decision-making. Future Wales, Planning Policy Wales and the Regional Transport Plans further reinforce these objectives through integrated land-use and transport planning. Consequently, a new transport proposal would now be expected to show not only that it resolves transport related problems, but also that it supports the transition to a lower-carbon transport system and is consistent with Wales's statutory commitment to achieve net zero emissions by 2050.

What this means for decision making

Taken together, these changes mean a proposal like the M4 Corridor around Newport scheme would now be considered in a very different policy and appraisal environment to 2018. It would no longer be tested mainly on its transport and economic benefits. Any new road scheme would need to be justified against the four road building purposes now embedded in WelTAG, show that there is no better alternative, and demonstrate that it does not simply add capacity for cars or work against carbon reduction and modal shift. The stronger protection now given to the Gwent Levels, the removal of route protection in 2021, and the new Infrastructure Consent Order process would add further weight to the environmental and consenting hurdles. If Welsh Government were to progress any highway based schemes now, the case would rest less on relieving congestion alone and more on whether it could meet Wales's current climate, nature and sustainable transport commitments.

The latest planning policy and consenting context

Planning policy in Wales

Since the M4 Public Local Inquiry, the Welsh planning system has undergone significant reform, strengthening the strategic and environmental role of planning. At the national level, **Planning Policy Wales (PPW)** has evolved into a comprehensive placemaking-led framework, culminating in Edition 12 (February 2024, updated July 2024), which significantly strengthens policy responses to the nature emergency. Key changes include a requirement for all development to deliver a net benefit for biodiversity and ecosystem resilience, application of a stronger step-wise approach to avoid, minimise, restore and only as a last resort compensate for impacts, mandatory Green Infrastructure Statements accompanying planning applications, and stronger protection for Sites of Special Scientific Interest (SSSIs), trees, woodlands and wider green infrastructure networks.

In parallel, Wales has reintroduced a stronger strategic planning tier through the establishment of Corporate Joint Committees (CJCs) in 2021, with statutory responsibility for preparing **Strategic Development Plans (SDPs)** and **Regional Transport Plans (RTPs)**. This marks a return to regional planning, enabling transport, housing, employment, infrastructure and environmental issues that cross local authority boundaries to be addressed at a regional scale. SDPs are intended to sit between national and local planning policy and provide greater alignment between spatial planning, economic development and transport investment

The publication of **Future Wales: The National Plan 2040** in 2021 further transformed the planning framework by replacing the Wales Spatial Plan and introducing a statutory national development plan. Future Wales establishes a long-term spatial strategy for Wales, promotes sustainable placemaking, decarbonisation and infrastructure-led growth, and provides the strategic context within which SDPs, RTPs and Local Development Plans are prepared.

Together, these changes have created a more integrated planning system that places greater emphasis on regional collaboration, sustainable transport, climate action and nature recovery.

Removal of the M4 corridor route protection

A significant change since the cancellation of the M4 Corridor around Newport project in 2019 has been the removal of the long-standing TR111 route protection corridor. The TR111 notice, originally established in 1995, required planning authorities to consult Welsh Government on development proposals within 67 metres of the safeguarded motorway alignment and effectively protected the preferred route from conflicting development proposals. In June 2021, the Welsh Government formally withdrew the TR111 protection following publication of the South East Wales Transport Commission (Burns Commission) recommendations.

As a result, the former motorway alignment is no longer safeguarded through the planning system and the route has progressively reverted to normal development management considerations within Local Development Plans. Over time, new development or other land use changes may occur within parts of the former corridor, making it progressively more difficult or expensive to deliver the same highway alignment in the future. Because the former motorway route is no longer reserved from development and cannot simply be reactivated as a pre-existing scheme, any future strategic transport intervention within the corridor would need to be identified, justified, assessed and consented afresh under the prevailing planning and infrastructure consenting framework.

The new significant infrastructure project regime

A further major change is the introduction of the Infrastructure (Wales) Act 2024, which came into force on 15 December 2025 and established Wales's new Significant Infrastructure Project (SIP) regime. This replaces a range of previous consenting routes, including the Developments of National Significance regime, with a single Infrastructure Consent Order (ICO) process. For major highway schemes, the new regime is broadly analogous to the Development Consent Order (DCO) process under the Planning Act 2008 in England, providing a single consent incorporating multiple approvals.

Whereas the proposed M4 Corridor around Newport scheme progressed through the traditional highways procedure under the Highways Act 1980, involving draft Line Orders, Side Roads Orders, Compulsory Purchase Orders and a Public Local Inquiry, future strategic highway proposals in Wales that meet the SIP thresholds (generally new highway schemes exceeding 1 km in length, or schemes directed into the regime by Welsh Ministers) are now expected to proceed through the ICO process. This represents a fundamental shift in how nationally significant road infrastructure is planned and consented in Wales.

Biodiversity policy changes and implications for development

Nature and the Gwent Levels

Since the M4 Corridor around Newport Public Local, the legislative and policy framework relating to biodiversity in Wales has evolved. The cumulative effect of these changes is a shift from a focus primarily on mitigating ecological harm towards a stronger requirement for development to avoid harm and maintain and enhance biodiversity, strengthen ecosystem resilience and contribute positively to nature recovery

A notable change is the increased emphasis on ecological connectivity and ecosystem resilience, requiring development to consider landscape-scale ecological function rather than solely site-specific habitat and species impacts.

This is particularly relevant in the context of the Gwent Levels, which is now recognised within national planning policy as a National Natural Resource Area and is subject to emerging strategic planning guidance focused on protecting and restoring ecological networks.

A review of the current key legislative and policy considerations relevant to development in Wales, and specifically within or affecting the Gwent Levels, is provided below.

Future Wales: The National Plan 2040

Adopted in 2021, this national framework steers growth, infrastructure and land use across Wales. Its Policy 9 requires ecological networks and green infrastructure to be safeguarded, restored and enhanced, and designates the Gwent Levels as a National Natural Resource Area, requiring development proposals to protect and enhance its ecological, historic and environmental character.

Draft strategic planning guidance for the Gwent Levels National Natural Resource Area

Issued for consultation in February 2026 to supplement Policy 9, the guidance introduces a spatial framework of Core and Recovery/Opportunity Zones to direct nature-based solutions and ecological connectivity. Rather than excusing inappropriate development, it seeks to protect and enhancement of this nationally significant reclaimed coastal landscape and its vulnerable reens, ditches, ecological networks and Sites of Special Scientific Interest.

Planning Policy Wales Edition 12

Published in February 2024 as the response to the Nature Emergency, PPW12 requires every proposal to deliver a Net Benefit for Biodiversity and a Green Infrastructure Statement, to follow the Step-wise Approach that treats compensation as a last resort, and to apply the DECCA framework. It also establishes a strong presumption against development that would harm an SSSI.

Nature Emergency and Biodiversity Deep Dive

Having declared a Climate Emergency in 2019 and a Nature Emergency in 2021, Wales signalled more urgent action on habitat and species decline. The 2022 Biodiversity Deep Dive reinforced this, backing the “30 by 30” target and a better, bigger and more connected series of protected sites.

Nature Recovery Action Plan and Biodiversity Targets

The Nature Recovery Action Plan sets out Wales’s strategy for halting and reversing biodiversity decline, aligned with the Well-being of Future Generations and Environment Acts. The Environment (Principles, Governance and Biodiversity Targets) (Wales) Act 2026 strengthens this by embedding environmental principles and introducing legally binding biodiversity targets.

Environment (Wales) Act 2016

Framing the Sustainable Management of Natural Resources, its Section 6 duty requires public authorities to maintain and enhance biodiversity and promote ecosystem resilience, while Section 7 obliges them to have regard to lists of priority species and habitats when exercising functions relating to development plans, infrastructure projects, development management and land management.

Well-being of Future Generations (Wales) Act 2015

This Act commits public bodies to sustainable development across seven well-being goals, among them A Resilient Wales. By requiring long-term thinking, prevention and integration, it reinforces the expectation that development supports ecosystem resilience rather than undermining it.

Wildlife and Countryside Act 1981 and Habitats Regulations

Alongside the Conservation of Habitats and Species Regulations 2017, this Act protects designated sites and species, and its Section 28G duty compels public bodies to further SSSI conservation. The Habitats Regulations remain central where likely significant effects on European sites, such as those linked to the Severn Estuary, cannot be excluded.

Implications for development

Taken together, these reforms establish a substantially more demanding biodiversity framework than existed at the time of the M4 Public Local Inquiry, requiring development proposals to demonstrate measurable biodiversity benefits and contributions to nature recovery. Biodiversity considerations must now inform site selection, option appraisal, design and consenting from the outset, with particular regard to the Gwent Levels’ reed and ditch network, SSSI features, ecological connectivity, hydrological function and opportunities for nature recovery.

The economy, productivity and relationship with transport investment

Economy

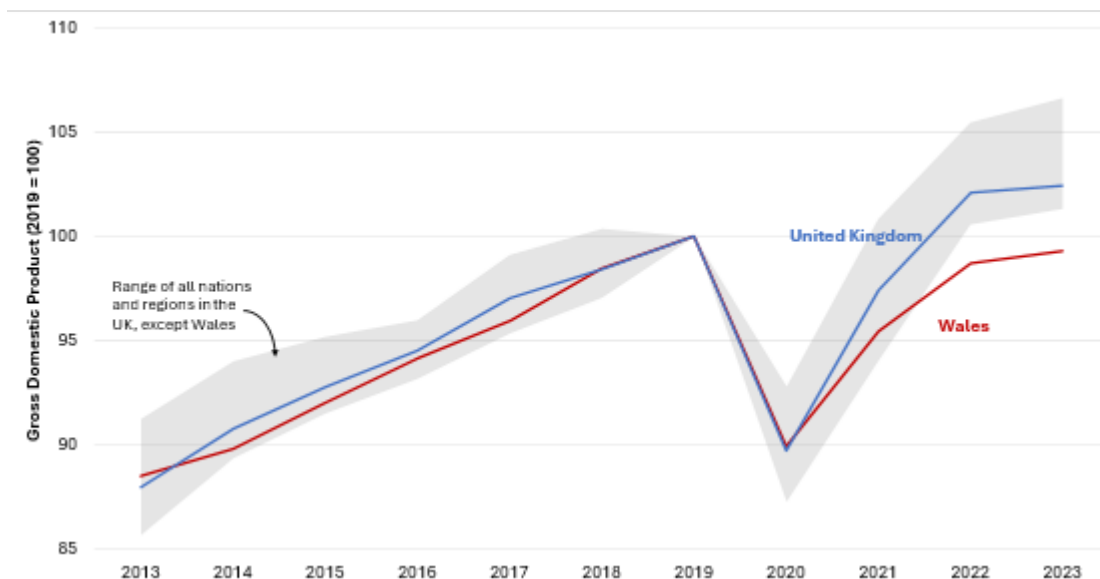
The Welsh economy, as measured by Gross Domestic Product (GDP), is around £92.8 billion in size, as of 2023. It accounts for around 3.4% of the UK total, in comparison, Wales’s population comprises around 4.6% of the UK total.

Wales has comprised around 3 to 4% of UK GDP since at least the mid-1960s, as far back as official regional economic data is available. This indicates that, Wales has consistently generated less economic output per capita than the UK average but has grown at a broadly similar rate to the UK. In effect, lagging but not falling significantly further behind.

More recent data indicates that the Welsh economy is stalling and struggling to recover to its pre-pandemic size and growth trajectory. The growth rates in output and employment in Wales are showing signs of decoupling from the rest of the UK:

- Wales is the only economy in the UK which, has not recovered to its pre-pandemic level, with its GDP down by -1% since 2019, compared to growth of +2% at a UK-level.
- Wales is the only part of the UK where private sector employment has fallen since 2015, having declined by around -8,000 jobs. In comparison, private sector employment elsewhere in the UK increased between 15,000 and 681,000, in the North East of England and London, respectively.

Wales is the only economy in the UK that has not recovered to its pre-pandemic size



Productivity

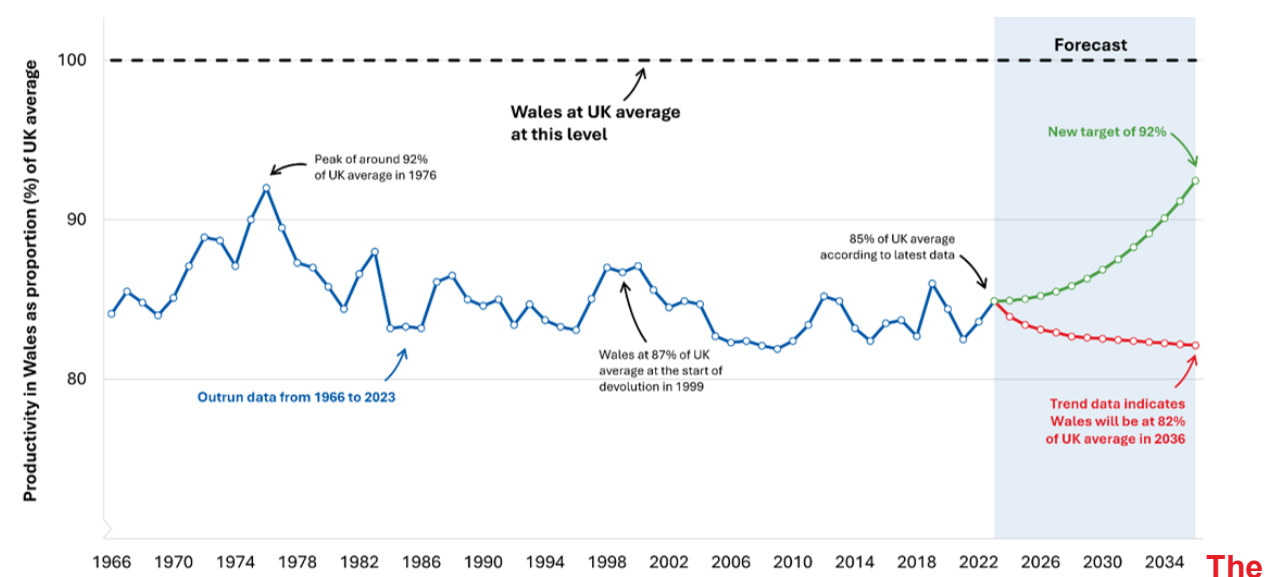
Productivity is a measure of how much economic output is generated for each hour worked, and it matters because, over time, it is the main way an economy can raise wages and living standards without pushing up inflation. The productivity of the Welsh economy, typically measured in Gross Value Added (GVA) per hour, is currently around 15% lower than the UK. Adam Price, the Cabinet Minister for Enterprise, Connectivity and Energy, announced a target in June 2026 to halve the productivity gap between Wales and the UK, within a decade. As such, the new target represents an increase in GVA per hour in Wales from around 85% of the UK average to 92%.

Wales’s productivity gap is driven by a combination of factors, including relatively weak transport connectivity, lower rates of business investment and innovation, smaller average firm size, a heavier

perceived regulatory burden, skills and demographic pressures including out-migration of graduates and an older workforce, and a comparatively high reliance on public sector employment³. The latter is both a reflection of historic industrial restructuring and a contributor to the sectoral composition of the Welsh economy, which contains a smaller share of some highly productive private-sector industries than the UK average.

Wales is unique among the devolved nations of the UK as its productivity has grown slightly slower than the UK average, since 1999, resulting in a small fall from 87% of the UK average to 85%. In contrast, Scotland's productivity has grown strongly, reaching parity with the UK, and Northern Ireland, which has historically lagged slightly behind Wales, has reached 88% of the UK average, now sitting ahead of Wales. Scotland's productivity growth in this period has been linked to high sustained investment in transport, and its wider capital base⁴. Transport investment raises productivity by cutting journey times and widening the pool of workers, suppliers and markets a business can reach.

Without intervention, Wales's productivity is on track to fall further behind the UK



The economy, productivity and relationship with transport investment

Relationship between economic growth and road transport

The relationship between economic growth and road transport is shaped, in large part, by the type of activity which drives the growth. When economic growth is driven by an expansion of transport-intensive sectors, such as construction and manufacturing, road freight demand tends to rise broadly in step with output. Where growth instead stems from services and other less transport-intensive activity, the two can pull apart.

A comparative analysis of the UK and Spain, between 1999 – 2007⁵, illustrates this difference:

- In Spain, the economy grew by around +135% and road freight by around +95%
- In the UK, the economy grew by around +85% while road freight fell by around –20%

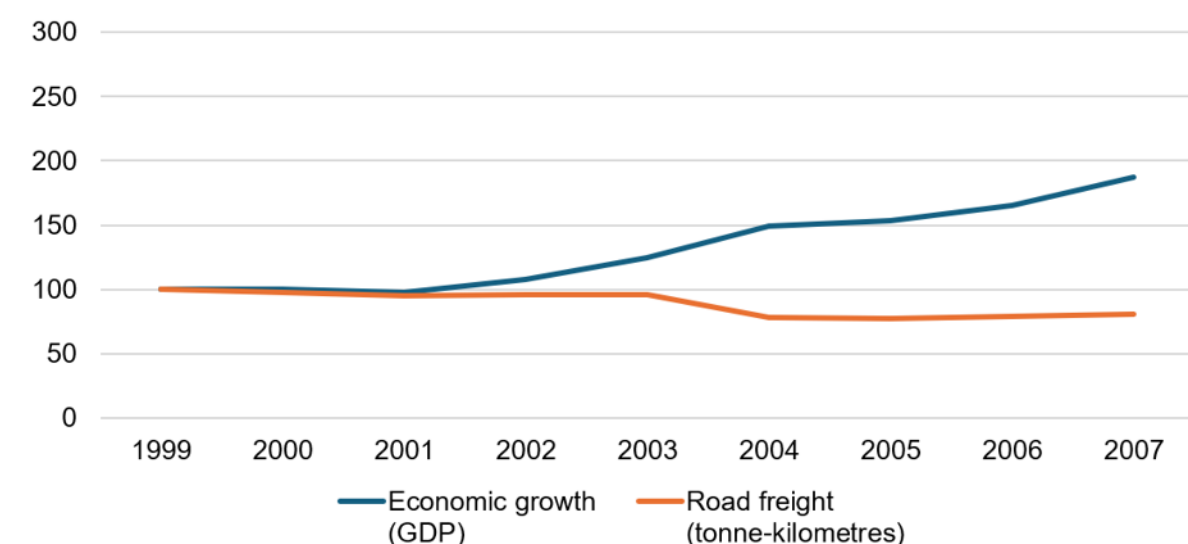
The difference reflects what powered each economy. In Spain, growth was led by construction – a transport-intensive sector which requires moving heavy goods over many separate trips – so road freight

climbed almost in step with output. In the UK, growth came increasingly from services and was reinforced by leaner logistics, shorter haulage distances and a shift of goods away from road, allowing freight volumes to fall even as the economy expanded.

A more recent example of 'coupled growth' is Poland, whose economy grew by around +27% and road freight by +33% between 2016 – 2024. Poland's economic growth over this period was driven by transport intensive sectors, such as automotive and electronics manufacturing and logistics⁶. This indicates that the coupling effect, between levels of economic growth and road transport, still occurs.

Overall, this analysis highlights that the composition of future growth matters more than its headline rate when it comes to its impact on volumes of road transport. If the future economic growth of Wales is driven heavily by production sectors such as manufacturing, construction and agriculture, which are inherently freight-intensive, it has potential to push road use upwards, in line with an increase in output, all else being equal. However, if growth is driven by services and other less transport-intensive sectors, the economy is likely to expand while road transport demand grows more slowly or even declines.

Economic growth in the UK 'decoupled' with road freight, as the economy shifted towards service sectors requiring less transport



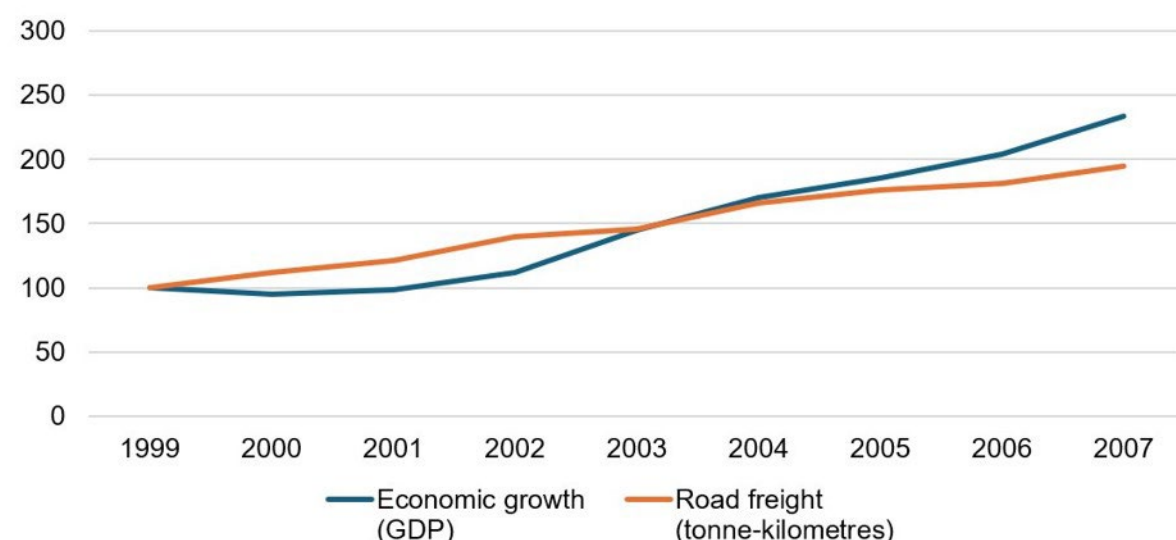
³ <https://www.productivity.ac.uk/research/wales-2025/>

⁴ <https://www.productivity.ac.uk/research/investigating-the-factors-driving-scotlands-productivity-gap-with-international-countries/>

⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0967070X14000286>

⁶ Estimated based on the following Eurostat databases: https://doi.org/10.2908/ROAD_GO_TA_TOTT and https://doi.org/10.2908/NAMA_10_GDP

Economic growth in Spain remained ‘coupled’ with road freight, as growth was driven by transport-intensive sectors like construction



Funding and Financing

Potential Funding and Financing Mechanisms

No single funding source is likely to deliver a major package of transport interventions. Future solutions for the M4 corridor are therefore likely to require a combination of Welsh Government capital funding, regional transport funding, economic development programmes, city region investment and, where appropriate, private sector finance. These are outlined below.

Welsh Government Capital Funding and Borrowing Powers

The Welsh Government remains the principal source of transport capital investment in Wales. Strategic transport interventions can be funded directly through Welsh Government capital budgets, subject to Ministerial priorities, business case approval and affordability within future Spending Reviews. The Welsh Government also possesses limited borrowing powers, allowing capital expenditure to be financed over longer periods where projects demonstrate strong strategic and economic justification. However, funding remains constrained and subject to competing priorities across government, requiring schemes to demonstrate a strong strategic case and value for money.

Public-private partnership models

The Mutual Investment Model (MIM) is Welsh Government’s preferred public-private partnership mechanism for major infrastructure projects. Private sector partners finance, construct and maintain an asset, while the public sector makes annual service payments over an agreed period. By spreading capital costs over time and providing certainty on whole-life asset management, MIM can support major interventions where immediate public funding is unavailable. It is best suited to large schemes with clearly defined assets and predictable operating arrangements. However, it is generally more expensive over a project’s lifetime than using Welsh Government borrowing powers, as private finance requires higher returns than government borrowing.

Alternative approaches could link borrowing to future income streams, such as business rate growth through Tax Increment Financing or revenues from a potential road toll. Equally, both toll income and business rate uplift could fund investment directly as they accrue. Where used to support borrowing,

these models may be cheaper than MIM but carry greater risk. Repayment depends on projected revenues being realised, with any shortfall ultimately falling to the public sector.

Regional Transport Fund and Grant Modernisation

The Welsh Government’s grant modernisation programme is bringing together a number of transport funding streams into a single Regional Transport Fund (RTF), aimed at simplifying funding arrangements, reducing administrative burdens and aligning investment with regional priorities. Managed through Corporate Joint Committees (CJCs) in partnership with local authorities, Welsh Government and Transport for Wales, the RTF supports the delivery of schemes identified within Regional Transport Plans and Delivery Programmes. The 2026-27 programme represents a transition towards multi-year, regionally prioritised investment, and is likely to become the primary funding mechanism for locally and regionally significant transport interventions in South East Wales.

Wider Economic Development Funding

Transport infrastructure can attract wider economic development funding where it supports housing delivery, employment growth, regeneration or strategic investment sites. Potential sources include local authority capital programmes, developer contributions, city region investment funds and future UK economic development programmes. In South East Wales, schemes that unlock growth locations or improve access to key employment areas may be well placed to secure such funding.

The Cardiff Capital Region (CCR) City Deal is a significant source of regional investment, supporting projects that enhance connectivity, productivity and sustainable economic growth.

While unlikely to fund major transport schemes in isolation, CCR funding could contribute towards wider multimodal infrastructure packages where clear economic and regeneration benefits can be demonstrated.

Bus Franchising

The proposed introduction of bus franchising in Wales represents a significant change in the way public transport services will be planned, funded and delivered. Under a franchised system, Transport for Wales and Welsh Government will have greater influence over routes, frequencies, fares and integration with rail services. This creates opportunities to align revenue support and capital investment more effectively across the public transport network. For South East Wales, franchising could support the delivery of enhanced bus rapid transit, improved express services, integrated ticketing and park-and-ride schemes. While franchising itself is not a capital funding mechanism, it provides a framework through which investment in public transport infrastructure and services can be coordinated and targeted towards wider transport objectives, including reducing car dependency on the M4 corridor.

UK Government Rail Investment

Although rail infrastructure in Wales remains largely funded through UK Government expenditure via Network Rail, significant investment opportunities continue to exist through periodic rail enhancement programmes, control periods and major project funding allocations. Future investment proposals may include network capacity enhancements, station improvements, signalling upgrades and measures that improve cross-border connectivity. For South East Wales, UK Government rail funding could play an important role in delivering measures that improve resilience and capacity on the South Wales Main Line and supporting further implementation of the Burns Commission recommendations, although competition for funding at a UK level remains significant.

4. Options

The options being considered as part of this review



A workshop was held in June 2026 between Welsh Government and Transport for Wales officials, hosted by Arup, to discuss the scope of this review. The Welsh Government is considering previously appraised options that have been subject to the 2018 Public Local Inquiry and/or relying on previous study, within the modern-day context, and consideration of other planned and committed transport plans, programmes and projects.

Road based options

Option 1.1: widening of the Brynglas Tunnels to make the existing two-lane tunnels into 3 lanes in each direction.

Option 1.2: the 'A48 and A4810 works to increase capacity on the existing A48 Southern Distributor Road and A4810 Steelworks Access Road (Queen's Way).

Option 1.3: A targeted package of A48 Southern Distributor Road improvements to increase capacity – this will provide a reduced version of the 'A48 and A4810 works.

Option 1.4: Operational changes to the existing M4 including junction closures, to help manage and improve traffic flow, including junction closures.

Option 1.5: Traffic management measures with signage and new HGV driver rest facilities to encourage re-routing of some traffic via the A465 rather than using the M4 around Newport.

Public Transit based options

Option 2.1: additional rail services to increase capacity for east-west travellers and improvement to the Severn Tunnel Junction to make it easier for people to access the interchange.

Option 2.2: implementation of 6 new rail stations and services on the mainline at Magor, Llanwern, Somerton, Newport West, Cardiff Parkway and Cardiff East.

Option 2.3: a new Newport-Cardiff Bus Rapid Transit service between the two cities to create a segregated, dedicated route as an alternative to using the M4 around Newport.

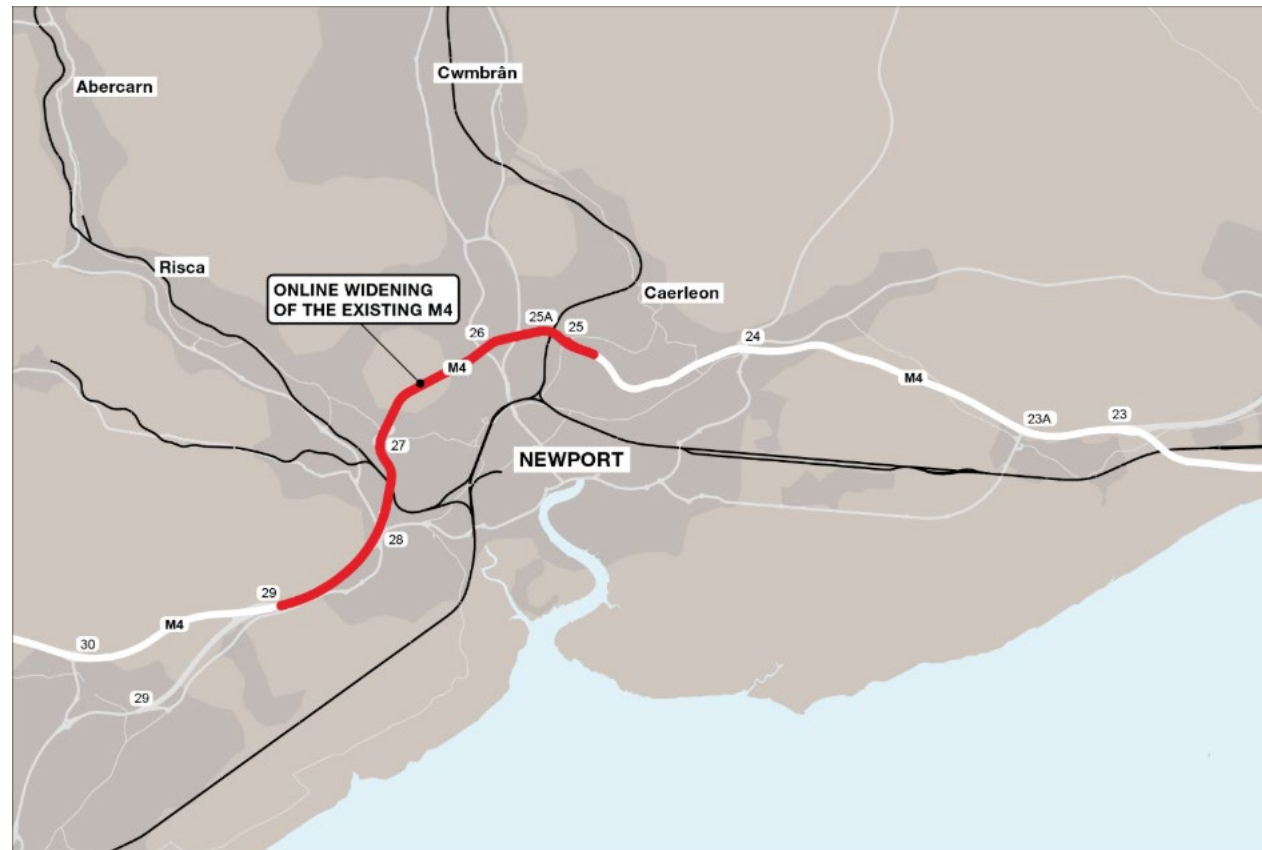
Each option has been reviewed against a consistent set of criteria to give decision-makers a clear, high-level comparison of their relative merits and trade-offs.

The following pages set out in for each option:

- Performance at alleviating congestion on the M4 around Newport and the likely effect on traffic levels and network resilience.
- Cost and value for money which include a high-level capital cost estimate with qualitative commentary.
- Development and delivery timescales with an indicative view of the time needed to progress through design, statutory processes and construction.
- Environmental considerations, including principal ecological, water, landscape and heritage sensitivities, and any impacts on the Gwent Levels.
- Carbon considerations and the likely direction of embodied and operational carbon impacts.
- Land use and planning factors such as the key planning policy and consenting implications.
- Interactions with the other options because some options may complement each other while others may create in-combination complexities such as construction impacts.
- Key risks, including deliverability, technical feasibility and stakeholder risks.

Together, these criteria provide a rounded basis for understanding not only how effective each option might be in addressing congestion and resilience on the M4, but also how well it aligns with the wider policy, environmental, social and economic well-being objectives that now shape transport decision-making in Wales.

Option 1.1 | Widening of the Brynglas Tunnels



Widening at the existing two-lane tunnels to create 3 lanes in each direction.

Description

This option involves improvements to the existing M4 corridor by widening the existing carriageways to provide additional capacity through the major bottleneck which is the Brynglas Tunnels. This comprises of the following elements:

- Utilisation of the existing M4 hard shoulder to provide a dual four-lane motorway between Junction 29 (Castleton) and Junction 26 (Malpas);
- A dual three-lane motorway between Junction 26 and Junction 25 (Caerleon); and
- A new westbound three-lane tunnel would be constructed at Brynglas to increase capacity. The existing Brynglas twin-bore tunnels would be retained and used to carry a total of three lanes of eastbound traffic.
- Tunnel works would impact adjacent structures associated with Junction 25A and A4042, requiring significant modification or reconstruction to facilitate delivery of the scheme which would require reconstruction.

This option primarily addresses the Brynglas constraint and peak congestion through the tunnels, improving journey-time reliability, and providing some online resilience if there is an incident.

Key issues

Engineering and construction complexity – high engineering and geotechnical risk associated with construction of a new tunnel beneath a constrained urban area, together with significant traffic management requirements and disruption on a nationally important transport corridor.

Limited network benefits – whilst the option would improve capacity and remove the Brynglas Tunnels bottleneck, it would not address the underlying geometric constraints of the route. Due to the substandard horizontal and vertical alignment and constrained junction spacing the existing 50mph speed limit would likely need to remain in place to manage residual safety risks. As a result, the option would provide only a partial improvement to corridor performance and would not bring this section of the motorway up to modern design standards. The scheme would also fail to provide an alternative route during incidents and would not address wider resilience issues on the surrounding highway network. Consequently, congestion, delays and poor journey time reliability could continue during incidents, network disruptions and major events, despite the significant investment.

Land, property and statutory risk – property acquisition, demolition and compensation requirements, together with statutory approvals and potential objections, could increase costs and lead to programme delays.

Environmental constraints – construction and operation could affect environmentally sensitive habitats and protected species, requiring mitigation, licensing and potentially extensive environmental approvals.

Summary of Impact

The capital cost of the scheme is estimated to be at least £1.7 billion, with potential delivery options balancing cost against disruption on the road network.

It is estimated that the scheme would take 12 years to deliver and would cause significant disruption to the local highway network for approximately 7 years during construction.

This option would provide up to 40% additional capacity on the existing route by upgrading this section of motorway from a substandard two-lane carriageway to a full three-lane carriageway. It is not expected to reduce traffic on the M4, as it involves online works and does not create an alternative route elsewhere. Instead, it would help resolve the problems by creating more road capacity on the existing motorway alignment, bringing the Brynglas tunnels within practical capacity and enabling generally free-flow conditions along this section of the corridor.

Alignment with other options:

Junction closures or restrictions in Option 1.4 would be required in combination with this option meet the Design Manual for Roads and Bridges (DMRB) designs standards by increasing junction spacing. This would help achieve potential capacity improvements and could be delivered together.

This option could be complemented by any of the other options, however, there would be significant disruption if delivered concurrently with works on the A48 (Options 1.2 or 1.3), which should be avoided.

Traffic Impact

The capacity figures presented here are based on the evidence given during the M4 public inquiry, which used the Congestion Reference Flow (CRF) for standard and substandard two-lane and three-lane motorways.

The major bottleneck in the area is the Brynglas Tunnels, and this option would increase their capacity by around 40%, moving from a two-lane substandard carriageway to a three-lane carriageway (widening only would not achieve DMRB standards). This would provide generally free flow conditions through the existing bottle neck during normal conditions and improve journey times.

This option would achieve a 75% ratio of flow over capacity (RFC) through the bottleneck, meaning it would bring the motorway in this area back within operating capacity. However, other substandard sections of the motorway (such as J24 to J25 past Celtic Manor) would continue to operate over capacity, and this may be further exacerbated as the additional capacity attracts more traffic through this section, limiting the durability of these benefits.

There would also likely be severe disruption during construction, which could affect traffic flow across the highway network for an extended period, owing to the necessary diversions and the resulting redistribution of traffic onto other routes

Economic Impact

The scheme would improve journey times and reliability through the corridor's principal bottleneck, benefiting strategic freight, business travel and connectivity between South Wales and England during normal conditions. However, it would not provide an alternative route during incidents or delays, which will limit its benefits.

The scheme would offer limited direct support for access to employment sites in south Newport, so its economic benefits would mainly accrue to existing motorway users rather than being broadly distributed locally.

Significant construction disruption over several years could adversely affect businesses, freight movements and productivity across South Wales.

Given the high capital cost, delivery complexity and uncertainty over sustained congestion relief, the economic impact should be regarded as mixed and uncertain, with low-to-medium confidence pending any modelling.

Environmental and Climate Impact

The scheme would avoid direct impacts on the Gwent Levels protected wildlife area, but could affect the River Usk and its lower stretches, the Monmouthshire and Brecon Canal (between Junctions 26 and 27) and the Allt-yr-Yn Local Nature Reserve. These impacts would need to be carefully managed to meet national planning and habitat protection requirements.

Woodland and mature trees line much of the M4, particularly between Junctions 27 and 29. National planning policy requires three new trees to be planted for every one lost, and a full set of ecological surveys would be needed before planning approval. Off-site planting would likely be required to leave nature in a better state than before, alongside new woodland corridors created through replacement planting.

Protected species are likely to be present, including dormice in woodlands and bats in trees, buildings and possibly the tunnels. Licences would be needed to work in these areas.

Higher traffic flows and continued congestion would increase noise along the M4 corridor and throughout Newport, though no significant new noise would reach the levels south of Newport.

Higher traffic flows would worsen air quality along the corridor and in Newport, with widening bringing traffic closer to homes and other sensitive locations. Some local improvement is expected around Brynglas Tunnels as congestion eases.

Higher traffic flows and continued congestion would increase carbon emissions

Social and Cultural

The widening of the existing M4 corridor, including construction of a new Brynglas Tunnel, would affect communities located alongside the motorway through Newport. Increased traffic volumes and ongoing congestion pressures are predicted to result in higher levels of noise, air pollution and visual intrusion for residents living close to the route. This would likely adversely impact human health. The scheme would provide limited improvements to accessibility which would not improve social inclusion, and would create few opportunities to enhance walking, cycling and other active travel connections.

The widened motorway corridor would also bring transport infrastructure closer to a number of heritage assets, including listed buildings and Scheduled Ancient Monuments, potentially affecting their setting and character.

While additional tunnel capacity may improve traffic flow at Brynglas, the wider social benefits are expected to be limited due to congestion remaining elsewhere on the network.

Planning and Consenting

The option would likely require an Infrastructure Consent Order, supported by a full Environmental Impact Assessment and supporting assessments. Extensive ecological, arboricultural, heritage, air quality, noise and geological surveys would be required to support the design and consent process. Works affecting protected species, including bats and dormice, would require licences from the relevant environmental regulators. Given the extent of property acquisition, demolition and impacts on established communities, there is a high likelihood of objections and a potentially lengthy pre-application and examination process.

The need to tunnel beneath an existing urban area and work adjacent to environmentally sensitive receptors would add complexity and risk to the consenting process. In addition, the reliance on all-lane running within a constrained corridor, combined with the retention of substandard motorway geometry and the continued requirement for a 50mph speed limit, may present challenges in demonstrating an acceptable level of operational safety and could affect acceptability to SWTRA as the strategic highway authority.

Stakeholder acceptability

The option attracted both support and opposition during previous public consultations, largely due to concerns regarding property impacts, land take and community disruption. Significant traffic management restrictions during construction may also be opposed by businesses due to the potential economic consequences of disruption on a strategic transport corridor. While some stakeholders may value the increased capacity through Brynglas, concerns regarding long-term effectiveness, construction impacts and value for money are likely to remain significant considerations.

Deliverability, feasibility, and risks

The scheme, would require extensive design development, engagement and consultation, environmental assessment, statutory approvals and land acquisition before construction could commence. Delivering major works alongside a live motorway would be a significant constraint, adding complexity and phasing requirements, resulting in a substantial construction programme.

As a point of reference, the M4 widening between Coryton and Castleton took three years to complete, which required less significant engineering, had fewer complexities and was less constrained in comparison to this option.

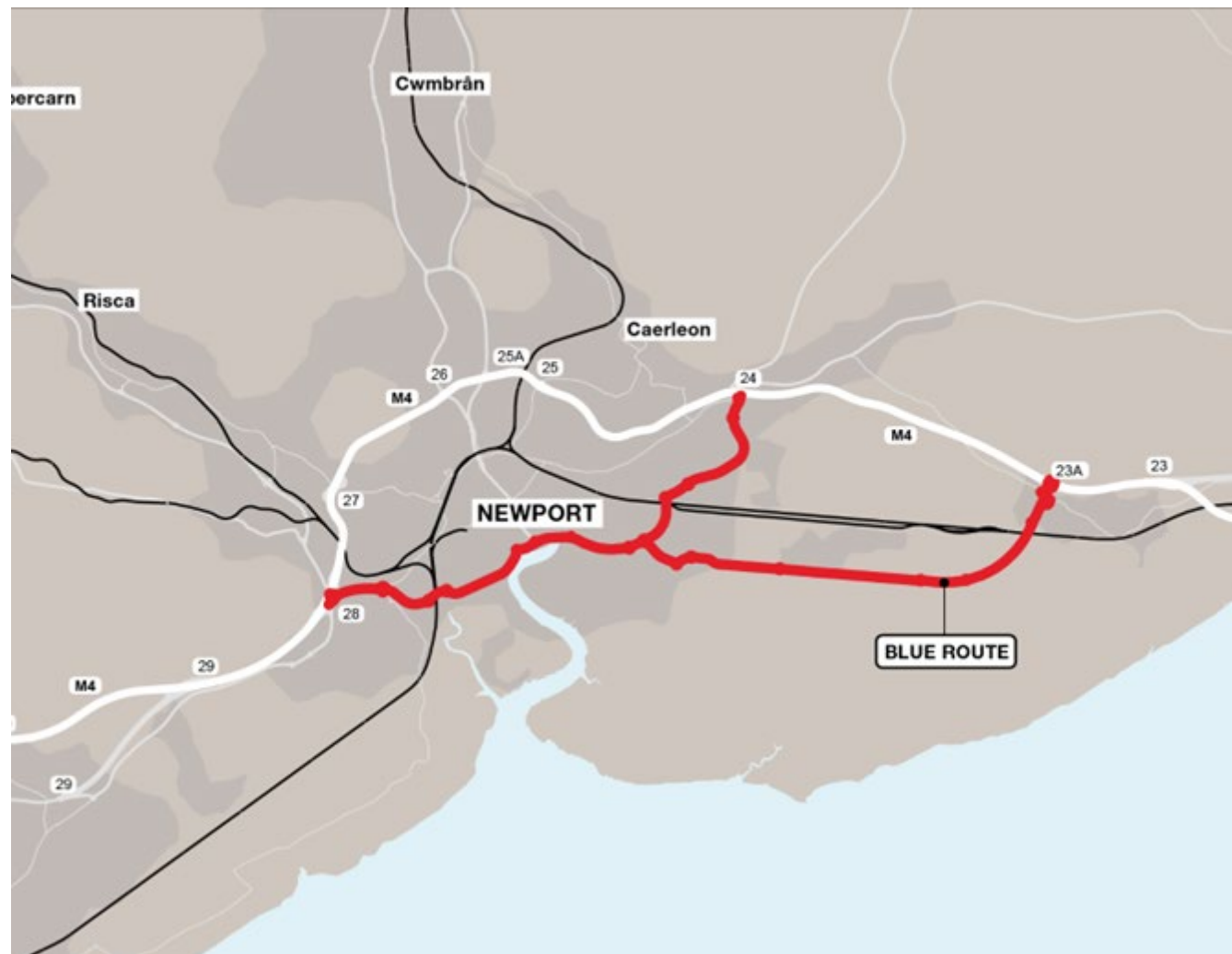
It is estimated that the scheme would take 12 years to deliver and would cause significant disruption to the local highway network for approximately 7 years during construction.

The principal technical challenges and risks associated with this option are:

- **New tunnel** - construction of a new westbound three-lane tunnel adjacent to the existing Brynglas Tunnels while maintaining safe operation of the motorway. There are high engineering risks associated with tunnelling in an urban environment, including ground movement and impacts on properties above the tunnel.
- **Existing aging assets** – the option would require the modification, adaption or replacement of many existing structures, such as overbridges, river crossings and retaining structures. There is significant engineering risk and challenges associated with the design and implementation of these works.
- **Constrained network** – the route of the existing M4 around Newport is urban in nature and highly constrained with property and other land uses. This option requires extensive widening works, which would have significant impact on surrounding land, businesses and property.
- **Network standard and All Lane Running**– the existing M4 alignment and layout does not meet current motorway standards. The design of this option would remain highly constrained by the existing substandard horizontal and vertical geometry, which would make improvement to the standard of road difficult to achieve therefore it is anticipated the existing 50mph speed limit would be required to remain to address residual safety concerns. To accommodate all-lane running of the motorway, there would need to be significant alterations to the existing junctions and connecting roads. Notwithstanding these interventions, achieving acceptance from SWTRA as the operating authority may be challenging, owing to the reliance on departures from standard, continued geometric constraints and the retention of safety-related operational restrictions.

Despite these interventions, the options would not address wider capacity constraints elsewhere on the M4 corridor, and so wider congestion, delay and journey time reliability issues are likely to persist.

Option 1.2 | A48 and A4810 works



Improvements to the Newport A48 SDR and A4810

Description

The A48 and A4810 works includes increased capacity to the Newport A48 Southern Distributor Road (SDR) and A4810 Steelworks Access Road. The proposal seeks to make greater use of these existing roads, which run to the south of and parallel to the M4 through Newport, by increasing capacity and improving key junctions. The route would provide an alternative east–west corridor for traffic travelling through the area and reduce pressure on some sections of the local highway network.

This option primarily addresses the interaction between strategic and local traffic and incident resilience, by providing an alternative east–west corridor, rather than resolving the M4 constraint itself.

This option involves:

- improving and upgrading the existing A48 SDR and A4810 roads to an Urban Dual Carriageway cross section throughout;
- Upgrading and improving the existing at-grade roundabouts and signalised junctions to a combination of junction closures; improved at-grade junctions; and grade separated junctions; and
- Enhancements to the routes to achieve increased safe speed limits to make the route more attractive to motorway traffic.

Key issues

- **Extensive online construction** - the option would require major works along both the A48 SDR and A4810 corridors whilst maintaining traffic flows, resulting in significant traffic management, disruption and lengthy construction programme.
- **Third-party constraints** - the option interacts with major utilities, overhead power lines, strategic pipelines and the Air Products COMAH site. These constraints present significant delivery, safety and statutory approval risks.
- **Environmental and community impacts** - the option has the potential to affect biodiversity, watercourses, designated ecological sites, nearby communities and existing development areas, with increased traffic, noise and air quality impacts.
- **Limited long-term relief to the M4** - despite the scale of intervention, previous appraisal has concluded that it would provide only limited relief to congestion on the M4, with operational issues expected to remain on the motorway and emerge on parts of the A48 and A4810 works as traffic demand grows

Summary of Impact

This option seeks to relieve the motorway by upgrading the existing A48 Southern Distributor Road and steelworks access road to provide an alternative route to the south of Newport, giving local and freight traffic a viable alternative and reducing demand through the constrained M4 corridor.

The capital cost of the scheme is estimated to be £1.8 billion.

It is estimated that the scheme would take 8 years to deliver and would cause significant disruption to the local highway network for approximately 4 years during construction.

It is estimated that this option could reduce traffic on the M4 by up to 6%.

Alignment with other options

Option 1.2 and Option 1.3 share the same A48 interventions and are therefore mutually exclusive i.e. only one can be taken forward.

This option would have a significant impact on the A48, A4810 and local traffic routing through Newport and should not be delivered concurrently with works on the M4 (Options 1.1 or 1.4).

Option 2.3 (Newport-Cardiff BRT) includes dedicated bus priority at Junction 28, which may reduce traffic capacity. A co-designed approach would help consider a solution benefiting all users where possible.

Traffic Impact

Based on the 2016 published ‘Appraisal of Objectors’ Alternative Blue Route Proposals’ it is forecast that this option would reduce traffic by around 6% on the M4 around Newport, but the increased capacity of the A48 could marginally increase traffic levels on the M4 between Junction 28 and Junction 29. Whilst having a short-term benefit, this is likely to be eroded by background growth and latent demand.

The option would improve resilience on the local road network and provide some local accessibility benefits. However, on its own it would not deliver a practical increase in capacity on the M4, with the Brynglas Tunnels still operating above theoretical capacity.

Construction would require significant works within an existing urban transport corridor over a period of several years, causing substantial disruption to local communities, businesses and road users.

If designed well, there could be an opportunity to improve local active travel connectivity, otherwise there is a risk that grade separation could further sever local communities.

Economic Impact

Upgrading the A48 and A4810 to grade-separated junctions would provide some local economic benefits by improving journey time reliability on the Southern Distributor Road and strengthening access to the south of Newport, including employment and retail sites.

Increasing the capacity of the distributor road could also draw trips off the local road network, providing more resilience to the city's road network. This has the potential to reduce congestion within the city itself and, therefore, improve journey reliability and, in turn, generate agglomeration benefits in Newport.

This Option 1.2 provides better access to J23a along the A4810, compared to Option 1.3 (capacity increases to the A48 only). This will improve access to the new residential and employment developments and development opportunities along the A4810 corridor, primarily at the former Llanwern steelworks site. As a result, this option may also help promote the development of new employment and residential sites along the corridor.

Overall, however, the scale of the wider economic benefits are likely to be limited. On its own it would not solve the congestion issues on the M4, and as a standalone intervention it is therefore unlikely to offer strong value for money, with benefits more localised than strategic.

Environmental and Climate Impact

The scheme would result in both direct and indirect impacts on the Gwent Levels SSSIs (the Redwick and Llandeenny SSSI) through widening and works along the A4810, and through increased traffic and emissions along the route. Works to the A48 Usk Way, adjacent to the western side of the River Usk SAC and SSSI, would likely result in land take and ecological impacts, and a Habitats Regulations Assessment would be required.

A full set of ecological surveys would be needed before planning approval, and there are significant risks associated with impacts on SSSIs, which are considered "unacceptable as a matter of principle" under Planning Policy Wales Edition 12. The route also falls within the Gwent Levels National Natural Resource Area (NNRA) Spatial Area and the Gwent Levels Core Zone, as set out in the Draft Strategic Planning Guidance for the Gwent Levels NNRA (Policy 9).

Mitigation requirements for the SAC, SSSIs and NNRA are likely to be moderate, particularly given the requirement to deliver a Net Benefit for Biodiversity, and off-site compensation would likely be required to achieve this.

There are, however, opportunities to deliver the Strategic Principle of the Draft Strategic Planning Guidance for the Gwent Levels NNRA (Policy 9) by safeguarding and strengthening the biodiversity network, improving ecosystem resilience and maximising green infrastructure through the mitigation and compensation measures brought forward.

Social and Cultural

Increased traffic volumes and grade separated junction changes along the A48 and A4810 corridor would create additional severance for pedestrians and cyclists, reducing permeability and making journeys by walking and cycling less attractive. Although alternative active travel routes could be provided, opportunities to enhance walking and cycling infrastructure would be limited.

Increased visual impacts, noise and air pollution, would have negative implications for the health and wellbeing of local communities, while reduced accessibility for local routes could adversely affect physical activity levels and social inclusion.

Approximately 1,500 residential and commercial properties could be adversely affected through land take, resulting in wider equality and community impacts across Newport.

These impacts would be felt particularly by those without access to a private car, including more vulnerable groups.

Planning and Consenting

This option would require agreement from Newport City Council for work on the local highway network, or the use of statutory powers, most likely through a Infrastructure Consent Order (ICO), to secure delivery.

The scheme would present significant ecological consenting challenges due to the direct and indirect impacts associated with widening the A4810 through the Gwent SSSIs at Redwick and Llandeenny. As Planning Policy Wales identifies damage to SSSIs as unacceptable in principle, the scheme would need to demonstrate that impacts have been avoided wherever possible and provide a compelling justification for any residual effects.

The route also passes through the Gwent Levels Nationally Networked Resource Area (NNRA) Spatial Area and Core Zone, where proposals are expected to project and enhance the distinctive wider ecological network. Consequently, the design and consenting process would need to demonstrate the maintenance of habitat connectivity and delivery of biodiversity enhancements.

A Habitats Regulations Assessment would also be required, as works to the A48 Usk Way are located adjacent to the River Usk SAC/SSSI. Potential requirements for off-site biodiversity compensation would further increase consenting complexity, cost and programme risk.

Stakeholder acceptability

The A48 is owned and operated by Newport Council. This option would require agreement of Newport Council, or else statutory processes to deliver.

Significant disruption to local roads during construction would require careful traffic management.

A notable stakeholder, delivery and consenting risk associated with the option relates to the Air Products facility adjacent to the A4810 Steelworks Access Road. The Welsh Government's previous appraisal identified that parts of the route would pass through the Health and Safety Executive (HSE) consultation zone associated with this COMAH (Control of Major Accident Hazards) site, raising potential safety, land use planning and operational concerns. The appraisal noted that HSE may be expected to advise against the A4810 elements of the proposal and that implementation could require review of the site's Hazardous Substances Consent.

Deliverability, feasibility, and risks

This option, although feasible, would require extensive design development, engagement and consultation, environmental assessment, statutory approvals and land acquisition before construction could commence. Construction would be undertaken largely online along the existing A48 SDR and A4810 corridors, requiring significant traffic management, lane restrictions and phased delivery whilst maintaining access for businesses, communities and strategic traffic. The principal technical challenges and risks associated with this option are:

- **Online construction** – the option would be constructed along the existing A48 SDR and A4810 corridors. Delivering multiple grade-separated junctions whilst maintaining traffic flows would present significant construction and traffic management challenges, with associated disruption to local communities, businesses and the wider highway network.
- **Existing urban constraints** – the route passes through a highly constrained urban environment with development, businesses and existing infrastructure located close to the highway boundary. The option would require extensive highway widening and junction modifications, creating risks associated with land acquisition, property impacts and maintaining existing access arrangements.
- **Major structures and junction improvements** – the option includes a number of grade-separated junctions, bridge structures and alterations to existing highway infrastructure, which present significant engineering and construction risks associated with delivering these works.
- **Utilities and existing services** – The corridor contains extensive utilities and infrastructure, including major gas pipelines, overhead power lines and drainage assets. Diversions, protection works and third-party agreements would represent a significant delivery risk and could increase programme duration and cost.

Option 1.3 | Capacity Increases to the A48 Southern Distributor Road



Work to A48 to attract traffic away from M4

Description

This option would improve the A48 Southern Distributor Road (SDR) through a series of junction changes and grade separations at Maesglas Road, Usk Way, Corporation Road, Nash Road, Queensway Meadows, Hartridge Farm and improve traffic flow along the corridor, encouraging east-west traffic, particularly trips with an origin or destination in Newport, to use the A48 SDR and Beatty Road.

The improvements would provide more free-flowing traffic conditions along the A48 SDR, reducing delays associated with existing at-grade junctions and improving journey time reliability. By enhancing the attractiveness of the route for east-west movements, the option aims to encourage local and regional traffic, particularly trips with an origin or destination in Newport, to use the A48 SDR in preference to sections of the M4 around Newport. This would help reduce traffic demand on the motorway and improve overall network resilience.

This option primarily addresses the interaction between strategic and local traffic and network resilience by making the A48 a more attractive alternative, rather than resolving the M4 constraint itself. The key difference between this option and Option 1.2, is works would be focused on the A48 and avoid improvements to the A4810, this may focus more traffic through Junction 24 (which is a busier junction that has more capacity) rather than Junction 23A at Magor Services (which has lower demand but also less capacity).

Key issues

- **Extensive online construction and traffic management** - the scheme would be constructed within the existing A48 SDR corridor and would require multiple grade-separated junctions to be built whilst maintaining traffic flows, resulting in significant construction complexity, disruption and programme risk.
- **Network performance and future capacity** – whilst the option would improve network resilience and increase capacity along the A48 SDR corridor, operational issues would likely remain on the existing M4. This presents a risk to the long-term effectiveness of the option in addressing congestion and wider network performance.
- **Environmental challenges** - The option would result in increased traffic, noise and air quality impacts for communities along the A48 SDR corridor, together with potential effects on biodiversity, watercourses and designated ecological sites.

Summary of Impact

This option seeks to make better use of existing network capacity by upgrading the A48 so that some journeys - particularly shorter, local trips - can be attracted off the M4, easing demand at the pinch point.

Unlike Option 1.2 which provides a longer alternative route to the south of Newport, giving local and freight traffic a viable alternative.

The capital cost of the scheme is estimated to be £1.7 billion.

It is estimated that the scheme would take 8 years to deliver and would cause significant disruption to the local highway network for approximately 4 years during construction.

It is estimated that this option could reduce traffic on the M4 by up to 5%.

Alignment with other options

Option 1.2 and Option 1.3 share the same A48 interventions and are therefore mutually exclusive i.e. only one can be taken forward.

This option would have a significant impact on the A48 and local traffic routing through Newport and could not be delivered concurrently with works on the M4 (Options 1.1 or 1.4).

Option 2.3 (Newport-Cardiff BRT) includes dedicated bus priority at Junction 28, which may reduce traffic capacity. This option can help design benefits to all road users.

Traffic Impact

Based on the 2016 published 'Appraisal of Objectors' Alternative Blue Route Proposals' the A48 and A4810 works indicated that increased capacity at the eastern end of the Steelworks Access Road would encourage very little additional traffic to use the route compared to the A48 and A4810 works itself. On this basis, it could be reasonably assumed that a forecast reduction in M4 traffic of around 5% in the opening year is realistic, which is 1% lower than the previously modelled A48 and A4810 works option (considered as Option 1.2 here).

It is likely that short-term benefits are likely to be eroded by background growth and latent demand, with the 5% reduction backfilling over time.

The option would improve local network resilience and accessibility, particularly to the south of Newport. Construction would cause substantial disruption within an existing urban corridor, though a well-designed scheme could also deliver improvements to local active travel connectivity.

Economic Impact

In terms of economic impact, this Option 1.3 is likely to offer benefits comparable to Option 1.2, as both involve improvements to the A48 Southern Distributor Road. This includes potential improvements in journey time reliability on the Southern Distributor Road, strengthening access to the south of Newport, and drawing trips off the local road network (with potential positive knock-on benefits for congestion and agglomeration).

However, this option does not involve improvements to the A4810, and, as a result, access from Junction 23a to the along the A4810 corridor, including the former Llanwern steelworks site, would not be improved. Therefore, it would not generate the potential access and development benefits along the A4810.

Similarly, this option would not solve the congestion issues on the M4, and as a standalone intervention it is therefore unlikely to offer strong value for money, with benefits more localised than strategic.

Environmental and Climate Impact

The scheme would avoid direct impacts on the Gwent Levels SSSIs, but lies adjacent to the Gwent Levels National Natural Resource Area (NNRA) and partly within the Gwent Levels Recovery (Opportunity) Zone. Works to the A48 Usk Way, adjacent to the western side of the River Usk SAC and SSSI, would likely result in land take and ecological impacts, and a Habitats Regulations Assessment would be required. Increased traffic and emissions along the route would also need to be considered.

Woodland and mature trees are present around the A48 south of M4 Junction 24. Planning Policy Wales Edition 12 requires 3:1 replacement of any trees lost, and a full set of ecological surveys would be needed before planning approval, together with wider mitigation to deliver a Net Benefit for Biodiversity.

Protected species are likely to be present, including dormice in woodlands and bats in trees and buildings, and Protected Species Licences would likely be required to work in these areas.

There are, however, opportunities to deliver the Strategic Principle of the Draft Strategic Planning Guidance for the Gwent Levels NNRA (Policy 9) by safeguarding and strengthening the biodiversity network, improving ecosystem resilience and maximising green infrastructure through the mitigation and compensation measures brought forward.

Social and Cultural

Increased traffic volumes and the introduction of grade-separated junctions along the A48 and A4810 corridor would create additional barriers for pedestrians and cyclists, reducing connectivity and making walking and cycling less attractive. While alternative active travel routes could be provided, opportunities to enhance active travel infrastructure would remain limited. Greater visual intrusion, noise and air pollution could adversely affect the health and wellbeing of local communities. Reduced accessibility across local routes may also discourage physical activity and weaken social connectivity.

Land take requirements could adversely affect approximately 700 residential and commercial properties, resulting in significant community and equality impacts across Newport (although impacting around half fewer properties when compared to Option 1.2).

These effects would be felt most acutely by those without access to a private vehicle, including many of the most vulnerable members of the community.

Planning and Consenting

The option would likely require an Infrastructure Consent Order, supported by a full Environmental Impact Assessment and Transport Assessment. Extensive ecological, arboricultural, heritage, air quality, noise and geological surveys would be required to support the design and consent process. The proposed grade-separated junction works would also require the resolution of local land ownership, access arrangements and associated rights, which could add complexity to the design and consenting process.

The route is located adjacent to the Gwent Levels Nationally Networked Resource Area (NNRA) and partially within the Gwent Levels Recovery Zone, placing strong emphasis on the protection and enhancement of ecological network and green infrastructure. A Habitats Regulations Assessment would be required due to the proximity of work to the River Usk SAC/SSSI at Usk Way.

Protected Species Licenses are likely to be required for species such a dormice and bats, while Planning Policy Wales requirements for Net Benefit for Biodiversity and replacement planting ratios would require extensive mitigation and potential off-site compensation measures.

Stakeholder acceptability

The A48 is owned and operated by Newport Council. This option would require agreement of Newport Council, or else statutory processes to deliver.

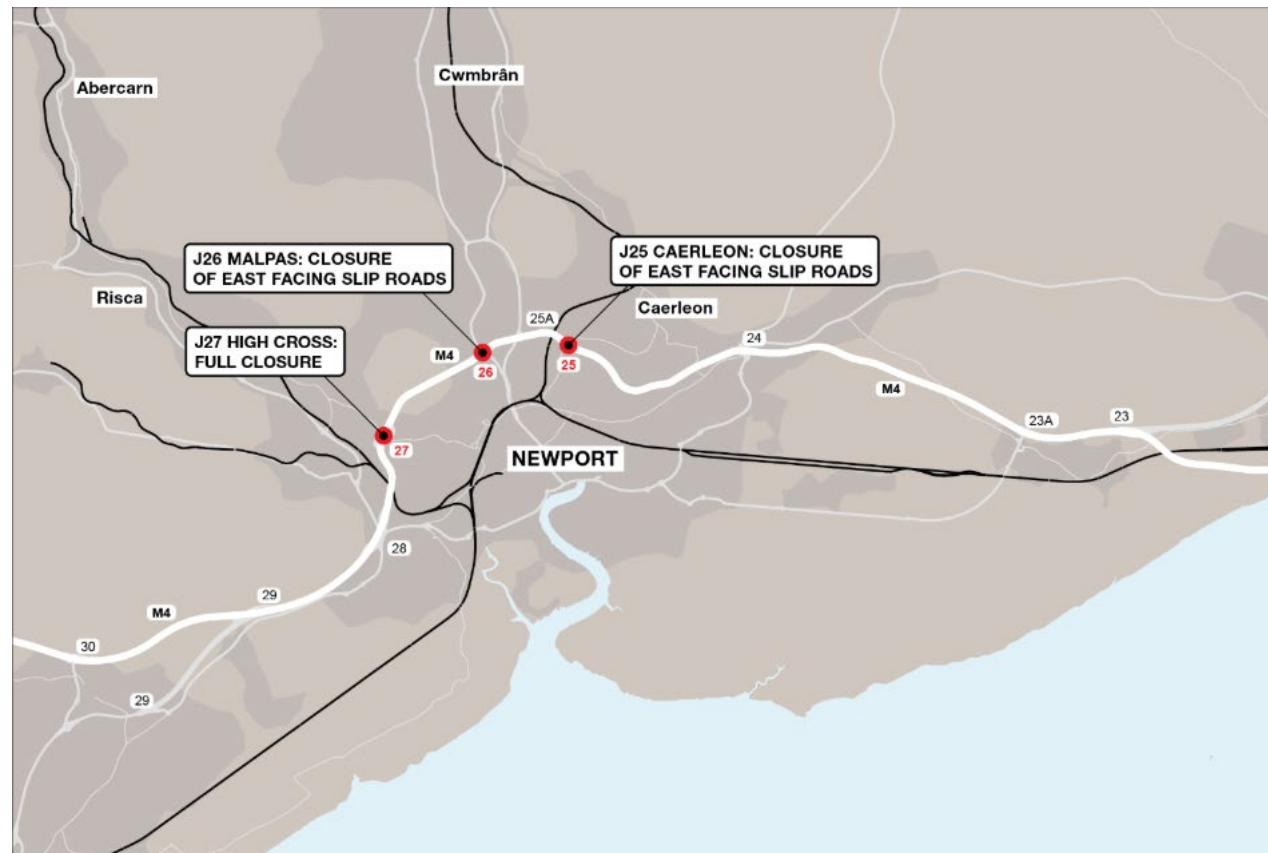
Significant disruption to local roads during construction would require careful traffic management.

Deliverability, feasibility, and risks

The deliverability, feasibility and risks of this option are similar in nature to that of Option 1.2 (A48 and A4810 works), except due to the lesser extents of intervention are relatively less onerous. Construction would be undertaken largely online along the existing A48 Southern Distributor Road corridor, requiring significant traffic management, lane restrictions and phased delivery whilst maintaining traffic flows and access to surrounding communities and businesses. The principal technical challenges and risks associated with this option are:

- **Online construction** – the option would be constructed along the existing A48 SDR corridor. Delivering multiple grade-separated junctions whilst maintaining traffic flows would present significant construction and traffic management challenges, with associated disruption to local communities, businesses and the wider highway network.
- **Existing urban constraints** – the route passes through a highly constrained urban environment with development, businesses and existing infrastructure located close to the highway boundary. The option would require highway widening, junction modifications and changes to existing access arrangements, creating risks associated with land acquisition and impacts on neighbouring properties and businesses.
- **Junction improvements** – the option includes several grade-separated junctions and bridge structures, including improvements at Pont Ebbw, Maesglas, Docks Entrance, Usk Way, Corporation Road, Leeway Junction and Hartridge Farm. There are significant engineering and construction risks associated with delivering these works within an operational urban corridor.
- **Utilities and existing services** – the corridor contains extensive utilities and infrastructure, including overhead power lines, drainage assets and other buried services.

Option 1.4 | Changes to the existing M4 and its management to improve traffic flow



Junction and partial junction closures

Description

This option would see several of the existing M4 junction closed, either in part or in full. The changes to the access and egress changes to the M4 would like be:

- J27 High Cross - Full closure;
- J26 Malpas - Closure of east facing slip roads; and
- J25 Caerleon - Closure of east facing slip roads (noting that the west facing slips are already closed except for emergency vehicles).

This option prioritises the strategic function of the M4 by to reducing the use of the M4 by local traffic, particularly through the critical Brynglas Tunnels section, and to reduce delays caused by merging, diverging and weaving movements at these closely spaced junctions. Alternative combinations of slip road closures may also be viable, but have not been considered in detail at this stage.

Key issues

- **Traffic impact on local road network** – this option would increase traffic on local roads across Newport, in particular around Malpas, High Cross, and Ridgeway, placing greater reliance on the local road network. Junction 27 is particularly well used, and redistribution would likely cause significant local impacts around nearby Junction 28.
- **Local access from M4** - access to Newport would be reduced, either directly through junction closures or indirectly as displaced traffic uses alternative routes and causes congestion.
- **Motorway capacity** – this option would not significantly address the wider capacity issues and would reduce accessibility for nearby residential areas who would be forced to seek alternative routes.
- **Support and objection** - this scheme would likely be unpopular with the local community and could result in Newport Council objecting to junction closures due to the increase in congestion in the city as a result without an appropriate package of local mitigation measures being agreed.

Summary of Impact

The capital cost of the scheme is estimated to be £14 million.

It is estimated that the scheme could take less than 2 years to deliver with Experimental Traffic Orders with limited physical works to release the impact.

It is estimated that this option could reduce traffic on limited sections of the M4 by up to 3%.

Alignment with other options

This option complements widening of the Brynglas Tunnels (Option 1.1) by increasing junction spacing and helping to achieve modern designs standards. This would help achieve potential capacity improvements, reduce complexity and challenges of delivering Option 1.1 in isolation.

This option could be complimented by Option 1.2 (A48 and A4810 works and Option 1.3 (A48 improvements), which would in part mitigate the impacts on local connectivity.

Traffic Impact

The improved junction spacing along the existing motorway corridor around Newport could slightly increase the theoretical capacity of the corridor by reducing the number of cars joining and leaving the motorway. Based on current traffic movements and first principal assumptions, it is assumed that this option could remove around 3% of traffic through the Brynglas Tunnels and around 2% between Junction 24 and Junction 25:

- **Closing Junction 27** – most trips are likely to reassign to Junction 28, having a negligible impact on the number of cars through our study area, but it would reduce the number of merging/weaving movements and therefore help the flow of traffic.
- **Closing the east-facing slips at Junction 26** – most trips are likely to reassign to Junction 25A, providing some traffic reduction through the Brynglas Tunnels.
- **Closing the east-facing slips at Junction 25** – depending on the direction of travel, some trips may reassign to Junction 25A or to Junction 24, providing some traffic reduction through the Brynglas Tunnels.

However, local trips in the area would be affected, either directly through junction closures or indirectly as displaced traffic uses alternative routes and causes congestion.

Economic Impact

Closing selected junctions could prioritise long distance traffic including freight movements. However, economic benefits to long distance traffic are likely to be offset by reduced access to Newport and traffic displacement onto less suitable local routes, which could increase journey times, reduce access reliability and add costs for residents and businesses that rely on access to these junctions.

As such, there is a risk that economic costs would be redistributed rather than reduced, with poorer access for local businesses and increased congestion, noise and delay on alternative routes.

The option would also not materially increase capacity or contribute to increased resilience of the M4 around Newport. Under this option, the M4 would remain vulnerable during incidents or delays, with limited alternative capacity for the movement of people and goods.

Therefore, despite this option's relatively low capital cost, value for money is likely to be constrained by limited benefits and potential adverse accessibility and local economic impacts. The option may provide some local operational benefits but is unlikely to deliver the wider productivity, resilience or agglomeration benefits of a more comprehensive M4 corridor intervention.

The capital cost would be relatively affordable, but the option would likely provide limited long-term value for money.

Environmental and Climate Impact

The option would avoid direct impacts on the Gwent Levels SSSIs, the River Usk SAC/ SSSI and other designated sites south of Newport, as works would be confined to the existing motorway corridor and junction infrastructure. Ecological impacts are expected to be limited given the minor nature of the works, although targeted surveys may still be required to identify any protected habitats or species. There would also be opportunities to deliver biodiversity enhancement through habitat creation, tree planting and the management of decommissioned slip roads, helping to achieve a Net Benefit for Biodiversity.

The closure of junction slips would increase traffic on parts of the local road network, leading to higher noise levels and poorer air quality for some communities within Newport. However, impacts on the Gwent Levels and other environmentally sensitive areas south of Newport would be avoided. Existing noise and air quality issues associated with congestion and operational constraints on the M4 north of Newport would largely remain unchanged.

As the option would not increase highway capacity and is expected to displace some localised M4 traffic operational greenhouse gas emissions are likely to remain neutral. Some localised increases may occur where traffic is moved onto longer or more congested local routes, although these effects are expected to be limited. Embodied carbon would be very low due to the minor nature of the work and the absence of major construction activity.

Social and Cultural

This option would provide some localised benefits through improvements at Junction 25 and 26, where reducing conflicting movements on the roundabouts would improve accessibility and traffic circulation for all users.

The scheme would also avoid the severance and community impacts associated with routes to the south of Newport and could create opportunities to enhance facilities for pedestrians and cyclists around the upgraded junctions in the future.

However, the overall social benefits would be limited. Transport safety and personal security impacts would remain adverse due to ongoing congestion and delays on the wider motorway network, while the closure of slip roads would discourage some local traffic from using the motorway. Although these would be opportunities to improve conditions for non-motorised users locally, accessibility and social inclusion benefits would be more limited.

Strategic traffic would continue to experience congestion and delays, reducing the overall effectiveness of the scheme in addressing wider transport and accessibility challenges across the corridor.

Planning and Consenting

This option could be trialled initially through temporary measures, such as road markings and signage, requiring an Experimental Traffic Regulation Order. This phased approach before any permanent physical closures are implemented would enable the impacts of the scheme to be assessed in practice and could help reduce planning and delivery risk.

Works are unlikely to require planning permission and could be regularised through the Highways Act 1980 and permitted development rights afforded to the highway authority.

The option avoids direct impacts on the environmentally sensitive Gwent Levels and River Usk designations, significantly reducing the scope of environmental assessment requirements and the likelihood of major ecological consenting issues. The scheme is unlikely to require an Environmental Statement.

The redistribution of traffic onto local roads could result in increased congestion, noise and air quality impacts in these communities. As a result, Newport City Council may raise objections to junction closures due to concerns regarding city centre traffic conditions, which could lead to delays in any approvals process.

In summary, whilst environmental constraints are comparatively limited, the option would still need to be progressed through the appropriate Traffic Regulation Orders and statutory approval processes.

Stakeholder acceptability

Public acceptability is likely to be low among users of the junctions impacted, in particular those who use the M4 for more local journeys and for direct access. Local business groups are likely to oppose the option, as it would not address the M4's long-term transport and resilience issues, without suitable alternative options for providing local access. This option might be seen favourably by environmental groups as an alternative to more infrastructure intensive options.

Deliverability, feasibility, and risks

From a technical and operational perspective, the option would introduce minimal additional engineering or operational issues beyond those already experienced on the M4 mainline.

Construction would affect M4 traffic, however this would be for a relatively short period of time.

The risk of construction delivery would be substantially lower than for more infrastructure-intensive schemes, due to the relative simplicity.

This option could be trialled using temporary measures, including traffic management, road markings and signage only, without physically removing junction infrastructure (e.g. slip roads).

The Welsh Government could also investigate the potential for temporary junction closures at peak times or during delays, through 'ramp metering'. This approach would help manage traffic flows onto the M4, avoiding permanent closures.

Option 1.5 | Traffic management measures including re-routing via A465



Measures to encourage better use of the A465 with signage and HGV rest facilities

Description

This option would promote greater use of the A465 as an alternative route to the M4, particularly for longer-distance and HGV traffic that could avoid the most congested sections of the M4 around Newport. The option would build on the significant improvements delivered along the A465 in recent years, which have removed key bottlenecks, improved safety and increased the route's attractiveness as a strategic east-west corridor.

To encourage uptake, the scheme could include fixed signage directing suitable traffic towards the A465 from the M4 and M5, supported by variable message signs to enable active route management during periods of congestion, incidents or reduced capacity on the M4.

HGV driver rest facilities would enhance and complement the routing strategy by making the A465 more practical and attractive for freight operators, particularly given the recognised demand for additional driver welfare and secure parking provision.

Incremental measures could assist affordability and delivery, for example initial diversionary signage, variable message signs and then HGV stop facilities.

This option primarily addresses incident resilience by promoting an alternative route during disruption on the M4, with limited effect on day-to-day peak congestion.

Key issues

- **Network performance and future capacity** – the option would encourage longer-distance traffic, including HGVs, to reroute via the A465, A40 and M50 corridors, helping to redistribute some traffic away from the M4 around Newport. However, it would not significantly address the underlying capacity, congestion and resilience issues on the existing M4. As a result, operational constraints on the M4 motorway network would likely remain, limiting the long-term effectiveness of the option in improving overall network performance.
- **HGV driver rest facilities** - there is a recognised shortage of suitable HGV driver rest facilities in the region. New or expanded HGV rest facilities would require planning permission and site-specific environmental assessment.
- **Behaviour change**- the A465 is often longer and less direct than the M4, so many freight operators may continue to use the motorway without strong operational benefits.

Uptake through signage alone is likely to be negligible on a typical day, with diversion more likely only during significant congestion, delay or incident effectiveness depends heavily on driver uptake. There could be increased uptake by road freight including HGVs with new attractive rest stop facilities.

A Wales Freight Strategy could help encourage some HGV movements away from the M4 around Newport and onto the A465 by creating a clearer policy and operational framework that recognises the different roles of each route

Summary of Impact

The capital cost of the scheme is estimated to be £49 million.

The scheme could be delivered in phases with the later phase being the HGV driver facilities which would take 3 years with minimal impact to the existing highway network.

It is estimated that this option could reduce traffic on the M4 by 1%, this is the equivalent of one HGV every 6 minutes, but has the added benefit of rerouting long distance traffic when there is an incident on the motorway.

Overall, this option would be relatively low cost and straightforward to implement compared with more infrastructure-intensive interventions. While it would not remove the need for improvements to the M4 itself, it could provide a useful supporting measure by improving network resilience and drivers a clearer alternative during periods of disruption.

Alignment with other options

This option complements Options 1.1-1.4 by increasing the A465 attractiveness to encourage it as an alternative route, especially for freight.

Traffic Impact

The A465 could provide an alternative, high-quality route, particularly during incidents on the M4, but it would not directly resolve the operational problems around Newport. Having formally opened in May 2025, use of the A465 by traffic that would otherwise use the M4 around Newport is likely to be a supporting resilience measure rather than a standalone solution.

Drivers may only divert to the A465 if it is clearly advantageous. For many east–west trips it is likely to be longer and less direct than the M4, so on a typical day uptake through signage alone is negligible; diversion is more likely during significant congestion (i.e. an incident on the M4). Rather than relying on tools such as Google Maps (and other similar satellite navigation) to respond once congestion has built, variable message signs further away (e.g. Port Talbot or Monmouth) could pre-emptively route traffic onto the A465 at the early signs of congestion.

The option may be more relevant to some longer-distance HGV traffic between Monmouth and Swansea.

Improved lorry stopping facilities along the A465, addressing the off-site parking and driver welfare pressures identified in the recent Welsh lorry parking survey, could help encourage some longer-distance freight to switch. However, freight operators are sensitive to journey time and other factors and may continue to use the M4 without strong operational benefits.

Around 14% of the traffic on the M4 during the peak hour are HGV's, with a smaller percentage being long distance trips. It is likely that the A465 corridor is more attractive to trips between the M5 north of Gloucester and Swansea, if they are not already on the A465. It is therefore estimated, based on these first principle assumptions, that this option will divert less than 1% of trips off the M4 through the study area.

Economic Impact

Promoting the A465 as an alternative route could improve network resilience by providing a clearer diversion for suitable long-distance and freight traffic during incidents or severe congestion on the M4. This may reduce disruption to supply chains and improve journey reliability for some businesses. Improved HGV rest facilities could also make the route more practical for freight operators and support driver welfare.

The option is relatively low-cost and straightforward to deliver, but its economic benefits are likely to be modest during normal conditions because the A465 is longer and less direct for many journeys. Its value for money therefore is likely to depend heavily on driver uptake and its effectiveness during periods of M4 disruption.

Additional traffic also has the potential to create localised congestion and adversely affect communities and businesses along the A465 and connecting routes. Therefore, the option may be most suitability considered as a resilience measure, rather than a standalone solution.

Environmental and Climate Impact

This option would avoid direct impacts on the Gwent Levels SSSI and other designated sites south of Newport, as it relies primarily on signage, information and operational measures rather than major new infrastructure. Land take and habitat loss would therefore be limited, although some ecological impacts could arise from improvements to deliver rest facilities and pull-in areas, where targeted ecological surveys may be required. Opportunities would also exist to deliver biodiversity enhancement and a Net benefit for Biodiversity along the route, although off-site compensation may be needed depending on the extent of any habitat loss.

Redistributing freight and longer-distance traffic onto the A465 Heads of Valleys corridor could result in localised increases in noise and reduced amenity for communities along that route, requiring appropriate mitigation. Alternatively, communities along the most constrained sections of the M4 around Newport could experience some localised relief from traffic related impacts. Air quality effects are expected to be similarly mixed, with some increases in vehicle emissions along the A465 corridor but corresponding

reductions elsewhere on the network. Overall, changes are likely to be comparable to those previously assessed as part of the A465 development.

Operational greenhouse gas impacts are expected to be modest and would largely reflect a redistribution of traffic across the network rather than a significant increase in overall emissions. Embodied carbon would be low given the limited infrastructure required and the reliance on operational and behavioural measures rather than major construction activity, measures to encourage better use of the A465.

Social and Cultural

With the A465 corridor providing an important strategic connection between the Heads of Valleys and major employment and healthcare centres in Newport, Cardiff and Swansea, enhancing its role as an alternative route to the M4 would modestly improve accessibility and support economic opportunities for communities within some of the most deprived areas of Wales.

The option would also deliver health and wellbeing benefits for the freight sector through the provision of improved HGV driver rest facilities, helping to address issues associated with driver fatigue and poor access to suitable rest areas.

By encouraging the redistribution of freight and longer-distance traffic away from the most constrained sections of the M4 around Newport, the scheme could reduce the impact of heavy goods vehicle on local communities and improve perceptions of safety for other road uses, including pedestrians, cyclists and motorcyclists.

As the option relies primarily on signage, information and operational measures rather than a major new infrastructure, it would avoid many of the construction-related impacts associated with larger highway scheme, such as extensive land take, property loss, community severance and prolonged disruption. However, any increase in through-traffic, particularly HGV movements, along the A465 corridor could result in localised adverse effects on nearby communities through increased noise, severance and reduced amenity, requiring careful consideration of the balance between benefits for Newport and impact on settlements along the Heads of The Valleys route.

Planning and Consenting

This option relies primarily on signage, information provision and improved HGV driver rest facilities rather than major new infrastructure, significantly reducing the consenting requirements. It avoids many of the planning and environmental challenges associated with large scale highways scheme, including significant land take or property acquisition.

New or expanded HGV rest facilities would require planning permission and site-specific environmental assessment. While the option avoids direct impacts on Gwent Levels and River Usk designations, localised impacts on communities along the A465 corridor, including noise, amenity and severance effects, would require consideration and mitigation. The need for an Environmental Statement is unlikely.

Stakeholder acceptability

The redistribution of traffic onto the A465 corridor could place additional pressure on key junctions and links between the M4, A449, A40 and A465, potentially transferring congestion to other parts of the network. Increased traffic flows may also result in localised capacity, safety, noise and air quality impacts along the corridor and connecting routes. Community concerns regarding increased traffic levels and associated environmental effects may affect public acceptability, whilst businesses may question whether the option provides sufficient reliability benefits for strategic movements.

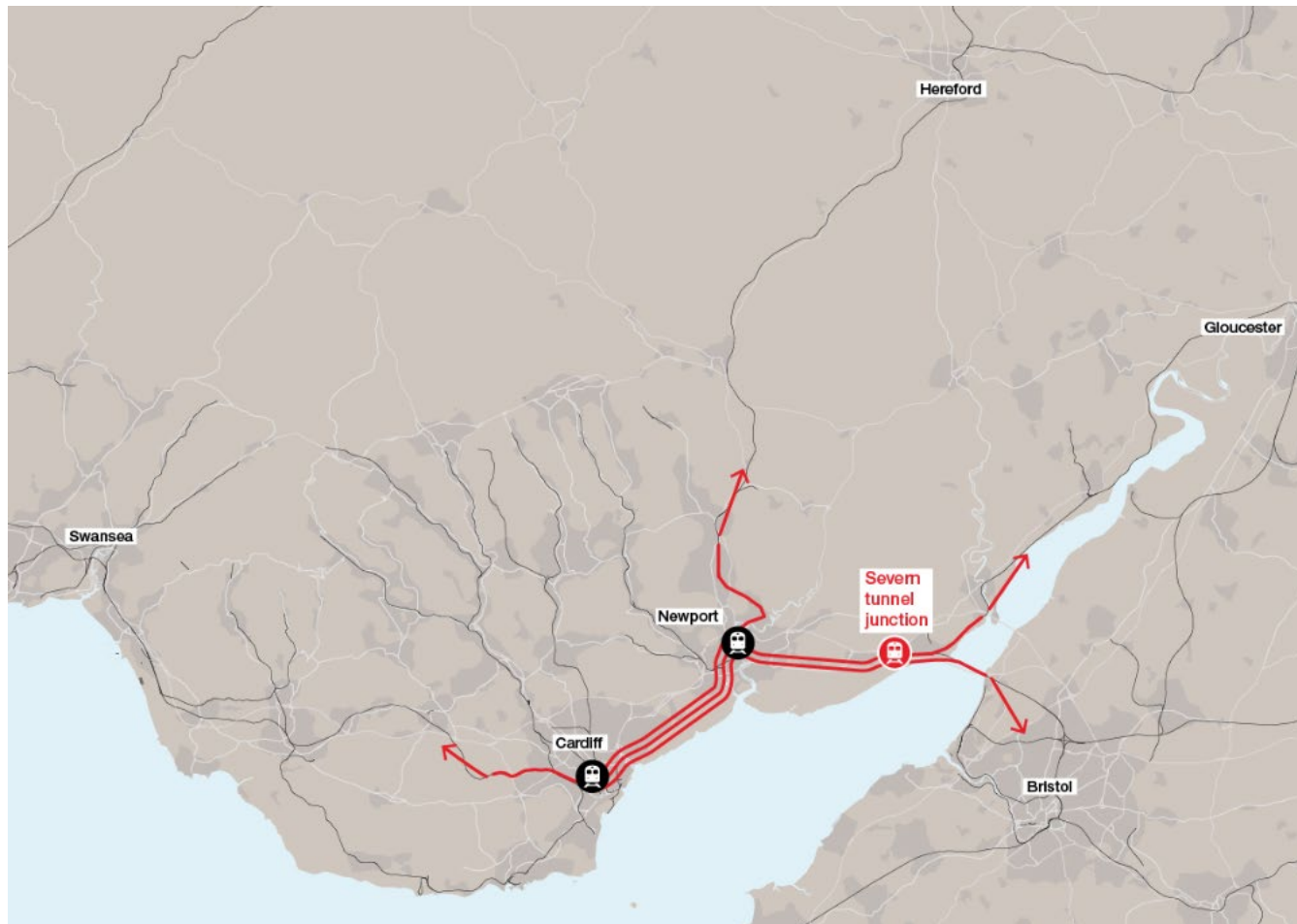
Deliverability, feasibility, and risks

This option offers a relatively low-cost and less infrastructure-intensive intervention compared with major highway enhancement schemes. However, its effectiveness would rely heavily on change of driver behaviour, particularly HGV and long-distance traffic, to divert via the A465. As a result, the option is unlikely to fully address the underlying congestion, capacity and resilience issues on the M4 around Newport and may provide limited benefits unless the alternative route offers a clear journey time or reliability advantage during incidents or periods of severe congestion

The provision of new HGV facilities could enhance the attractiveness of the route for strategic freight movements and improve driver welfare. However, delivery would require the identification of suitable sites in close proximity to the A465, together with the securing of planning permissions, land agreements and other statutory consents. Existing service providers and businesses along the corridor may also oppose new facilities where they are perceived to compete with established operations.

Successful implementation would depend on effective traffic management, route signing and stakeholder engagement. In particular, the installation of strategic signage on the M5 would require agreement and approval from National Highways. Whilst construction activities associated with signage, traffic management measures and any new HGV facilities would affect users of the A465, M4 and M5 corridors, the scale of disruption and delivery risk would be substantially lower than for more infrastructure-intensive highway schemes.

Option 2.1 | Additional rail services on the existing mainline



Additional rail services on existing lines

Description

This package includes rail improvements through the corridor which include:

- Additional Transport for Wales (TfW) services between West Wales and Bristol Temple Meads (one additional train every two hours);
- Extra services between Cardiff and Gloucester (one additional train per hour);
- Extra services between Cardiff and Hereford (one additional train per hour); and
- In addition, enhancements at Severn Tunnel Junction would improve access to the rail network through better station facilities, walking and cycling links, and connections to the new station car park.

Alongside these service improvements, enhancements at Severn Tunnel Junction would improve access to the rail network through better station facilities, interchange, walking and cycling links, and connections to the new station car park.

Development of these options is currently underway and together, these measures would improve rail connectivity across the corridor, make rail a more attractive alternative for journeys to and from South East Wales.

Key issues

- Access improvements to Severn Tunnel Junction – this may induce more car trips on the local road network, but these are likely to be negligible on the M4 corridor.
- The South Wales Main Line – this suffers from capacity constraints, particularly during the peak periods when the services would add the biggest benefit to the M4. Additional works would be needed to enable timetabling of extra services.
- Improvements to the Relief Line (as part of Option 2.2) – this would help unlock line capacity, allowing new stopping services to run without constraining the fast intercity trains.
- A business case has been issued to UK Government by TfW, detailed considerations ongoing.

Summary of Impact

The capital cost of the scheme is estimated to be £30 million, which would include Severn Tunnel Junction improvements, but it may also require additional depot/stabling arrangements at additional cost, which is currently being investigated by TfW.

To operate the additional services 9 extra trains would be required, at an estimated cost of £121 million, with an annual operating cost of £26 million.

It is estimated that the scheme would take 5 years to implement.

It is estimated that this option could reduce traffic on the M4 by up to 1%.

Alignment with other options

Options 2.1 and 2.2 are complementary rather than competing. The additional mainline services e.g. West Wales to Bristol have fewer stops and offer the faster journey through the study area, whereas the Burns stations and stopping services provide more regular stops and absorb local trips between stations. The two therefore work together to serve different markets across the corridor.

Traffic Impact

Increasing the frequency of longer-distance rail services would strengthen rail's role as a viable alternative to strategic car travel on the M4 corridor.

The proposed enhancements include an additional service every two hours between Cardiff and Bristol Temple Meads (expected to commence from 2027), alongside potential additional hourly services between Cardiff and Gloucester, and Cardiff and Hereford. Together, these services would improve connectivity to key destinations at both ends of the corridor and beyond the study area.

Depending on the rolling stock, the additional services could provide capacity for a further 500 seats in the peak hour.

A first-principles assessment, informed by Passenger Demand Forecasting Handbook guidance, has been used to estimate the likely uplift in rail demand. As long-distance services, they offer a direct alternative to those currently using the M4 and would likely result in a shift from car to rail, with a minimal reduction of demand on the motorway. A 1% reduction in peak hour traffic on the M4 has been estimated through the study area.

Improvements at Severn Tunnel Junction, including better station access, interchange facilities, and expanded park-and-ride, would encourage more rail trips, but may also generate additional local car trips to and from the station during the peak hour.

Economic Impact

Improved rail services could encourage mode shift from car to rail, taking longer-distance car trips off the M4. The new rail passengers will also generate additional rail revenue to help offset the cost of operating the services.

Beyond the catchments of the existing stations served by these improved longer-distance rail services, access to the rail network will remain challenging. There may be less mode shift as a result, because driving will be more attractive for those flows. However, improvements to local rail services in the Cardiff and Newport areas should enhance access to long distance rail and improve the attractiveness of rail for a wider range of flows.

Freight traffic and local trips would continue to use the M4 but a reduction in longer-distance car trips should help improve journey times and reliability.

Transport for Wales are responsible for advising the Welsh Government on the value for money of this option, with work ongoing.

Environmental and Climate Impact

The additional rail services would result in increased emissions, along with associated carbon during enabling works.

Habitat loss is expected to be minimal and would relate primarily to line improvements, electrification works and associated infrastructure, although part of the affected area falls within the Gwent Levels Site of Special Scientific Interest (SSSI). Where habitat loss occurs, targeted ecology surveys are likely to be required. However, the works are likely to constitute permitted development, provided they remain within the limits of deviation.

There would also be opportunities to deliver net biodiversity benefit along the rail estate to help mitigate any impacts.

Physical works at Severn Tunnel Junction, including the associated car park and new access road, would have a greater environmental footprint than the rail service enhancements. These works would involve land take and localised habitat loss and would require targeted ecology surveys.

Social and Cultural

Increasing the service frequency would make the existing connections more attractive to people and provide more flexibility in their travel times.

Enhancements at Severn Tunnel Junction station, including improved passenger facilities, interchange opportunities, walking and cycling connections and links to a new station car park, would strengthen access to the rail network and improve the overall passenger experience for residents.

By encouraging a shift from private car use to public transport, the option would help reduce car dependency, contributing to wider health, air quality and well-being objectives.

Improved cross-border rail services would also strengthen connections between key communities and economic centres across South Wales, Bristol, and South West England, supporting great social inclusion, accessibility and regional integration while enhancing opportunities for employment, education and leisure travel.

Planning and Consenting

Offline access works at Severn Tunnel Junction is likely to require planning permission, supported by appropriate technical and environmental assessments. Should a new highway option on the Strategic Road Network exceed 1km in length, it would likely require an Infrastructure Consent Order, but should the road remain a local highway, then planning permission and necessary Highway Act Orders are likely needed. EIA Screening would determine whether an Environmental Statement would be needed. At this stage it is assumed a scheme would not require EIA.

The rail service enhancements themselves would not require planning permission. Associated line improvements are like to be delivered under permitted development rights, provided they remain within the established rail corridor and delivered between Transport for Wales and Network Rail.

Environmental assessment would be required where rail works affect sensitive habitats. Parts of the rail corridor pass through the Gwent Levels SSSI, and any habitat loss would require targeted ecological surveys and potentially a Habitats Regulations Assessment.

Deliverability, feasibility, and risks

Running additional services would likely have an impact on timetabling, particularly given the capacity constraints on the South Wales Main Line at peak times, which would need to be carefully managed. Improvements to the Relief Line (as part of Option 2.2) would help unlock line capacity, allowing new stopping services to run without impacting freight and the fast intercity trains.

The proposed passenger service would require investment in new trains and depot/staging facilities, which could impact the delivery window. Whilst new trains can take around 4 years to acquire there is an opportunity to use older ‘off-lease’ units on a short-term basis.

There are currently several access options being developed for Severn Tunnel Junction, to improve and encourage access to the station as a park and ride site. Some of the proposed options include a new access road off the M48, which may have some localised impact on the trunk road.

Option 2.2 | New rail stations and services



New rail stations and services between Cardiff Central and Severn Tunnel Junction

Description

Six new stations are proposed on the South Wales Mainline relief lines between Cardiff and Severn Tunnel Junction as part of the Burns Commission and are currently being developed by TfW:

- Cardiff East;
- Newport West;
- Somerton (Newport East);
- Llanwern;
- Magor & Undy; and
- Cardiff Parkway at St Mellons which form part of the wider Hendre Lakes development.

A new urban rail service is proposed, stopping at the new intermediate stations. To facilitate the new service without impacting freight and faster intercity services, track upgrades are proposed. Upgrades would be to around 27 miles of the existing South Wales Relief Lines, rather than the mainlines, between Cardiff Central and Severn Tunnel Junction, increasing the line speed from 40mph to 100mph offering similar capacity to the mainlines.

Stations are designed for 6/8-car operation to allow for future growth. Proposed services include a new Cardiff–Bristol service and an enhanced Cardiff Cheltenham service.

Key issues

- This is a non-devolved, is committed by the UK Government and has partial funding allocation within Rail Network Enhancement Pipeline RNEP.
- **Investment in new trains and depot/staging facilities** – this would impact the delivery window. New trains can take around 4 years to acquire.
- **Cardiff Parkway** – has received planning permission.
- Detailed considerations are ongoing and led by TfW.

Summary of Impact

The capital cost of the scheme is estimated to be £800 million and may also require additional depot/stabling facilities.

To operate the new services 8 extra trains would be required, at an estimated cost of £116 million, with an annual operating cost of £26 million.

It is estimated that the scheme would take 6 years to implement.

It is estimated that this option could reduce traffic on the M4 by up to 6%.

Alignment with other options

Options 2.1 and 2.2 are complementary rather than competing. The additional mainline services e.g. West Wales to Bristol have fewer stops and offer the faster journey through the study area, whereas the Burns stations and stopping services provide more regular stops and absorb local trips between stations. The two therefore work together to serve different markets across the corridor.

Whilst providing a different function, there may be some duplication of service between Options 2.2 and 2.3, with both public transport options providing a regular stopping service between South Newport and Cardiff Central.

Traffic Impact

The six new stations are proposed on the South Wales Mainline relief lines between Cardiff and Severn Tunnel Junction, supported by the South Wales Relief Line Upgrade. These are accompanied by a new Cardiff to Bristol service and an enhanced Cardiff to Cheltenham service.

Depending on the rolling stock, the additional services could provide capacity for a further 2,300 to 4,600 passengers in the peak hour. Capacity here refers to the number seated and standing on the trains, which is a crude measure, as passengers will use different sections of the service.

Early estimates indicate that the 4 trains per hour could generate around 2.2 million new rail trips per year (about 7,000 per day).

Additional high-level assumptions have been applied to estimate the abstraction of trips off the M4. These include a 50% car-diversion factor, typical car occupancy rates, and an adjustment to M4 traffic, recognising that some abstraction will come from parallel routes such as the A48.

Based on these first principal assumptions it is therefore assumed that around 6% of cars could be removed from the M4 during the peak hour, but more analysis would be required to understand if some sections of the M4 (i.e. the western end between Newport and Cardiff) would receive more benefit than others.

Any capacity released is likely to be partially backfilled by new traffic. The proposals therefore act as a "relief valve," supporting more peak-hour journeys, rather than supporting free-flow conditions on the M4.

Without further analysis it is hard to forecast modal shift, with a large proportion of passengers likely moving between stations along the rail line rather than duplicating trips the full length of the study corridor.

Economic Impact

This option was identified in the “Our Prospectus for Travel in South East Wales” report by the Burns Delivery Board and would significantly enhance public transport’s role in urban regeneration and improve regional connectivity.

This option would be delivered largely through non-devolved rail investment programmes and is already committed by the UK Government and has partial funding allocation within Rail Network Enhancement Pipeline RNEP, to be confirmed in further spending reviews⁷.

Delivering six new stations could provide new public transport opportunities for local travel to/from those stations’ catchments within South Wales (and further afield, on longer distance services), taking local trips off the M4. The new rail passengers will also generate additional rail revenue to help offset the cost of operating the railway.

A switch from car to public transport will deliver a larger environmental benefits than alternatives that simply re-route car trips onto different roads.

Beyond the stations’ catchment, where access to the rail network remains challenging, there may be less mode shift as driving will be more attractive for those flows. Depending on the service patterns, some through passengers may experience extended journey times, making rail less attractive to them.

Freight traffic would continue to use the M4 but a reduction in car traffic should help improve journey times and reliability.

Transport for Wales are responsible for advising the Welsh Government on the value for money of this option, with work ongoing.

Environmental and Climate Impact

This option would have varying ecological impacts across the proposed station locations. Direct impacts on the Gwent Levels SSSI and National Natural Resource Area are likely at Newport West, and to a lesser extent at Magor and Undy, where habitat loss and planning policy constraints could present significant challenges. These sites fall within the Gwent Levels NNRA spatial area and core zone, where Planning Policy Wales 12 applies a strong presumption against development affecting SSSIs.

Ecological surveys would be required to support planning applications, SSSI Assent and Protected Species Licensing where necessary. Mitigation and compensation measures would also be needed to deliver a Net Benefit for Biodiversity and address any habitat or species impacts arising from the scheme. There would be opportunities to support the objectives of the Draft Strategic Planning Guidance for the Gwent Levels NNRA by strengthening ecological networks, enhancing ecosystem resilience and maximising green infrastructure through careful designed mitigation and compensation measures, although off-site compensation is likely to be required where habitat loss cannot be avoided.

The schemes would support a shift from car to rail, with approximately 2.2 million additional rail journeys forecast each year, contributing positively to operational carbon reduction and wider decarbonisation objectives. Whilst these benefits would be partially offset by the embodied carbon associated with the relief-line upgrade and construction of new station infrastructure, the overall effect is expected to be beneficial from a greenhouse gas perspective.

Social and Cultural

The option would deliver social, accessibility and community benefits by expanding access to the rail network. There are currently around 200,000 people living and working within a 20-minute walk of the new and proposed stations along the corridor (in Newport and Cardiff), providing them a direct alternative to the private car.

By improving access to employment opportunities, education, training, healthcare and other key services, this option would help address socio-economic inequalities and support wider regeneration and economic development objectives.

The new stations would serve communities that are currently underserved by public transport, increasing travel choice and independence for residents, as reflected by strong public support during consultation.

Beyond transport, the scheme could contribute positively to placemaking through station designs that incorporate local heritage, public art, green infrastructure, high-quality public spaces and strong walking, cycling and wheeling connections.

Reduced car dependency would also deliver wider health and environmental benefits through improved air quality, lower carbon emissions and increased opportunities for active travel, supporting broader well-being objectives across the region.

⁷ [Prime Minister announces seven new stations and major rail funding commitment - GOV.UK].

Planning and Consenting

The South Wales Relief Line upgrade would be progressed primarily through Network Rail powers and permitted development rights, although new station sites and associated infrastructure would require planning permission and site-specific approvals.

Cardiff Parkway already benefits from planning permission, and was supported by an Environmental Statement.

Ecological assessments and Habitats Regulations Assessment screening would be required where upgrades and station infrastructure are located close to the Gwent Levels and Severn Estuary designations.

The planning case is strengthened by wider transport and environmental policy objectives on both sides of the border. Measures such as road space reallocation, local parking controls and Bristol's Clean Air Zone are expected to reinforce demand for rail travel within the corridor, while investment in new stations and service enhancement aligns strongly with national and regional policy. As a result, rail demand between Cardiff, Newport and Bristol is well-positioned to grow faster than average provided the necessary service improvements and supporting infrastructure are delivered.

Deliverability, feasibility, and risks

The new station and relief line upgrades were both awarded funding in the UK Government Spending Review 2025 and are being developed and implemented by Network Rail, working with Transport for Wales (TfW).

The current action is with Network Rail to develop the delivery programme for the relief line upgrade and station works.

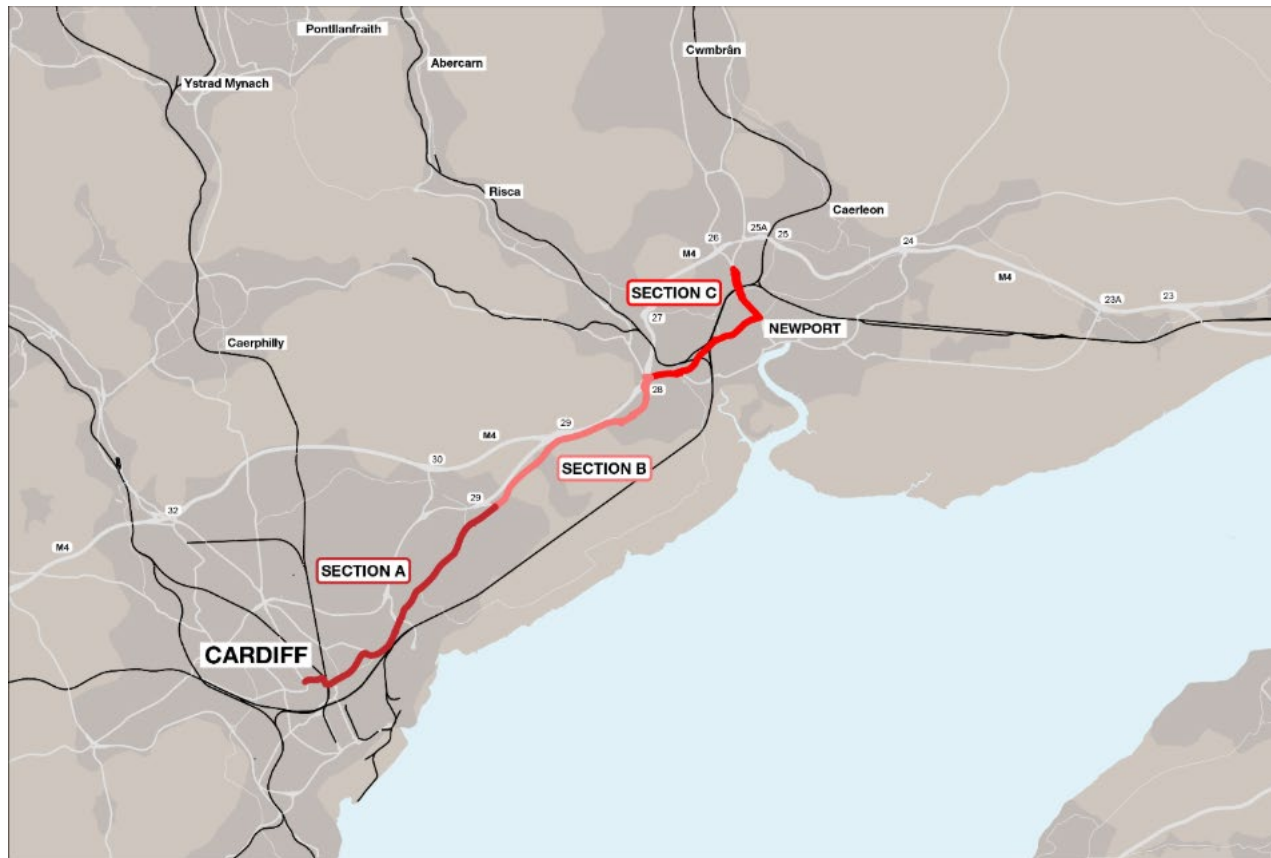
Freight services will continue to operate on the relief lines, as now, alongside the new 'Burns' stopping services but will benefit from higher relief line speeds.

The proposed passenger service would require investment in new trains and depot/staging facilities, which would impact the delivery window. New trains, for example, can take around 4 years to acquire, with opportunities to use older 'off-lease' units on a short-term basis.

Cardiff Parkway is being delivered separately, as part of the privately financed Hendre Lakes development, and received planning approval in 2025.

The station works are likely to take place away from the trunk road network, therefore no notable disruption is assumed to the trunk for this options report.

Option 2.3 | Newport-Cardiff Bus Rapid Transit



A 'Gold Standard' Bus Rapid Transit and active travel corridor

Description

The Newport–Cardiff BRT is a Burns Commission recommendation, forming part of the "network of alternatives" to the M4 relief road. It would provide a segregated, dedicated bus route between the two city centres, primarily along the A48 corridor, designed to make bus travel fast and attractive to both M4 users and local residents.

It would deliver a high frequency, reliable bus service that could carry well over 12,000 people daily using a fleet of high-quality zero-emission BRT vehicles with fully accessible level boarding, contactless ticketing and real time journey information.

The scheme is being progressed by Transport for Wales, working with Newport City Council and Cardiff Council. It is being developed as a combined Active Travel and BRT corridor up to a "gold standard", in three sections.

Section A starts in Cardiff, along Newport Road and through St Mellons providing dedicated bus infrastructure alongside a bi-directional cycle route, future-proofed for a full Cardiff-to-Newport BRT.

Section B runs along the A48 from the east of Cardiff and the west of Newport at Pencarn Way.

Section C is in Newport between the city centre and Pencarn Way, along Cardiff Road. The design balances bus priority, active travel provision and corridor constraints (e.g. Tredegar Park, Pont Ebbw, the railway bridges and Royal Gwent Hospital).

Key issues

- **Land acquisition** – this would be required to facilitate the whole route.
- **Disruption to Local Authority roads** - this would need careful consideration and agreement with them or else statutory processes to deliver
- **Consultation with statutory bodies and affected landowners** – this would be essential to help resolve specific pinch points.
- The scheme is being developed by TfW, working with Newport City Council and Cardiff Council, with detailed considerations ongoing.

Summary of Impact

The capital cost of the “gold standard” scheme is estimated to be £335 million. Other options that could be delivered at a lesser cost with different benefits and impacts have been developed. The preferred option would need to be determined through future engagement and consultation with stakeholders and the public.

To operate the new services around 24 new buses would be required, at an estimated cost of £24 million, with an annual operating cost of £8 million.

It is estimated that the scheme would take around 5 years to fully complete through a series of phased, sectional improvements to minimise disruption during construction.

It is estimated that this option could reduce traffic on the M4 by up to 2%.

Alignment with other options

This option could be delivered alongside and be complementary to all other options considered.

Whilst providing a different function, there may be some duplication of service between Options 2.2 and 2.3, with both public transport options providing a regular stopping service between South Newport and Cardiff Central.

The corridor includes dedicated bus priority at Junction 28 which could be delivered as part of Option 1.2 and 1.3 (both A48 options).

There is a risk that reallocating road space to bus priority along the A48 and at Junction 28 could cause capacity issues at Junction 28 backing onto the M4, or result in traffic reassigning off the A48 and onto the M4.

Traffic Impact

The appraised “Gold Standard” option has been designed with continuous bus lanes in both directions and operation seven days a week from early morning until late at night. It would run buses at least every 10 minutes with higher frequencies during busy travelling times. Bus services on other local routes would be coordinated with the BRT service to easily and efficiently link into the wider areas of Cardiff and Newport.

It is likely to be operated by articulated buses with capacity for around 110 people, in line with the Belfast Glider, providing capacity for around 1,320 people in the peak hour. The space on a bus is a crude measure of capacity, as passengers use different sections of the route. Previous modelling suggests the average passenger trip length is around 6km, so the service is predominantly local - with people hopping on and off along its length - rather than performing the strategic, longer-distance function that the M4 provides.

Based on early-stage modelling there are 155 new cross border trips on the service during the peak hour, which could equate to a peak hour reduction on the M4 of up to 2%, however this is focussed on the western of the of the study area between Newport and Cardiff.

To deliver the BRT scheme, some highway capacity would be reallocated to buses and active travel, which may encourage some traffic to reassign to the M4, potentially offsetting some of this reduction. This could be particularly impactful along the A48 at Tredegar Park and Junction 28 of the M4, where congestion at these junctions could start to affect M4 operations.

The scheme's principal value therefore lies in improving network resilience, providing a reliable alternative to the car and supporting active travel through the accompanying segregated cycle route and feeder bus connections.

Economic Impact

BRT could encourage mode shift from car to bus, taking some local trips off the M4. The nature of bus stopping patterns relative to rail station spacing may improve access to public transport more than new stations.

The new bus passengers will also generate additional fare revenue to help offset the cost of operating the services.

A switch from car to public transport will generate larger environmental benefits than alternatives that re-route car trips to different roads. It may also deliver benefits for the more congested city centres in Cardiff and Newport.

However, the BRT focuses on a relatively small geographical corridor, and car travel is likely to remain unchanged, beyond this catchment. Previous modelling has also indicated that the removal of capacity on the A48 could attract drivers onto the M4, potentially cancelling out (or at least reducing) any original benefits achieved by encouraging people to switch to bus.

Freight traffic and longer distance trips would continue to use the M4 but a reduction in local car trips may help improve journey times and reliability.

Early assessments by Transport for Wales indicate that this option provides good value for money, with a positive benefit cost ratio.

Environmental and Climate Impact

Part of the proposed corridor is the Gwent Levels National Nature Reserve (NNRA) and the SSSI needing careful design considerations.

The route features mature trees and woodland edges adjacent to the road, particularly in Section B. Widening in these locations could result in tree loss, with Planning Policy Wales (PPW12) requiring 3:1 replacement of any trees removed. Protected species are also likely to be present, including dormice in adjacent woodlands and hedgerows, and bats in trees and buildings.

Targeted ecological surveys would be required where habitat loss occurs, including for protected species, to inform licensing and associated mitigation. Mitigation for replacement trees and the requirement to deliver a Net Benefit for Biodiversity (NBB) would likely require off-site compensation, depending on the extent of habitat loss.

The scheme also presents opportunities to deliver the Strategic Principle of the Draft Strategic Planning Guidance for the Gwent Levels NNRA (Policy 9) — safeguarding and strengthening the biodiversity network, enhancing ecosystem resilience and maximising green infrastructure through mitigation and compensation measures.

Social and Cultural

The option would deliver social, accessibility and community benefits by connecting around 70,000 people that live and work within a 10-minute walk of the new corridor, providing them a direct alternative to the private car.

By enhancing the attractiveness and convenience of bus travel, the BRT would particularly benefit those who are more reliant on public transport, helping to reduce inequalities in access to employment, healthcare and education while supporting greater participation in community life.

The scheme would also help address high levels of car dependency along the corridor, supporting wider objectives relating to social inclusion, air quality, and public health.

Dedicated active travel infrastructure and public realm improvements would strengthen connections between communities, businesses including the Cardiff Capital region Investment Zone and local amenities, contributing positively to placemaking and creating a more attractive environment for sustainable modes.

A high-frequency service operating throughout the day would increase travel choice and independence, particularly for those without access to a private car.

While temporary disruption during construction and potential impacts on local parking provision would require careful management, the overall effect of the scheme would be to improve accessibility, connectivity and social outcomes in and between Cardiff and Newport.

Planning and Consenting

The option would require agreement from Newport City Council and Cardiff Council for works on local authority roads, or the use of statutory processes to secure delivery.

Planning permission would be needed for any offline works.

Consultation with statutory bodies and affected landowners would also be required to resolve specific corridor constraints and pinch points.

The A48 corridor lies on the northern extent of the Gwent Levels NNRA, with part of Section A lying within it. Targeted ecological surveys, protected species licenses for species such as dormice and base and the requires of replacement planting for tree loss are likely to be required.

Deliverability, feasibility, and risks

The proposed corridor is being developed by Transport for Wales and has been through the early stages of public consultation. It is expected that Cardiff and Newport City Councils will deliver the final schemes, which will likely require some land take, impact current highway capacity, and need dedicated Traffic Regulation Orders.

The Bus Rapid Transit is likely to use dedicated vehicles, such as the Belfast Glider (Van Hool ExquiCity), and while there would be a lead time to order the vehicles, the route could be operated alongside other services in the interim.

As proposed, the BRT corridor would interact with the A48 and Junction 28 of the M4, which are the subject of Options 1.2 and 1.3. Without careful consideration, the schemes could work against each other with the BRT potentially undermining the improvements to A48 capacity intended to draw demand off the M4.

Procurement of an operator may also be required. This may take place in line with Bus Franchising, which would involve a different process to the current operator procurement route.

Combinations of options

The benefits of the options have been considered in terms of how they could be stacked when combined. There are four distinct types of road-based intervention, which work in fundamentally different ways, so their effects can reasonably be added together:

- Works to the M4 (Option 1.1) - increasing capacity through the tunnels; this would not remove traffic but brings the pinch point around the tunnels within capacity.
- Works to the Southern Distributor Road (Options 1.2 or 1.3) - making the parallel A48/A4810 route more attractive with grade-separated junctions to attract traffic, particularly local trips.
- Junction closures (Option 1.4) - regulating local traffic at key junctions, reducing traffic around the M4 and cutting weaving movements to improve flow.
- A465 re-routing (Option 1.5) - attracting long-distance HGVs away from the M4 towards the A465.

Options 1.2 and 1.3 share the same A48 works, so they are an either/or choice within any combination.

The public transport options are different, as many are aimed at the same users and journeys, so their effects can overlap rather than simply add together. Options 2.2 and 2.3 in particular provide a similar Cardiff–Newport connection and may abstract passengers from one another, slightly reducing the combined benefit on the M4.

In addition, if space is freed up on the M4, some of that capacity may be taken up by future growth or people who currently avoid travelling at busy times. For these reasons, any package of combined measures would need to be tested and assessed in more detail before firm conclusions could be reached.

The cost of each option can simply be added together to give a combined cost. The time to implement, however, cannot. Combinations that include works to the M4 and works to the Southern Distributor Road cannot happen concurrently, due to disruption, but some work can run in parallel (for example design and consultation), but implementation would need to be staggered to avoid major disruption around Newport.

All the road-based options can be implemented in parallel with the public transport options. The table on the following page sets out the long list of road-based combinations; the public transport options, individually or combined, can be added to any of these.

- Option 2.1 – Additional rail services on existing mainline
 - Capital cost: £30 million
 - Vehicle cost: £121 million (9 trains)
 - Operational cost: £26 million per year
 - Time: 5 years (parts could be delivered in 3 years)
 - M4 traffic reduction: 1%
- Option 2.2 – New rail stations and services
 - Capital cost: £800 million
 - Vehicle cost: £116 million (8 trains, covered within cost of Op 2.1)
 - Operational cost: £52 million per year (total inclusive from Op. 2.1)
 - Time: 6 years
 - M4 traffic reduction: 6%
- Option 2.3 – Newport–Cardiff Bus Rapid Transit
 - Capital cost: £335 million
 - Vehicle cost: £24 million (24 buses)
 - Operational cost: £8 million per year
 - Time: 5 years
 - M4 traffic reduction: 2%
- Option 2.1 + 2.2 + 2.3
 - Capital cost: £1.2 billion
 - Vehicle cost: £145 million
 - Operational cost: £60 million per year
 - Time: 6 years
 - M4 traffic reduction: 7%

M4 around Newport Options - Combinations Summary Table

This summary should be read in conjunction with the full report. Values and impacts set out in this table are either sourced from previous studies or estimated by the review team. Any subsequent work would be subject to more detailed analysis and appraisal.

Option	Cost	M4 Around Newport Traffic Reduction	Removes M4 pinch point	Time (years)	Combined delivery issues
1.1 Tunnel widening + 1.2 A48 and A4810 works	£3.5 billion	6%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate the impact of the BRT scheme (2.3).
1.1 Tunnel widening + 1.3 A48 works	£3.4 billion	5%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.4 Junction rationalisation	£1.7 billion	3%	Yes	12	Works on the M4 would create significant disruption and require diversions onto local roads during construction.
1.1 Tunnel widening + 1.5 A465 routeing	£1.8 billion	1%	Yes	12	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during M4 works.
1.2 A48 and A4810 works + 1.4 Junction rationalisation	£1.8 billion	6%	No	8	Increased capacity on the A48 and A4810 would help accommodate redistributed local traffic during M4 junction closures. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.2 A48 and A4810 works + 1.5 A465 routeing	£1.8 billion	7%	No	8	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to the A48 and A4810. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.3 A48 works + 1.4 Junction rationalisation	£1.7 billion	8%	No	8	Increased capacity on the A48 would help accommodate redistributed local traffic during M4 junction closures.
1.3 A48 works + 1.5 A465 routeing	£1.7 billion	6%	No	8	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to the A48. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.4 Junction rationalisation + 1.5 A465 routeing	£0.06 billion	4%	No	3	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4.
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.4 Junction rationalisation	£3.5 billion	9%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.5 A465 routeing	£3.5 billion	7%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.3 A48 works + 1.4 Junction rationalisation	£3.4 billion	8%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.3 A48 works + 1.5 A465 routeing	£3.5 billion	6%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	4%	Yes	12	Promoted alternative use of the A465 would provide some but limited benefits to traffic redistribution during delays on the M4 at times of works to and delays on the M4.
1.2 A48 and A4810 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	10%	No	8	Increased capacity on the A48 and A4810 and alternative use of the A465 would help accommodate redistributed traffic during M4 junction closures or delays on the M4. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.3 A48 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£1.8 billion	9%	No	8	Increased capacity on the A48 and alternative use of the A465 would help accommodate redistributed traffic during M4 junction closures or delays on the M4. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.2 A48 and A4810 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£3.5 billion	10%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).
1.1 Tunnel widening + 1.3 A48 works + 1.4 Junction rationalisation + 1.5 A465 routeing	£3.5 billion	9%	Yes	14	Work on the M4 and A48 should not be undertaken at the same time, causing lengthy disruption around Newport. Work along the A48, especially J28, could help mitigate BRT impact (2.3).

Any of the above highway combinations may be combined with one or more of the public transport options with a potential total cost of £1.2 billion, M4 traffic reduction of 7% and delivery time of 6 years. Operational costs and revenues for public transport options require further review.

Combination | Fastest and cheapest to deliver



Combining option 1.4 and 1.5 would help improve the flow of traffic during the busiest periods by reducing merging and weaving movements along the busiest sections. It would also encourage some HGV traffic onto the A465, supported by variable message signs directing traffic to the alternative route during periods of congestion around Newport.

This option would have limited operational impact on the M4 during construction, though junction closures could disrupt traffic and are likely to face opposition from Newport City Council unless an appropriate package of local mitigation measures is developed.

Option 1.4 - Changes to the existing M4 and its management to improve traffic flow +

Option 1.5 - Promoting the A465 as an Alternative Route

- Would cost around **£63 million**
- Reduce up to **4%** of traffic off the M4; and
- Take less than **3 years** to implement

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around **£1.23 billion**;
- Reduce up to **11%** of traffic off the M4; and
- Take **6 years** to implement

M4 junction closures would likely exacerbate the impact of the Newport-Cardiff Bus Rapid Transit scheme (and vice versa), which would cause disruption to local authority roads and remaining M4 junctions with the Bus Rapid Transit's necessary carriageway reassignment to accommodate buses and active travel. As such, careful co-design is recommended to help ensure maximum opportunities for synergy and benefits.

Combination | Would provide greatest capacity on the M4



Rather than just removing traffic from the M4, option 1.1 and 1.4 would provide the greatest capacity along the existing road. Widening the motorway from two lanes to three lanes in each direction, alongside closing some existing junctions to help improve the flow of traffic on the M4.

The tunnel widening would cause significant disruption for several years during construction. The junction closures would also disrupt current traffic movements and would be likely to face opposition from Newport City Council unless an appropriate package of local mitigation measures is developed.

Option 1.1 - Widening of the Brynglas Tunnels +

Option 1.4 - Changes to the existing M4 and its management to improve traffic flow

- Would cost around **£1.7 billion**
- Increases capacity around the Brynglas Tunnels and relieves pinch point constraint;
- Reduce up to **3%** of traffic off the M4; and
- Take **12 years** to implement

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around **£ 2.9 billion**;
- Reduce up to **10%** of traffic off the M4;
- Increases capacity around the Brynglas Tunnels; and
- Take **12 years** to implement

M4 junction closures would benefit design standards on the existing M4 in-combination with its widening owing to more spaced-out junctions. However, junction closures will likely exacerbate the impact of the Newport-Cardiff Bus Rapid Transit scheme (and vice versa), which would cause disruption to local authority roads and remaining M4 junctions with the Bus Rapid Transit's necessary carriageway reassignment to accommodate buses and active travel. As such, careful co-design is recommended to help ensure maximum opportunities for synergy and benefits.

Combination | Reduces the most traffic along the M4



The A48 and/or A4810 capacity increases would offer an alternative corridor south of Newport, while the A465 provides a resilient route north through the Ebbw Vale valley. Combined with junction closures, this would improve flow on the M4 around the tunnels.

This could be delivered without closing the M4 but sections of the A48 would need to close for up to four years during construction, causing major impacts on the local road network. Works along the A48 could be targeted and phased to assist affordability and delivery. It is likely that works would be undertaken sequentially to reduce local disruption.

The junction closures would disrupt existing traffic movements and likely face opposition from Newport City Council unless an appropriate package of local mitigation measures is developed.

Option 1.2 - A48 with or without A4810 works +

Option 1.4 - Changes to the existing M4 and its management to improve traffic flow +

Option 1.5 - Promoting the A465 as an Alternative Route

- Would cost around **£1.8 billion**
- Reduce up to **10%** of traffic off the M4; and
- Take **8 years** to implement

Combined with all Public Transport Options (2.1, 2.2, and 2.3):

- Would cost around **£ 3 billion**;
- Reduce up to **17%** of traffic off the M4
- Take **8 years** to implement

M4 junction closures would likely increase pressure on Junction 28 and the surrounding local highway network. This could compound the effects of the Newport-Cardiff Bus Rapid Transit scheme, which may require the reallocation of carriageway space to buses and active travel, reducing capacity for general traffic on some routes. As such, careful co-design would be required to maximise opportunities for integration and minimise adverse impacts on the wider network.

5. Conclusion

The M4 is a strategic corridor for the region and is essential for jobs, investment, trade and everyday journeys across South Wales. Whilst the road is an essential strategic link for through movements, it also has to act as a local distributor, and the substandard carriageway around Newport suffers from a number of related problems:

- Peak congestion during busy periods;
- Journey-time reliability, with unpredictable journey times along the corridor;
- The Brynglas constraint, a substandard two-lane pinch point that limits capacity;
- Incident resilience, given limited alternative routes when incidents or events occur; and
- The interaction between strategic and local traffic, where long-distance movements mix with local trips joining and leaving the motorway at closely spaced junctions.

No Single Solution

A key finding of this review is that none of the options would provide the additional capacity and resilience needed to address the current and future traffic-related problems on the M4 around Newport. A combination of measures such as improvements to public transport, changes to how the network is managed, and targeted road improvements is likely to be more effective, working together to improve journey times, increase network resilience and give people more travel choices, while acknowledging the different timescales, costs, requirements and risks involved.

However, combined these options could reduce traffic on the M4 by around 17%, which would help congestion but not address it, falling short of the 25% reduction needed in the long term. Widening the Brynglas Tunnels is the only option that would directly solve the pinch point itself, though it would cause major disruption over several years of construction, and even then it would not resolve the substandard section of motorway between Junctions 24 and 25, or provide network resilience at times of incidents and events.

A Changed Policy and Delivery Context

Any option taken forward would need to be developed within a significantly different policy, environmental and consenting framework to that which applied when the M4 Corridor around Newport project was cancelled in 2019. Whilst the underlying transport challenges remain, future interventions will need to demonstrate not only that they address congestion, resilience and economic connectivity, but also that they align with Wales's climate, nature recovery, wellbeing and sustainable transport objectives. Any option should therefore be treated as a new project requiring fresh appraisal, evidence gathering and statutory approval rather than a continuation of previous proposals and studies.



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6. Next Steps

How to progress any options

Establishing the Case for Intervention

The first step would be to undertake a proportionate WelTAG appraisal to confirm the transport problems, establish objectives, identify a reasonable long list of options and assess their strategic fit within the current policy context. This work should be supported by updated transport modelling, robust cost estimates, economic analysis and a review of committed transport investments, including the South Wales Metro, Burns Programme interventions and the South East Wales Regional Transport Plan. Attention should be given to demonstrating consistency with Llwybr Newydd, the Sustainable Transport Hierarchy, Future Wales and wider decarbonisation objectives.

Where options are considered worthy of further progression, a programme of baseline surveys and technical studies may be required. Depending on the option, this is likely to include ecology surveys, protected species surveys, habitat condition assessments, water environment and drainage studies, arboricultural assessments, air quality monitoring, noise and vibration assessment, carbon assessment, geotechnical investigations, utilities surveys, heritage assessment and traffic modelling.

Future schemes would need to demonstrate a measurable Net Benefit for Biodiversity alongside compliance with the Section 6 biodiversity duty and wider ecosystem resilience requirements.

Planning and consenting considerations for significant infrastructure projects are different to those that applied during the M4 Public Local Inquiry. Major highway interventions on Welsh Government roads would be likely to fall within the new Infrastructure Consent Order (ICO) regime established by the Infrastructure (Wales) Act 2024, requiring integrated consideration of environmental, planning, land acquisition and operational matters through a single consenting process. Alternatively planning permission and Highways Act Orders would be needed, with decision making to be made in accordance with the latest policies and procedures.

Any future scheme would be expected to be supported by a comprehensive Environmental Impact Assessment, Habitats Regulations Assessment where relevant, Green Infrastructure Statement, carbon assessment and evidence demonstrating compliance with Well-being of Future Generations, Planning Policy Wales and Future Wales.

Stakeholder Engagement and Collaboration

Alongside technical development, a structured programme of stakeholder engagement would be essential. This is likely to include Transport for Wales, Natural Resources Wales, Newport City Council, neighbouring authorities, relevant Corporate Joint Committees, local communities, landowners, environmental bodies and the freight and business sectors. Early engagement would help identify constraints, opportunities for integration with wider transport investments, and potential areas of concern before significant resources are committed.

Funding, Delivery and Programme Considerations

Finally, funding and delivery mechanisms would need to be considered from an early stage. Major interventions are unlikely to be funded through a single source and may require any combination of Welsh Government capital investment, Regional Transport Fund allocations, Cardiff Capital Region investment, UK Government rail funding, economic development programmes and potentially alternative financing approaches.

Future business cases would therefore need to demonstrate not only transport benefits, but wider contributions to economic productivity, housing delivery, regeneration, resilience and national wellbeing outcomes. In practice, progression from initial WelTAG appraisal through design development, statutory processes and construction is likely to require a phased programme extending over a number of years for any major intervention.

Further review

The findings of this review highlight opportunities to revisit key concept options through a modern lens, taking a more strategic approach that prioritises network performance over individual route interventions. For example:

Undertake a strategic M4 corridor resilience and connectivity review for South East Wales

To identify measures capable of significantly alleviating congestion and improving resilience on the M4 around Newport, the Welsh Government could commission a strategic review examining the underlying causes of congestion across the wider South East Wales transport system rather than focusing solely on the motorway corridor itself. The review could even expand to the whole M4 in Wales acknowledging the strategic and network based nature of the corridor. Such a review should build on corridor resilience studies, the Burns Commission recommendations, Llwybr Newydd, the Regional Transport Plan and National and Regional Transport Delivery Plans, and consider interventions capable of delivering meaningful reductions in traffic demand, improving network resilience and enhancing journey reliability.

The review could include:

- Regional Movement Patterns Assessment – developing an updated understanding of travel demand across South East Wales, including the relationship between local travel patterns, mode choice and congestion on the M4 corridor. Particular emphasis should be placed on understanding the high proportion of trips with origins or destinations in Newport and Cardiff and identifying opportunities to reduce dependence on private car travel.
- Freight and Logistics Strategy Review – assessing the contribution of freight movements to congestion and delay, investigating opportunities for freight demand management, route optimisation, increased rail freight utilisation and other operational measures to improve motorway performance and resilience.
- Public Transport Network Enhancement Review – examining how bus franchising powers, rail investment and bus network redesign could improve public transport accessibility and mode share across Newport, Cardiff and the surrounding Valleys. The review should identify interventions capable of providing credible alternatives to car travel for journeys currently reliant on the M4 corridor.
- Alternative Strategic Route Utilisation Assessment – evaluating the role of the completed A465 corridor and the A40/A465 route in improving network resilience, including opportunities to influence route choice and divert appropriate freight and long-distance traffic away from the congested sections of the M4.
- Option Assessment and Delivery Planning – considering the costs, benefits, deliverability, environmental implications, carbon impacts, planning constraints, funding opportunities and statutory requirements associated with emerging interventions. The review should identify a prioritised programme of measures and a clear route through WelTAG, Green Book and statutory consenting processes.

Working with Cardiff Capital Region to support network resilience and modal shift

As considered in this review, the M4 around Newport performs a critical strategic function for South East Wales, serving long-distance movements, freight, commuting, business travel and access to key economic destinations. Addressing congestion and improving resilience on the motorway network will therefore require a multi-modal and regional approach that extends beyond the motorway corridor itself.

As a next step, the Welsh Government could engage closely with the regional body Cardiff Capital Region (CCR) to explore how the Regional Transport Plan (RTP) and its Regional Transport Delivery Plan (RTDP) can contribute towards improved network resilience and reduced reliance on the M4 for those journeys that could reasonably be undertaken by alternative modes.

The RTP recognises the importance of creating a more connected, resilient and sustainable transport network across South East Wales through investment in public transport, active travel and transport integration. The RTDP, published March 2026 has identified 40 schemes and a further four reserve schemes for potential delivery across South East Wales, with an indicative programme value of approximately £237 million over five years.

This engagement should seek to identify opportunities where planned regional transport interventions could support a shift from private car use to public transport, particularly for commuting and local trips that currently contribute to peak period demand on the motorway. It should also consider how greater modal choice can help provide alternative travel options during incidents, maintenance activities or wider network disruption affecting the M4 corridor.

Potential areas for collaboration could include:

- Further development of the South Wales Metro network and associated rail enhancements with transit orientated development, improving access to key employment and residential areas across the region by public transport.
- Delivery of strategic bus priority measures and rapid bus corridors, including schemes that improve journey time reliability on key radial routes into Cardiff and Newport.
- Investment in transport interchanges, park-and-ride facilities and integrated ticketing to encourage greater public transport use for regional journeys.
- Improvements to walking, cycling and wheeling connections to major public transport hubs, increasing the attractiveness of sustainable travel for shorter local trips.
- Development of demand-responsive and integrated public transport services that strengthen connections between communities and strategic transport corridors.

Particular consideration should be given to schemes identified through the RTP and RTDP that are capable of influencing travel demand within the Newport, Cardiff and Eastern Valleys travel-to-work areas, where a significant proportion of journeys interact with the M4 corridor. Examples include ongoing rail enhancements, major bus corridor improvements, transport interchange upgrades, active travel connections and multimodal integration initiatives across the region.

A collaborative programme of work between Welsh Government, CCR, Transport for Wales and local authorities would enable the potential contribution of regional transport investment to M4 resilience to be better understood and quantified. Targeted transport modelling could help consider interventions that could have the greatest impact of reducing M4 traffic. This could also inform future prioritisation of transport funding and help ensure that investments in public transport, active travel and demand management are aligned with wider objectives for improving the performance, reliability and resilience of the strategic road network.

Strategic junction closure and network reassignment review

The junction closures studies of the M4 CEMs stage of work modelled the impacts of junction closures, but did not consider how they might fit in the strategic use of the corridor. Some principles along the following lines could be explored through future network optimisation and reassignment studies (or as part of the broader strategic M4 corridor resilience and connectivity review):

- Prioritise the M4 for longer-distance strategic movements, reducing its function as a peripheral distributor road for Newport.
- Recognise the A4051, A4042 and A449 as key strategic trunk road connections and prioritise their role within the wider network.
- Consider reducing, restricting or rationalising access from non-trunk roads, with strategic access concentrated at Junctions 23 and 28.
- Examine opportunities to route Newport-bound traffic via Junctions 23 and 28, using the A4810 Steelworks Access Road (SAR), A48 Southern Distributor Road (SDR) and the wider local road network.
- Assess the implications of closing Junctions 25 and 27, with associated traffic reassigned via Junctions 23 and 28 and the surrounding strategic and local road network.
- Retain Junction 25A as the primary connection between the M4 and the A4042 north towards Cwmbran, while exploring demand management measures for movements between the A4042 south and the M4.
- Prioritise the strategic function of Junction 26 in providing access to the A4051 corridor, supported where appropriate by demand management measures such as ramp metering or variable access controls.
- Consider a revised signage and wayfinding strategy that directs Newport traffic towards Junctions 23 and 28 rather than Junctions 25, 25A, 26 and 27.
- Explore any required local road mitigation measures.
- Investigate the potential for temporary junction closures at peak times or during delays, through ‘ramp metering’.
- Explore a potential trial to test performance.

Strategic M4 maintenance strategy

As key structures and assets along the M4 route continue to age, periods of maintenance and renewal work will be required to maintain safety, reliability and network performance.

Given the M4’s limited diversion options through Newport, there is an opportunity to investigate whether targeted investment in the A48 Southern Distributor Road could provide a more effective alternative route during future maintenance periods, helping to reduce disruption for road users.

A review could identify and assess measures to improve the capacity, resilience and operational performance, both as a diversionary route during planned works and as part of a longer-term strategy to strengthen the resilience of the wider network.

The review could explore different targeted junction improvements and widening works along the A48 SDR, considering value for money and phasing, in order to assist affordability and delivery.

Use of the A465 for road freight

A Wales Freight Strategy could help make better use of the A465 as a complementary strategic freight corridor, encouraging suitable long-distance HGV movements away from the constrained M4 around Newport and improving the resilience of the wider Welsh transport network.

It is important to recognise that freight operators generally choose routes based on journey time, reliability, cost and destination. For many trips serving Newport, Cardiff, the ports, and the M4 economic corridor itself, the M4 will remain the most direct route. A Wales Freight Strategy is therefore unlikely to remove all HGV traffic from the M4; however, it could help redistribute suitable strategic through-traffic, reducing pressure on the Newport section and improving network resilience.

For example:

- Route hierarchy and strategic freight designation: The strategy could identify the A465 as the preferred east-west route for certain freight movements, particularly those travelling between West Wales, the Heads of the Valleys, Mid Wales and the English Midlands, whilst reserving the M4 primarily for movements serving the South Wales coastal cities and ports.
- Better freight journey information: Real-time digital signage, sat-nav partnerships and routing guidance could actively direct suitable freight traffic towards the A465, especially during periods of congestion or incidents around the Brynglas Tunnels.
- Investment in freight facilities: A network of lorry parking, driver welfare facilities, fuelling, charging and logistics hubs along the A465 corridor would make it a more attractive route for operators.
- Targeted incentives: The strategy could explore differential financial or operational incentives that favour use of the A465 for appropriate long-distance freight movements.
- Integration with logistics planning: Distribution centres, strategic employment sites and rail freight facilities could be planned and promoted around the A465 corridor, reinforcing freight demand away from the M4.
- Resilience planning: The A465 could be established as the principal alternative freight corridor when disruption occurs on the M4, providing operators with greater certainty and reliability.

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