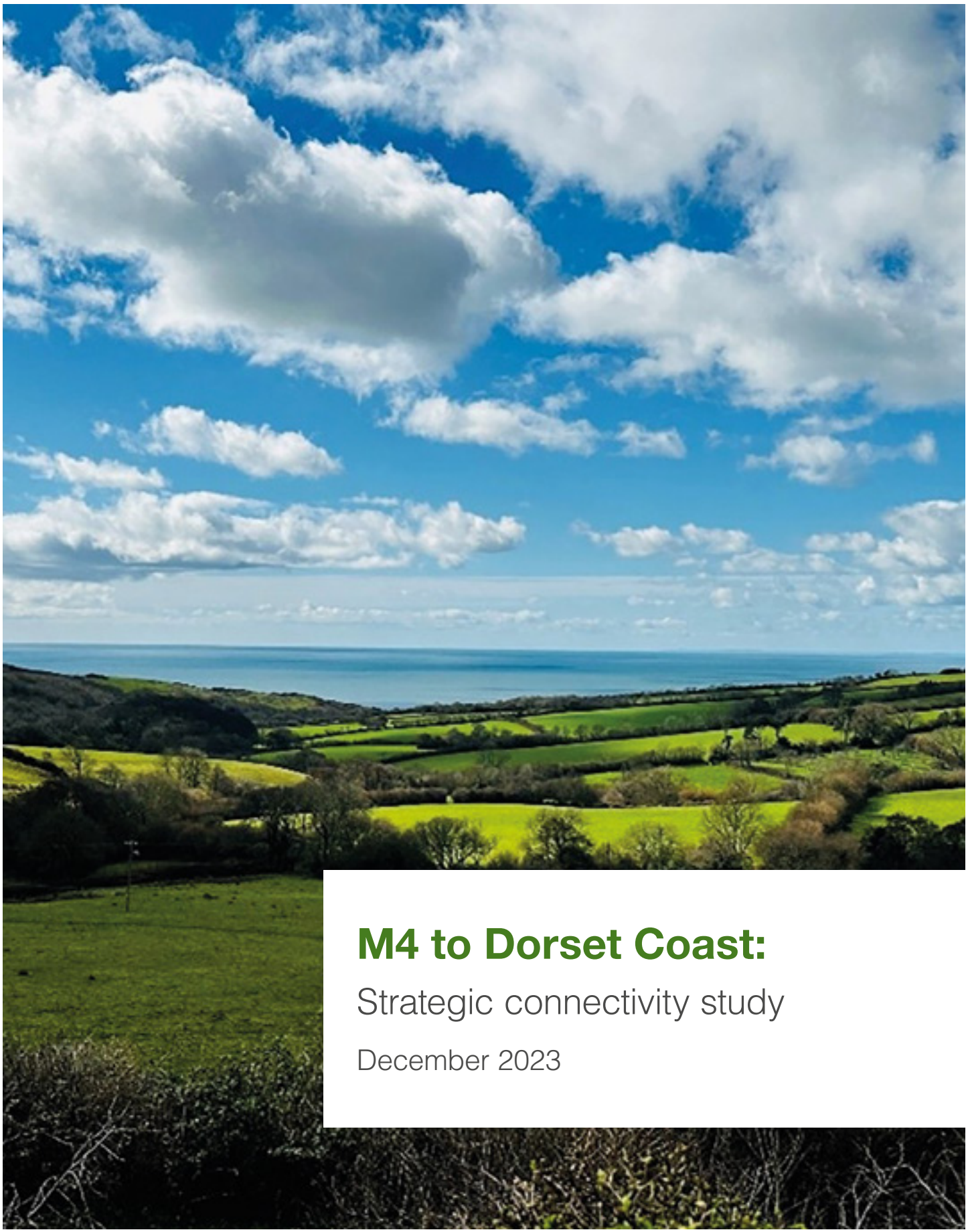
national highways



M4 to Dorset Coast:

Strategic connectivity study

December 2023

Introduction

National Highways is the government organisation which plans, designs, builds, operates and maintains England's motorways and major A-roads, known as the strategic road network (SRN). The roads we manage play a critical role in enabling businesses to transport products and services, providing access to jobs and suppliers, and facilitating trade and investment across the country. In combination with the major road network (MRN) and other local roads the SRN also supports journeys connecting people and places.

In March 2020, the UK government published its roads investment strategy 2 (RIS2). RIS2 set out a long-term strategic vision for the network, specifying performance standards, outlining planned enhancement schemes and setting out the funding for the second road period (RP2), covering the financial years 2020/21 to 2024/25.

RIS2 identified the need for an M4 to Dorset Coast study as follows:

"M4 to Dorset Coast – There are few north-south connections across the South West of England. The present strategic road for this area is a mixture of the A36 and A46, via Bath, Warminster and Salisbury. Local authorities in the area have suggested that there is a strategic case for adopting an alternative corridor – the A350 – as the main strategic route for the area; and then beginning a coordinated programme of upgrades to provide a high-quality route linking the M4 to the Dorset Coast including Bournemouth and Poole, with its economically-important port facilities.

We expect that this study will identify which corridor provides the main strategic route for the area; may recommend the trunking and detrunking of key routes; and may identify priority investments in the area that can be taken forward."

Since 2021, National Highways has worked closely with a range of local and regional stakeholders to deliver this study, including local authorities' transport and planning teams as well as sub-regional transport bodies. A series of presentations, group workshops and one-to-one meetings have been held to understand local concerns and priorities for the region and to align with other transport studies and projects being brought forward at a local and regional level.

This strategic study responds to the challenge set by RIS2 and identifies a preferred strategic route for the area as well as areas for further work and investment to deliver enhancements to strategic connectivity. The findings and recommendations of this study will inform a future programme of more detailed studies to develop plans for future investment.

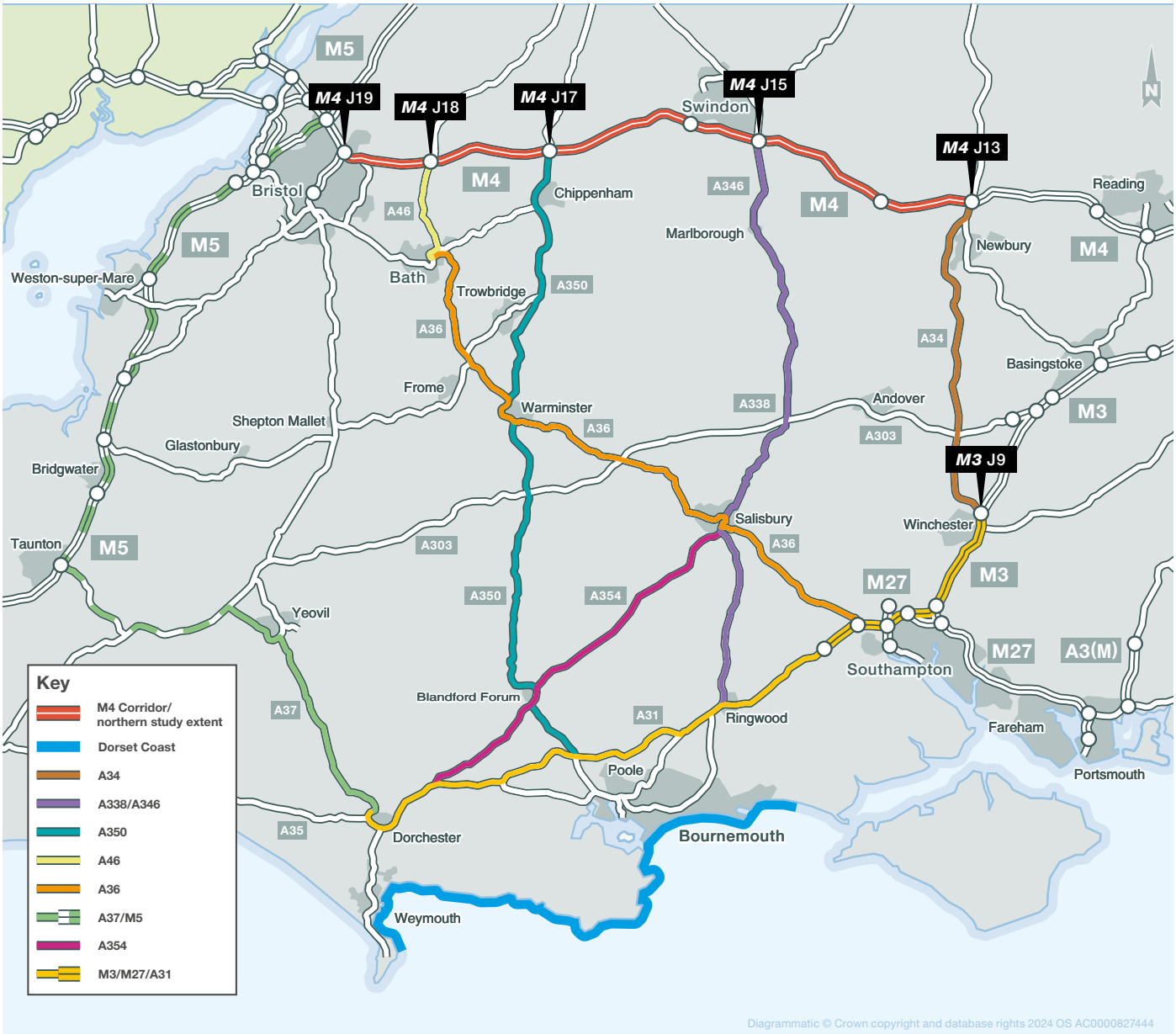
The study has been delivered through a three-stage process:

- Stage 1 – Understanding current conditions: how the existing strategic route is used and the performance of the roads in scope against the study objectives.
- Stage 2 – Identifying concepts and route packages: where network improvements could be focused to address areas of underperformance identified in Stage 1.
- Stage 3 – Preferred strategic route: identifying a preferred route and considering how concepts identified in Stage 2 could improve the performance of routes against the study objectives.

Study area and objectives

In 2021, we worked closely with key stakeholders, including the Department for Transport (DfT), local authorities and sub-national transport bodies to agree the scope of the study. This included agreeing objectives for the study as well as initial work looking at the different roads and routes that could be in scope.

We agreed that the study should investigate a number of routes beyond the existing SRN (A46 / A36 strategic corridor, including different combinations of routes that use the roads shown in the figure below. This includes existing parts of the SRN (the A31, A34, A35, A36 and A46), parts of the MRN (parts of the A37, A338 and A350), and other major A-roads (the A346, A354 and the remainder of the A338 and A350).



We also agreed that only the part of the A37 that provides access to the A303 (where improvements are already planned) and onwards to the M5 should be included in the project scope, but not the A37 heading north from Yeovil due to the complexities in connecting through the centre of Bristol onto the M4.

Drawing on the strategic objectives for RIS2, as well as the issues that our stakeholders told us were important for residents and businesses, we agreed a set of objectives to underpin our approach to the study.

Improving safety for all	Providing fast and reliable journeys	Delivering better environmental outcomes	Meeting the needs of all users
Provide a safe route linking the M4 to the Dorset Coast.	Provide a quick, direct route linking the M4 and the Dorset Coast. Reduce delays and improve journey time variability caused by conjestion. Help ensure convenient access from ports on the Dorset Coast to the M4 for freight traffic.	Provide opportunities for travel by sustainable and low carbon modes. Identify opportunities to improve the natural environment and green infrastructure. Be a good neighbour and improve access and environments for communities.	Provide opportunities for walking, cycling and horse riding to enable healthier lifestyles. Provide a route that appropriately seperates strategic and local traffic. Provide a route that supports tourism, economic growth and jobs.

Using these objectives as the basis for our work, this study has sought to answer four key questions:

1. Which roads and routes should provide the main strategic route for the region? What benefits would this deliver?
2. If the recommended route is not the existing route using the A46 and A36, what consideration needs to be given to trunking (designating roads as part of the SRN) and de-trunking (removing roads from the SRN)?
3. Where and when should investment be prioritised for delivery?
4. What supporting measures (e.g public transport, active travel) should be considered?

Stage 1: Understanding current conditions

The first stage of work identified challenges with the current performance of the existing strategic route and the other routes in the wider study area. Some of the challenges include:

Improving safety for all

- The existing strategic route (A46 / A36) has a relatively high number of collisions, in particular the section of the A36 between Stapleford and Salisbury. A higher than average proportion of the collisions on this section also result in death or serious injury.

Providing fast and reliable journeys

- The existing strategic route is relatively indirect for journeys between the M4 and Dorset Coast, meaning long journeys or the use of more local roads.
- In Bath and Salisbury, the mix of local and long-distance traffic on the current A36 road leads to delays and congestion. To avoid this, drivers on longer journeys are using alternative routes like the A350 and less suitable local roads through places like Bradford-on-Avon and Midford.
- The A31/A35 route performs well compared to other routes. It has fewer collisions, faster journey times and less delays. However, there are areas where traffic experiences congestion and delay, such as at Canford Bottom and around Dorchester.

Delivering better environmental outcomes

- The current strategic route has environmental impacts, especially in terms of noise, nitrogen dioxide (NO2) pollution, and impacts to cultural and historical sites. These are particular issues where the A36 passes through Bath and Salisbury, both of which are Air Quality Management Areas (AQMAs). Bath is also a World Heritage Site and has introduced a Clean Air Zone.
- There are also wider environmental constraints, including a number of Areas of Outstanding Natural Beauty in close proximity to the routes, the New Forest National Park, and other areas where protections exist for wildlife and ancient woodland.

Meeting the needs of all users

- Long distance, strategic traffic is diverting onto the local road network to avoid travelling through Bath which impacts on the quality of life for residents along these alternative routes.
- The population of the area is generally older than the national average and may rely more on private transport for travel. Public transport operates across the study area, however, in more rural locations public transport options are limited.
- Improved connections in the study area can open up development opportunities, boosting productivity.

Stage 2: Identifying concepts and route packages

In this second stage of work, we used the results from the first phase to identify concepts that could help improve areas where routes aren't performing well. Because this study covers a large area, we focused on identifying concepts rather than producing detailed plans. For instance, we looked at which junctions might need more capacity or enhanced cycle provision but didn't specify exactly how to provide this.

Working closely with key stakeholders and partners we created a range of possible road-based interventions. We also engaged with Network Rail to learn about planned rail enhancements and discussed potential transport improvements with the Western Gateway and Transport for the South East sub-national transport bodies to ensure consistency with current and future multi-modal transport plans.

The initial longlist included more than 150 potential concepts across all the routes in the study area. These included:

- Strategic concepts, which are those that would deliver a step-change in route performance. Examples of these include new sections of road, for example to route traffic away from town and city centres, or major changes to junctions.
- Non-strategic concepts, which are short-term interventions to improve highway conditions on a more localised scale (such as minor junction and carriageway improvements).
- Alternative mode concepts, which are changes to the highway network to help support access to public transport, walking and cycling.
- A high-level assessment of concepts and potential route packages against the study objectives, potential barriers to delivery, cost and environmental impacts was undertaken. This helped the study team to identify any routes which should not be taken forward to the next stage.
- The roads remaining in scope after Stage 2 were combined into six potential 'route packages' that could provide an end-to-end route from the M4 to the Dorset Coast (see next page).

There were two routes within the study area where barriers to delivery were very high:

1. The A350 between Warminster and Sturminster Marshall
2. The A346 / A338 between the M4 and Salisbury

These two routes have several locations where significant new road building would be required to bring the road up to the right standard to accommodate strategic traffic without significant impacts on communities along the route. This would require road building in Areas of Outstanding Natural Beauty, at significant cost.

This was not considered to be realistic or deliverable and at this stage these routes were therefore removed from the study scope.


Swindon
Bristol
M4
Chippenham
A346
M4
Reading
M5
A46
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
Shepton Mallet
A36
A303
Glastonbury
Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 1
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Swindon
Bristol
M4
Chippenham
A346
M4
Reading
M5
A46
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
Shepton Mallet
A36
A303
Glastonbury
Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 2
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Swindon
Bristol
M4
Chippenham
A346
M4
Reading
A46
M5
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
Shepton Mallet
A36
A303
Glastonbury
Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 3
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Swindon
Bristol
M4
Chippenham
A346
M4
Reading
A46
M5
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
Shepton Mallet
A36
A303
Glastonbury
Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 4
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Swindon
Bristol
M4
Chippenham
A346
M4
Reading
A46
M5
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
Shepton Mallet
A36
A303
Glastonbury
Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 5
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Swindon
Bristol
M4
Chippenham
A346
M4
Reading
A46
M5
Marlborough
Newbury
M4
Weston-super-Mare
Bath
Trowbridge
A350
A36
A34
Basingstoke
Frome
Warminster
A338
Andover
M3
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Bridgwater
Salisbury
Winchester
Taunton
M5
A303
A36
M27
M3
A350
A354
Yeovil
M27
A3(M)
Southampton
A303
A37
Blandford Forum
A31
Ringwood
Fareham
Poole
Portsmouth
A35
Dorchester
Bournemouth
Weymouth
Route Package 6
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Stage 3 – Preferred route package

This final stage of work was carried out to identify a preferred strategic route. Each of the route packages was assessed against the study objectives using a range of tools and techniques. This stage of work also included further consideration of potential challenges to delivery, particularly around the environmental impacts of each of the route packages and their comparative cost. This approach to assessment, and the outputs of the work, were discussed and agreed with key stakeholders and partners.

The result of this stage of work is that Route Package 5 performed best against the objectives of the study and is our recommended strategic route.

Route Package 5 is highlighted on the previous page and uses the A350 from Junction 17 of the M4 to Warminster. It then uses the A36 between Warminster and Salisbury, and the A338 from Salisbury to Ringwood. It also incorporates the east to west route via the A31 and A35 at the southern end of the study area.

Route Package 5 (RP5) is the recommended package because it:

- performs best against the objectives of the study overall
- is the best performing route in respect of providing fast and reliable journeys and could reduce end to end journey times in peak hours by more than 20 minutes. This would be a significant benefit for movement of freight
- provides an overall benefit to the safety of all users due to reductions in traffic, and therefore collisions, in town centres
- is estimated to provide the greatest amount of economic benefit of all the options, with those benefits spread over a wider geographical area
- provides an overall reduction in traffic through local settlements in comparison to the other packages and provides the most opportunity for transformational change in relation to improved quality of life and enhancements to walking, cycling and public transport within key settlements

Although all the route packages would have challenges to delivery associated with cost and environmental protections, RP5 avoids the challenges associated with road building in the Cotswolds AONB that would be associated with options using the northern part of the A36.

We have discussed the implications of this recommendation in terms of potential trunking and de-trunking with our key stakeholders and partners.

We are recommending that consideration should be given to the de-trunking of the A36 and trunking of the A350 north of Warminster to deliver this route package. However, we are not recommending changes to trunking at the southern end of the route, as the section of the A36 south of Salisbury will still provide a key strategic route for traffic to and from the Solent area.

Consideration will need to be given to how any trunking and de-trunking is phased, as this will need to be delivered in parallel timescales.

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Our recommendations and next steps

Following the three stages of the study, we identified a list of recommendations based on our baseline evidence and analysis, alongside engagement with various groups.

Our primary recommendations are those things we consider are needed to deliver the preferred strategic route:

- north of Warminster, consideration of trunking the A350 and de-trunking the A36 and A46
- delivery of the schemes along the A350 that are currently subject to MRN funding bids from Wiltshire County Council at junction 17 of the M4, Chippenham and Melksham
- a more detailed assessment of the A350 between West Ashton and the A36 to address issues at Yarnbrook and Westbury
- development of a strategic highways scheme at Salisbury to address the issues associated with long-distance traffic routing through the city centre
- a more detailed assessment of the junctions of the A338 with the A31 to address delay on the A338 through Blashford and making it easier for pedestrians and cyclists to cross the A31 where it passes through Ringwood
- a more detailed assessment of the A31 between Ameysford and Merley, including Canford Bottom roundabout which is a current cause of delay along the A31 and A349
- junction improvements on the A35 around Dorchester

Our secondary recommendations aren't directly linked to our preferred route but are at locations we think will improve north-south connectivity:

- delivery of the current National Highways improvement scheme at junction 9 of the M3 to reduce delays on the A34
- improvements to rail bridges along the A37 at Stratton and Stoford
- improvements on strategic local roads south of the A31 that provide access to Bournemouth Airport and the Port of Poole. This includes improvements on the A348 at Ferndown and between Longham and Bear Cross, as well as to the road network in the immediate vicinity of the Port of Poole, including the A350 mini-roundabout, the A350 / B3068 junction and A350 bridges
- local junction improvements and improvements to walking and cycling around Weymouth to improve access to the Port of Portland

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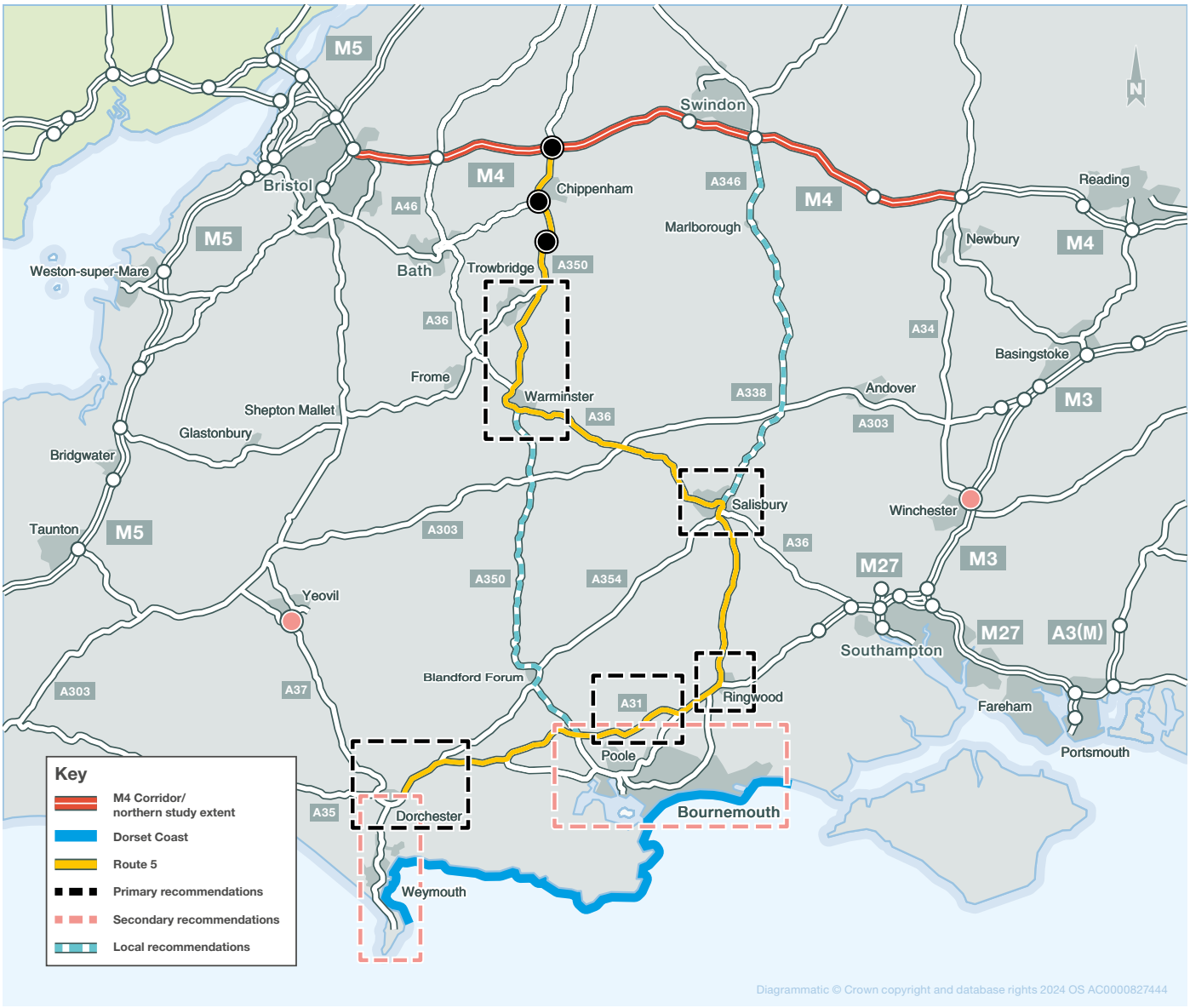
Next steps

We acknowledge that while we can recommend a strategic route and have identified that other roads in the study area are not suited to long-distance traffic, it is not possible to stop drivers from using them where their trips mean these roads provide a more direct route. We are therefore making **local recommendations** to improve safety and access to public transport, and to reduce noise and make roads easier to cross on the A338 / A346 between Salisbury and the M4, and on the A350 between Warminster and Sturminster Marshall.

The recommendations of the study will now be considered further by government and wider stakeholders. It is expected that a programme of further development work will be undertaken, developing more detailed options for potential investment. This work will inform our plans for the next Roads Investment Strategy (2025 – 2030) and beyond.

M4 to Dorset Coast - Strategic connectivity study

Our recommendations



Black locations:
are the proposed primary recommendations from the study to deliver north-south connectivity on the recommended strategic route.

Pink locations:
are proposed secondary recommendations, where intervention away from the recommended strategic route will help deliver enhanced connectivity.

Teal routes:
are local recommendations where we may need to consider proposals to alleviate the impact of strategic traffic.

If you have any questions about the information in this brochure, to request a hard copy or if you need help accessing the information, please contact us and we will help you.

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