



West Sussex County Council

A29 REALIGNMENT PHASE 1

Environmental Statement - Chapter 15





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WSP

2 London Square

Cross Lanes

Guildford, Surrey

GU1 1UN

Phone: +44 148 352 8400

WSP.com



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15 SUMMARY AND CONCLUSION

15.1 INTRODUCTION

- 15.1.1 This chapter of the ES provides a brief summary of all effects resulting from the construction and operation of the A29 Realignment Phase 1.
- 15.1.2 Table 15-1 provides a brief description of each effect, the required mitigation measures and resulting residual effect. This chapter considers changes to the assessment as a result of the Revised ES as well as the ES Addendum (see **Section 15.3**).
- 15.1.3 As outlined in Chapter 5 – Approach to EIA, any effect of Moderate and above is considered to be 'Significant'. All 'Significant' effects in Table 15-1 are in **bold**.

Table 15-1 – Summary of Effects

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
Air Quality				
Construction Stage				
Changes in levels of dust and fine particulates at existing receptors due to on-site construction activities	Human Receptors within 200m from construction works	Minor -/T/D/ST	<ol style="list-style-type: none"> 1 Damping down of dry surfaces, in-particular haul roads; 2 Avoiding/minimising stockpiling of friable materials on-site in open areas; 3 Locating stockpiles (if necessary) as far away from sensitive receptors as practicable; 4 Seeding or screening of long-term inactive stockpiles such as topsoil; 	Negligible and Not Significant ST
Changes in ambient NO ₂ , PM ₁₀ and PM _{2.5} concentrations at existing receptors from Non-Road Mobile Machinery	Human Receptors within 200m from construction works and	Minor -/T/D/ST	<ol style="list-style-type: none"> 5 On-site speed restrictions to minimise dust entrainment; 6 Sheeting/covering of lorries carrying potentially dusty materials; 7 Wheel/chassis cleaning prior to exit onto the public highway; 8 Requiring all on-site plant to comply with the latest EU emission standards for non-road mobile machinery; and 	Negligible and Not Significant ST

¹ + / - = Beneficial or Adverse P / T = Permanent or Temporary, D / I = Direct or Indirect, ST / MT / LT = Short Term, Medium Term or Long Term, N/A = Not Applicable

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
(NRMM) and construction traffic emissions.	roads carrying traffic		Requiring all contractor vehicles to be compliant with a minimum Euro emissions standard, for example Euro VI (6).	
Operational Stage				
Changes in NO ₂ , PM ₁₀ and PM _{2.5} concentrations at existing receptors due to emissions from road traffic associated with the Scheme.	Existing human receptors	Negligible LT	No mitigation measures	Negligible and not Significant LT
Noise and Vibration				
Construction Stage				
Construction noise	Residential dwellings	Major - / T / D / ST	Measures outlined in the CEMP including: Use of Best Practice Methods (BMP), specifically: All vehicles and plant will be switched off when not in use; Design and use of site hoardings and screens, where necessary, to provide acoustic screening at the earliest practicable opportunity. Where practicable, gates will not be located opposite buildings containing NSRs; Vehicle and mechanical plant fitted with effective exhaust silencers;	Moderate - / T / D / ST

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
			<p>Positioning of construction plant and activities to minimise noise at sensitive locations;</p> <p>Equipment that breaks concrete by munching or similar, rather than by percussion; and</p> <p>The use of mufflers on pneumatic tools.</p>	
Construction vibration	Residential dwellings	<p>Major</p> <p>- / T / D / ST</p>	<p>Measures outlined in the CEMP including:</p> <p>Use of BPM, specifically:</p> <p>selection of low vibratory equipment and methodologies;</p> <p>contact details for nominated site contact for local residents to deal with complaints and engaging with local residents; and</p> <p>no start-up or shut down of vibratory plant e.g. rollers or compactors, within 50m of receptors.</p>	<p>Minor/Moderate</p> <p>- / T / D / ST</p>
Operational Stage				
Road traffic noise	Dwellings	<p>Minor</p> <p>- / P / D / LT</p>	N/A	<p>Minor</p> <p>- / P / D / LT</p>
Road traffic noise	Other Sensitive Receptors	<p>Minor</p> <p>- / P / D / LT</p>	N/A	<p>Minor</p> <p>- / P / D / LT</p>
Noise from relocated substation	Dwellings	<p>Negligible</p> <p>N/A / P / D / LT</p>	N/A	<p>Negligible</p> <p>N/A / P / D / LT</p>

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
Transport and Access				
Construction Stage				
Construction Traffic	Local Road Users	Slight Adverse	Construction Traffic Management Plan	Slight Adverse / Not Significant
Diversions of Public Rights of Way	Public Rights of Way Users	Slight Adverse	Construction Traffic Management Plan	Slight Adverse / Not Significant
Operational Stage				
Road Safety	Local Road Users	Not Significant	Road Safety Audit – designers response	Not Significant
Change in Traffic Flows	Local Road Users	Beneficial but Not Significant	N/A	Not Significant
Modification of Public Right of Way	Public Rights of Way Users	Not Significant	N/A	Not Significant
Ecology				
Construction Stage				
Disturbance from construction activities	Bats - roosting	Minor	CEMP to detail and guarantee measures	Negligible

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
including visual, noise, vibration and lighting.		- / T / I / ST		N/A
	Bats – foraging and commuting	Minor - / T / I / ST	– CEMP to detail and guarantee measures – Sensitive lighting regime Site fencing/ hoarding to protect retained habitat.	Negligible N/A
	Badgers	Minor- Moderate - / T / I&D / ST	– CEMP to detail and guarantee measures Protection of retained setts	Minor - / T / I / ST
	Birds – wintering	Minor - / T / I / ST	CEMP to detail and guarantee measures	Negligible N/A
	Birds – breeding	Minor - / T / D / ST	– CEMP to detail and guarantee measures. Avoidance of site clearance during the breeding bird season (March-August, inclusive).	Minor - / T / D / ST
	Reptiles	Minor - / T / D / ST	– CEMP to detail and guarantee measures. Sensitive vegetation clearance	Negligible N/A
	Invertebrates	Minor - / T / D / ST	– CEMP to detail and guarantee measures. Sensitive vegetation clearance	Negligible N/A
	Other Species of Principal	Minor - / T / D / ST	– CEMP to detail and guarantee measures. Sensitive vegetation clearance	Negligible N/A

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
	Importance (SPI)			
Degradation through airborne pollution Pollution caused by use of hazardous materials and incidental release of dust, chemicals, fuels or waste materials.	Off-site Habitat of Principal Importance (HPI)	Minor - / T&P / I / LT&ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat.	Negligible N/A
	On-site HPI (Hedgerows)	Minor - / T&P / D&I / LT&ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat.	Negligible N/A
	On-site HPI (Traditional Orchard)	Minor- Moderate - / T&P / D&I / LT&ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat.	Negligible N/A
Permanent and temporary land-take with the Scheme footprint Permanent manipulation of habitats, such as landscaping and 'tidying-up' of areas not within the footprint, felling of	On-site HPI (Hedgerows)	Minor - / P / D / LT	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures – Site fencing/ hoarding to protect retained habitat. Habitat replacement	Minor - / T / D / ST
	On-site HPI (Traditional Orchard)	Minor- Moderate - / P / D / LT	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures – Site fencing/ hoarding to protect retained habitat. Habitat replacement	Minor - / T / D / ST

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
trees for Health and Safety reasons				
Temporary storage of construction materials within / adjacent to ecological resources with associated habitat contamination	Off-site HPI	Minor - / T / I / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat. 	Negligible N/A
	On-site HPI (Hedgerows)	Minor - / T / I / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat. 	Negligible N/A
	On-site HPI (Traditional Orchard)	Minor- Moderate - / T / I / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Pollution prevention measures Site fencing/ hoarding to protect retained habitat. 	Negligible N/A
Habitat loss and fragmentation disrupting species dispersal	Bats - roosting	Minor - / P / D / LT	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures Installation of bat boxes to replace lost PRFs prior to tree removal. 	Minor - / T / D / ST
	Bats – foraging and commuting	Minor - / P / D / LT	Site fencing/ hoarding to protect retained habitat.	Minor - / T / D / ST
	Badgers	Minor- Moderate - / T / I&D / ST	<ul style="list-style-type: none"> – Creation of artificial sett – CEMP to detail and guarantee measures Protection of retained setts 	Minor - / T / I / ST
	Birds – wintering	Minor - / T / D / ST	CEMP to detail and guarantee measures	Minor - / T / D / ST

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
	Birds – breeding	Minor - / T / D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. – Avoidance of site clearance during the breeding bird season (March-August, inclusive). Installation of bird boxes 	Minor - / T / D / ST
	Reptiles	Minor - / T / D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. Sensitive vegetation clearance 	Minor - / T / D / ST
	Invertebrates	Minor - / T / D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. Sensitive vegetation clearance 	Minor - / T / D / ST
	Other SPI	Minor - / T / D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. Sensitive vegetation clearance 	Minor - / T / D / ST
Direct mortality during site clearance and construction	Bats - roosting	Minor - / P / D / LT	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Updated surveys to establish any changes to baseline Installation of bat boxes to replace lost Potential Roost Features (PRFs) 	Negligible N/A
	Badgers	Minor- Moderate - / T / I&D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures – Creation of artificial sett and works completed under a Natural England licence Protection of retained setts 	Minor - / T / I / ST
	Birds – breeding	Minor - / T / D / ST	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. Avoidance of site clearance during the breeding bird season (March-August, inclusive). 	Minor - / T / D / ST
	Reptiles	Minor	<ul style="list-style-type: none"> – CEMP to detail and guarantee measures. Sensitive vegetation clearance 	Negligible

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
		- / T / D / ST		N/A
	Invertebrates	Minor - / T / D / ST	- CEMP to detail and guarantee measures. Sensitive vegetation clearance	Negligible N/A
	Other SPI	Minor - / T / D / ST	- CEMP to detail and guarantee measures. Sensitive vegetation clearance	Negligible N/A
Operational Stage				
Direct disturbance from operational use including visual, noise, vibration and lighting.	Bats – roosting	Negligible - / P / I / LT	- Monitoring of bat boxes Sensitive lighting strategy	Negligible N/A
	Bats – foraging and commuting	Minor - / P / I / LT	Sensitive lighting strategy, to include timing of operational lighting	Negligible N/A
	Badgers	Minor - / P / I / LT	Sensitive lighting strategy, to include timing of operational lighting	Minor N/A
	Birds – wintering	Negligible - / P / I / LT	Careful habitat management	Negligible N/A
	Birds – breeding	Negligible - / P / I / LT	Careful habitat management	Negligible N/A
	Reptiles	Negligible	Careful habitat management	Negligible

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
		- / P / I / LT		N/A
	Invertebrates	Negligible - / P / I / LT	Careful habitat management	Negligible - / P / D / LT
Degradation through airborne pollution	Off-site HPI	Negligible - / P / I / LT	No specific mitigation	Negligible N/A
	On-site HPI (Hedgerows)	Negligible - / P / I / LT	Establishment of new habitats	Negligible - / P / D / LT
	On-site HPI (Traditional Orchard)	Negligible - / P / I / LT	Establishment of new habitats	Minor + / P / D / LT
Direct injury / mortality during operation	Bats – foraging and commuting	Minor - / P / I / LT	– Establishment of new habitats Sensitive lighting strategy, to include timing of operational lighting	Negligible N/A
	Badgers	Minor - / P / I / LT	– Establishment of new habitats – Sensitive lighting strategy, to include timing of operational lighting Wildlife underpass	Minor N/A
	Birds – wintering	Negligible - / P / I / LT	– Establishment of new habitats Careful habitat management	Negligible N/A

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
	Birds – breeding	Negligible - / P / I / LT	– Establishment of new habitats Careful habitat management	Negligible N/A
	Other SPI	Negligible - / P / I / LT	– Establishment of new habitats Careful habitat management	Negligible N/A
Landscape and Visual Impact				
Construction Stage				
Effects on landscape character	LCA1 - Eastergate Village	N/A	Temporary construction lighting to be minimal in extent and use. The lighting is to be highly directional and seek to minimise light spill and glare into the surrounding landscape. Construction operations to be limited to daylight working hours where possible; Noise and dust to be kept to a minimum; and Construction working area to be as contained and constrained as possible to minimise land take, vegetation loss and reinstatement requirements, by implementation of a Construction Environmental Management Plan (CEMP).	Slight (Adverse) Not Significant
	LCA2 - Eastergate Semi-Rural Land			Moderate (Adverse) Significant
	LCA3 - Barnham Village			Slight (Adverse) Not Significant
Visual Amenity	R1 - Fontwell Avenue Road Users			Moderate (Adverse) Significant

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
	R2 - Eastergate Lane Road Users			Slight (Adverse) Not Significant
	R3_ PRoW (Path 318)			Large (Adverse) Significant
	R4 - Downview Road			Large (Adverse) Significant
	R5 - Murrell Gardens			Large (Adverse) Significant
	R6 - Barnham Road			Moderate (Adverse) Significant
	R7 - PRoW off Barnham Road (Path 318)			Moderate (Adverse) Significant
	R8 - Fontwell Avenue			Large (Adverse) Significant
	R9 - Eastergate			Moderate (Adverse) Significant

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects	
	Lane Residents				
	R10 - Ryburn Farm			Moderate – Large (Adverse) Significant	
	R11 - Field Place			Moderate (Adverse) Significant	
	R12 - Upton Brooks			Large (Adverse) Significant	
	R13 - Collins Close			Moderate (Adverse) Significant	
Operational Stage					
Effects on landscape character	LCA1 - Eastergate Village	N/A	<p>terms the aims of all proposed landscape mitigation measures are:</p> <p>To blend the Scheme into the surrounding landscape, minimising adverse effects on landscape character and visual amenity;</p> <p>To enhance and extend the existing landscape framework where this improves the quality and character of the local area, with reference to published landscape character assessments;</p> <p>To protect and incorporate the existing features of the landscape into the wider landscape framework to assist in the assimilation of the new scheme into the local landscape setting; and</p>	<u>Year 1</u>	<u>Year 15</u>
	LCA2 - Eastergate Semi-Rural Land			Slight (Adverse) Not Significant	Slight (Adverse) Not Significant
				Moderate (Adverse) Significant	Slight (Adverse) Not Significant

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects	
	LCA3 - Barnham Village		To create an attractive setting for the Scheme. features of the proposed landscape mitigation include:	Slight (Adverse) Not Significant	Slight (Adverse) Not Significant
Visual Amenity	R1 - Fontwell Avenue Road Users		New woodland planting to provide green visual containment in addition to creating habitat for wildlife; New specimen tree planting to enhance visual appeal and integrate the Scheme into the surrounding landscape; New hedgerow planting to enhance visual amenity of the Scheme, respond positively to the local character and screen the nearby residents from the proposed noise barrier; Areas of wildflower grassland to enhance the biodiversity along with visual appeal; and Established areas of existing vegetation are proposed to be retained and enhanced where possible.	Moderate (Adverse) Significant	Moderate (Adverse) Significant
	R2 - Eastergate Lane Road Users			Slight (Adverse) Not Significant	Neutral Not Significant
	R3_ PRoW (Path 318)			Large (Adverse) Significant	Moderate (Adverse) Significant
	R4 - Downview Road			Large (Adverse) Significant	Large (Adverse) Significant
	R5 - Murrell Gardens			Large (Adverse) Significant	Large (Adverse) Significant
	R6 - Barnham Road			Moderate (Adverse) Significant	Moderate (Adverse) Significant

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects	
	R7 - PRow off Barnham Road (Path 318)			Slight (Adverse) Not Significant	Neutral Not Significant
	R8 - Fontwell Avenue			Moderate (Adverse) Significant	Moderate (Adverse) Significant
	R9 - Eastergate Lane Residents			Moderate (Adverse) Significant	Moderate (Adverse) Significant
	R10 - Ryburn Farm			Moderate – Large (Adverse) Significant	Moderate (Adverse) Significant
	R11 - Field Place			Slight (Adverse) Not Significant	Slight (Adverse) Not Significant
	R12 - Upton Brooks			Moderate-Large (Adverse) Significant	Moderate-Large (Adverse) Significant

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects	
	R13 - Collins Close			Slight (Adverse) Not Significant	Slight (Adverse) Not Significant
Water Resources					
Construction Stage					
Short-term increase in flood risk due to construction activities	Residents / users of the surrounding areas	Slight - / T / D / ST	Implementation of measures detailed in the CEMP including; <ul style="list-style-type: none"> ■ Implement a construction-phase drainage strategy to intercept, capture and attenuate surface water runoff and adopt a phased approach to the construction of the operational drainage system to ensure impermeable areas are appropriately drained and attenuated prior to discharge. ■ The construction-phase drainage strategy could include the provision of a bund along the lowest perimeters of the site to prevent uncontrolled runoff towards existing properties. ■ Operational-phase drainage systems must be protected from ingress of sediment and debris and cleaned on completion of construction works. ■ Storage of material and construction plant should be set back from the Barnham Lane Ditch and away from areas that may be at risk of flooding or existing overland flow routes described in the FRA. ■ To minimise groundwater seepage into the areas of excavation/cutting, deep excavations should be constructed during the summer months as far as practicable and groundwater levels should be monitored during construction. 	Neutral to Slight - / T / D / ST	
	Construction workers	Slight - / T / D / ST		Neutral to Slight - / T / D / ST	

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
Potential effects on the water quality of water resources due to construction activities and accidental leaks and spillages	Barnham Lane Ditch	Slight - / T / D / ST	<ul style="list-style-type: none"> ■ Surface water run-off from within the Site should be managed to prevent uncontrolled migration of pollutants to waterbodies. This could include temporary bunding and settlement ponds. ■ Preparation of incident response plans, prior to construction. ■ Spillages and leaks would be immediately contained in line with the incident response plan. ■ On-site availability of oil spill clean-up equipment including absorbent material and inflatable booms for use in the event of an oil spill or leak. ■ Wherever possible, plant and machinery would be kept away from the drainage system and watercourses. ■ Use of drip trays under mobile plant. ■ Oil, fuels and other harmful substances should be stored on an impermeable surface with appropriate drainage or containment. ■ Construction materials brought to the Site should be free of any contaminated material, so as to avoid any possible contamination of watercourses. ■ Care should be taken to ensure that wet cement does not come into contact with surface water or near the watercourses and drainage ditches. Cement should be poured in dry conditions and consideration should be given to use fast drying cement. <p>If ground contamination is encountered during construction works, work would stop immediately and measures would be taken to prevent disturbance and mobilisation of contaminants, until the contamination has been treated in-situ or removed for off-site treatment.</p>	Neutral
	Barnham Rife	Slight - / T / D / ST		Neutral
	Lidsey Rife	Slight - / T / I / ST		Neutral
	School Ditch	Slight - / T / D / ST		Neutral
	Superficial Deposits	Moderate - / T / I / ST		Slight - / T / I / ST
Potential increase in physical	Barnham Lane Ditch	Slight	<ul style="list-style-type: none"> ■ Working areas shall be clearly defined to ensure the disturbance of soils is minimised, where possible. 	Slight

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
contamination (i.e. sedimentation) of surface water bodies due to ground disturbance		- / T / D / ST	<ul style="list-style-type: none"> ■ The cleaning of vehicle wheels prior to leaving Site. ■ Dust Management Plan (i.e. damping down) with subsequent consideration given to the management of surface water runoff. ■ Installation of systems such as perimeter bunds, silt traps and swales designed to trap silty water including adequate maintenance and monitoring of these to ensure effectiveness, particularly after adverse weather conditions. ■ The implementation of a temporary drainage strategy to prevent uncontrolled runoff. ■ Locating stockpiles and materials storage a minimum of 10m from any watercourses or drainage lines. ■ If perched groundwater is encountered within the made ground or superficial deposits at the Site, during the establishment of the foundations, dewatering may be required. The most appropriate method of dewatering would be chosen at this stage, which may include the enclosure of the excavation by sheet piling. Piezometers could be used outside of the sheet-pile to monitor groundwater levels. Damp proof membranes will be incorporated during construction to prevent the ingress of shallow groundwater. <p>If dewatering is required, water should be passed through an appropriate sediment control system prior to discharge.</p>	- / T / D / ST
	Barnham Rife	Neutral		Neutral
	Lidsey Rife	Slight - / T / I / ST		Neutral
	School Ditch	Slight - / T / D / ST		Slight - / T / D / ST
Operational Stage				
Potential increase in flood risk, due to an increase in	Future site users of the Scheme	Moderate - / P / D / LT	The proposed operational surface water drainage system has been taken into account in the assessment of potential effects. Secondary mitigation includes:	Slight - / P / D / LT

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
impermeable surface areas and the disturbance of surface water and groundwater flow paths	Residents / users of the surrounding areas	Moderate - / P / D / LT	<ul style="list-style-type: none"> ■ Additional groundwater monitoring, which was completed in February 2021, and, if required amendment to the drainage design prior to construction of the Scheme as suggested by WSCC (LLFA) and ADC in their correspondence dated 6 August 2020 and included in the FRA. The results showed that, while the distance between the invert of the tanks and the ground water level is less than expected the infiltration rates are still sufficient to enable the 100yr + 40% event to be fully managed within the proposed system. 21 CCTV condition surveys were carried out along Barnham Road and Fontwell Avenue, as outlined in the FRA, to confirm the final road design / mitigation measures at the proposed roundabout with Barnham Road. This was agreed with WSCC (LLFA) and ADC in their correspondence dated 6 August 2020 and included in the FRA. 	Slight - / P / D / LT
Potential effects on the water quality of water resources, including water courses and groundwater	Barnham Lane Ditch	Neutral	Not required	Neutral
	Barnham Rife	Neutral		Neutral
	Lidsey Rife	Neutral		Neutral
	School Ditch	Neutral		Neutral
Geology and Soils				
Construction Stage				

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
Ingestion, inhalation and dermal contact with contaminated soil and ground gases; inhalation of windblown dust; or soil vapour inhalation are some of the potential pathways.	Human Health – Construction workers and those living in proximity to construction works.	Not Significant -T/D/ST	Mitigation and Management measures included within the CEMP to be followed.	Not Significant -T/D/ST
Archaeology and Heritage				
Construction Stage				
Site preparation (topsoil stripping is assumed to be site-wide). Excavation for road construction; for attenuation ponds; for services/ drainage and construction compounds.	Prehistoric	Major -P/D/LT	Archaeological trial trench evaluation will be required prior to construction, in order to clarify the nature, survival and significance of any archaeological assets that may be affected. A draft Written Scheme of Investigation (WSI) for an archaeological trial trench evaluation, and an Outline Archaeological Mitigation Strategy are included in Appendix 13.4 and 13.3 of the Environmental Statement. The results of the evaluation would allow the formation of an appropriate mitigation strategy for any significant archaeological assets. Mitigation normally comprises preservation by record: advancing understanding of asset significance through targeted archaeological excavation in advance of development. This might be combined with a watching brief during ground works for remains of lesser significance. In the unlikely event that nationally important remains are present, preservation in situ may be required (i.e. through redesign/avoidance).	Negligible

Description of Effects	Receptor	Significance and Nature of Effects Prior to Secondary Mitigation ¹	Summary of Secondary Mitigation	Significance and Nature of Residual Effects
			<p>As an alternative to trial trenching a preliminary site strip, in the form of Strip, Map and Sample may be undertaken under archaeological direction during the construction phase. Regardless of the option, a Post-Excavation Assessment Report would be prepared.</p>	

15.2 SUMMARY OF REVISED ES FINDINGS

- 15.2.1 Following the submission of the 2020 ES, the detailed design has progressed. The key changes to the design assessed within the Revised ES include rotation of Pond 4 to better suit the emerging masterplan south of Barnham Road and evolution of the landscape design to include the additional 50m of hedgerow to achieve 10% Biodiversity Net Gain for the Scheme. All amenity grassland previously included within the landscape design has been replaced with wildflower meadow, further planting included east of Pond 3 and trees have been incorporated into the central roundabout further increasing the area net gains for biodiversity.
- 15.2.2 The Drainage Strategy has progressed following information obtained from the Winter infiltration testing and a CCTV survey of existing drainage features. Consultation remains ongoing with Arun District Council to finalise the detailed designs.
- 15.2.3 Construction planning has progressed which has provided clarification in relation to the vegetation clearance requirements, compound layouts, construction works near trees and construction traffic movements. These have been included in the Outline Construction Environmental Management Plan (**Appendix 3.5**).
- 15.2.4 SSE has progressed the lighting design and measures to control lighting to minimise impacts on bats during the summer months have been incorporated into an Outline Lighting Management Scheme (**Appendix 10.2**).
- 15.2.5 The document has been updated throughout to address clarifications within the Regulation 25 request, and a response to each of the issues raised is provided in the Regulation 25 table in **Appendix 1.1**.
- 15.2.6 The above changes have not resulted in any new significant adverse effects or changes in the significance of effects already assessed in the 2020 ES.

15.3 SUMMARY OF ES ADDENDUM FINDINGS.

- 15.3.1 Following the submission of the 2020 ES, the proposed positioning of the relocated substation has moved from north of the proposed Fontwell Avenue Roundabout, to a position 40m to the east of the proposed roundabout. This has resulted in a contraction of the RLB to the north of Fontwell Avenue Roundabout and extension of the redline to the east. A further change to the redline in the vicinity of the Fordingbridge Industrial Estate (Halo) entrance was required due to late changes in land ownership boundaries that will require fence lines to be adjusted as part of the works.
- 15.3.2 A review of all topics assessed in the original 2020 ES has been undertaken in light of the changes to the RLB. Due to the minor extent of the changes, no changes are expected to the significance of residual effects or the mitigation requirements. The residual effects outlined in Table 15-1 therefore remains relevant.



2 London Square
Cross Lanes
Guildford, Surrey
GU1 1UN

wsp.com

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