

A358 Taunton to Southfields Dualling Scheme

Preliminary Environmental
Information Report

Non-Technical Summary

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Introduction

Highways England proposes to upgrade the A358 by providing a dual carriageway between the M5 at Taunton and Southfields roundabout on the A303. The proposed scheme is a highways Nationally Significant Infrastructure Project (NSIP) under the *Planning Act 2008*. This means that an application will need to be made for permission to build the proposed scheme. This permission is called a Development Consent Order (DCO).

Before we can submit an application for a DCO, we have a duty to consult the local community and other stakeholders on our proposals including:

- a description of the proposed scheme and the reasonable alternatives considered
- the environmental setting
- the likely significant environmental effects based on the preliminary environmental information available at the time
- the measures to avoid or reduce such effects

As well as undertaking this consultation, we are continuing to collect and assess information about environmental effects to inform our decision making, a process known as Environmental Impact Assessment (EIA). We will present this information in what is known as an ‘Environmental Statement’ (ES) – a document which provides an assessment of the likely significant effects of the proposed scheme on the environment.

As part of our environmental assessment, we have prepared a Preliminary Environmental Information (PEI) Report. This report provides information to help you understand the likely environmental effects of the proposed scheme. We have developed the PEI Report for this consultation and it presents the information currently available from the EIA that we are undertaking.

The information contained within the PEI Report is preliminary, and we will use this along with feedback received from the consultation to help shape and develop the findings for the ES. The ES will be submitted as part of the DCO application.

This document provides a summary of the PEI Report in non-technical language.



Why is the scheme needed?

In 2014, the UK government identified the A358 Taunton to Southfields Dualling Scheme in its first *Road Investment Strategy* (RIS) 2015-2020, which sets out a five year investment programme for improvements to the Strategic Road Network (SRN). Funding for delivery of the A358 Taunton to Southfields Dualling Scheme was confirmed within the second *Road Investment Strategy* (RIS2), which covers the period between 2020 and 2025.

The proposed scheme is part of a programme of improvements planned along the A303/A358 corridor, aimed at improving vital connectivity between the South West and London and the South East of the UK.

It directly addresses this long-term commitment and would provide the new dual carriageway link from the M5 at Taunton to the A303 at Southfields roundabout.

While much of the A303/A358 corridor is a dual carriageway, there are still over 35 miles of single carriageway. These sections act as congestion bottlenecks, particularly in the summer months and at weekends, causing delays to road users, and they add to an increased risk of accidents.

Currently most of the A358 is a single carriageway and has many local roads and private accesses joining directly with it. The road is often congested and is a source of

frustration for local people, and those using the road to travel longer distances.

Many road users try to avoid the traffic congestion by diverting onto smaller local roads, which then increases the level of traffic in surrounding villages.

The existing A358

The existing section of the A358 between Taunton and Ilminster is approximately 8.5 miles long, running from M5 junction 25 to Southfields roundabout on the A303.

The route predominantly comprises single carriageway, with a short section of dual carriageway (approximately 0.8 miles) between Henlade and Mattock's Tree Green. This is preceded for 500 metres to the east by a section of single carriageway as the road ascends to the crest at Mattock's Tree Green. There is also a short section of dual carriageway on the approach to the M5 junction 25.

At the northern end of the route, the A358 connects to M5 junction 25 roundabout.

At the southern end of the route, the A358 connects to Southfields roundabout. This junction provides access into Ilminster, Horton Cross and to the A303.

Along the A358 between Taunton and Southfields roundabout, there are numerous local road junctions, the most notable of which is the traffic signal controlled

junction with the A378 at Mattock's Tree Green. Other local roads provide access to local villages such as Ilton, Ashill, Hatch Beauchamp, Bickenhall, Thornfalcon, Ruishton and Henlade.

There is one local road crossing where a bridge carries the A358 carriageway over Griffin Lane to the west of Hatch Beauchamp.

The existing A358 has been the subject of a number of upgrades in the 1980s and 1990s.



The project

Description of the proposed scheme

The proposed scheme would connect M5 junction 25 at Taunton with the existing A303 at Southfields roundabout near Ilminster, providing 8.5 miles of new, all-purpose dual carriageway. It can be divided into two main sections:

- New section of dual carriageway created from the existing A358 between the M5 roundabout junction 25 and Griffin Lane.
- Widening of the rest of the existing A358 to Southfields roundabout.

The main elements of the proposed scheme comprise (from north to south):

- **M5 junction 25** – upgrade of the northbound on and southbound off slip roads of the M5 at junction 25.
- **Nexus 25 roundabout** – modification of lanes on roundabout and widening of entries and exits.
- **Stoke Road** – a new bridge over the A358.
- **Mattock’s Tree Green junction** – provision of a new separated junction.
- **Scout camp link** – a new 650 metre long link road.
- **Village Road link (north)** – a new single carriageway road approximately 600 metres long to connect the A358 at Mattock’s Tree Hill to Village Road.

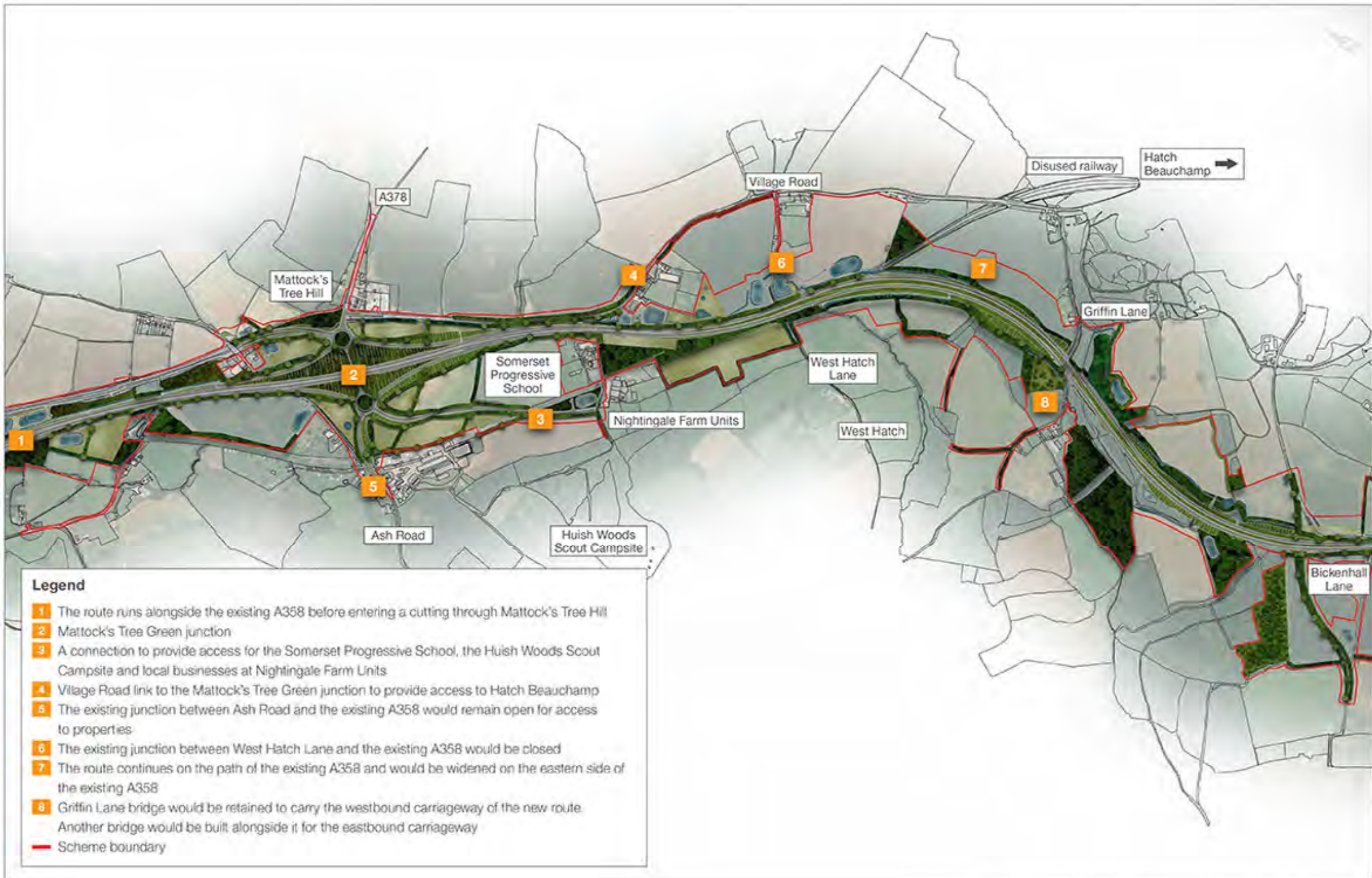
- **Griffin Lane** – a new bridge over Griffin Lane, adjacent to the current bridge.
- **Bickenhall Lane** – a new 750 metre long single carriageway and a bridge over the A358.
- **Village Road link (south)** – a new single carriageway approximately 1,350 metres long, and bridge over the A358 to connect Village Road (south) across the route.
- **Capland Lane link** – the existing Capland Lane junction would be closed and alternative options will be considered before the final design is reached.
- **Stewley link** – a new 2,200 metre long single carriageway link from Stewley Lane to Ashill Road.
- **Ashill junction** – provision of a new separated junction.
- **Broadway Street link** – a new single carriageway link approximately 1,500 metres long, running adjacent to the route, to connect Broadway Street to Ashill Road.
- **Southfields roundabout** – a new dedicated left slip lane from the A358 to the A303 eastbound and widening of entries and exits.

If the DCO is granted, construction is planned to start in late 2024 and the proposed scheme is due to open to traffic in mid-2028.

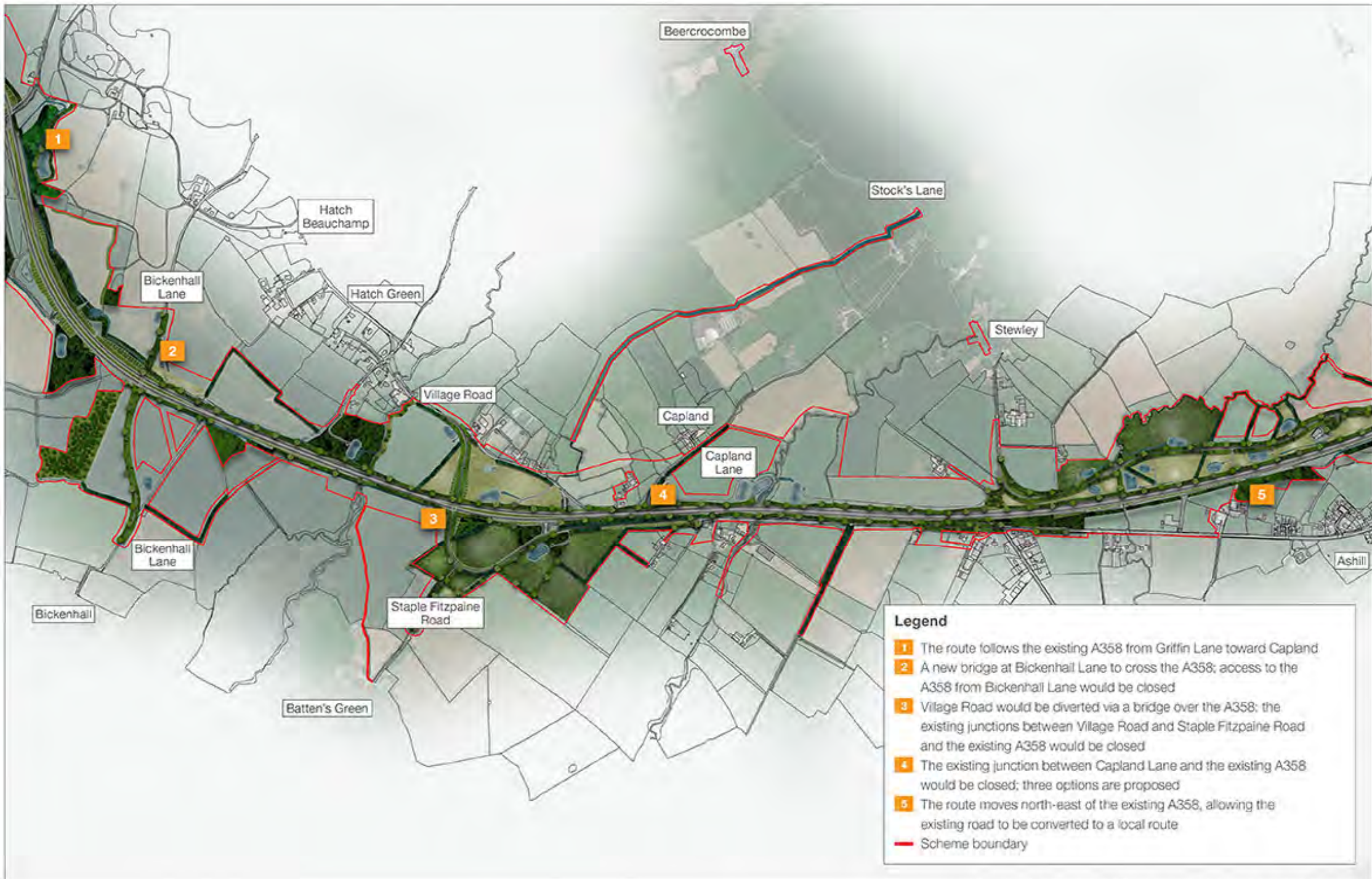
Section 1: M5 junction 25 to Mattock's Tree Green junction



Section 2: Mattock's Tree Green junction to Griffin Lane



Section 3: Griffin Lane to Ashill junction



Section 4: Ashill junction to Southfields roundabout



Ilchester

Ilminster
Town Centre
Industrial
Area



Ashill
Hatch
Beauchamp

Marsh

recesssigns.com



Scheme objectives

The proposed scheme will achieve the main project objectives as follows:

Objectives

- **Employment** – provides direct access to Nexus 25 development from the east, as well as connecting to the A378. This would help Taunton to become a more attractive place to work and do business by the local population and helps facilitate growth in Somerset and the South-West.
- **Housing** – will facilitate the ability for developers to provide housing at key hotspots along the corridor.
- **Capacity** – will provide relief to the traffic congestion in Henlade. The average daily traffic would reduce from 33,500 vehicles to 4,000 vehicles in 2038. By reducing congestion and increasing capacity it would allow mile-a-minute travel as the norm along the new A358.
- **Resilience** – offers connection between the new A358, Nexus 25 development and M5 junction 25, helping reduce congestion between West Hatch and M5 junction 25 and improve resilience along the corridor.
- **Safety** – will see the existing road junctions and private accesses closed with new connections and junctions provided, making journeys safer by avoiding conflicting traffic-turning movements. The proposed scheme would also improve safety by encouraging road users

to use the new A358, rather than seeking alternative local routes to avoid congestion into Taunton. Existing walking, cycling and horse-riding provision would also be enhanced and improved.

- **Connectivity** – the connectivity of the South-West with the South-East and London would be improved, making Taunton and the South-West region more accessible. Daily travel for commuters and local traffic into Taunton would be safer and more reliable, by separating local movements from traffic passing through the area.
- **Environment** – avoids the Ancient Woodland at Huish Copse and at Stoke Wood and removes the need to impact the open space.
- **Severance** – will provide new connections to the A358, providing safer replacement routes for local communities. Existing walking, cycling and horse-riding provision would also be enhanced and improved.
- **Quality of life** – will allow local traffic using the A378 to connect with the upgraded A358 at Mattock's Tree Green junction. This would improve local journeys into Taunton. It would also cause less disruption to existing patterns of movement for local communities. The reduction in traffic congestion at Henlade would improve residents' quality of life.

Alternatives

Since the project was first announced in December 2014, we have been developing plans that would have benefits for Taunton, Somerset and the wider region. Since 2014, as part of our design work, we have identified and considered a total of 28 options. We assessed these options against environmental, economic and engineering factors as well as the overarching scheme objectives. We identified three options as the better performing routes. These were called the 'Orange', 'Pink' and 'Blue' routes.

We carried out a consultation on the Orange option from March to July 2017 and then undertook a further consultation on all three options from January to February 2018. As a result of consultation, we identified three further options for review. These were a combination of the Pink and Orange routes, a combination of the Blue and Orange options, and a new option containing changes at the Mattock's Tree Green junction, called the 'Green' option.

Since our last consultation, we updated the cost estimates for the scheme which showed that the cost of each of the options had increased. As a result, we had to revisit our options to see how they could be modified to balance the proposed scheme's objectives, cost, value for money and public feedback.

To improve the affordability of the proposed scheme we used the previously published Pink option as a basis to

develop a modified option, as this had performed the best across our previous assessments.

Our assessments show that removing junctions A and B, as well as the dual carriageway link between these junctions, from the Pink option will deliver the right balance between scheme objectives and cost. This modification (the 'Pink Modified' route) also provides the benefit of removing the impact these junctions would have on homes, public open space and the countryside which was an issue you raised at consultation. This Pink Modified option was announced as the 'preferred route' in June 2019.

For more information on the route options consultation and the preferred route announcement, please visit our project's webpage at:

www.highwaysengland.co.uk/a358-taunton-to-southfields



Design development

During the current preliminary design stage, we have undertaken further consideration of options on specific design elements along the proposed Pink Modified route.

Our appraisal of options considered a range of criteria, not only environmental. These included scheme objectives, technical issues for highways, structures, drainage and earthworks, maintenance and operational issues, buildability, cost, existing commitments, health and safety and carbon. Any preferred options have been taken forward on a balance of outcomes. Further information on the options appraisals is provided in Appendix 3.2 Option appraisals of the PEI Report.

We will continue to develop our scheme proposals as we feed results from ongoing surveys and consultation feedback into the design. We will complete our preliminary design in early 2022 and submit our environmental assessment (in the form of an ES) as part of our DCO application later in 2022.



Potential environmental effects

The EIA considers impacts during the construction and operation of the proposed scheme. The construction phase assessment addresses both temporary impacts whilst we build the proposed scheme and permanent impacts once we have completed construction. The operational assessment considers the situation when the proposed scheme is completed and being used by traffic.

This section provides an overview of our initial findings relating to environmental impacts and identification of sensitive receptors (i.e. a component of the natural, created, or built environment such as human being, water, air, a building, or a plant, that is affected by an impact).

During construction, most of the proposed scheme's potential adverse impacts would be avoided or reduced by using industry standard practice and control measures. As part of our application to build the improvements we will be preparing an Environmental Management Plan. This will explain how we would manage the temporary impact of construction on local communities, the environment and the local landscape, as well as any ways we can lessen the impact of construction.

As part of the EIA process we are carrying out further work to confirm the initial findings presented below. We will present our final assessment of environmental impacts in the ES that we will submit with the DCO application.

Air quality

Baseline

Air quality is generally good in the area; however, there are some areas of poor air quality around the proposed scheme. There is one Air Quality Management Area (AQMA) within 200 metres of the proposed scheme, located along the existing A358 at Henlade. There are a further three AQMAs within the wider road network outside of the construction footprint at Cullompton, Yeovil and East Reach.

AQMAs are areas which the local authority has identified as requiring management to achieve desired air quality objectives and to protect health. Henlade AQMA suffers from poor air quality as a result of traffic emissions from vehicles using the existing road.

Construction

During construction, potential air quality effects may arise from construction dust produced by activities such as demolition and earthworks.

The quantity of dust depends on the scale and intensity of the construction works. We will use best practice mitigation

measures to reduce effects from construction dust such as a dust suppression technique and road sweeping.

Preliminary construction assessment

- Likely temporary adverse effects due to dust emissions from construction activity on sensitive receptors (e.g. humans and ecology) within 200 metres of the proposed scheme.

Operation

Once the new road opens, potential air quality effects may arise from vehicle emissions. The proposed scheme would change the volume of traffic on roads in the wider surrounding area. This would result in changes to the levels of vehicle emissions on the affected roads and at nearby sensitive locations to humans (such as houses) and ecology (such as ecologically protected sites). The new alignment of the A358 would be approximately 300 metres south from Henlade. This would improve air quality in Henlade by reducing vehicle movements along the existing A358 that currently passes through the Henlade AQMA.

Preliminary operation assessment

- Our early findings show that once the new road opens, no likely significant adverse effects on local air quality concentrations are predicted at human receptors (i.e.

residents, users or visitors who would experience the effect).

- Likely permanent beneficial effects on local human receptors in the existing Henlade AQMA area due to relieving congestion and moving the road away from these receptors.



Cultural heritage

Baseline

Cultural heritage includes archaeology, historic buildings/structures and historic landscapes. The existing A358 runs through a landscape of historical interest, with archaeological evidence present from prehistoric times to the Second World War. Within the study area, the landscape comprises historical assets including one scheduled monument (the Cross in St Aldhelm and St Eadburgha churchyard, located approximately 270 metres to the south-west of the proposed scheme in Broadway at the south-eastern end of the route), 194 listed buildings (142 listed buildings within 1 kilometre of the proposed scheme boundary) and one registered park and garden within the 1 kilometre study area (Hatch (Beauchamp) Court, located approximately 490 metres east near Hatch Beauchamp). There are two conservation areas located within the study area, Hatch Beauchamp and Thornfalcon.

Construction

During construction, there is potential for disturbance to unknown archaeological remains where the proposed

scheme requires excavation below the existing ground surface.

We would be carrying out construction activity, including movements of machinery, temporary lighting and temporary construction compounds, within the wider setting of listed buildings and other heritage assets within the study area. These works would be temporary and of limited duration.

Preliminary construction assessment

- Likely permanent significant adverse direct effects on buried archaeological remains.
- Likely permanent adverse effects to the settings of a number of listed buildings, including Musgrave Farmhouse, Ashe Farmhouse, Ruishton House, and a listed road bridge.
- Likely permanent adverse direct effects on Hatch Park, Jordans Park, and on ancient and post-medieval fields, Somerset Hills.

Operation

Once the new road opens, there is potential for both beneficial and adverse impacts on the setting of cultural heritage resources. This is due to changes in traffic noise

and the visibility of moving vehicles on the road from different locations.

Preliminary operation assessment

- Ashe Farmhouse: given the current rural setting of the farmhouse, the increase in noise levels during operation is likely to constitute a moderate adverse (significant) effect.
- The Thatch: given the current rural setting of the farmhouse, the increase in noise levels during operation is likely to constitute a moderate adverse (significant) effect.



Landscape and visual impacts

Baseline

The A358 is situated in a predominantly rural area in Somerset, with small settlements scattered along the route. There are 37 farm holdings adjacent to the existing A358, as well as various ecological and heritage assets which are of individual value, but also contribute to the character of the local landscape (including the nearby Blackdown Hills Area of Outstanding Natural Beauty (AONB)). These designations reflect the conservation value of the region, and its rich heritage of human settlement.

The Blackdown Hills AONB is located approximately 1.4 miles west at its nearest point to the proposed scheme.

England is divided into 159 broad character areas of cohesive character by Natural England, known as National Character Areas (NCA). The proposed scheme would pass through three NCAs: NCA 140 Yeovil Scarplands, NCA 143 Mid Somerset Hills, and NCA 146 Vale of Taunton and Quantock Fringes. An additional NCA (NCA 147 Blackdowns) is located approximately 1 mile to the south-west at its nearest point to the route.

It also passes through a number of Local Landscape Character Areas (LLCA); 1a Vale of Taunton Deane; 4a Fivehead Farmed and Wooded Vale; and 5a North Curry; and will also pass through the following Lower Lias

Foothills and Lowland LLCA within Region 2 (Blackdown Hills Plateau Foothills and Valleys). LLCA are defined by the local authorities covering the whole administrative area as broad character areas of cohesive character.

Residential properties are situated throughout the study area in a range of situations including small settlements, hamlets, and isolated properties, which includes existing properties fronting directly onto the existing alignment of the A358. Most residential properties within the area have some form of rural outlook due to the low density of built form in the study area.

Views vary from enclosed woodland walks and agricultural fields, to panoramic views from open fields and ridges. Traffic on the existing A358 is a feature of many existing longer and open views but is often filtered to some degree by existing roadside vegetation.

Construction

During construction, there would likely be significant effects on the landscape character from within the study area and on viewpoint locations as a result of the proposed scheme. These effects would mostly be temporary, associated with temporary construction compounds and construction activities.

Construction activities include the movement of machinery/vehicles, use of tall machinery, felling of woodland, clearing of vegetation, large scale excavation

across the site, earthworks to form landscape bunding and erection of retaining walls and overbridges. As the proposed scheme is gradually built throughout the construction phase, permanent effects would increasingly become part of the landscape and views.

Preliminary construction assessment

- Likely temporary significant adverse effects on the Vale of Taunton Deane and North Curry Sandstone Ridge LLCAs.
- Likely temporary significant adverse effects on a number of visual receptors as a result of views of construction activities and removal of hedgerows and trees.

Operation

We have designed the proposed scheme to integrate the A358 into the existing surroundings, enhancing the local environment where possible.

Landscape and visual effects are likely to occur as a result of the reduction to tranquillity, long-term loss or changes to existing landscape features or characteristics, features or composition of a view, or the addition of new features within the landscape or view.

Changes include the presence of the widened road, addition of new highways infrastructure such as bridges, a

more open landscape as a result of loss of mature trees, change to field/landscape pattern and presence of drainage features into the landscape.

The visual character of the area is likely to change as a result of the presence of the widened road, bridges, and changes to vegetation along the southern side of the A358. We will create large areas of tree planting within existing hedgerows to strengthen the landscape character of the rural landscape. We will plant hedgerow and trees alongside the widened section of the proposed scheme to reinstate the nature of the landscape character along the A358. Also, we will add woodland blocks to the strategic woodland corridor between Fivehead Ridge and the Blackdown Hills AONB, this includes additional woodland/tree planting alongside Bickenhall Wood ancient woodland.

Preliminary operation assessment

- Likely permanent significant adverse effects the Vale of Taunton Deane and North Curry Sandstone Ridge LLCAs.
- Likely permanent significant adverse effects on visual receptors and recreational views.



Biodiversity

Baseline

Several sites that are designated due to their ecological significance are located near to the A358. These include (but are not limited to) Somerset Levels and Moors Special Protection Area (SPA) and Ramsar (3.5 kilometres east), Severn Estuary Special Area of Conservation (SAC) and Ramsar site (25 kilometres downstream along the River Tone and River Parrett), Thurlbear Woods and Quarrylands Site of Special Scientific Interest (SSSI) (1.3 kilometres west), and Barrington Hill Meadows SSSI and National Nature Reserve (NNR) (1.0 kilometres south-west), Bickenhall Orchard Local Nature Reserve (LNR) (440 metres south-west), South Taunton Streams LNR (260 metres west) and Children's Wood / Riverside Park LNR (210 metres north). A further 15 SSSIs are located within 200 metres of the A358.

Along the A358 corridor are existing hedgerows, veteran trees and watercourses that have the potential to support flora and fauna of ecological importance. There are protected and priority species within the proposed scheme area including (but not limited to) bats, badgers, reptiles, barn owls, Hazel dormice, great crested newts, invertebrates and hedgehogs. There are also priority habitats within or adjacent to the proposed scheme, including lowland calcareous grassland, deciduous

broadleaved woodland (including ancient woodland and veteran trees) and hedgerows.

Construction

The sites of ecological interest and other priority habitats throughout the proposed scheme are likely to be affected either directly as a result of habitat severance and loss, or indirectly due to changes in air quality from dust and pollution, noise and vibration, or hydrological changes resulting in degradation of habitat.

Protected species have the potential to be affected by the proposed scheme both directly and indirectly. To minimise adverse effects we have included mitigation measures such as sensitive timing of works and protection of retained habitats within our construction phase designs. We will aim to avoid or reduce the impacts of habitat loss, habitat degradation, habitat fragmentation, disturbance and species mortality. We will provide further mitigation measures for specific species, including replacement bat roosts where habitats are lost during construction, and the creation of replacement habitat in advance of construction.

Towards the end of the construction period we will update our Environmental Management Plan to reflect changes in baseline conditions. We would also include essential

environmental information needed for monitoring and maintain the new road once open for traffic.

Preliminary construction assessment

- Likely significant adverse effects on designated sites and protected species.
- Likely significant adverse and beneficial effects on habitats.
- Likely significant adverse effects on bats due to loss and fragmentation of foraging and commuting habitats.

Operation

Potential impacts on protected species once the road is opened may include, but would not be limited to, disturbance from increased levels of noise or lighting, habitat degradation due to changes in air quality from vehicle emissions and incidental mortality through animal vehicle collisions.

We have designed the proposed scheme to connect the habitats within the local area and to reduce, as far as possible, the effects of habitat fragmentation. The landscape includes natural barriers in key locations to force bats and birds up over the road to reduce the risk of collision with vehicles. We have designed hedgerow and tree planting along the road, as well as our fencing strategy, to direct animals to use culverts and underpasses which provide safe crossing points. After construction,

whilst our tree planting and new habitats are establishing, it is likely that temporary screening would be required in some locations to force bats (particularly low flying species) up over the road. The surveys we are undertaking during 2021 will help inform the locations of where this screening will be needed.

We will design the drainage along the proposed scheme to provide appropriate measures to attenuate and treat (including pollution control devices where necessary) surface water runoff from the road. This will avoid degradation or damage of the water environment including water habitats and the species they support.

Preliminary operation assessment

- Likely significant adverse effect on Bickenhall Wood ancient woodland due to air quality related nitrogen deposition from vehicle emissions causing potential for habitat degradation.



Geology and soils

Baseline

The proposed scheme varies in ground level between the A358 where it joins the M5 at junction 25 and Southfields roundabout. The proposed scheme descends into a wide valley between Greenway bridge before rising back up again at Mattock's Tree Hill.

Agricultural land includes areas classified as best and most versatile land. This means that the land is considered the most flexible land in terms of the range of crops that can be grown, give the highest yield and produce the most consistent yield. We have identified a number of possible sources of contamination adjacent to the proposed route, including historical landfills, an infilled railway cutting, a sewage works, commercial activities and fuel storage sites.

Construction

During the construction phase, disturbance of historic landfills may create ground gas and vapour pathways, which could affect nearby residential and commercial

properties. These effects will be explored further as part of the EIA and reported on in the ES.

Within the land required temporarily for construction, approximately 104 hectares of best and most versatile agricultural land would be temporarily lost. After construction we would reinstate approximately 39 hectares of best and most versatile agricultural land. This would leave a permanent loss of approximately 65 hectares of best and most versatile agricultural land. We have not yet collected specific ground investigation and monitoring data. However, once complete this data would be used to inform options for appropriate mitigation and further stages of assessment.

Preliminary construction assessment

- Likely temporary and permanent adverse effect on best and most versatile agricultural land and subgrade
- agricultural land.
- Potential significant effects relating to contamination from historical landfills on off-site residential users would produce a moderate adverse permanent effect prior to mitigation. Mitigation will be designed during the EIA once further information is gathered.

Operation

Once the new road is open, we do not anticipate any activities that are likely to have an impact on geology and soils.

Preliminary operation assessment

- No likely significant effects are anticipated during the operation of the proposed scheme.

Material assets and waste

Baseline

As part of our assessment, we are considering the use of materials and the generation of waste. The baseline situation includes the availability of materials including minerals within the region and the capacity of waste management infrastructure.

The proposed scheme would require both raw materials, such as aggregates and soil, and manufactured construction materials such as concrete, asphalt and steel. In the Somerset region, the availability for crushed rock and sand and gravel are expected to meet projected demand for the next 28 years and 12.5 years, respectively. Somerset County Council have identified areas of finite mineral resources within the area of the proposed scheme that should be safeguarded for the future. There is sufficient capacity in the waste facilities in Somerset and the UK should this be required for the proposed scheme.

Construction

During construction, we would need to import materials to site which may have an impact on local sources of material. We anticipate this to be a small amount in the context of suppliers which regularly provide material for similar projects. Our excavation works would result in a

surplus of material (approximately 58,700 cubic metres). We would look for other opportunities to use this material as part of the proposed scheme, including for engineering uses and essential landscaping. This would reduce the noise and air quality impacts associated with the transportation of large quantities of materials.

There would likely be some waste arising from the proposed scheme. However, where possible, we will prevent waste by managing it in accordance with the waste hierarchy. This means we would look for opportunities such as reusing materials on-site, off-site recycling, off-site composting or off-site recovery (i.e. waste serving a useful purpose), with a preference to reduce and reuse prior to disposal.

Preliminary construction assessment

- No likely significant effects are anticipated during the construction of the proposed scheme.

Operation

Once we open the road, there would be limited significant effects as there are no requirements to import or export materials or to generate waste on a day-to-day basis other than for routine maintenance activities such as gully emptying and litter collection. Material use and waste

generation is anticipated to be very small during operation of the proposed scheme.

Preliminary operation assessment

- No likely significant effects are anticipated during the operation of the proposed scheme.



Noise and vibration

Baseline

Existing noise and vibration in the area is likely to be dominated by road traffic noise from the A358, A303, A378 and M5. Noise sensitive areas along the A358 are associated with individual or small groups of dwellings. The existing A358 passes close to residential properties resulting in high existing noise levels along the A358. This is reflected in the designation of eight Noise Important Areas (NIA) (areas identified by the UK government as being most exposed to noise) along the existing A358 between Taunton and Southfields.

Construction

During the construction of the proposed scheme, temporary significant adverse noise effects are likely to occur at 45 properties during the daytime.

We would use best practice measures to manage construction noise. These would include using quiet and low vibration equipment, locating equipment away from residential areas to minimise noise disturbance, using enclosures for stationary equipment, using temporary screening hoarding/bunds, and implementing a traffic management plan.

We have identified construction vibration impacts at four dwellings and one non-residential property. However, these impacts would be of short duration i.e. less than 10 days, and therefore have been assessed as not significant. We would control vibration effects from construction with suitable mitigation measures.

Preliminary construction assessment

- Construction activities would result in likely significant temporary adverse noise effects at approximately 345 residential and non-residential noise sensitive receptors within the study area.
- Significant adverse vibration effects are considered unlikely.

Operation

Once we open the new road, changes in the noise environment would arise from changes in the road layout which would alter the distance between road traffic and sensitive receptors such as residential properties. Changes in noise levels would also be associated with changes in traffic volumes, types of vehicles using the road(s) and speed on the local road network.

We have identified that once open:

- 113 residential properties will likely have direct significant permanent beneficial noise effects

- 439 residential properties will likely have direct permanent adverse significant noise effects
- 211 residential properties will likely have indirect permanent beneficial significant noise effects
- 374 residential will likely have indirect permanent adverse significant noise effects during the daytime

As part of our design we have considered the horizontal and vertical structure of the proposed scheme to minimise noise impacts. We are currently looking at possible mitigation options, for example vertical screening (noise barriers), to incorporate into the design.

During operation, a number of NIAs would benefit from noise reductions such that they would be lower than the current noise levels without the proposed scheme.

Preliminary operation assessment

- Likely direct permanent beneficial significant noise effects have been identified at 113 residential properties.
- Likely direct permanent adverse significant effects have been identified at 439 residential properties.
- Likely indirect permanent beneficial significant effects have been identified at 211 residential properties.
- Likely indirect permanent adverse significant effects have been identified at 374 residential properties.



Public
Footpath

Population and human health

Baseline

The assessment of population and human health considers the potential effects on private property and housing, community land and assets, development land and businesses, agricultural holdings, walkers, cyclists and horse riders including disabled users, and human health.

The existing A358 passes through a largely rural area between Taunton and Ilminster, with various agricultural land uses and villages, hamlets and scattered farms and individual dwellings. The area surrounding the proposed scheme is largely rural in nature with a number of agricultural holdings as well as dispersed residential properties and businesses.

The current A358 provides direct access to local communities such as Ruishton, Haydon, Henlade, Thornfalcon, West Hatch, Hatch Beauchamp, Ashill, Broadway and Horton Cross, with businesses including churches, indoor sports facilities, schools, care homes, doctor's surgeries and shops. Taunton Gateway Park and Ride is located within 500 metres of the proposed scheme and the M5 at Taunton.

There are over 20 public rights of way (PRoW) such as footpaths that cross or meet the A358 which have the potential to be affected by the proposed scheme.

Construction

During construction the proposed scheme is likely to lead to both beneficial and adverse effects.

One permanent adverse effect is that we would need to demolish three private properties. Where no demolition or land take is needed, effects (such as severance and limited accessibility) on private property and housing during construction would be temporary. We would put in place appropriate mitigation (such as appropriate signage) and management through our EMP.

Some community assets, PRoW and agricultural holdings in close proximity to the proposed scheme are also likely to be negatively affected through temporary land take or the indirect effects of construction activities.

There are three open spaces within the study area that have a high sensitivity given their frequent use and access to majority of the community. As these are located around 500 metres away from the proposed scheme, these are likely to experience a neutral or slight adverse effect given the noticeable change in environmental quality (such as from noise and air) expected in close proximity to the open spaces.

We would aim to limit the impacts of any temporary closures of PRoW and temporary agricultural accesses during construction by using mitigation measures such as temporary diversions and signage. We would also maintain access to businesses and residential properties. We would

minimise severance during construction through the construction of agricultural crossings, access tracks and replacement of field entrances where needed. Our consultation with affected landowners will inform the location of these mitigation measures where possible.

Preliminary construction assessment

- Likely permanent large adverse effects on three private properties to be demolished.
- Likely temporary moderate adverse effects on five private properties.
- Likely permanent adverse effects on community assets.
- Likely temporary moderate adverse effects to 20 businesses (due to changes in access changes).
- Likely permanent and temporary significant adverse temporary effects on a number of agricultural land holdings.
- Likely adverse effects on walker, cyclists, and horse riders as a result of construction activities.

Operation

Once we open the road, the proposed scheme is anticipated to provide beneficial effects in terms of overall accessibility and connectivity for the local community, businesses and for those visiting the area.

The proposed scheme includes a number of new crossing points which would provide better and safer links across

the A358 for road users and walkers, cyclists and horse riders including disabled users. The proposed scheme will also include proposals for new and improved rights of way through a PRow Management Plan. We will write this to support our ES and will submit as part of our DCO application.

Preliminary operation assessment

- Likely permanent moderate adverse effects on four private properties.
- Likely slight beneficial effects to all community assets as a result of improved accessibility from the overall reduction in the number of vehicles passing through communities.
- Likely slight beneficial effects to all business receptors as a result of improved journey time reliability and safety.
- Likely one large adverse impact to a bridleway where the route will be stopped up, with a further 15 routes experiencing moderate adverse effects as a result of longer journey times as a result of permanent diversions.
- Likely positive health outcome in North Curry and Stoke St Gregory as a result of reductions in noise.
- Likely positive health outcomes in relation to the health of transport and connectivity, air quality, and employment and training across all electoral wards.



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Road drainage and the water environment

Baseline

The water environment comprises the road drainage system, surface water features such as watercourses, groundwater resources in relation to water supplies and flood risk within the study area. The links between the surface water, groundwater and nature creates a very complex and sensitive environmental setting.

Our ongoing groundwater and surface water surveys will further inform our understanding of the baseline. This will give us greater certainty about the nature and scale of potential impacts and inform our design of mitigation and enhancement measures.

There are 12 known watercourse crossings along the A358 corridor. A number of these channels are statutory designated watercourses. These waterbodies are Broughton Brook, Meare Stream, Fivehead rivers (two main channels), River Ding and the River Isle. As a result,

there are areas of surface water flood risk across the route of the proposed scheme.

Construction

We would follow the established construction practice guidelines to manage pollution risks during construction. Measures to mitigate adverse effects on the water environment during construction would include providing spill kits, restricting site traffic to dedicated haul roads and ensuring hard-standing areas are regularly swept and maintained. Site-specific measures for construction of the proposed scheme would include:

- Early in construction we would set up a surface water management system using measures such as temporary silt fencing, cut off ditches, settlement ponds and bunds. This would capture all runoff (i.e. fuel from vehicles) and prevent mixing of sediments and contaminants into existing drainage ditches where necessary.
- Prior to discharge, we would contain and treat any water with a higher risk of contamination which requires discharge.
- We would suspend work during floods or during intense rainstorms.

Preliminary construction assessment

- No potential significant effects identified on surface water and groundwater due to the implementation of appropriate mitigation measures during construction.

Operation

Once we open the new road, there is the potential for the proposed scheme to impact on the risk of flooding, surface water and groundwater quality and statutory designated waterbodies. These include aspects such as the release of highways runoff (i.e. fuel from vehicles) to surface waterbodies which has the potential to affect water quality and indirectly aquatic habitats.

The proposed scheme would involve work to the watercourses in terms of new culverts and bridges, extension of existing culverts and bridges and works to water channels. This would cause permanent changes to the physical character and water content of the waterbodies affected.

Preliminary operation assessment

- No potential significant effects identified on surface water and groundwater receptors.
- Assessment work on flood risk and the risk of pollution to water receptors as a result of the proposed scheme is ongoing and will be reported on in the ES, once information becomes available.



Climate

Baseline

The assessment of climate includes the effects of greenhouse gas emissions associated with the proposed scheme and resilience of the proposed scheme to cope with extreme weather events.

The baseline for the assessment of climate resilience is made up of the current climate observations and future projected climate conditions and extreme weather events in the local area. UK climate projections predict an increase in annual temperatures and rainfall, with wetter winters and drier summers and increases in the frequency of heatwaves, prolonged periods with no rainfall and days with heavy rainfall (considered to be when rainfall is greater than 25 millimetres).

Construction

The proposed scheme would result in greenhouse gas emissions during construction from the raw materials required, transport and construction processes. The provisional estimate of emissions from the construction phase total 80,000 tCO₂e (metric tonnes of carbon dioxide equivalents): 50% from construction materials; 8% from construction transport; and 43% from the construction installation and processes.

We would implement mitigation measures to reduce emissions during construction of the proposed scheme. This could include the specification of ultra-low sulphur diesel, management and minimisation of energy use, sourcing recycled or secondary materials from the local area and exploring the use of lower carbon materials.

We would design the proposed scheme to be resilient to impacts arising from projected future weather events and climatic conditions and in accordance with current planning, design and engineering practice and codes. Mitigation measures to improve the proposed scheme's resilience to climate change include the use of construction materials with appropriate durability requirements such as increased resilience to changes in temperatures.

Preliminary construction assessment

- No likely significant effects with regard to greenhouse gas emissions during the construction of the scheme.
- No likely significant effects with regard to the vulnerability of the proposed scheme to climate change during construction.

Operation

Once we open the new road, emissions would be generated primarily from the exhaust pipes of vehicles using the road and from our maintenance and refurbishment of the road.

We do not consider that the emissions from the proposed scheme in isolation would have a material impact on the ability of the UK government to meet its carbon budgets. Therefore we do not anticipate that this project would give rise to a significant effect on climate.

We have also assessed the climate change risks to the proposed scheme once the road is open. Potential impacts include increased heat stress for maintenance workers, damage to road surfaces from high temperatures, flooding and weakening of embankments from storms.

We have embedded measures to ensure resilience to these potential impacts within our design. We have assessed climate change risks to the proposed scheme and we found these not to be significant because of mitigation measures already built in to the design, to ensure the design provides a level of resilience to weather and climate-related effects. For example, we have designed drainage infrastructure with sufficient allowance to account for climate change and to withstand extreme rainfall events. Such measures would make the proposed scheme resilient to future climate conditions.

Preliminary operation assessment

- No likely significant effects with regard to greenhouse gas emissions would be likely during the operation of the proposed scheme.

- No likely significant effects with regard to the vulnerability of the proposed scheme to climate change during operation.



Cumulative effects

We will undertake an assessment of potential cumulative effects arising from the following:

- proposed developments in the vicinity of the proposed scheme that are under construction or have been consented, combined with the effects of the proposed scheme
- combined effects from the proposed scheme on a single receptor from a number of individual environmental impacts, for example noise, dust and traffic

Cumulative effects with other developments

We have undertaken an initial review of the planning applications and allocations within the area around the proposed scheme. Part of this assessment was to identify any other developments which may result in a cumulative effect together with the proposed scheme, which would result in a greater, new or different significant effect than the proposed scheme would produce on its own. The search area for these other developments was the largest combined area based on the likely distances from which other developments could influence each environmental topic.

We will assess the cumulative effects once we have concluded the individual environmental factor assessments. Therefore, we have not reported the cumulative effects in the PEI Report, but will be assessed and reported in the ES.

Combined effects on a single receptor

Combined impacts are from the action of a number of different impacts upon a single resource/receptor and are considered within the environmental factor chapters of the PEI Report. The results of this preliminary assessment do not indicate that any additional mitigation measures are required. We will include a full combined effects assessment within the environmental factor chapters of the ES.

A358



Consultation

Public consultation

We are consulting on our plans to upgrade the A358 between Taunton and Southfields. This includes the potential environmental effects of the proposed scheme as summarised in this document. We will consider consultation feedback when making further refinements to our proposed design and refining the EIA and ES.

The consultation is running from **Tuesday 12 October until 23:59 on Monday 22 November 2021**. There are various ways you can respond to the consultation.

Online

The feedback form can be completed on our website at: www.highwaysengland.co.uk/a358-taunton-to-southfields

Freepost

The feedback form, or any other feedback, can be posted to the freepost address below.

FREEPOST A358 TAUNTON TO SOUTHFIELDS

(please note that the address must be written in capital letters and you do not need a stamp).

If you need a hard copy of the feedback form, let us know and we can provide one in the post.

Email

You can email us your feedback via:
A358TauntontoSouthfields@highwaysengland.co.uk

All consultation responses must be received **by 23:59 on 22 November 2021**. Responses received after this date may not be taken into consideration as part of the consultation.

If you have any questions you can also call us on 0300 123 5000.

After the consultation

We will take time to consider your feedback when making further refinements to our proposed design and to develop our planned mitigation measures as part of our ES. We will set out a summary of the responses that you have given us in a consultation report, with details on how your feedback has shaped and influenced the proposals. This report will form part of our DCO application and will be published following submission of our application. We expect to submit our DCO application in 2022 and, if it is granted, start work on the A358 improvements in 2024/25.