A358 Taunton to Southfields Dualling Scheme

Preliminary Environmental Information Report - Appendix 9.4
Non-Significant Effects

HE551508-ARP-EGT-ZZ-RP-LE-000006

09/09/21

Table of contents

Table of Tables

1 Non-significant effects

This document considers non-significant effects of the proposed scheme with respect to geology and soils. Table 1-1 has been developed based on the conceptual site models (CSMs) produced as part of the preliminary risk assessment (PRA). This identified the likely receptors, sources and potential contaminant linkages (PCLs) and associated risks. Generally the PCLs were associated with a low or moderate to low risk. Those with moderate to high risk were used to identify the sites which should be scoped into the proposed ground investigation and taken forward for the environmental assessment.

The receptor sensitivity and magnitude have been compared using Table 9-4 “significance matrix” and the outcomes are summarised below. The table presents the assessment of effects following mitigation.

Table 1-1 Summary of non-significant effects – construction

Potential impact	Receptor	Description	Receptor sensitivity	Design and mitigation measures	Magnitude of impact	Significance of effect
Exposure to contaminated soil/groundwater/ leachate/ ground gas/vapours	On-site users	Construction workers	Medium	Completion of ground investigations prior to construction to inform detailed design. If unacceptable risks are identified due to presence of contaminated soils/groundwater/leachates/ground gas, remediation to be completed in accordance with current guidelines and standards to satisfaction of regulatory authorities. Remediation strategies may involve source removal or pathway intervention as appropriate. Measures contained within the EMP including soils handling and storage, dust control, monitoring and dealing with unexpected contamination would control the impact resulting in a low and very low risk to these receptors. Appropriate health and safety management systems in place during construction.	Minor	Slight
	Off-site users	Public open space	High		No change	Neutral
		Commercial workers	Medium		Negligible	Slight
		Highway users (existing A358)	Low		No change	Neutral

Potential impact	Receptor	Description	Receptor sensitivity	Design and mitigation measures	Magnitude of impact	Significance of effect
Contaminated soil leachate/ groundwater/ direct discharge and pollution of aquifers Vertical / lateral migration of leachate/ groundwater contamination through driving of contaminants by construction works i.e. piling/creation of preferential pathways	Groundwater	Colluvium/Head deposits, Blue Lias - Secondary A	High	Completion of ground investigations prior to construction to inform detailed design. If unacceptable risks are identified due to presence of contaminated soils/groundwater/leachates, remediation to be completed in accordance with current guidelines and standards to satisfaction of regulatory authorities. Remediation strategies may involve source removal or pathway intervention as appropriate. The impact would be controlled through measures set out in the EMP including appropriate hazardous materials storage, temporary drainage, monitoring. Foundations works risk assessment to be completed for individual structures where deep foundations or ground improvement works are proposed.	Negligible	Slight
		Mercia Mudstone Group/Branscombe Mudstone Formation – Secondary B	Medium		Negligible	Neutral
		Alluvium, Charmouth Mudstone Formation – Secondary (undifferentiated) Belemnite Member - undesignated	Low		Negligible	Neutral
Contaminated soil leachate/ groundwater/ direct discharge and pollution of surface water Vertical / lateral migration of leachate/ groundwater contamination through preferential pathways	Surface water	Water Framework Directive water body: Fivehead River River Isle River Ding West Sedgemoor Main Drain Watercourses which cross the proposed scheme: Black Brook Tributary 1 Black Brook Tributary 2 Black Brook Tributary 3 River Tone Tributary 1	High		Negligible	Neutral

Potential impact	Receptor	Description	Receptor sensitivity	Design and mitigation measures	Magnitude of impact	Significance of effect
		West Sedgemoor Main Drain Unnamed ordinary watercourse Fivehead River Main channel 1 Fivehead River Main channel 2 Fivehead River Tributary 5 Venner's Water Cad Brook Drainage Network Cad Brook River Ding Back Stream				
Temporary loss / reduction of one or more soil function	Agricultural soils used for food production.		Low	Good practice techniques would be adopted in the handling, storage and reinstatement of soils to avoid any reduction in the long-term capability.	Moderate	Slight

Table 1-2 Summary of non-significant effects – operation

Potential impact	Receptor	Description	Receptor sensitivity	Design and mitigation measures	Magnitude of impact	Residual significance of effect
Exposure to contaminated groundwater/ Leachate/ ground gas/vapours	On-site users	Maintenance workers	Medium	Completion of ground investigations prior to construction to inform detailed design. If unacceptable risks are identified due to presence of contaminated soils/groundwater/leachates, remediation to be completed in accordance with current guidelines and standards to satisfaction of regulatory authorities. Remediation strategies may involve source removal or pathway intervention as appropriate. A Materials Management Plan (MMP) will be prepared in advance of construction works in accordance with CL:AIRE Definition of Waste Code of Practice (2011) (v.2). This will include measures to establish acceptable reuse criteria and procedures, to ensure the suitability of material for reuse, can be demonstrated and verified. A site waste management plan (SWMP) will also be prepared to address the removal, transportation and disposal of all waste and identify opportunities to maximise the recycling potential of all materials arising from construction of the proposed scheme. Materials reused within the proposed scheme are subject to Design Manual	Minor	Slight
	Off-site users	Residential	Very High		Negligible	Slight
		Commercial worker	Medium		Negligible	Slight

Potential impact	Receptor	Description	Receptor sensitivity	Design and mitigation measures	Magnitude of impact	Residual significance of effect
				for Roads and Bridges (DMRB) specification for highways earthworks and therefore only materials suitable for end use i.e. not posing an unacceptable risk to human health will be reused.		