

A358 Taunton to Southfields Dualling Scheme

Preliminary Environmental Information Report - Chapter 16
Summary

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16 Summary

16.1 Summary of preliminary effects

- 16.1.1 Based on the preliminary assessment, the scale and location of the proposed scheme means that several different aspects of the environment would potentially be affected. Some of these effects would occur during construction, such as the loss of land, vegetation and wildlife habitat, and the generation of dust and noise.
- 16.1.2 Other impacts would occur during operation, such as noise from traffic, changes to travel conditions and the provision of new landscaping and ecological habitats from the landscape and ecological mitigation proposals.
- 16.1.3 The previous technical chapters (5-14) present the preliminary assessments for the individual EIA topics. Each assessment provides a preliminary assessment of the likely significant effects and Table 16-1 provides a high-level summary of these effects.
- 16.1.4 A summary of the assessment set out in this Preliminary Environmental Information (PEI) Report can be found in the Non-Technical Summary (NTS).
- 16.1.5 The ongoing EIA will consider these effects and assess their significance, taking into account proposed mitigation measures. This will be presented in the Environmental Statement (ES) prepared to accompany the Development Consent Order (DCO) application.

Table 16-1 Summary of preliminary assessment of likely significant environmental effects

Factor	Preliminary assessment of likely significant environmental effects	
	Construction stage	Operational stage
Air quality	<ul style="list-style-type: none"> Temporary adverse effect due to dust emissions from construction activity on sensitive receptors within 200 metres (m) of the proposed scheme. 	<ul style="list-style-type: none"> No likely significant adverse effects on local air quality concentrations predicted at human receptors. Permanent beneficial effects on local human receptors in the existing Henlade Air Quality Management Area (AQMA) due to relieving congestion and moving the road away from receptors. The changes in nitrogen (N) deposition at ecological sites cannot be considered to be insignificant as defined in DMRB LA 105 <i>Air quality</i>. Please see the summary of significant environmental effects for Biodiversity for the conclusion of significance.
Cultural heritage	<ul style="list-style-type: none"> Likely permanent significant adverse direct effect on buried archaeological remains. Likely permanent adverse effect on the setting of the listed Musgrave Farmhouse. Likely permanent adverse effect on the setting of the listed Ashe Farmhouse. Likely permanent adverse effect on the setting of the listed Ruishton House. Likely permanent adverse direct effect on the listed Road bridge at NGR ST 2815 2249. Likely permanent adverse direct effect on Hatch Park, Hatch Beauchamp. Likely permanent adverse direct effect on Jordans Park, Ashill. Likely permanent adverse direct effect on HLCA_003, Ancient and post-medieval fields, Somerset Hills. 	<ul style="list-style-type: none"> Ashe Farmhouse (NHLE: 1060367). Given the current rural setting of the farmhouse, the increase in noise levels during operation is likely to constitute a moderate adverse operational effect. The Thatch (NHLE: 10603668). Given the current rural setting of the farmhouse, the increase in noise levels during operation is likely to constitute a moderate adverse operational effect.
Landscape	<ul style="list-style-type: none"> During construction there are likely to be significant effects on the: <ul style="list-style-type: none"> Vale of Taunton Deane LLCA (large adverse); and 	<ul style="list-style-type: none"> Significant landscape effects will remain due to the offline sections of the proposed scheme within the existing rural landscape and nature of proposed earthworks, junctions and structures for:

Factor	Preliminary assessment of likely significant environmental effects	
	Construction stage	Operational stage
	<ul style="list-style-type: none"> ○ North Curry Sandstone Ridge LLCA (moderate adverse). ● The significant effects on representative viewpoints during construction are: <ul style="list-style-type: none"> ○ Two very large adverse (viewpoints 1 and 4); ○ 10 large adverse (viewpoints 2, 5, 7, 9, 13, 18, 22, 26, 27, and 32); and ○ Nine moderate adverse (viewpoints 6, 10, 14, 20, 23, 24, 25, 31, and 45). 	<ul style="list-style-type: none"> ○ Vale of Taunton Deane LLCA (large adverse year 1, moderate adverse year 15); and ○ North Curry Sandstone Ridge LLCA (moderate adverse year 1 and year 15). ● The significant effects on representative viewpoints during year 1 are: <ul style="list-style-type: none"> ○ One very large adverse (viewpoint 4); ○ 10 large adverse (viewpoints 1, 2, 7, 9, 13, 18, 22, 26, 27, and 32); and ○ Nine moderate adverse (viewpoints 5, 6, 14, 20, 23, 24, 25, 31, and 45). ● The significant effects on representative viewpoints during year 15 are: <ul style="list-style-type: none"> ○ One large adverse (viewpoint 1); and ○ Five moderate adverse (viewpoints 2, 4, 18, 27, and 32).
Biodiversity	<ul style="list-style-type: none"> ● Adverse significant effects on Road Verges West of Hatch Beauchamp Local Wildlife Site (LWS), Jordans Park LWS and River Rag LWS due to direct habitat loss within these designated sites. ● Adverse significant effect on Bickenhall Wood and Saltfield Copse LWS ancient woodlands due to direct habitat loss. ● Adverse significant effect on veteran trees due to the loss of up to three veteran trees. ● Adverse significant effect on semi-natural broadleaved woodland due to habitat loss. ● Beneficial significant effect on semi-natural broadleaved woodland due to habitat creation. ● Adverse significant effect on species-rich hedgerows due to habitat loss. 	<ul style="list-style-type: none"> ● Adverse significant effect on Bickenhall Wood ancient woodland due to vehicular related nitrogen deposition causing potential for habitat degradation.

Factor	Preliminary assessment of likely significant environmental effects	
	Construction stage	Operational stage
	<ul style="list-style-type: none"> Beneficial significant effect on species-rich hedgerows due to habitat creation and management. Beneficial significant effect on species-rich neutral grassland due to habitat creation. Adverse significant effect on bat assemblages due to loss and fragmentation of foraging and commuting habitats. 	
Geology and soils	<ul style="list-style-type: none"> Direct temporary and permanent very large adverse effect on best and most versatile (BMV) agricultural land. Temporary and permanent large adverse effect of Subgrade 3b agricultural land. A potential significant construction effect related to contamination from historical landfills and off-site residential users prior to mitigation would produce a moderate adverse permanent effect. Mitigation will be designed during the EIA once further information is gathered. 	<ul style="list-style-type: none"> No likely significant operational effects
Material assets and waste	<ul style="list-style-type: none"> No likely significant construction stage effects anticipated 	<ul style="list-style-type: none"> No likely significant operational stage effects anticipated
Noise and vibration	<ul style="list-style-type: none"> Temporary adverse significant noise effects from construction activities have been identified at approximately 345 residential and non-residential noise sensitive receptors within the study area. 	<ul style="list-style-type: none"> Direct permanent beneficial significant noise effects have been identified at 113 residential properties. Direct permanent adverse significant noise effects have been identified at 439 residential properties. Indirect permanent beneficial significant noise effects have been identified at 211 residential properties. Indirect permanent adverse significant noise effects have been identified at 374 residential properties.
Population and health	<ul style="list-style-type: none"> Three private properties will experience permanent large adverse impacts during construction due to demolition. A further six private properties will experience temporary moderate adverse effects through the introduction of severance or discernible changes in environmental quality. There are no demolitions resulting in large adverse effects for either community assets or businesses. 	<ul style="list-style-type: none"> Four private properties are anticipated to experience permanent moderate adverse effects due to severance or substantial environmental changes. There will be 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.

Factor	Preliminary assessment of likely significant environmental effects	
	Construction stage	Operational stage
	<ul style="list-style-type: none"> • There is one very large adverse effect, one temporary large adverse, and four moderate adverse effects on community assets as a result of access changes or discernible changes in environmental quality. • There are moderate adverse effects to 20 businesses as a result of access changes or discernible changes in environmental quality. • 23 agricultural land holdings will experience significant adverse temporary effects, with 16 agricultural land holdings experiencing significant adverse permanent effects once construction is complete. • Slight adverse effects will be experienced by all walker, cyclists, and horse riders as a result of construction activities. • Neutral health outcomes for all health determinants except for air quality which is negative across all wards. 	<ul style="list-style-type: none"> • There will be slight beneficial effects to all business receptors as a result of improved journey time reliability and safety. • There is one large adverse impact to one bridleway where the route has been stopped up, with a further 15 routes experiencing moderate adverse effects as a result of longer journey times as a result of the diversions. • Positive health outcomes across all wards in relation to the health determinants of transport and connectivity, air quality, and employment and training. • Positive health outcome for noise determinant in North Curry and Stoke St Gregory ward. • Neutral health outcomes in relation to other assessed health outcomes (i.e., open space and nature, noise, landscape, and sources of pollution).
Road drainage and water environment	<ul style="list-style-type: none"> • No potential significant effects identified on surface water and groundwater receptors due to the implementation of appropriate mitigation measures during construction. 	<ul style="list-style-type: none"> • No potential significant effects identified on surface water and groundwater receptors in the PEI Report. • The potential impact of the proposed scheme on pollution risk to water receptors will be determined using HEWRAT and reported in the ES. • The potential impacts of the proposed scheme on flood risk (for Black Brook Tributaries 1-3, River Tone Tributary 1, West Sedgemoor Main Drain, Fivehead River Main Channels 1 and 2, Venner's Water, River Ding and Tributaries 1 and 2 and Back Stream) will be assessed in the ES utilising hydraulic modelling.
Climate change	<ul style="list-style-type: none"> • Vulnerability to climate change <ul style="list-style-type: none"> ○ No potential significant effects anticipated for receptors identified in the PEI Report due to the implementation of appropriate design and mitigation measures during construction. • Greenhouse gas (GHG) emissions 	<ul style="list-style-type: none"> • Vulnerability to climate change <ul style="list-style-type: none"> ○ No potential significant effects anticipated for receptors identified in the PEI Report due to the implementation of appropriate design and mitigation measures during operation. • GHG emissions

Factor	Preliminary assessment of likely significant environmental effects	
	Construction stage	Operational stage
	<ul style="list-style-type: none"> Based on the preliminary assessment presented in this PEI Report, no significant effects in relation to GHG emissions are predicted during the construction and operation phases. This is due to the consideration that in isolation the proposed scheme would not have a material impact on the ability of the UK government to meet its carbon reduction targets. 	<ul style="list-style-type: none"> Based on the preliminary assessment presented in this PEI Report, no significant effects in relation to GHG emissions are predicted during the construction and operation phases. This is due to the consideration that in isolation the proposed scheme would not have a material impact on the ability of the UK government to meet its carbon reduction targets.

Abbreviations List

Please refer to PEI Report Chapter 17 Abbreviations.

Glossary

Please refer to PEI Report Chapter 18 Glossary.