

CHAPTER 14: INTERACTIVE EFFECTS, ASSESSMENT SUMMARY AND MITIGATION IMPLEMENTATION

14.1 INTERACTIVE EFFECTS

14.1.1 As discussed in Chapter 5, interactive effects relate to multiple effects from a single development, which may, when experienced together, give rise to a potentially significant impact upon a receptor.

14.1.2 An analysis has been undertaken into specific receptors, or receptor groups, to identify any predicted residual effects common to a receptor across more than one assessment within the preceding chapters of this ES. Where one receptor, or group of receptors, are predicted to experience multiple effects, consideration has been given to the interaction of these effects and whether significant interactive effects are likely to arise as a result. An example would be where a local resident is affected by dust, noise and a loss of visual amenity during the construction of a scheme, with the result being a greater impact than each individual effect alone.

14.1.3 For some environmental effects, no interactions with other impacts can occur and therefore no interactive effects are considered likely to arise. For example, visual impacts do not interact with impacts on sub-surface land contamination. For other environmental effects it is apparent that interactions could occur and impact in different ways upon an individual receptor. Combined cumulative effects are more likely to arise when the receptor or receptor group is more sensitive to change. Typical examples include ecological and human receptors.

14.1.4 The assessment of interactive effects has been undertaken in two stages.

- The identification and collation of any receptors within the technical assessments predicted to experience a residual effect (significant or otherwise) as a result of the Proposed Development.
- Consideration of the potential interactive effects on the identified receptors from multiple effects.

Receptor collation

- 14.1.5 The identified residual effects, as set out within the individual technical chapters of the ES, have been reviewed against the receptors they affect. Where there is more than one effect on a particular receptor, there is a requirement to determine whether there is the potential for interactions. If there is the potential for effect interactions then consideration has been given as to whether this is likely to result in a combined significant effect.
- 14.1.6 Where possible, to assist the consideration of possible interactive effects, receptors which share the same characteristics, sensitivities or qualifying features (such as residential properties), have been grouped together into a single receptor type.
- 14.1.7 It is important to note that under this methodology the largest effect on a receptor group has been used for the consideration of interactive effects. This presents a worst case scenario given that not all individual receptors within a certain receptor group will experience effects to the same degree.

Potential for interactive effects

- 14.1.8 There is no established EIA methodology for assessing and quantifying the combined effects of individual impacts arising from a proposed development on sensitive receptors. The assessment of potential interactive effects has therefore been based upon professional judgement, taking into account receptor sensitivity and the defined residual effects identified within each technical assessment.
- 14.1.9 For the purposes of the interactive effects assessment, only residual effects which are classified as being of minor, moderate, or major significance have been considered. Residual effects of negligible significance have been excluded from the assessment of interactive effects as, by virtue of their definition, they are considered to be imperceptible to an environmental resource or receptor.

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Table 14.1 Demolition/Construction Phase

Receptor/Receptor Group	Socio-Economics	Air Quality	Transport and Access	Built Heritage	Ecology	Water Environment	Noise and Vibration	Landscape and Visual
Occupiers of existing dwellings/properties in proximity to the Site	✗	✗	✗	✗	✗	✓ Minor -ve	✓ Mod -ve	✓ Major -ve
The local population in respect of local services, schools, employment opportunities, etc	✓ Minor +ve	✗	✗	✗	✗	✗	✗	✗
Users of local roads	✗	✗	✗	✗	✗	✗	✗	✓ Mod -ve
Ecological habitats and species	✗	✗	✗	✗	✓ Minor /-ve	✗	✗	✗
Surface and groundwater regimes both on and in proximity to the Site	✗	✗	✗	✗	✗	✗	✗	✗
Public amenity areas (within and surrounding area)	✗	✗	✗	✗	✗	✗	✗	✓ Major -ve
The landscape character of the Site and its surrounding environs	✗	✗	✗	✗	✗	✗	✗	✓ Major -ve
Sensitive receptors introduced to the Site by the Proposed Development including site workers, future residents, school children, and other users present during the later phases of construction	✗	✗	✗	✗	✗	✗	✗	✗

- ✓ =Residual effect predicted at receptor
- ✗ = No effect predicted at receptor
- + = Positive impact
- = Negative impact
- Mod = Moderate

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Table 14.2 Occupation Phase

Receptor/Receptor Group	Socio-Economics	Air Quality	Transport and Access	Built Heritage	Ecology	Water Environment	Noise and Vibration	Landscape and Visual
Occupiers of existing dwellings/properties in proximity to the Site	x	x	x	x	x	x	x	✓ Major -ve
The local population in respect of local services, schools, employment opportunities, etc	✓ Major +ve	x	x	x	x	x	x	x
Users of local roads	x	x	✓ Minor +ve/-ve	x	x	x	x	✓ Mod -ve
Ecological habitats and species	x	x	x	x	✓ Minor +ve/-ve	x	x	x
Surface and groundwater regimes both on and in proximity to the Site	x	x	x	x	x	x	x	x
Public amenity areas (within and surrounding area)	✓ Major +ve	x	x	x	x	x	x	✓ Major -ve
The landscape character of the Site and its surrounding environs	x	x	x	x	x	x	x	✓ Mod -ve
Sensitive receptors introduced to the Site by the Proposed Development including site workers, future residents, school children, and other users present during the later phases of construction	✓ Major +ve	x	x	x	x	x	✓ Mod -ve	x

- ✓ =Residual effect predicted at receptor
- x = No effect predicted at receptor
- + = Positive impact
- = Negative impact
- Mod = Moderate

Potential for interactive effects during construction

14.1.10 As shown in table 14.1, during the construction phase, multiple impacts are only predicted for one receptor group; Occupiers of existing dwellings/properties in proximity to the Wider OPA Site and OPA Phase 1 Site.

14.1.11 During the construction phase of the Proposed Development residents are predicted to experience noise and visual impacts. When these occur together it is possible that the negative effects experienced by human receptors at these locations could be heightened, given noise can be perceived more negatively if the source of the noise (e.g construction plant) is also visible.

14.1.12 However, this is likely to only occur at the receptors closest to the Wider OPA/OPA Phase 1 Site, with the majority of the construction works involving activities that are further from receptors. Therefore, It is not considered that any additional mitigation measures are required as a result of this interactive effect above and beyond those already described within this ES.

14.1.13 In addition to this, construction phase effects are restricted to short periods of time due to the transient nature of the works. Through implementation of the CEMP, the combined effect on the identified sensitive receptors will be minimised.

Potential for interactive effects during occupation

14.1.14 As shown in table 14.2, during the occupational phase, multiple impacts are predicted for three receptor groups.

14.1.15 These impacts range in magnitude and are both positive and negative in nature. However, none of these impacts are above Moderate in magnitude. Therefore, it is not considered that the interaction between them would give rise to any significant effects.

14.2 ASSESSMENT AND MITIGATION

14.2.1 Tables 14.3, 14.4, 14.5 and 14.6 provide a summary of the assessments and the predicted residual effects following mitigation implementation and a summary of the proposed mitigation.

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Table 14.3: Assessment Summary – OPA Phase 1

SOCIO ECONOMICS							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects							
Employment	Low	Positive	Low	Not significant	None Required	Low	Not Significant
Operation Effects							
Housing Provision	Medium	Positive	Low	Not significant	None Required	Low	Not Significant
Employment	Low	Positive	Low	Not significant	None Required	Low	Not Significant
Pre-School	Low	Negligible	Negligible	Not significant	None Required	Negligible	Not Significant
Primary	High	Negative	Medium	Not significant	Wider OPA 3FE Primary School/Financial Contribution	Negligible	Not Significant
Secondary	Low	Negligible	Negligible	Not significant	None Required	Negligible	Not Significant
GP Practices	High	Negative	Medium	Significant	Financial Contribution	Negligible	Not Significant
Open Space	Medium	Negative	Low	Not significant	None Required	Low	Not Significant
Play Space	Low	Negligible	Negligible	Not significant	None Required	Low	Not Significant
Cumulative Effects							
Effect	Description				Mitigation		Significance

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Housing Provision	The Proposed Development is anticipated to generate additional pressure on the local social infrastructure, such as primary school places and primary healthcare facilities.	Financial Contribution	Not Significant
Impact of Climate Change			
Effect	Description	Mitigation	Significance
Residents using or seeking GP services	An increased risk of over overheating due to a forecast increase in mean average air temperature. An increased risk of surface water flooding, and associated water borne diseases resulting from an increase in average annual precipitation and sea level rise. Both of these have the potential to place an extra burden on primary healthcare services, specifically the demand for GP services.	None required	Not significant
Residents using open space	The forecast increase in the mean average temperature is likely to encourage people outdoors more often to use local open spaces. It is plausible therefore that there would be a more consistent demand for outdoor amenity space.	None required	Not significant
Residents using child play space	The forecast increase in the mean average temperature is likely to encourage people outdoors more often to use child play space. It is plausible therefore that there could be a more consistent demand for play space.	None required	Not significant

AIR QUALITY							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects							
Demolition Activities	High	Temporary	Negligible	Not Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Earthworks Activities	High	Temporary	Medium	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Construction Activities	High	Temporary	Medium	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Track out Activities	High	Temporary	Low	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Operation Effects							
Additional Road Traffic	High	Permanent	Negligible	Not Significant	None	Negligible	Not Significant

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Cumulative Effects			
Effect	Description	Mitigation	Significance
Construction Effects	There is the potential for dust impacts from other nearby construction sites during overlapping construction phases.	Mitigation included within the CEMP will reduce dust impacts from the site and thus the cumulative impacts	Not Significant.
Operational Effects	The impact of road traffic effects from committed development within the area. This is included within the modelled traffic data and presented in the results.	Not required	Not Significant
Impact of Climate Change			
Effect	Description	Mitigation	Significance
Construction	Potential for increased dust impacts due to dryer and warmer weather	Not required	Not Significant
Operational Impacts	Climate change unlikely to change impacts of additional vehicle emissions	Not required	Not Significant

TRANSPORT AND ACCESS						
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Significance/Impact Magnitude	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects						
Severance	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Driver Delay	Very High	Temporary	Slight Adverse	Construction Environmental Management Plan	Negligible	Temporary
Pedestrian Delay	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Pedestrian Amenity	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Accidents and Safety	Medium	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Hazardous Loads	Low	Temporary	Negligible	Construction Environmental Management Plan	Negligible	

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Operation Effects						
Severance	High	Permanent	Negligible or Slight Adverse	Sustainable Transport Improvements and Off-site highway contributions	Negligible or slight adverse	Permanent
Driver Delay	Very High	Permanent	Slight to Moderate Adverse	Sustainable Transport Improvements and Off-site highway contributions	Slight adverse	Permanent
Pedestrian Delay	High	Permanent	Negligible or Slight Adverse	Sustainable Transport Improvements and Off-site highway contributions	Negligible or Slight Adverse	Permanent
Pedestrian Amenity	High	Permanent	Negligible	Sustainable Transport Improvements and Off-site highway contributions	Slight beneficial	Permanent
Accidents and Safety	Medium	Permanent	Slight to Moderate Adverse	Sustainable Transport Improvements and Off-site highway contributions	Slight adverse	Permanent
Hazardous Loads	Low	Permanent	Negligible	Not Required	Negligible	
Cumulative Effects						
Effect	Description			Mitigation		Significance
N/A	N/A			N/A		N/A
Impact of Climate Change						
Effect	Description			Mitigation		Significance
N/A	N/A			N/A		N/A

BUILT HERITAGE							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect

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Construction Effects							
None identified	N/A	Not required	N./A	None identified	N/A	Not required	N./A
Operation Effects							
None identified	N/A	Not required	N./A	None identified	N/A	Not required	N./A
Cumulative Effects							
Effect	Description				Mitigation		Significance
None identified	N/A				Not required		N./A
Impact of Climate Change							
Effect	Description				Mitigation		Significance
None identified	None identified	N/A		None identified	N/A	Not required	None identified
							N/A

ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Occupation / Operational Effects – OPA Phase 1								
River Itchen Special Area of Conservation (SAC) and	Pollution (sediment, hydrocarbons etc)	Very High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
River Itchen SSSI (and other constituent designated sites)			16665, upstream of Itchen Valley Country Park, deposition of the sediment may affect designated features including macrophytes, macroinvertebrates, notably condition of salmon spawning habitat (redds) through smothering vegetation, blocking voids within the coarse bedload used by fish and invertebrates, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, affecting designated features including macrophytes, macroinvertebrates, fish, and birds			create greater resilience and allow the system to collect sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			through reduction in water quality including exposure to substances with chronic or acute consequential effects.			ensure consistent and ongoing high quality performance. Taking into account the change in land use and Additional Measures set out in Table 10.11 and in Chapter 11 of this ES, in particular the provision of a robust, monitored and managed SuDS system, it is considered reasonable to conclude that although the River Itchen SAC and SSSI has a Very High level of sensitivity, the Magnitude of change will be Negligible and therefore No Significant occupation likely effect will occur as a result of sediment (or other associated contaminant) emissions. Please refer to Chapter 11 of this ES for full details.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to maturing mixed use development, implemented and occupied in phases, that will be	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			characterised by permanent surfaces including impermeable and hard wearing roads, pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated with the Wider OPA and associated Link Road. Soil erosion from these areas is considered to be negligible.		
Solent Maritime SAC (and other constituent)	Pollution (sediment, hydrocarbons etc)	Very High	Discharge of soil/sediment from operation/occupation of the site from various activities into on site/receiving watercourses and transport into the Solent introducing nutrients, metals and other deleterious substances	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
designated sites)			bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the Solent influencing a possible reduction in water quality including exposure to substances with chronic or acute consequential effects.			sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance.		

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Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Taking into account the change in land use and Additional Measures set out in Table 10.11 and in Chapter 11 of this ES, in particular the provision of a robust, monitored and managed SuDS system, it is considered reasonable to conclude that although the River Itchen SAC and SSSI has a Very High level of sensitivity, the Magnitude of change will be Negligible and therefore No Significant occupation likely effect will occur as a result of sediment (or other associated contaminant) emissions. Please refer to Chapter 11 of this ES for full details.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to maturing mixed use development, implemented and occupied in phases, that will be characterised by permanent surfaces including impermeable and hard wearing roads,	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and transport into the Solent.			pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated with the Wider OPA and associated Link Road. Soil erosion from these areas is considered to be negligible.		
Solent SPA (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including estuaries, intertidal flats, saline lagoons,	Low	Moderate (Could be significant)	The Wider OPA will include the provision of an extensive network of footpaths and play/sports facilities as part of the scheme, both within the developed areas and as green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.			recreational capacity. This includes the provision of a 5km SANG (suitable alternative natural space) route, that includes at least 2.5km of route that allows informal access and dog walking. A detailed comparison of the on site provision against SANG criteria has been completed. Please refer to Chapter 14 for full details. The on-site recreational provision at One Horton is expected to cater for most day-to-day walking and cycling journeys. However, residents of One Horton Heath will wish to also visit the New Forest SPA. Eastleigh Borough Council is in ongoing negotiations with Natural England with respect to the effectiveness of the on-site recreational provision. Should these negotiations conclude that further measures are required, a financial		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						contribution to the Solent Recreation Mitigation Strategy SPD will be made to removing this additional pressure from the Solent SAC/SPA and Ramsar sites. With the inclusion of the additional on site (and local connected) recreational resources set out in Table 10.11 of Section 10.7 of this Chapter of the ES and set out in more detail in Chapter 14 of this ES, together with any necessary payments to the Solent Recreational Mitigation Strategy SPD, it is considered reasonable to conclude that any changes in recreational pressure on the SPA and Ramsar (or constituent SSSI etc) are likely to be within the range of typical recreational use for the wider residential population, and there would be no short-term or long-term change to the conservation status of habitat/species receptors or the integrity of		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						designated sites. As such, whilst the sensitivity of the Solent and Southampton Water SPA and constituent SSSIs remains the same, the Magnitude of change reduces to Very Low and therefore Moderate (could be significant effects) could arise. Subject to final negotiations with Natural England, financial contribution to the Solent Bird Aware SPD fund to support specific recreation mitigation measures at the SPD would be made, and therefore No Significant Likely Occupational/Operational Effect will occur to the Solent and Southampton Water SPA/Ramsar from recreational pressure associated with the Wider OPA. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						to avoid these effects will be successfully implemented.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to maturing mixed use development, implemented and occupied in phases, that will be characterised by permanent surfaces including impermeable and hard wearing roads, pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated with the Wider OPA and associated Link Road. Soil	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						erosion from these areas is considered to be negligible. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Solent and Southampton Water Ramsar (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Will Not Occur	No likely significant effect
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and thereby the Solent associated features of interest.					
New Forest SPA (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Will Not Occur	No likely significant effect
New Forest SAC (and other constituent	Disturbance/ degradation of designated features as	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
designated sites)	a result of increased recreation		a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.					
Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are	Will Not Occur	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated	Low	Moderate (Could be significant)		Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is limited to the majority of this SINC, therefore the impact of increased recreational pressure	Low	Negligible (not significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			will be limited to the narrow strip to the north and west of Chalcroft business park that lies outside the perimeter security fence.			access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Round Copse, West End Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	See measures above for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.	Low	Moderate (Could be significant)		Will Not Occur	No likely significant effect
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is not permitted into this SINC, therefore the impact of increased recreational pressure is negligible.	Low	Negligible (not significant)	None	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Treeline Break Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	Low	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Negligible (not significant)	See measures above for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will Not Occur	No likely significant effect
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is not permitted into this SINC, therefore the impact of increased recreational pressure	Low	Negligible (not significant)		Will Not Occur	No likely significant effect
Watercourses (other than those listed or associated with designated sites listed above) –	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and other associated contaminants)	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Priority Habitat			substances with chronic or acute consequential effects.			at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance.		
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Minor (not significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas.	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures		

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						to avoid these effects will be successfully implemented.		
Marshy Grassland	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			in the receiving watercourses and associated features of interest.					
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and unmanaged use of habitat areas.	Low	Minor (not significant)	See measures included for watercourses	Will Not Occur	No likely significant effect
Hedgerows	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and unmanaged use of habitat areas.	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Bats	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats)	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	Minor Non-significant likely effect
	Indirect degradation of foraging resource	High	Artificial lighting can attract flying nocturnal invertebrates (particularly moths) drawing them a way from unlit area into lit areas, thereby reducing the availability of prey for light sensitive species (such as brown long-eared bats)	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	Minor Non-significant likely effect
	Increase in predation risk	Low	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Great Crested Newt	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats – particularly within 250m of breeding ponds).	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	No likely significant effect
	Increase in predation risk	High	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	No likely significant effect
	Entrapment	High	Entrapment in road and drainage infrastructure	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Otter	Pollution	Medium	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects. Increase in litter and fly tipping.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	No likely significant effect
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very low	No likely significant effect
Water Vole	Pollution	Low	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures	Will Not Occur	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			quality including exposure to substances with chronic or acute consequential effects. Increase in litter and fly tipping.			to avoid these effects will be successfully implemented.		
	Disturbance/ degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect
Reptiles	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats – particularly within 250m of breeding ponds).	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Increase in predation risk	High	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures	Very Low	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						to avoid these effects will be successfully implemented.		
	Entrapment	High	Entrapment in road and drainage infrastructure	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Badger	Increase in road collision mortality	Low	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (marshy grassland, woodland, hedgerows and riparian habitats.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Breeding Birds	Increase in road collision mortality (all species but particularly barn owl)	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (marshy grassland, woodland, hedgerows and riparian habitats.	Low	Moderate (Could be significant)	Road speeds within Phase 1 will be under 20 Mph through a residential scheme, therefore no increase in road traffic mortality is expected.	Very Low	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Increase in predation risk	High	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Invertebrates	Alteration of behaviour	Medium	Artificial light can alter the behaviour of nocturnal invertebrates, thereby affecting population viability and breeding.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Fish (on site)	Pollution	High	Discharge of soil/sediment from construction activities into on site/receiving watercourses, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency.	Low	Moderate (Could be significant)	See measures for watercourses	Very Low	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses resulting in a reduction in water quality including exposure to substances with chronic or acute consequential effects.					
	Nutrients	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses with potential effects on eutrophication levels and associated features of interest.	Low	Moderate (Could be significant)		Very Low	No likely significant effect
	Changes in flow regime	High	Change in riverine flow associated with modified drainage and effects on fish and associated habitat features from a change in flow regime.	Low	Moderate (Could be significant)		Very Low	No likely significant effect

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ECOLOGY								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Invasive Species	Spread of invasive species into habitat present (in particular tributaries of the River Itchen)	High	Degradation of affected natural habitats through reduction in diversity and dominance of non-native species that do not provide foraging resource for native invertebrate/animal species.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

HYDROLOGY							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
CONSTRUCTION EFFECTS							
<u>Flood risk to downstream persons and property</u> A CEMP containing site management measures and through the phasing of the delivery of the surface water drainage and flood mitigation measures will minimise effect on site drainage.	Very High	Temporary	Negligible to Very Low Adverse	Neutral to Moderate Adverse	-	Negligible to Very Low Adverse	Neutral to Moderate Adverse

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<u>Surface Water Quality</u> Adoption of best practice construction site management with adequate contingency planning, following the principles of pollution prevention will be formalised and incorporated into a CEMP to reduce the risk of a pollution event occurring from potentially polluting construction activities.	Medium to Very High	Temporary	Negligible to Low Adverse	Neutral to Moderate Adverse	Surface water quality monitoring and management plan	Negligible to Low Adverse	Neutral to Moderate Adverse
OPERATION EFFECTS							
<u>Flood risk to downstream persons and property</u> Provision of a surface water drainage system based on SuDS principles to attenuate and release runoff at controlled rate and sequentially designed site layout	Very High	Permanent	Negligible to Low Beneficial	Neutral to Moderate Beneficial	-	Negligible to Low Beneficial	Neutral to Moderate Beneficial
<u>Surface Water Quality</u> Surface water drainage system based on SuDS principles to intercept and provide pollution treatment	Medium to Very High	Permanent	Negligible to Low Adverse	Neutral to Moderate Adverse	Surface water quality monitoring and management plan	Negligible to Very Low Adverse	Neutral to Moderate Adverse
<u>Nutrients</u> Connection to public sewer draining to Peel Common WwTW and	Very High	Temporary	Very Low	Moderate Adverse	Deliver 'Nutrient Neutrality' and net reduction as part of Wider OPA	Negligible to Medium Beneficial	Neutral to Major Beneficial

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delivering on-site and off-site nutrient mitigation.							
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NOISE AND VIBRATION							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects – OPA Phase 1							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Construction Effects – The Wider OPA							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise at nearby bird habitats	Medium	Bird response to construction noise	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise and vibration at fish habitats	Medium	Fish response to construction noise and vibration	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Operation Effects – OPA Phase 1							
Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Negligible	Neutral	n/a	Negligible	Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Negligible	Neutral	2m high garden wall/fencing	Negligible	Neutral

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Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Negligible	Neutral	n/a	Negligible	Neutral
Operation Effects – Wider OPA							
Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Low - Negligible	Moderate - Neutral	n/a	Low - Negligible	Moderate - Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Medium - Negligible	Major - Neutral	2m high garden wall/fencing in combination with 15m standoff. Alternative location of gardens on screened side of dwellings	Negligible	Neutral
Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Noise at proposed school	Medium	Noise present in teaching areas	Negligible	Neutral	n/a	Negligible	Neutral
Noise at proposed school	Low	Noise present in offices and meeting rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Medium - Negligible	Major - Neutral	2m high close boarded fencing	Low	Moderate
Cumulative Effects							
Effect	Description			Mitigation		Significance	
Change in road traffic noise 2020 to 2023	Change in road traffic noise levels as a result of the OPA Phase 1 development, in combination with committed developments and general increase in baseline environment over time.			n/a		Negligible	
Change in road traffic noise 2020 to 2030	Change in road traffic noise levels as a result of the Wider OPA development, in combination with committed developments and general increase in baseline environment over time.			n/a		Low	

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Impact of Climate Change			
Effect	Description	Mitigation	Significance
n/a			

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LANDSCAPE AND VISUAL								
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect	Confidence Level
Construction Effects								
OPA Phase 1 and Link Road -Scenario 1								
Landscape Receptors								
To be read in conjunction with ES Volume 1, Figures 13.4, 13.5-13.7 and 13.12								
Horton Heath LCA	Low	Direct on and off-site impacts from construction highway infrastructure, building construction operations and associated traffic.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Chalcroft LLCA	Low	Direct impacts from construction works on the site, introducing plant vehicles, movement, and construction activity. Direct impact of Hedgerow removal. Localised, indirect impacts from construction activity of part of Burnett's Way and impacts arising from the detailed scheme implementation	Temporary Medium to High	Temporary Moderate Adverse	-	Temporary Medium to High	Temporary Moderate Adverse	High
Quobleigh LLCA	Low	Construction works will directly impact upon the character of Fir Tree Lane and the setting of Fir Tree Farm as well as impacting on existing PRoW and recreation routes through the site. There will be Direct removal of small sections of tree planting and indirect effects arising from the implementation of the landscape works will have an indirect impact on the setting of this area	Temporary Medium to High	Temporary Moderate Adverse	-	Temporary Medium to High	Temporary Moderate Adverse	High
Site wide	Medium	Road and building construction works will directly impact existing tree belts where the link road will sever this planting in two locations. There will be direct removal of areas of gappy hedgerows to make way for housing and road construction. There will a need for be temporary footpath closure. Indirect disturbance effects from construction traffic and activity on ancient woodland and Chalcroft Farm, are also predicted given proximity.	Localised Temporary Medium to High	Temporary Moderate Adverse	-	Localised Temporary Medium to High	Temporary Moderate Adverse	High

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Visual Receptors To be read in Conjunction with ES Volume1, Figures 13.10 and 13.11 Photosheets								
Recreational users of PRoW F2	Medium	Construction traffic and activity will be present in the view and this will be temporary.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Recreational users of PRoW F3	Medium	Movement and activity associated with the development of the Phase 1 works and the link road construction will be in close proximity	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate/ Adverse	High
Recreational users of PRoW F10 and F11	Medium	Traffic movement, construction and activity associated with the link road will be seen when travelling west towards Allington Lane where the link road crosses the existing PRoW	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Recreational users of PRoW B743, B744, B746, and B780	Medium	Recreational users of the footpaths to the west of Allington Lane will experience glimpsed views of the site and the likely change in views associated with the development will be seen as a result of the construction of the link road. Having said this, construction work associated with the roundabout construction is already seen within these views and in places where vegetation has been removed along Allington Lane to accommodate the new access into the site.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Residents overlooking the eastern edge of the site	High	Construction traffic, activity and movement will be seen in close proximity for residents living on the south eastern edge of the site who sit in a slightly elevated position above the site.	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Residents on Fir Tree Lane	High	Construction traffic and activity will be introduced to views experienced given the proximity of the link road and the access off Allington Lane.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Transient users of Burnetts Lane	Medium	Construction traffic, activity and movement will be seen in close proximity for transient users of Burnetts Lane	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Transient Users of Blind Lane	Medium	Activity and movement associated with the Phase 1 works will be seen in views for transient users of Blind Lane whose views look directly across towards the site from the east	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Transient users of Fir Tree Lane	Medium	Users of Fir Tree Lane will experience a change in their view as a result of the new link road construction and this change will affect the western most part of this route	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Operation Effects								

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OPA Phase 1 and Link Road -Scenario 1								
Landscape								
Horton Heath LCA	Low	At completion, the development will introduce an uncharacteristic feature within the LCA of a larger scale than other built form in the local surroundings. The proposed landmark structure positioned at the southern gateway will be located amongst the setting of residential and employment land use. With the maturation of the strategic landscape planting and trees within open spaces and along streets, the development will be better assimilated into the landscape. However, given the scale of development in relation to other built form in the LCA some adverse impact on landscape character will remain.	Medium	Moderate Adverse	-	Low to Medium	Minor to Moderate Adverse	High
Chalcroft LLCA	Low	At completion, the development will introduce uncharacteristic features within the LLCA and will increase the scale of the residential development and introduce further built form. The lack of maturity of new planting, at this stage. The proposed landmark structure positioned at the southern gateway will be located amongst the setting of residential and employment land use. The characteristic watercourse running along the southern edge of the solar farm will be incorporated into the proposals and at completion this landscape transition zone will have been enhanced with additional characteristic planting to reinforce existing landscape character. There will continue to be some adverse impacts on the LLCA at this stage given the change in context to surrounding areas and the introduction of built form together with the lack of maturity of new planting, at this stage. By year 15, with the maturation of the link road tree planting, landscape transition areas, trees and hedgerows within the open spaces of the Phase 1 scheme, the development will be better	Medium	Minor Adverse	-	Low and Positive allowing for maturation of the scheme landscape design, by Year 15	Minor Beneficial	High

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		assimilated into the landscape and will integrate characteristic planting to respond to the wider context of the LLCA. The incorporation of additional advanced planting across the Phase 1 site and within emerging parcels will further integrate the development into the landscape. The designed landscape transition zone alongside the ancient woodland will also result in an increased area of habitat enhancement across that area. By this stage the new rain gardens alongside the link road and blue green infrastructure, open spaces, and ecological corridors and some new recreation spaces and access links will provide increasingly beneficial impacts in terms of landscape character and land use. At the same time the established greenspaces will provide additional positive ecosystem services, in a climate resilient manner.						
Quobleigh LLCA	Low	At completion, the development will introduce an uncharacteristic feature within the LLCA in the form of the link road which will increase the scale and proximity of built form within the LLCA. Retained areas of Green Infrastructure will at completion of the link road assist in retaining the characteristic contained nature of the various parcels across the site. Enhancements to the existing landscape framework and green infrastructure and additional planting associated with the link road construction only just establishing at this stage. With the maturation of the associated strategic landscape planting, the planting found along the link road and the enhancements to the characteristic landscape framework within which the site is located, the phase 1 development and the link road will be better assimilated into the landscape and will integrate characteristic planting and combine with positive architecture to positively respond to the context and setting of the LLCA.	Low to Medium	Minor Adverse	-	Low and Positive allowing for maturation of the scheme landscape design, by Year 15	Minor Beneficial	High
Site wide	Medium	Upon completion, the development of the Phase 1 scheme, associated infrastructure and the link	Medium	Minor Adverse	-	Low and Positive allowing for	Minor Beneficial	High

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		road construction will give rise to the introduction of some uncharacteristic features which will be near site features. The loss of some areas of hedgerow within the Phase 1 parcel along with sections of tree planting will result in permanent loss at completion. Enhancements to retained landscape features will at completion not provide their full benefits. Over time new planting will mature to a more appreciable scale. New characteristic tree and hedgerow planting and enhancements to watercourses and blue infrastructure will also become more apparent so that by year 15 these features will provide increased habitat, amenity and recreation assets.				maturation of the scheme landscape design, by Year 15		
Visual								
Recreational users of PRoW F2	Medium	On completion, users of PRoW F2 when travelling south towards Chalcroft will see new built form brought in closer proximity to their view. Planting proposed along the footpath route and within the watercourse landscape buffer to the north of the Phase 1 works will only just be established. Development will be largely contained and kept below the skyline (with the exception of the landmark feature) By Year 15, views of the development for users of PRoW F2 will be filtered and softened by the presence of tree and hedgerow planting found adjacent to the new development edge and along the watercourse to the north of the Phase 1. However, new Phase 1 built development and the link road will continue to occupy the view at a closer proximity.	Medium	Moderate Adverse	-	Medium, by year 15 with maturation of planting	Moderate Adverse	High
Recreational users of PRoW F3	Medium	Upon completion of the Phase 1 and link road development, users of PRoW F3 will see a major alteration to their view when seen travelling from Burnetts Lane to the west. The introduction of built form will be set back behind retained hedgerows and allows for proposed tree planting between plot frontages and the upgraded footpath route. Built form will be seen in close proximity for users along	Medium	Moderate Adverse	-	Medium by year 15 with maturation of planting	Minor to Moderate Adverse	High

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		this footpath, however, the open and undeveloped nature of the watercourse corridor will be retained to the north of this footpath. The completed link road will also introduce new features into the landscape when viewed from this footpath route where it crosses the PRoW to the south of the solar farm. The proposed landmark structure will be seen within the context of built form. By year 15, once matured, planting along Chalcroft track and along the upgraded footpath and cycle route will provide a soft transition to the new settlement edge and to the wider site beyond. Internal street scene planting will soften built form and provide glimpses of green corridors running through the development when viewed from the north.						
Recreational users of PRoW B743, B744, B746, and B780	Medium	Once complete, views of the link road and associated infrastructure from these footpaths will be screened by the presence of planting found along Allington Lane. The proposed tree planting around the link road will be yet to reach maturity and therefore will not serve to reduce the visual impact at completion. By year 15, Once avenue tree planting is mature, this will assist in filtering views and adding to the established planting found along Allington Lane	Medium	Moderate Adverse	-	Low Adverse by year 15 with maturation of planting	Minor Adverse	High
Recreational users of PRoW F10 and F11	Medium	Upon completion of the link road, recreational users of PRoW F10 and F11 will experience a change in their views where the new link road cuts across the existing PRoW. Where this crossing point is proposed, new areas of tree planting will aid its assimilation into the landscape and filtering of views once mature but at completion will afford direct views of the link road and associated infrastructure. Upon maturity of planting, the link road will be softened by proposed planting at the western edge of the site with tree planting filtering views of the road and its associated infrastructure.	Medium to low	Moderate Adverse	-	Low, by year 15 with maturation of planting	Moderate Adverse	High

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Residents overlooking the eastern edge of the site	High	Upon completion, residents overlooking the site will have a change in their view with built form and residential properties set behind a new landscape transition zone. At the entrance into the site the proposed landmark structure will sit above the adjacent built form and will break the skyline in views, however this will be seen amongst the context of surrounding built form and development. While this landscape transition zone matures, it is likely that views of the development will be dominant and an uncharacteristic feature within the views experienced. By year 15, a proposed landscape buffer will have matured in the foreground and proposed mature tree planting within the development plot itself will increase the green edge and provide a softer transition. Mature tree planting will provide a green street scene for residents living along Burnetts Lane	High	Moderate Adverse	-	Medium, by year 15 with maturation of planting	Moderate Adverse	High
Residents on Fir Tree Lane	High	Upon completion, views of the link road for residents on Fir Tree Lane will be partially filtered by the presence of establishing avenue tree planting. By year 15, when avenue tree planting is mature, this will soften views experienced towards the new link road and integrate this into views. Residents living on Fir Tree Lane will at this time see the proposed characteristic planting and a soft edge to the link road.	Medium	Moderate Adverse	-	Medium, by year 15 with maturation of planting	Minor Adverse	High
Transient users of Burnetts Lane	Medium	Upon completion, transient users of Burnetts Lane will experience a change in their view with built form and new residential properties set behind a new landscape transition zone. At the entrance into the site the proposed landmark structure will sit above the adjacent built form and will break the skyline in views, however this will be seen amongst the context of surrounding built form and development By year 15, Views across the open landscape will not be retained but replaced with a mature landscape buffer of characteristic planting and	High	Moderate Adverse	-	Medium, by year 15 with maturation of planting	Moderate Adverse	High

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		increased native hedgerow planting. Proposed mature tree planting within the development plot itself will increase the green edge and softer transition and mature tree planting will provide a green street scene for transient users of Burnetts Lane.						
Transient Users of Blind Lane	Medium	Upon completion, new built form will be seen in views for transient users of Blind Lane with new buildings forming the foreground of views where Blind Lane meets Burnetts Lane. The new residential development will be a dominant feature when viewed from this junction and views will be direct and uninterrupted, altering the baseline situation of the view. It is likely that glimpsed views of the proposed landmark structure will be seen breaking the skyline in views as receptors travel down Blind Lane. Although these views will be seen in the context of additional new built form in places views of the landmark structure will break above the fields seen above Burnetts Lane. The tree planting proposed along Burnetts Lane when viewed from Blind Lane will offer some softening of the new development edge but will not be mature at this stage. At year 15, upon maturation of the scattered tree planting along Burnetts Lane, there would be some notable softening of views from Blind Lane, however, the proximity of the development edge when viewed by transient users at the junction of Burnetts Lane will remain noticeable.	Medium	Moderate to Major Adverse	-	Medium, by year 15 with maturation of planting	Moderate Adverse	High
Transient users of Fir Tree Lane	Medium	Once complete, views of the link road and associated infrastructure will be partially screened by the presence of planting found around the Listed Building, at field boundaries and along Fir Tree Lane itself. The proposed tree planting around the link road will be yet to reach maturity and therefore will not serve to reduce the visual impact at this stage. At year 15, when the avenue tree planting is mature, this will filter views toward the new link road and integrate this into views.	Medium	Moderate Adverse	-	Medium, by year 15 with maturation of planting	Minor Adverse	High

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Table 14.4: Assessment Summary – Wider OPA

SOCIO ECONOMICS							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects							
Employment	Low	Positive	Medium	Not Significant	None Required	Medium	Not Significant
Operation Effects							
Housing Provision	Medium	Positive	Medium	Not Significant	None Required	Medium	Not Significant
Employment	Low	Positive	Medium	Not Significant	None Required	Medium	Not Significant
Pre-School	Low	Negligible	Negligible	Not Significant	None Required	Negligible	Not Significant
Primary	High	Positive	Low	Not Significant	None Required	Low	Not Significant
Secondary	Low	Negligible	Negligible	Not Significant	None Required	Negligible	Not Significant
GP Practices	High	Negative	High	Significant	Financial Contribution	Negligible	Not Significant
Open Space	Medium	Positive	Medium	Not Significant	None Required	Medium	Not Significant
Play Space	Medium	Positive	Medium	Not Significant	None Required	Medium	Not Significant
Cumulative Effects							

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Effect	Description	Mitigation	Significance
Housing Provision	The Proposed Development is anticipated to generate additional pressures on the local social infrastructure, such as primary healthcare facilities.	Financial Contribution	Not Significant
Impact of Climate Change			
Effect	Description	Mitigation	Significance
Residents using or seeking GP services	An increased risk of over overheating due to a forecast increase in mean average air temperature. An increased risk of surface water flooding, and associated water borne diseases resulting from an increase in average annual precipitation and sea level rise. Both of these have the potential to place an extra burden on primary healthcare services, specifically the demand for GP services.	None required	Not significant
Residents using open space	The forecast increase in the mean average temperature is likely to encourage people outdoors more often to use local open spaces. It is plausible therefore that there would be a more consistent demand for outdoor amenity space.	None required	Not significant
Residents using child play space	The forecast increase in the mean average temperature is likely to encourage people outdoors more often to use child play space. It is plausible therefore that there could be a more consistent demand for play space.	None required	Not significant

AIR QUALITY							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects							
Demolition Activities	High	Temporary	Negligible	Not Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Earthworks Activities	High	Temporary	Medium	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Construction Activities	High	Temporary	Medium	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Track out Activities	High	Temporary	Low	Potentially Significant	Specific measures to be included in the CEMP as outlined in Appendix 7.4	Negligible	Not Significant
Operation Effects							

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Additional Road Traffic	High	Permanent	Negligible	Not Significant	None	Negligible	Not Significant
Cumulative Effects							
Effect	Description				Mitigation		Significance
Construction Effects	There is the potential for dust impacts from other nearby construction sites during overlapping construction phases.				Mitigation included within the CEMP will reduce dust impacts from the site and thus the cumulative impacts		Not Significant.
Operational Effects	The impact of road traffic effects from committed development within the area. This is included within the modelled traffic data and presented in the results.				Not required		Not Significant
Impact of Climate Change							
Effect	Description				Mitigation		Significance
Construction	Potential for increased dust impacts due to dryer and warmer weather				Not required		Not Significant
Operational Impacts	Climate change unlikely to change impacts of additional vehicle emissions				Not required		Not Significant

TRANSPORT AND ACCESS						
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Significance/Impact Magnitude	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects						
Severance	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Driver Delay	Very High	Temporary	Slight Adverse	Construction Environmental Management Plan	Negligible	Temporary
Pedestrian Delay	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Pedestrian Amenity	High	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary
Accidents and Safety	Medium	Temporary	Negligible	Construction Environmental Management Plan	Negligible	Temporary

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Hazardous Loads	Low	Temporary	Negligible	Construction Environmental Management Plan	Negligible	
Operation Effects						
Severance	High	Permanent	Negligible or Slight Adverse	Sustainable Transport Strategy, Off-site highway works and contributions	Negligible or slight adverse	Permanent
Driver Delay	Very High	Permanent	Slight to Moderate Adverse	Sustainable Transport Strategy, Off-site highway works and contributions	Slight adverse	Permanent
Pedestrian Delay	High	Permanent	Negligible or Slight Adverse	Sustainable Transport Strategy, Off-site highway works and contributions	Negligible or Slight Adverse	Permanent
Pedestrian Amenity	High	Permanent	Negligible	Sustainable Transport Strategy, Off-site highway works and contributions	Slight beneficial	Permanent
Accidents and Safety	Medium	Permanent	Slight to Moderate Adverse	Sustainable Transport Strategy, Off-site highway works and contributions	Slight adverse	Permanent
Hazardous Loads	Low	Permanent	Negligible	Not Required	Negligible	
Cumulative Effects						
Effect	Description			Mitigation		Significance
N/A	N/A			N/A		N/A
Impact of Climate Change						
Effect	Description			Mitigation		Significance
N/A	N/A			N/A		N/A

BUILT HERITAGE							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects							

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Physical impact to Firtree Farmhouse as a result of change in use (arising from changes to building fabric and possible wear and tear associated with new use)	Grade II Listed Building – designated heritage asset of less than the highest significance	Direct, permanent	Negative (level cannot be ascertained on the basis of current information)	Negative (level cannot be ascertained on the basis of current information)	Heritage Impact Assessment following identification of new change of use. Potential further measures could include historic building watching brief.	Minor Negative	Minor Negative
Non-physical impact to Firtree Farmhouse as a result of construction traffic, machinery, noise and vibrations, hoarding, and alteration of views due to removal of vegetation	Grade II Listed Building – designated heritage asset of less than the highest significance	Indirect, temporary	Minor Negative	Minor Negative	Any required hedgerow removal should be carefully sited and limited in scale. Appropriate siting of construction activities.	Minor Negative	Minor Negative
Non-physical impact to Firtree Farmhouse due to removal of Victoria House	Grade II Listed Building – designated heritage asset of less than the highest significance	Indirect, permanent	Neutral	Neutral	None required	Neutral	Neutral
Operation Effects							
Non-physical impact to Firtree Farmhouse due to changes in its setting resulting from presence of new development	Grade II Listed Building – designated heritage asset of less than the highest significance	Indirect, permanent	Negative (level cannot be ascertained on the basis of current information)	Negative (level cannot be ascertained on the basis of current information)	Retention of the key aspects of the immediate garden setting of Firtree Farmhouse and potential reinstatement of orchard planting. Retention and enhancement of existing vegetation screening. Adoption of appropriate design standards and layout of new buildings.	Minor Negative	Minor Negative
Cumulative Effects							
Effect	Description				Mitigation	Significance	

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None identified	N/A	Not required	N/A
Impact of Climate Change			
Effect	Description	Mitigation	Significance
Potential impact to historic fabric of Firtree Farmhouse	Potential damage to and/or deterioration of building fabric as a result of increased rainfall and driving winds.	Adopt and implement an appropriate maintenance strategy. Improvements to building's thermal performance, should be undertaken with due consideration of the appropriate guidance and an understanding of the performance of the building fabric.	Minor Negative

ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects - Wider OPA and Link Road								
River Itchen Special Area of Conservation (SAC) and River Itchen SSSI (and other constituent designated sites)	Pollution (sediment, hydrocarbons etc)	V High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, deposition of the sediment may affect designated features including macrophytes, macroinvertebrates, notably condition of salmon spawning habitat (redds) through smothering vegetation, blocking voids within the coarse bedload used by fish and invertebrates, introducing nutrients, metals and other deleterious substances bound on the sediment	Low	Moderate – could be significant	Retention, protection and restoration of watercourses and associated riparian corridors including bankside and in channel enhancement measures, promoting reconnection with the floodplain and Stage 0 features, delivered in accordance with a detailed long-term water features management plan. All watercourses will be protected by a 10m ecological buffer (excluding SUDS connections and ecological improvements) with an associated 10-50m green infrastructure corridor (measured from	Very low	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, affecting designated features including macrophytes, macroinvertebrates, fish, and birds through reduction in water quality including exposure to substances with chronic or acute consequential effects.			the bank edge of water limit when watercourse is full i.e. bankfull). This buffer will be enhanced with appropriate habitat management and habitat creation measures that complement and enhance the watercourses. A robust water quality monitoring regime of all SUDS basins and flows into/out of the One Horton Heath Site (including sediments, turbidity, conductivity, pH, nitrates and phosphates) will be implemented to provide feedback on the efficacy of net zero nutrient/sediment (including SuDS) treatment measures and to inform a responsive system of remedial management works to ensure that the long-term function of these features is maintained. Please refer to Chapter 11 of this ES for full details. Phased delivery of development and associated reduction in nutrient inputs as agricultural activities cease and zero/low nutrient/sediment input/output activities start. This will include interim land use change to reduce existing nutrient levels from the soil to reduce duration of legacy release from soils to		
	Change in nutrients affecting water quality	V High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the River Itchen and associated features of interest.	Low	Moderate – could be significant		Will not occur	Significant positive likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Modification of hydrological regime	V High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the Itchen at SU 46198 16665	Low	Moderate – could be significant	water once agricultural activities cease. Please refer to Chapter 11 of this ES for full details. Inclusion of wetland/watercourse features within the GI and watercourse corridors to promote on-site attenuation of surface waters emerging from the OHH area to enable long-term high quality wetland/watercourse habitats, promoting physical habitat diversity, reconnection to the floodplain and Stage 0 headwater processes, to ensure no further downstream mobilisation of soil/riverine sediment and nutrients and to provide ecologically valuable natural filtration features within the development such as wetland areas reed beds etc that is above and beyond the net zero nutrient and sediment emission measures described in above.	Will not occur	No Likely Significant Effect
Solent Maritime SAC (and other constituent designated sites)	Pollution (sediment, hydrocarbons etc)	V High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, deposition of the sediment may affect designated features including macrophytes, macroinvertebrates, notably condition of salmon spawning habitat	Low	Moderate – could be significant	See measures for River Itchen Special Area of Conservation (SAC) and River Itchen SSSI (and other constituent designated sites)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			(redds) through smothering vegetation, blocking voids within the coarse bedload used by fish and invertebrates, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, affecting designated features including macrophytes, macroinvertebrates, fish, and birds through reduction in water quality including exposure to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality	V High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, through the conversion to urban land use and low nutrient managed open spaces	Low	Moderate – could be significant		Will not occur	Significant positive likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			and habitats with potential effects on eutrophication levels in the River Itchen and associated features of interest.					
	Modification of hydrological regime	V High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the Itchen at SU 46198 16665	Low	Moderate – could be significant		Will not occur	No Likely Significant Effect
Solent SPA (and other constituent designated sites)	Pollution (sediment, hydrocarbons etc)	V High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and transport into the Solent, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and	Low	Moderate – could be significant	See measures for River Itchen Special Area of Conservation (SAC) and River Itchen SSSI (and other constituent designated sites)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			discharge into on site/receiving watercourses and transported into the Solent resulting in a reduction in water quality including exposure to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality	V High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses and transported to the Solent with potential effects on eutrophication levels and associated features of interest.	Low	Moderate – could be significant		Will not occur	No Likely Significant Effect
Solent and Southampton Water RAMSAR (and other constituent designated sites)	Pollution (sediment, hydrocarbons etc)	V High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and transport into the Solent, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and transported into the Solent resulting in a reduction in water	Low	Moderate – could be significant	See measures for River Itchen Special Area of Conservation (SAC) and River Itchen SSSI (and other constituent designated sites)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			quality including exposure to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality	V High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses and transported to the Solent with potential effects on eutrophication levels and associated features of interest.	Low	Moderate – could be significant		Will not occur	No Likely Significant Effect
New Forest SPA (and other constituent designated sites)	No likely significant effects						Will not occur	No Likely Significant Effect
New Forest SAC (and other constituent designated sites)	No likely significant effects						Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Emer Bog SAC (and other constituent designated sites)	No likely significant effects						Will not occur	No Likely Significant Effect
Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Direct damage	High	Deposition of dust arising from construction activities. Discharge of soil/sediment from construction activities into the SINC from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the SINC, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects. Works are sufficiently distant from this SINC with limited pathways such that direct construction phase effects are unlikely.	Low	Moderate (could be significant)	Production of a detailed Construction Environmental Management Plan (CEMP) (see table 10.7 for detailed description of required components) A 50m wide green infrastructure corridor (measured from tree stems on outer edge of perimeter woodland) will separate the developed areas from areas of highly valuable woodland habitat, including ancient woodland. This 50m corridor includes a 15m ecological buffer in which the following specifications apply: • No excavation (except SuDS, respecting RPAs) • No construction related activities or activities likely to have negative effect on habitat • Biodiversity Enhancement permitted	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						- No additional lighting >0.5lux The 15m ecological buffer will be demarcated with a significant species rich hedgerow, fence earth bank and ditch features to prevent public access into these areas. The ecological buffer will be designed to effectively extend the existing habitats within the SINC woodland and to provide a transitional habitat and structure, replicating natural woodland expansion/succession to increase diversity and to protect and enhance the existing habitat. The zone between 15-50m from the habitat boundary will be subject to the following restricted uses and constraints: - Footpaths - Cycleways - SuDS - Biodiversity enhancement permitted		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Minimal additional lighting where this does not compromise ecological function, ideally >0.5lux. It is envisaged that ecological enhancement measures will be delivered at the earliest available opportunity. Design measures have been included to avoid changes to the hydrological regime or soil levels that would negatively affect trees and shrubs. A detailed long term habitat management plan will be implemented to deliver habitat management and enhancement. A robust habitat monitoring regime will be implemented to provide feedback on the efficacy of buffers and habitat creation measures and to inform a responsive system of remedial works to ensure that the condition of retained habitats is maintained, the intended habitat conditions of newly created habitats are realised and that the long-term function of these features is maintained. Public access is excluded from the majority of this SINC;		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						therefore, the impact of increased recreational pressure will be limited to the narrow strip to the north and west of Chalcroft business park that lies outside the perimeter security fence.		
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)	Design measures have been included within the SuDS scheme (see Chapter 11 of this ES) to avoid changes to the hydrological regime, water quality or soil levels that would negatively affect trees and shrubs. A robust water quality monitoring regime of all SUDS basins and flows into/out of the One Horton Heath Site (including sediments, turbidity, conductivity, pH, nitrates and phosphates) will be implemented to provide feedback on the efficacy of net zero nutrient/sediment (including SuDS) treatment measures and to inform a responsive system of remedial management works to ensure that the long-term function of these features is maintained. Please refer to Chapter 11 of this ES for full details.	Will not occur	No Likely Significant Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow	Low	Moderate (could be significant)	Phased delivery of development and associated reduction in nutrient inputs as agricultural activities cease and	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			characteristics and quality entering the SINC			zero/low nutrient/sediment input/output activities start. This will include interim land use change to reduce existing nutrient levels from the soil to reduce duration of legacy release from soils to water once agricultural activities cease. Please refer to Chapter 11 of this ES for full details.		
Round Copse Site of Importance for Nature Conservation (SINC)	Pollution	High	Deposition of dust arising from construction activities. Discharge of soil/sediment from construction activities into the SINC from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the SINC, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (could be significant)	See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the SINC	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
Heart's Copse Site of Importance for Nature	Direct damage	High	Deposition of dust arising from construction activities.	Low	Moderate (could be significant)	See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Conservation (SINC)			Discharge of soil/sediment from construction activities into the SINC from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the SINC, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality		Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Modification of onsite hydrological regime affecting habitats.		Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the SINC	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
Treeline Break Site of Importance for Nature Conservation (SINC)	Direct damage	High	Deposition of dust arising from construction activities. Discharge of soil/sediment from construction activities into the SINC from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the SINC, affecting designated features through reduction in	Low	Moderate (could be significant)	See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			soil and water quality including exposure to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the SINC	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Field West of Treeline Break (Long Field) Site of Importance for Nature Conservation (SINC)	Direct damage	High	Deposition of dust arising from construction activities.	Low	Moderate (could be significant)	See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the SINC	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Quobleigh Pond and Woods Site of Importance for Nature Conservation (SINC)	Direct damage	High	Deposition of dust arising from construction activities. Discharge of soil/sediment from construction activities into the SINC from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the SINC, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (could be significant)	See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the SINC through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the SINC	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
Fair Oak School Meadow Site of Importance for Nature Conservation (SINC) / Wyvern Technical College Meadow Site of Importance for Nature Conservation (SINC)	Pollution	High	Deposition of dust arising from construction activities. Specific buffer prescriptions have been agreed for the protection of existing watercourses.	Very Low	Minor Non-significant	Production of a detailed Construction Environmental Management Plan (CEMP) (see table 10.7 for detailed description of required components)	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Watercourses (other than those listed or associated with designated sites listed above) – Priority Habitat	Direct damage	High	Deposition of dust arising from construction activities.	Low	Moderate (could be significant)	All watercourses will be protected by a 10m ecological buffer (excluding SUDS connections and ecological improvements) (measured from the bank edge of water limit when watercourse is full). Watercourse severance has been minimised through the development. See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the habitat through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the watercourse and associated features of interest.	Low	Moderate (could be significant)		Will not occur	Significant positive likely effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the feature	Low	Moderate (could be significant)		Negligible	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Ponds – see bats, birds, amphibians and reptiles as well– Priority Habitat	Habitat Change	High	The poor condition pond at Chalcroft Farm will be protected and restored through the development. The pond in Quobleigh wood will be unaffected by construction and enhanced. A net increase in ponds will be delivered by the proposals including a network of new wildlife ponds along the western boundary of the site to facilitate recolonisation of the southwest of the site by great crested newts and extend the range and population size of the Quobleigh metapopulation	Low	Moderate (could be significant)	All ponds will be subject to high quality conservation management delivered in perpetuity under a detailed LEMP.	Low	Non-Significant positive likely effect
	Direct damage	High	Deposition of dust arising from construction activities.	Low	Moderate (could be significant)	See also measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the feature through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the SINC and associated features of interest.	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the feature	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect
Parkland	Habitat Change	High	The area of parkland on site will be extended though planting by 0.5 ha (50%)	Low	Moderate (could be significant)		Low	Non-Significant positive likely effect
	Pollution	High	Deposition of dust arising from construction activities.	Low	Moderate (could be significant)	See also measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Will not occur	No Likely Significant Effect
Marshy Grassland – see bats, birds, amphibians and reptiles as well – Priority Habitat	Habitat Change	High	Construction activities will result in an unavoidable loss of 0.24ha of poor quality areas of marshy grassland	Low	Moderate (could be significant)	The retained habitat areas will be significantly enhanced and managed in perpetuity to increase species diversity through improvements to the hydrological and grazing regimes to increase the value of these habitats. Additional wetland habitat will also be	Low	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						provided in the form of ponds and wetland habitats to compliment these retained habitat areas.		
	Direct damage	High	Deposition of dust arising from construction activities. Damage to retained habitats through accidental access with machinery. Discharge of soil/sediment from construction activities into the feature from surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the feature, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (could be significant)	Areas of this habitat will be immediately adjacent to areas of significant construction works. See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Very low	No Likely Significant Effect
	Change in nutrients	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving	Low	Moderate (could be significant)		Very low	Non-Significant

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	affecting water quality		watercourses into the feature through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the feature and associated features of interest.					positive likely effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the feature	Low	Moderate (could be significant)		Very low	Non-Significant positive likely effect
Hedgerows	Habitat Change	High	Construction activities will result in an unavoidable loss of 1.17km of hedgerows.	Medium	Major (could be significant)	6.24km of new native, species rich hedgerow (with trees) will be created. These hedgerows will be protected by a minimum 5m buffer from the development and not subject to lighting levels >0.5 lux. These will be managed in perpetuity for the benefit	Low	Non-Significant positive likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						of wildlife under a comprehensive LEMP. The OPA net position shows: •Loss of 1.17 km of hedgerow (9.3% of baseline) •Retention of 9.21km of hedgerow (73 % of baseline) •Creation of 6.24 km of new species rich hedgerows This results in a post construction figure of 15.45 km resulting a total species rich hedgerow net gain of 22.8%. •Enhancement of 2.2km of retained hedgerow from species poor to species rich hedgerows, with standard trees where appropriate. This is in addition to the 22.8% gain in extent.		
	Direct Damage	High	Deposition of dust arising from construction activities. Damage to retained habitats through accidental access with machinery. Discharge of soil/sediment from construction activities into the feature from	Moderate	Moderate (could be significant)	Hedgerow removal and severance has been minimised through the design process. Where the removal or severance of hedgerows is unavoidable, compensatory native species rich hedgerows will be created on a minimum of a like for like basis.	Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			surface runoff introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of soil and water quality including nutrient enrichment. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the feature, affecting designated features through reduction in soil and water quality including exposure to substances with chronic or acute consequential effects.			Suitable protection barriers will be installed to prevent accidental damage to retained hedgerows and their root protection areas. Areas of this habitat will be immediately adjacent to areas of significant construction works. See measures for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)		
	Change in nutrients affecting water quality	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses into the feature through the conversion to urban land use and low nutrient managed open spaces and habitats with potential effects on eutrophication levels in the feature and associated features of interest.	Low	Moderate (could be significant)		Will not occur	Significant positive likely effect
	Modification of onsite hydrological regime	High	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems,	Low	Moderate (could be significant)		Will not occur	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	affecting habitats.		blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the feature					
Broadleaved Semi-Natural Woodland	Habitat Change	High	The construction of the link road and local road sections will result in the unavoidable loss of 0.8ha (12.3%) of semi-natural broadleaved woodland on site, at either end of the central woodland belt.	Medium	Major (significant)	Measures described in 10.7 and Table 10.11 and illustrated on the Integrated / Embedded Landscape, Visual, Ecological Mitigation drawing location in Appendix 10.12 of this chapter of the ES are considered adequate to mitigate for construction phase effects.	Very Low	No Likely Significant Effect
	Pollution	High	Deposition of dust arising from construction activities. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into the feature including exposure to substances with chronic or acute consequential effects.	Low	Moderate (could be significant)	Measures described for the adjacent woodland SINC sites (Quobleigh Pond and Woods, Round Copse, Treeline Break and Chalcroft Business Park), are also applicable to this habitat. The development will result in the creation of 5.6ha of semi-natural broadleaved woodland in areas designed to effectively extend the existing mature woodland and designated SINC sites. This results in	Very Low	No likely significant effect
	Direct damage	High	Direct impact through plant movement in RPAs or accidental physical damage.	Low	Moderate (could be significant)		Low	No likely significant effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Modification of onsite hydrological regime affecting habitats.	High	Modification of onsite hydrological regime through modifications to soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction supply of water or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality supplying the feature.	Low	Moderate (could be significant)	a total of 11.3 ha of woodland across the site post construction, a net increase in this priority habitat of 164%. The location of these areas of new habitat will complement the existing habitats and will be more likely to succeed on an accelerated timescale due to the presence of a mature donor habitat immediately adjacent to these locations. The existing areas of woodland on site will be enhanced through sensitive planting to promote greater species diversity in both species and structure of the woodlands by implementing a planting and management scheme to enhance herb, scrub and canopy layers and to account for the predicted loss of ash trees within the woodlands to Ash Dieback.	Low	No Likely Significant Effect
Bats	Removal of habitat features	High	Impacts on bat roosts and supporting habitats (including buildings, hedgerows, woodlands, watercourses and mature trees) and adjacent habitats.	High	Major (significant)	A number of low status roosts for common bats species are present within the buildings on site, the majority of which are to be demolished. These will be compensated for through the provision of roost type/species appropriate bat boxes and "natural" roost features created on retained trees in appropriate locations (i.e. in close proximity to existing flight lines,	Very Low	No Likely Significant Effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						adjacent to high value habitat, relatively undisturbed and unlit areas). A maternity roost for brown long-eared bats will be directly affected by the demolition. A mitigation roost will be constructed in the vicinity of Hearts Copse following the criteria for this roost type as described in the bat mitigation guidelines and delivered under licence. Substantial tree and shrub planting will reinforce the connection this location to existing flight lines and maternity roost locations within Hearts Copse. The removal of mature trees has been minimised through careful masterplan layout. Where trees containing potential roost features are retained, these will be protected by the buffer specifications as described for hedgerows (O & P) and woodland (G) in section 10.7. Where trees with potential roost features are required to be removed, a precautionary principle will be applied that assume the presence of the most likely roost type for the feature. This is considered appropriate as tree roosts are dynamic and can be readily		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						occupied/abandoned by a variety of species at any given time, making firm assessment of the roost types present particularly challenging. Mitigation and licensing requirements will therefore be informed by subsequent inspections prior to any impacts on these features. A suite of species and habitat specific monitoring regimes will be implemented to provide feedback on the efficacy of mitigation and habitat creation measures for specific receptor species in accordance with legislative and policy requirements. This monitoring will inform a responsive system of remedial measures to ensure that the intended function of these measures is realised and maintained in perpetuity. See A to N and T to X above.		
	Habitat Severance	High	Severance of key habitat connecting roost and feeding/breeding areas etc. Artificial lighting of habitat features during construction. Increased lighting levels associated with new link road, estate roads and additional external and internal building lighting may result in indirect	High	Major (significant)	Three locations where the link road severs high value foraging and connective habitat have been identified on site that present a traffic collision risk to bats.	Very Low	Minor Non-significant likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			impacts on foraging and commuting habitats (disturbance, ultimately resulting in loss of habitat)			•Minimising habitat loss in these areas by designing the road approach to the habitat in a perpendicular orientation •Minimising the width of the road crossing •Clear span design •Incorporation of suitable measures to ensure safe crossing following the most recent research into the efficacy of such measures to minimise road collision mortality. •A minimum height of 3m under bridge crossings. •Sensitive design of any lighting that may be required in these areas. •Additional compensatory habitat may be required. Significant vegetation will be retained either side of the construction areas in these locations to encourage the use of underpasses.		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Direct loss/degradation of key foraging habitat	High	Reduction in available food source/diversity/abundance of foraging resource including through severance and lighting effects.	High	Major (significant)	The loss of foraging habitat across the site has been minimised through the retention of key high value habitats. These habitats will be protected and enhanced, with connectivity between these habitat areas and potential roost sites maintained both across the site and the wider landscape through the measures to protect these specific habitats (see G, H, I, O & P). Additional habitat creation and enhancement measures described above for woodland (including woodland extensions), hedgerows, marshy grassland, ponds, watercourses and water quality will all enhance the foraging provision on site within the retained habitats.	Very Low	Minor Non-significant likely effect
Great Crested Newt	Pollution	High	Accidental pollution on site construction activities (e.g. hydrocarbons, herbicides, paints, solvents and other materials used) and discharge into habitats used including exposure to substances with chronic or acute consequential effects.	High	Major (significant)	Great crested newt and other amphibian/reptile mitigation Key amphibian/reptile habitats have been largely avoided and will be protected and enhanced.	Very Low	Minor Non-significant likely effect
	Destruction of habitat features	High	Impacts on terrestrial habitat adjacent to breeding sites, resting/hibernation features and supporting habitats (including ponds hedgerows, marshy grassland, woodlands,	High	Major (significant)	Where valuable amphibian habitats must be affected, appropriate measures will be implemented to ensure that animals are protected	Very Low	Minor Non-significant likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			watercourses and mature trees) and adjacent habitats.			during construction and that there is no detrimental effect on the favourable conservation status of the populations present on site.		
	Habitat Severance	High	Severance of key habitat connecting resting places, foraging habitats and breeding habitats Artificial lighting of habitat features during construction	High	Major (significant)	These measures include: Implementation of a series of linked Natural England EPS licences coordinated through the implementation of a great crested newt masterplan	Very Low	Minor Non-significant likely effect
	Killing/injury	High	Constriction operations in/adjacent to suitable habitat within 250m of breeding pond and associate traffic movements.	High	Major (significant)	Avoidance measures to minimise areas of habitat loss and to maintain habitat connectivity	Very Low	Minor Non-significant likely effect
	Direct loss/degradation of key foraging habitat	High	Reduction in available food source/diversity/abundance of foraging resource through habitat destruction or pollution/lighting effects. Reduction in foraging resource can also occur as a result of habitat severance.	High	Major (significant)	Sensitive approach to vegetation clearance including consideration of timing, duration and methodology. This will employ measures of phased vegetation removal in accordance with best practise under a detailed method statement. Exclusion from working areas until works have ceased and habitat reinstated	Very Low	Minor Non-significant likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Capture from exclusion areas and translocation to retained receptor habitat Translocation of the southern low size class Chalcroft population from the single poor quality pond and associated poor quality and disturbed terrestrial habitat within 500m to two restored and two created and optimised northern ponds in Chalcroft Wood on land owned by Eastleigh Borough Council, with high quality terrestrial habitat. This will provide a closer association with the larger part of the existing metapopulation promoting breeding success and genetic diversity, increasing the territory used by great crested newt into optimal habitat for the construction phase. Chalcroft pond will be retained and restored, including connectivity for great crested newt to return to the southern habitat. A necklace of new ponds will link the northern population with restored and enhanced habitats in the south. Measures to prevent entrapment in drainage systems and connectivity across roads		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Provision of enhanced terrestrial habitat and a network of created and restored ponds and wetlands, together with resting and overwintering habitats Habitat compensation and enhancement measures will be delivered in accordance with industry best practise ensuring compliance with policy and legislation. The management of recreation on site, particularly dogs, and cats through landscape design, householder packs and appropriate fencing and signage in key habitat areas, particularly close to known and potential future breeding ponds and adjacent habitats. Key elements of GCN mitigation will be delivered under EPS mitigation licences, as appropriate, with additional elements of the development delivered under a non-licensable method statement where the likelihood of an offence is negligible. Habitat connectivity will be maintained through the designation, enhancement and long-term management of ecological connective corridors to		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						maintain the landscape permeability both on and across the site for amphibians/reptiles. Measures will also be incorporated in road designs at key severance locations to facilitate safe passage to avoid collision mortality and entrapment risk. Habitat connectivity will be maintained through the designation, enhancement and long-term management of ecological connective corridors to maintain the landscape permeability both on and across the site for amphibians/reptiles. Measures will also be incorporated in road designs at key severance locations to facilitate safe passage to avoid collision mortality and entrapment risk. Measures have been incorporated into the masterplan to minimise risk and disturbance to the populations present and to facilitate the recolonisation and natural dispersal/recolonisation of the population across the site post construction to new wildlife ponds constructed to appeal to breeding GCN via a comprehensive network of suitable connective habitats linking		

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						existing populations to these new features. All habitats managed for amphibians/reptiles will be subject to a detailed long-term management plan. See A to N		
Otter	Habitat Severance	High	Habitat fragmentation due to habitat loss and disturbance	Low	Moderate (could be significant)	The riparian corridors across the site are considered to be connective habitat for otter and are minor tributaries of the River Itchen and therefore a potential pathway for pollution effects including sediment and hydrocarbons. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for the River Itchen SAC and SSSI also afford protection to otter in the wider river catchment during construction. The design principles describe above for bats will also allow otter to move freely along the riparian corridor under	Very Low	No likely significant effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						the link road and therefore reduce collision risk.		
	Killing/injury	High	Constriction operations in/adjacent to suitable habitat within 30m of riparian habitats and associate traffic movements.	Low	Moderate (could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for the River Itchen SAC and SSSI also afford protection to otter in the wider river catchment during construction and maintain connectivity.	Very low	No likely significant effect
Water Vole	Habitat Severance	Low	Habitat fragmentation due to habitat loss and disturbance	Low	Negligible (not significant)	The riparian corridors across the site are considered to be connective habitat for water vole and are minor tributaries of the River Itchen and therefore a potential pathway for pollution effects including sediment and hydrocarbons. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for the River Itchen SAC and SSSI also afford protection to	Will Not Occur	No likely significant effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						water vole in the wider river catchment during construction. The design principles describe above for bats will also allow water vole to move freely along the riparian corridor under the link road and therefore reduce collision risk and maintain connectivity.		
	Killing/injury	Low	Constriction operations in/adjacent to suitable habitat within 30m of riparian habitats and associate traffic movements.	Low	Moderate (could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for the River Itchen SAC and SSSI also afford protection to otter in the wider river catchment during construction.	Will Not Occur	No likely significant effect
Dormouse	Disturbance	High	Construction activity and noise in proximity to nest sites.	High	Major (significant)	See A- N and T above	Very Low	Minor Non-significant likely effect
	Destruction of habitat features	High	Impacts on terrestrial habitat adjacent to breeding sites, resting/hibernation features and supporting habitats (including hedgerows, woodlands, and mature trees)	High	Major (significant)	Ongoing annual dormouse tube monitoring to inform licencing requirements for each phase of the project.	Very Low	Minor Non-significant likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			and adjacent habitats connected to central woodland within territorial range.			Avoidance of hedgerow severance within 150m of confirmed records (currently only within woodland north of solar farm).		
	Habitat Severance	High	Severance of key habitat connecting resting places, foraging habitats and breeding habitats Artificial lighting of habitat features during construction	High	Major (significant)	No lighting associated with road crossings of woodland habitat Installation of suitable aerial structure (e.g. Peoples Trust for Endangered Species, 2019 ¹) across roads severing woodland, in combination with suitable planting to strengthen vegetated corridors	Very Low	Minor Non-significant likely effect
	Killing/injury	High	Constriction operations in/adjacent to suitable habitat and associate traffic movements.	High	Major (significant)		Very Low	Minor Non-significant likely effect
	Direct loss/degradation of key foraging habitat	High	Reduction in available food source/diversity/abundance of foraging resource through habitat destruction or pollution/lighting effects. Reduction in foraging resource can also occur as a result of habitat severance.	High	Major (significant)	Provision of deciduous woodland adjacent to key retained woodland corridor to ensure no net loss of habitat and to maximise availability of food plants throughout the active part of the year. Provision of 150 dormouse nest boxes within retained woodland corridors to maximise and extend suitable nesting	Very Low	Minor Non-significant likely effect

¹ <https://ptes.org/wp-content/uploads/2019/09/White-Hughes-2019-dormouse-bridge.pdf>

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						habitats. Annual nest box monitoring to be carried out. Sensitive woodland management to restore and maximise opportunities for dormouse (e.g. Forestry Commission 2019 ² and the Hampshire Dormouse Group ³)		
Reptiles	Pollution	High	Accidental pollution on site construction activities (e.g. hydrocarbons, herbicides, paints, solvents and other materials used) and discharge into habitats used including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for marshy grassland, woodland, hedgerows, ponds and great crested newts are also relevant to reptiles.	Very Low	Minor Non-significant
	Destruction of habitat features	High	Impacts on terrestrial habitat adjacent to breeding sites, resting/hibernation features and supporting habitats (including ponds hedgerows, woodlands, marshy grassland, watercourses and mature trees) and adjacent habitats.	Low	Moderate (Could be significant)		Very Low	Minor Non-significant

² Forestry Commission. 2019. A Protocol for Undertaking Woodland Management in England Where Dormice Are Present. Protocol Version 4.

³ <https://hampshiredormousegroup.co.uk/resources/woodland-habitat-management/>

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Habitat Severance	High	Severance of key habitat connecting resting places, foraging habitats and breeding habitats Artificial lighting of habitat features during construction	Low	Moderate (Could be significant)		Very Low	Minor Non-significant
	Killing/injury	High	Constriction operations in/adjacent to suitable habitat and associate traffic movements.	Low	Moderate (Could be significant)		Very Low	Minor Non-significant
	Direct loss/degradation of key foraging habitat	High	Reduction in available food source/diversity/abundance of foraging resource through habitat destruction or pollution/lighting effects. Reduction in foraging resource can also occur as a result of habitat severance.	Low	Moderate (Could be significant)		Very Low	Minor Non-significant
Badger	Damage/destruction of setts	Low	Construction within close proximity of sett location (distance dependent on magnitude of vibration) causing collapse of tunnels	Very Low	Negligible (not significant)	Very limited badger activity observed on site over a 2 year monitoring period. No active setts recorded in 2020.	Very Low	Negligible (not significant)
	Entrapment	Low	Open, steep sided excavations during construction can entrap animals.	Very Low	Negligible (not significant)	Works areas within 30m of suitable sett construction habitat will be subject to a pre-works inspection The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES	Very Low	Negligible (not significant)

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						will ensure that suitable measures to avoid these effects will be successfully implemented. The measures as described for marshy grassland, woodland, hedgerows, ponds and great crested newts are also relevant to reptiles.		
Breeding Birds	Destruction of habitat features	High	Impacts on terrestrial habitat adjacent to breeding sites, resting/hibernation features and supporting habitats (including ponds hedgerows, woodlands, marshy grassland, watercourses and mature trees) and adjacent habitats.	Low	Moderate (Could be significant)	Provision of new habitat will continue to support a similar species assemblage and population size. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	Minor Non-significant
	Disturbance (Barn Owl only)	High	Construction activity and noise in proximity to nest sites.	Moderate	Major (significant)	Work that risk disturbance to barn owl will avoid the key breeding/nesting period (March-August). The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	Minor Non-significant

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Damage/ destruction of active nests	High	Removal of habitat within close proximity of nest location, or of connected structures (i.e. buildings or branches) causing collapse of supporting vegetation.	Low	Moderate (Could be significant)	Works areas within 5m of suitable nest construction habitat will be subject to a pre-works inspection should work occur in the period March-September (inclusive). The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	Minor Non-significant
	Direct loss/degradation of key foraging habitat (barn owl)	High	Reduction in available food source/diversity/abundance of foraging resource through habitat destruction or pollution/lighting effects. Reduction in foraging resource can also occur as a result of habitat severance.	Moderate	Major (significant)	The existing nest location will be moved in a phased process whereby an identical box will be erected in the far south west of the site in winter 2020 (approx. 600m from the nearest link road section) with the existing box retained until the winter prior to the operational phase of the road (estimated 2022 – relocation in winter 2021). At which point the occupied box will be relocated (outside of breeding season) to a tree within 100m of the new nest box. This will recreate the current associated adult and nest roost configuration between the nest box and the roost in Chalcroft Farm. This relocation will seek to reduce collision risk and to reduce the potential for	Very Low	Minor Non-significant

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						disturbance effects form the residential areas. The marshy grassland areas in this vicinity of the nest box will be enhanced and managed to increase the population of field voles to provide an increased foraging resource.		
Invertebrates	Destruction of habitat features	Medium	Impacts on terrestrial habitat adjacent to breeding sites, resting/hibernation features and supporting habitats (including ponds hedgerows, woodlands, marshy grassland, watercourses and mature trees) and adjacent habitats.	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Fish (on-site) (see also watercourses)	Pollution	High	Discharge of soil/sediment from construction activities into on site/receiving watercourses, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses resulting in a reduction in water quality including exposure to	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			substances with chronic or acute consequential effects.					
	Modification of onsite hydrological regime affecting habitats.	Medium	Modification of onsite hydrological regime including small scale 0/1 st stage headwater catchments through change in soil drainage character, introduction of formal drainage, severance of drainage systems, blockage of natural drainage systems with reduction in extent of wetland habitats (including marshy grassland/wet woodland) or supply of water to standing or running water bodies, or change in flood regime resulting in an increase on volume/rate and transport of sediment/erosion etc and change in flow characteristics and quality entering the feature	Low	Minor (not significant)	With the inclusion of the additional mitigation set out in Table 10.11 of Section 10.7 of this Chapter of the ES it is considered reasonable to conclude that any changes in construction phase water quality are likely to be within the range of natural variability and there would be no short-term or long-term change to the conservation status of habitat/species receptors or the integrity of fish habitat and the fish population. As such, whilst the Sensitivity of the on site fish habitat and assumed population is Medium, the Magnitude of change is Very Low and therefore Low (not significant) effects would arise. Taking into account the rigorous water quality/sediment monitoring and management intervention measures set out in Table 10.11, a Not Significant Likely Construction Effect will occur to the fish population associated with the onsite/adjacent watercourses (or further downstream) from sediment or other associated pollution during construction associated with the OPA Phase 1.	Very Low	Positive non-significant likely effect
	Nutrients	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and phosphates) entering the soil and discharged through onsite/receiving watercourses with potential effects on eutrophication levels and associated features of interest.	Low	Minor (not significant)		Very Low	Positive non-significant likely effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Invasive Species	Spread of invasive species into habitat present (in particular tributaries of the River Itchen)	High	Degradation of affected natural habitats through reduction in diversity and dominance of non-native species that do not provide foraging resource for native invertebrate/animal species.	Low	Moderate (Could be significant)	There is a significant risk of spreading Himalayan balsam during works to construct the Quobleigh stream link road crossing. This could result in the spread of seed into the downstream tributaries and into the River Itchen SSSI. However, measures outlined in the CEMP and a separate invasive species strategy document will ensure that this plant is not caused to spread during works. There is a risk that additional species will be transported to site in materials or machinery. Specific biosecurity measures will be described and implemented through a CEMP to mitigate for the risk of transfer of invasive species and through the inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid this effect will be successfully implemented. The sensitivity of receptor habitats that could be subject to the spread of invasive species (particularly the dispersal of Himalayan balsam into watercourses) are high but, with effective management and monitoring,	Very Low	No likely significant effect

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ECOLOGY (CONSTRUCTION EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						the magnitude of this change is considered to be low and there is, therefore, no likely significant effect on habitats or designated sites due to the introduction of invasive species.		

ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Occupation / Operational Effects – Wider OPA and Link Road								
River Itchen Special Area of Conservation (SAC) and River Itchen SSSI (and other	Pollution (sediment, hydrocarbons etc)	Very High	Discharge of soil/sediment from construction activities into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, deposition of the sediment may affect	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
constituent designated sites)			designated features including macrophytes, macroinvertebrates, notably condition of salmon spawning habitat (redds) through smothering vegetation, blocking voids within the coarse bedload used by fish and invertebrates, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the River Itchen at the confluence located at SU 46198 16665, upstream of Itchen Valley Country Park, affecting designated features including macrophytes,			other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			macroinvertebrates, fish, and birds through reduction in water quality including exposure to substances with chronic or acute consequential effects.			ensure consistent and ongoing high quality performance. Taking into account the change in land use and Additional Measures set out in Table 10.11 and in Chapter 11 of this ES, in particular the provision of a robust, monitored and managed SuDS system, it is considered reasonable to conclude that although the River Itchen SAC and SSSI has a Very High level of sensitivity, the Magnitude of change will be Negligible and therefore No Significant occupation likely effect will occur as a result of sediment (or other associated contaminant) emissions. Please refer to Chapter 11 of this ES for full details.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to maturing mixed use	Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			development, implemented and occupied in phases, that will be characterised by permanent surfaces including impermeable and hard wearing roads, pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated with the Wider OPA and associated Link Road. Soil erosion from these areas is considered to be negligible.		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Solent Maritime SAC (and other constituent designated sites)	Pollution (sediment, hydrocarbons etc)	Very High	Discharge of soil/sediment from operation/occupation of the site from various activities into on site/receiving watercourses and transport into the Solent introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the Solent influencing a possible reduction in water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance. Taking into account the change in land use and Additional Measures set out in Table 10.11 and in Chapter 11 of this ES, in particular the provision of a robust, monitored and managed SuDS system, it is considered reasonable to conclude that although the River Itchen SAC and SSSI has a Very High level of sensitivity, the Magnitude of change will be Negligible and therefore No Significant occupation likely effect will occur as a result of sediment (or other associated contaminant) emissions.		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						Please refer to Chapter 11 of this ES for full details.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and transport into the Solent.	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to maturing mixed use development, implemented and occupied in phases, that will be characterised by permanent surfaces including impermeable and hard wearing roads, pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated	Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						with the Wider OPA and associated Link Road. Soil erosion from these areas is considered to be negligible.		
Solent SPA (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	The Wider OPA will include the provision of an extensive network of footpaths and play/sports facilities as part of the scheme, both within the developed areas and as green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. This includes the provision of a 5km SANG (suitable alternative natural space) route, that includes at least 2.5km of route that allows informal access and dog walking. A detailed comparison of the on site provision against SANG criteria has been completed. Please refer to Chapter 14 for full details.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						The on-site recreational provision at One Horton is expected to cater for most day-to-day walking and cycling journeys. However, residents of One Horton Heath will wish to also visit the New Forest SPA. Eastleigh Borough Council is in ongoing negotiations with Natural England with respect to the effectiveness of the on-site recreational provision. Should these negotiations conclude that further measures are required, a financial contribution to the Solent Recreation Mitigation Strategy SPD will be made to removing this additional pressure from the Solent SAC/SPA and Ramsar sites. With the inclusion of the additional on site (and local connected) recreational resources set out in Table		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						10.11 of Section 10.7 of this Chapter of the ES and set out in more detail in Chapter 14 of this ES, together with any necessary payments to the Solent Recreational Mitigation Strategy SPD, it is considered reasonable to conclude that any changes in recreational pressure on the SPA and Ramsar (or constituent SSSI etc) are likely to be within the range of typical recreational use for the wider residential population, and there would be no short-term or long-term change to the conservation status of habitat/species receptors or the integrity of designated sites. As such, whilst the sensitivity of the Solent and Southampton Water SPA and constituent SSSIs remains the same, the Magnitude of change reduces to Very Low and therefore Moderate (could be significant effects) could arise. Subject to		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						final negotiations with Natural England, financial contribution to the Solent Bird Aware SPD fund to support specific recreation mitigation measures at the SPD would be made, and therefore No Significant Likely Occupational/Operational Effect will occur to the Solent and Southampton Water SPA/Ramsar from recreational pressure associated with the Wider OPA. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic	Low	Moderate (Could be significant)	The developed Wider OPA and associated Link Road will result in a widespread change from the agricultural land use to	Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			maturing mixed use development, implemented and occupied in phases, that will be characterised by permanent surfaces including impermeable and hard wearing roads, pavements, roofing and other infrastructure that will generate surface runoff that will be directed into formal drainage, transporting any urban sediment that may be present into the formal SUDS system. Other surfaces will be permeable comprising e.g. permeable paving, amenity vegetation such as managed grass and other more ornamental landscape planting, as well as significant areas of Green Infrastructure associated with the Wider OPA and associated Link Road. Soil erosion from these areas is considered to be negligible. The inherent and additional measures (all based on robust		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Solent and Southampton Water Ramsar (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Very Low	No likely significant effect
	Change in nutrients affecting water quality	Very High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and thereby the Solent associated features of interest.					
New Forest SPA (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
New Forest SAC (and other constituent designated sites)	Disturbance/ degradation of designated features as a result of increased recreation	Very High	Recreational disturbance from human and dog walking in areas associated with sensitive bird species, notably with effects on breeding viability. The site contains a range of habitats that support these bird species including: estuaries, intertidal flats, saline lagoons, shingle beaches, saltmarsh, reedbeds, damp woodland and grazing marsh.	Low	Moderate (Could be significant)	See measures as described for the Solent SPA (and other constituent designated sites)	Very Low	No likely significant effect
Emers Bog SAC (and other constituent designated sites)	No likely significant effect						Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating	Very Low	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the	Low	Moderate (Could be significant)	a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			receiving watercourses and associated features of interest.			outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is limited to the majority of this SINC, therefore the impact of increased recreational pressure will be limited to the narrow strip to the north and west of Chalcroft business park	Low	Negligible (not significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			that lies outside the perimeter security fence.			refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Round Copse, West End Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure	Low	Moderate (Could be significant)	See measures above for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			to substances with chronic or acute consequential effects.					
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.	Low	Moderate (Could be significant)		Very Low	No likely significant effect
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is not permitted into this SINC, therefore the impact of	Low	Negligible (not significant)	None	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			increased recreational pressure is negligible.					
Hearts Copse, West End, Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	See measures above for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Very Low	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development	Low	Moderate (Could be significant)		Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.					
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is not permitted into this SINC, therefore the impact of increased recreational pressure is negligible.	Low	Negligible (not significant)		Very Low	No likely significant effect
Treeline Break Site of Importance for Nature Conservation (SINC)	Pollution (sediment, hydrocarbons etc)	Low	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the SINC affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Negligible (not significant)	See measures above for Chalcroft Distribution Park Site of Importance for Nature Conservation (SINC)	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Disturbance/degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas. Public access is not permitted into this SINC, therefore the impact of increased recreational pressure	Low	Negligible (not significant)		Very Low	No likely significant effect
Quobleigh Pond and Woods Site of Importance for Nature Conservation (SINC)	Disturbance/degradation of habitat features as a result of increased recreation	High	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas from the PRoW in the centre of this site.	Low	Moderate (Could be significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Fair Oak School Meadow Site of Importance for Nature Conservation (SINC)	Disturbance of designated features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Moderate (Could be significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods)		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Wyvern Technical College Meadow Site of Importance for Nature Conservation (SINC)	Disturbance of designated features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Moderate (Could be significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Watercourses (other than those listed or associated with designated sites listed above) – Priority Habitat	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	The proper implementation of a SuDS management / treatment train using a combination of upstream Source Control and Strategic SuDS Features will create greater resilience and allow the system to collect sediment (including silt and other associated contaminants) at various points which can then be removed as part of periodic maintenance. Creating a diverse SuDS scheme throughout the site will help to overcome the issues previously faced by SuDS. Ensuring that the principles of the site wide Water Management Strategy are taken forward into the future Reserved Matters Applications and ensuring that effective maintenance and management procedures are	Very Low	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from	Low	Moderate (Could be significant)		Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			followed will be the key to ensuring the overall effectiveness of the SuDS scheme. The SuDS system and water course inflows and outflows will be monitored (e.g. for sediment, turbidity, electrical conductivity, pH) to highlight reduced performance of any SuDS feature and allow for management intervention to ensure consistent and ongoing high quality performance. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Minor (not significant)	An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details. The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details. The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
Ponds – see bats, birds, amphibians and reptiles as	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
well– Priority Habitat			habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.			to avoid these effects will be successfully implemented.		
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Parkland	Increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas including potential vandalism.	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Marshy Grassland	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Change in nutrients affecting water quality	High	Change in nutrient (nitrate and phosphate) emissions from the operation/occupation of the site largely associated with domestic and business generation, with agricultural contributions	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			ceasing and application of fertilisers in open spaces minimised or avoided, but with generation of nutrients from urban operations including discharge of treated sewage arising from the development and urban sediment discharge, with potential effects on siltation and eutrophication levels in the receiving watercourses and associated features of interest.			to avoid these effects will be successfully implemented.		
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and unmanaged use of habitat areas.	Low	Minor (not significant)	See measures included for watercourses	Very Low	No likely significant effect
Hedgerows	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			exposure to substances with chronic or acute consequential effects.					
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and unmanaged use of habitat areas.	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Broadleaved Semi-Natural Woodland	Pollution (sediment, hydrocarbons etc)	High	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects.	Very Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Disturbance/ degradation of habitat features as a result of increased recreation	Medium	Recreational disturbance and degradation of habitat from an increase in access and unmanaged use of habitat areas.	Low	Minor (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Bats	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats)	High	Major (significant)	Three locations where the link road severs high value foraging and connective habitat have been identified on site that present a traffic collision risk to bats. •Minimising habitat loss in these areas by designing the road approach to the habitat in a perpendicular orientation •Minimising the width of the road crossing •Clear span design	Very Low	Minor Non-significant likely effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						•Incorporation of suitable measures to ensure safe crossing following the most recent research into the efficacy of such measures to minimise road collision mortality. •A minimum height of 3m under bridge crossings. •Sensitive design of any lighting that may be required in these areas. •Additional compensatory habitat may be required. Significant vegetation will be retained either side of the construction areas in these locations to encourage the use of underpasses. The inherent and additional measures (all based on robust and tried and tested methods)		

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.		
	Indirect degradation of foraging resource	High	Artificial lighting can attract flying nocturnal invertebrates (particularly moths) drawing them a way from unlit area into lit areas, thereby reducing the availability of prey for light sensitive species (such as brown long-eared bats)	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	Minor Non-significant likely effect
	Increase in predation risk	Low	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Great Crested Newt	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats – particularly within 250m of breeding ponds).	Low	Moderate (Could be significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Increase in predation risk	Low	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Entrapment	Low	Entrapment in road and drainage infrastructure	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Otter	Pollution	Low	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects. Increase in litter and fly tipping.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Disturbance/ degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Water Vole	Pollution	Low	Accidental pollution from site operation/occupation (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will	Will Not Occur	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			watercourses and into the habitat affecting designated features through a reduction in soil or water quality including exposure to substances with chronic or acute consequential effects. Increase in litter and fly tipping.			ensure that suitable measures to avoid these effects will be successfully implemented.		
	Disturbance/ degradation of habitat features as a result of increased recreation	Low	Recreational disturbance and degradation of habitat from an increase in access and informal use of habitat areas.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Will Not Occur	No likely significant effect
Reptiles	Increase in road collision mortality	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (woodland, marshy grassland, hedgerows and riparian habitats – particularly within 250m of breeding ponds).	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
	Increase in predation risk	High	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
	Entrapment	High	Entrapment in road and drainage infrastructure	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Badger	Increase in road collision mortality	Low	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (marshy grassland, woodland, hedgerows and riparian habitats).	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Breeding Birds	Increase in road collision mortality (all species but particularly barn owl)	High	Increase in collision risk due to increased new roads across the site, particularly in areas of severance of high suitability habitat (marshy grassland, woodland, hedgerows and riparian habitats).	Low	Moderate (Could be significant)	The link road is likely to be categorised as a "Modern A Road" class according to the Barn Owl Trust Whilst a modern A road, the link road will be designed to accommodate measures described within this report to reduce the road collision mortality rate including: •Sections where the road is situated on an embankment present the highest risk followed by sections at existing ground levels. In these areas, the creation of obstacles (natural or artificial with a preference for natural) which force birds to fly higher across roads will be incorporated into the scheme. •Areas where the road is situated in a cutting present a lower risk and will not require additional planting, although	Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
						this will be considered as part of the wider road landscaping scheme. •Verges south of the link road will be maintained in a short, thatchless condition to reduce the potential for field vole.		
	Increase in predation risk	High	An increase in the population of domestic cats is likely to increase predation risk.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect
Invertebrates	Alteration of behaviour	Medium	Artificial light can alter the behaviour of nocturnal invertebrates, thereby affecting population viability and breeding.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Negligible	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Fish (on site)	Pollution	High	Discharge of soil/sediment from construction activities into on site/receiving watercourses, introducing nutrients, metals and other deleterious substances bound on the sediment particles and influencing other aspects of water quality including nutrient enrichment and water transparency. Accidental pollution on site construction activities (e.g. hydrocarbons, paints, solvents and other materials used) and discharge into on site/receiving watercourses resulting in a reduction in water quality including exposure to substances with chronic or acute consequential effects.	Low	Moderate (Could be significant)	See measures for watercourses	Very Low	No likely significant effect
	Nutrients	High	Change (likely overall reduction during the course of the construction phasing) of agricultural sourced nutrients (in particular nitrates and	Low	Moderate (Could be significant)		Very Low	No likely significant effect

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ECOLOGY (OPERATIONAL EFFECTS)								
Receptor	Impact	Sensitivity of Receptor	Effect	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
			phosphates) entering the soil and discharged through onsite/receiving watercourses with potential effects on eutrophication levels and associated features of interest.					
	Changes in flow regime	High	Change in riverine flow associated with modified drainage and effects on fish and associated habitat features from a change in flow regime.	Low	Moderate (Could be significant)		Very Low	No likely significant effect
Invasive Species	Spread of invasive species into habitat present (in particular tributaries of the River Itchen)	Low	Degradation of affected natural habitats through reduction in diversity and dominance of non-native species that do not provide foraging resource for native invertebrate/animal species.	Low	Negligible (not significant)	The inherent and additional measures (all based on robust and tried and tested methods) set out in Table 10.7 and 10.11 of this Chapter of the ES will ensure that suitable measures to avoid these effects will be successfully implemented.	Very Low	No likely significant effect

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NOISE AND VIBRATION							
Environmental Effect	Sensitivity of Receptor	Nature of Impact	Impact Magnitude	Significance	Additional Mitigation	Residual Impact Magnitude	Residual Significance of Effect
Construction Effects – OPA Phase 1							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Construction Effects – The Wider OPA							
Noise at existing residential	Medium	Noise audible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Vibration at existing residential	Medium	Vibration perceptible within living areas	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise at nearby bird habitats	Medium	Bird response to construction noise	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Noise and vibration at fish habitats	Medium	Fish response to construction noise and vibration	Medium - Negligible	Major – Neutral	Construction best practice, CEMP and limits.	Low - Negligible	Moderate - Neutral
Operation Effects – OPA Phase 1							
Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Negligible	Neutral	n/a	Negligible	Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Negligible	Neutral	2m high garden wall/fencing	Negligible	Neutral
Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Negligible	Neutral	n/a	Negligible	Neutral

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Operation Effects – Wider OPA							
Development generated road traffic	Medium	Audible change in noise environment at existing receptors	Low - Negligible	Moderate - Neutral	n/a	Low - Negligible	Moderate - Neutral
Noise in proposed gardens	Medium	Noise present in gardens	Medium - Negligible	Major - Neutral	2m high garden wall/fencing in combination with 15m standoff. Alternative location of gardens on screened side of dwellings	Negligible	Neutral
Noise in proposed habitable rooms	Medium	Noise present in habitable rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Noise at proposed school	Medium	Noise present in teaching areas	Negligible	Neutral	n/a	Negligible	Neutral
Noise at proposed school	Low	Noise present in offices and meeting rooms	Medium - Negligible	Major - Neutral	Glazing and ventilation strategy	Negligible	Neutral
Industrial noise at proposed dwellings Chalcroft Industrial Estate	Medium	Industrial noise present at proposed dwellings	Medium - Negligible	Major - Neutral	2m high close boarded fencing	Low	Moderate
Cumulative Effects							
Effect	Description				Mitigation		Significance
Change in road traffic noise 2020 to 2023	Change in road traffic noise levels as a result of the OPA Phase 1 development, in combination with committed developments and general increase in baseline environment over time.				n/a		Negligible
Change in road traffic noise 2020 to 2030	Change in road traffic noise levels as a result of the Wider OPA development, in combination with committed developments and general increase in baseline environment over time.				n/a		Low
Impact of Climate Change							
Effect	Description				Mitigation		Significance
n/a							

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LANDSCAPE AND VISUAL								
Construction Effects								
The Wider OPA -Scenario 2								
Landscape								
Horton Heath LCA	Low	Construction work will be largely limited to direct impacts on the site itself with some off-site impacts including the construction of access points and localised impacts on adjacent road network. The construction works will also temporarily indirectly impact upon localised parts of the character of Burnetts Lane, Allington Lane, Chalcroft and Fir Tree Lane. The implementation of areas of open space, green infrastructure, drainage and phases of residential development will temporarily impact the immediate setting of Horton Heath and Allington while works are occur alongside.	Temporary Medium to High	Temporary Moderate to Major Adverse	-	Temporary Medium to High	Temporary Moderate Adverse	High
Chalcroft LLCA	Low	Construction works associated with the building of the houses and infrastructure associated with wider outline scheme will directly impact on the character of the various parcels of land across the site. Construction activity will have a localised indirect impact on Chalcroft Farm, as well as to the setting of the Ancient woodland. Implementation works will within parcels will have localised impacts and indirect impacts on the wider setting.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Quobleigh LLCA	Low	Construction building activity will directly impact this LLCA and the implementation of areas of tree planting and strategic green infrastructure will impact on the immediate setting of this area.	Temporary Medium to High	Temporary Moderate Adverse	-	Temporary Medium to High	Temporary Moderate Adverse	High

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Site wide	Medium	Direct construction impacts will arise on this area from traffic, groundworks, SuDS construction, landscape implementation and planting and the construction of infrastructure and new homes. Indirect impacts of these operations are predicted on Chalcroft track, Allington Lane and Burnetts Lane and on the existing residential edge and local network of roads. There will also be direct impacts from construction and implementation works on the network of footpaths in places where these interface with areas of development.	Localised Temporary High	Temporary Moderate Adverse	-	Localised Temporary High	Temporary Moderate Adverse	High
Visual								
Recreational users of PRoW F2	Medium	Construction traffic and activity will be present in the view	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Recreational users of PRoW F3	Medium	Movement and activity associated with the construction works will be in close proximity to users of PRoW F3	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Recreational users of PRoW F10 and F11	Medium	Construction works associated with the wider OPA will result in traffic movement, construction and activity.	Temporary Medium	Temporary Moderate Adverse	-	Temporary Medium	Temporary Moderate Adverse	High
Recreational users of PRoW B743, B744, B746, and B780	Medium	Recreational users of the footpaths to the west of Allington Lane will experience glimpsed views of the site and the likely change in views associated with the construction of this part of the development will be seen as a result of the construction of the landmark building, located at the northern gateway to the site.	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Residents overlooking the eastern edge of the site	High	Construction traffic, activity and movement is likely to be seen in glimpsed views through existing residential parcels adjacent to the Phase 1 works as well as direct views for residents overlooking the central parcels of the site where these views and construction traffic will be seen in close proximity and would be more apparent within views.	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Residents on Fir Tree Lane	High	Residents on the western part of Fir Tree Lane will see construction traffic and activity introduced to views given the proximity of works	Temporary High	Temporary Moderate Adverse	-	Temporary High	Temporary Moderate Adverse	High
Transient users of Burnetts Lane	Medium	Construction traffic, activity and movement will be seen in close proximity for transient users of Burnetts Lane	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High

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Transient Users of Blind Lane	Medium	Activity and movement associated with the OPA will be seen in glimpsed and longer distance views for transient users of Blind Lane who experience views directly across towards the site, from the east.	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
Transient users of Fir Tree Lane	Medium	Transient users of Fir Tree Lane will experience a change in their view as a result of the construction works and the downgrading of this route in part will change access through the site for these users.	Temporary Medium	Temporary Moderate to Major Adverse	-	Temporary Medium	Temporary Moderate to Major Adverse	High
The Wider OPA -Scenario 2								
Landscape								
Horton Heath LCA	Low	At completion, the development will introduce additional large-scale built form into the landscape and will form part of a much larger area of development in this LCA, sitting amongst established areas of strategic green infrastructure. As the strategic green infrastructure of the proposed development will be delivered as part of the early phases of development, by year 15, with the maturation of trees along main streets, in gardens and within green spaces, the development will be better assimilated into the landscape. However, the scale of the development in relation to the LCA will mean that some adverse effects will continue to persist on the LCA.	Medium	Moderate Adverse	-	Low to Medium, allowing for maturation by Year 15	Minor to Moderate Adverse	High
Chalcroft LLCA	Low	The development will introduce additional built form into the LLCA, with built form already established on the site. The development will increase the scale of development present across the LLCA and will result in the majority of the LLCA being built out with embedded landscape mitigation and green infrastructure as part of the development. The overall provision of green infrastructure across the site will increase. The addition of rain gardens within plots and along strategic locations within development plots will also provide an increase in blue and green infrastructure across the OPA.	Low to Medium	Minor Adverse	-	Low and Positive allowing for maturation by Year 15	Minor Beneficial	High

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		All new green infrastructure will provide additional longer-term benefits. The provision of street trees, once mature, will also provide benefits for urban greening and will assist in assimilating the development into the landscape as it matures.						
Quobleigh LLCA	Low	At completion, the development will introduce an uncharacteristic feature within the LLCA in the form of residential development and associated infrastructure and this will increase the scale and proximity of built form within the LLCA. Retained areas of Green Infrastructure and enhanced existing green corridors will retain characteristic features and the established landscape framework. Proposed landscaping within parcels will take time to mature. Once mature, the established additional characteristic landscape features and new open spaces with their multiple benefits, alongside the protected original valued assets, will positively assist in assimilating the development.	Low to Medium	Minor Adverse	-	Low and Positive allowing for maturation by Year 15	Minor Beneficial	High
Site wide	Medium	The retention of key strategic green corridors and the introduction of a landscape framework which forms the backbone to the development will retain key landscape blue and green features within the development of the site. Introduced landscape features along with new planting within development parcels will once mature, at year 15, increase the characteristic landscape features across the site and provide a holistic approach to green infrastructure. Once mature introduced features will also provide increased habitat, amenity and recreation assets. Areas of open space within the site boundaries and within development plots will also provide increased landscape features and integrated green open space.	Low to Medium	Minor Adverse	-	Low and Positive allowing for maturation by Year 15	Minor Beneficial	High
Visual								
Recreational users of PRoW F2	Medium	On completion, users of PRoW F2 will see new built form brought into closer proximity to their view while travelling along this footpath. Planting proposed along the footpath route and within the landscape transition areas near to the solar farm	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Moderate Adverse	High

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		and around the sports pitches will soften views and additional internal planting within the various parcels of development will further soften views for these receptors. On completion, users of PRoW F2 will see new built form brought into closer proximity to their view while travelling along this footpath. Planting proposed along the footpath route and within the landscape transition areas near to the solar farm and around the sports pitches will soften views and additional internal planting within the various parcels of development will further soften views for these receptors. The landscape buffer adjacent to the sports pitches will also assist in reducing the impact of light spill associated with the adjacent sports pitches. Within the views for receptors travelling south, the proposed landmark structure will be seen rising above the development parcel and will be seen amongst the setting of surrounding built form. In travelling north along this footpath, glimpsed views of the proposed landmark structure are likely at the local centre, with views seen amongst the setting of existing mature tree planting By year 15, views of the development for users of PRoW F2 will be filtered and softened by the presence of tree and hedgerow planting found adjacent to the footpath and within development parcels. Retained and enhanced planting will provide a soft transition at the new development edges and internal planting will break up views to assimilate the wider OPA development into the landscape						
Recreational users of PRoW B743, B744, B746, and B780	Medium	Once complete, views of the residential development will mostly be filtered due to the presence of planting found along Allington Lane. The landmark structure proposed at the gateway into the site will introduce an uncharacteristic feature within the landscape within these views. The proposed landmark structure will sit above the skyline in views, with the rest of the development	Medium	Moderate to Major Adverse	-	Medium	Moderate to Major Adverse	High

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		retained behind tree planting found along Allington Lane.						
Recreational users of PRoW F3	Medium	Upon completion of the development, users of PRoW F3 will see an alteration to their view, however, built form will not be seen as uncharacteristic with the Phase 1 works in close proximity to the route. Development will be seen as an extension to the existing settlement edge. By year 15, new planting within parcels in combination to the strategic green infrastructure will provide a soft transition for users of this PRoW, with the footpath running through the landscape buffer providing a softer edge and views across new development	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Minor Adverse	High
Recreational users of PRoW F10 and F11	Medium	Upon completion of the OPA, users of F10 and F11 will experience a complete change in their views where new development is introduced in the northern parcels of the site. These users will see built forms built out within close proximity within views. In certain locations the existing PRoW run through the proposed landscape transition areas, providing a softer edge and built form transitioned at the edges of the parcels. Views of the landmark structures located at the local centre and at Allington Lane are likely to be seen breaking the tree line in views for these receptors, with built form seen in the foreground of views, and the landmark structures seen sitting in the background of views. By year 15, the OPA views of the new development for users of these footpaths will be softened by additional scattered tree planting within landscape transition areas, this planting will not serve to screen views but provide a softer transition at the edges of the development	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Moderate Adverse	High
Residents overlooking the eastern edge of the site	High	Upon completion, residents overlooking the central part of the site will have a change in their view with new built form along with the school and sports facilities introduced in views. Planting within the parcels on the eastern part of the site will assimilate the new buildings in views and provide greenery into views.	High	Moderate to Major Adverse	-	Medium allowing for maturation by Year 15	Moderate to Major Adverse	High

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		Views of the site for residents off Burnetts Lane to the north of the water course will experience direct views across the new development and these views will include built form within close proximity to the residential edge and a new landmark By year 15, Views across the open landscape will continue to not be retained but will be replaced with new built form with integrated tree and hedge planting which once mature will assimilate the development into the landscape by breaking up built form and massing, in the views experienced. In addition, the proposed landmark features will introduce buildings of height within these views for residents overlooking the site.						
Residents on Fir Tree Lane	High	Upon completion, the proposals will introduce uncharacteristic features into views for these residents. By year 15, tree planting will be mature and this will soften views of the new development for residents along Fir Tree Lane	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Minor Adverse	High
Transient users of Burnetts Lane	Medium	Upon completion, transient users of Burnetts Lane will experience a change in their view with built form and new residential properties and a landmark feature set in relatively close proximity within views. behind a new landscape transition strip located along the western edge of the development. At year 15 once the proposed landscape buffer planting has matured. Views across the open landscape will not be retained but replaced with a landscape buffer of characteristic planting and increased native hedgerow planting. Proposed mature tree planting within the development plot itself will increase the green edge and soften the transition. Mature tree planting will provide a green street scene for transient users of Burnetts Lane.	High	Moderate to Major Adverse	-	Medium allowing for maturation by Year 15	Moderate Adverse	High

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		Views of the landmark structure will be seen amongst surrounding built form, but will break the treeline in views.						
Transient Users of Blind Lane	Medium	Upon completion new built form will be seen in views for transient users of Blind Lane with new buildings forming the foreground of views where Blind Lane meets Burnetts Lane. The new residential development will be a dominant feature when viewed from this junction and views will be direct and uninterrupted, altering the baseline situation of the view. The tree planting proposed along Burnetts Lane when viewed from Blind Lane will partially soften the new development edge, at this time. At year 15, after maturation of the scattered tree planting along Burnetts Lane, there will be some more pronounced softening of views from Blind Lane, however, the location and proximity of the development edge will mean that there are still direct views of new built development experienced by transient users at the junction of Burnetts Lane.	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Moderate Adverse	High
Transient users of Fir Tree Lane	Medium	Once complete, views of the new proposals, associated infrastructure and changes to the route through the site will be partially screened by the retention of existing planting found around Fir Tree Lane, itself. Additional characteristic planting and enhancements to the green corridors will barely be established at this time. By year 15, when tree planting and additional structure planting is mature this will soften views of the OPA development.	Medium	Moderate Adverse	-	Medium allowing for maturation by Year 15	Moderate Adverse	High
Cumulative Effects								
Effect	Description				Mitigation		Significance	Confidence Level
N/A	N/A				N/A		N/A	N/A
Impact of Climate Change								

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Effect	Description	Mitigation	Significance	Confidence Level
Applies to both Scenario 1 and Scenario 2				
Landscape				
Biosecurity threat	Pests and diseases	Use of plant passports and/or UK provenance stock wherever possible and application of Biosecurity Best Practice in all plant sourcing. Delivered through detailed planting specifications, CEMP and Reserved Matters stage.	Minor	High
Surface Water Flooding	Increased rainfall intensity	Incorporation of SuDs measures, with built in capacity for climate change scenarios and provision for intense storm and safe overland flow routes. Maximised porous greenspace and surfacing, over impermeable hard surfacing, as far as possible. Incorporation of rain gardens/SuDS features along the link road and within development parcels and the use of tree pits and planting within areas of hardstanding to increase porous surfacing – details to be confirmed through detailed application and reserved matters applications. Utilisation of landscape transition areas and areas of open space to increase storage capacity across site. Delivered through approved Detailed Planning application and Reserved Matters Applications and Technical Approvals.	Minor	High
Need to avoid increased carbon release into	Need for carbon reduction	Conservation of existing mature trees. Low embodied carbon hardscape product sourcing,	Minor	Medium

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atmosphere and instead improve sequestration		recycling of site won soil and other products. Planting of new trees and woodland in the public realm/open spaces and fruit trees in private gardens. Encouragement of the use of public transport with accessible and desirable routes to hubs. Also, Encouragement of the use of shared cycle and footpath routes across site. Delivery through approved Outline and Detailed Planning application, Reserved Matters Applications, Technical Approvals and Arboriculture Method Statement.		
Failure of planting to thrive and overheating and health effects	Increased drought events and heat	Use of trees in public spaces and public realm to provide summer shading for users of spaces and buildings. Selection of a mix of plant and tree species with identified drought tolerant attributes alongside, best practice soil management, groundcover and tree pit design. Rainwater harvesting and capture for irrigation purposes. Delivered through approved Outline and Detailed Planning application, Reserved Matters Applications and CEMP to deliver effective tree establishment and maintenance.	Minor	Medium
Visual				
Slower planting growth rates and increased failures	Poor planting establishment causing reduction in the effectiveness of visual mitigation	Above Biosecurity measures, sensitive species selection, good soil management and incorporation of best practice installation / underground tree systems. Delivery through detailed design and reserved matters applications and an approved CEMP to draw attention and set out requirements for achieving effective	Minor	High

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		establishment and to deliver a monitoring regime.		
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Table 14.5: Mitigation Implementation – OPA Phase 1

SOCIO ECONOMICS				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Financial Contribution	District Council	Planning Obligation/CIL	GP Places	Upon phased occupation of the Proposed Development
Financial Contribution	District Council	Planning Obligation/CIL	Primary School Places	If the Wider OPA 3FE Primary School is not delivered.

AIR QUALITY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Construction Measures in CEMP	Contractor	Planning Condition		Construction Phase

TRANSPORT AND ACCESS				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Bubb Lane to Burnetts Lane link road and associated junctions	Developer	S278/S38	N/A	Spring 2021
Pedestrian/cycle route along eastern end of WEF3 (Chalcroft Farm Access Road)	Developer	S278/S38	N/A	TBC
Traffic calming along Burnetts Lane	Developer or HCC	S278/S106	N/A	TBC
Financial contributions towards surfacing improvements at local PROW routes	HCC	S106	N/A	TBC
Infrastructure at Bubb Lane/Link Road roundabout including extended footway and pedestrian crossing	Developer	S278/S106	N/A	TBC

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Proposed OPA Phase 1 Site Layout provision of pedestrian and cycle routes	Developer	S278/S38	N/A	TBC
Proposed OPA Phase 1 Site Layout securing routes appropriate for bus use	Developer or HCC	S106	N/A	TBC
Off-site highway contributions (EBC as developer has already paid £2,880,776.74)	HCC	S106	N/A	TBC
Proposed OPA Phase 1 Site Layout allowing connections onto other local PROW routes	Developer	S278/S38	N/A	TBC
Provision of a Full Travel Plan	Developer	S106	N/A	3 months prior to 1 st occupation

CULTURAL HERITAGE

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
None required	N/A	N/A	N/A	N/A

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Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
	e.g. Developer/Contractor/Council	e.g. Planning Condition S.106	How will the implementation of the mitigation measure be monitored?	e.g. construction phase or specific trigger
INHERENT DESIGN MITIGATION MEASURE				
Production of a detailed Construction Environmental Management Plan (CEMP)	Eastleigh Borough Council or agents thereof under the	Planning Condition	CEMP management responsibilities, duties,	Pre-construction

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
	control of Eastleigh Borough Council		monitoring, reporting, improvement plan Communications and complaints reporting system	
Watercourses protected by 10m ecological buffer (excluding SuDS)	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP.	Pre-construction (design)
Hedgerow removal and severance has been minimised through the design process. Where the removal or severance of hedgerows is unavoidable, compensatory native species rich hedgerows will be created in accordance with the prescriptions detailed in the DEFRA Biodiversity metric 2.0. Suitable protection barriers will be installed to prevent accidental damage to retained hedgerows and their root protection areas.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process, and LEMP Delivered through CEMP	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of habitat to minimise interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP
Woodland and tree removal and severance has been minimised through the design process. Retained existing woodlands will be enhanced through the introduction of a high quality Woodland Management Plan, discussed later in the ES Chapter.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
			delivered under a detailed LEMP	habitat to minimise interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP
Areas of important marshy grassland have been excluded from the development area and will be enhanced by the project. These areas will be subject to high quality conservation management discussed later in the ES Chapter.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP	Preconstruction avoidance through design. LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP
ADDITIONAL MITIGATION, COMPENSATION AND ENHANCEMENT				
OPERATION – ALL PHASES Discharge of foul water (sewage) to Peel Common Waste Water Treatment Works and not into the River Itchen. Suitable treatment at Peel Common Wastewater Treatment Works within consented limits. Comprehensive SuDS infrastructure including features such as interceptors, permeable paving, rain gardens, swales, vegetated SuDS ponds, sediment forebays. Successful treatment of nitrates and phosphates using robust methodology. Purchase of Defra/NE/ EBC nutrient credits if necessary, to demonstrate overall net zero nutrient emissions from the development, monitoring regime to demonstrate no emissions and feedback mechanism to enable effective management intervention if necessary. This approach has been designed with the express requirement that the development is nutrient neutral and does not result in any increase in nitrate, phosphate or sediment runoff into the receiving watercourses, the River Itchen and the Solent systems. Please refer to Chapter 11 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses. Corrective measures or adaptations to	Construction: Suitable temporary measures to be implemented during construction as required to avoid construction related effects (see CEMP) Operation: SuDS to be delivered in advance of each phase to ensure that no negative effects on water quality.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
			design for subsequent phases to be informed by on site monitoring of SuDS performance.	
CONSTRUCTION AND OPERATION – ALL PHASES Retention, protection and restoration of watercourses and associated riparian corridors including bankside and in channel enhancement measures, promoting reconnection with the floodplain and Stage 0 features, delivered in accordance with a detailed long-term water features management plan. All watercourses will be protected by a 10m ecological buffer (excluding SUDS connections and ecological improvements) with an associated 10-50m green infrastructure corridor (measured from the bank edge of water limit when watercourse is full i.e. bankfull). This buffer will be enhanced with appropriate habitat management and habitat creation measures that complement and enhance the watercourses.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance.	Construction: Suitable temporary measures to be implemented during construction as required to avoid construction related effects (see CEMP) Operation: SuDS to be delivered in advance of each phase to ensure that no negative effects on water quality.

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Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES Inclusion of wetland/watercourse features within the GI and watercourse corridors to promote on-site attenuation of surface waters emerging from the OHH area to enable long-term high quality wetland/watercourse habitats, promoting physical habitat diversity, reconnection to the floodplain and Stage 0 headwater processes, to ensure no further downstream mobilisation of soil/riverine sediment and nutrients and to provide ecologically valuable natural filtration features within the development such as wetland areas reed beds etc that is above and beyond the net zero nutrient and sediment emission measures described in above.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance.	
OPERATION – ALL PHASES Potable water abstraction and balancing River Itchen flows is comprehensively dealt through strategic measures being implemented by Southern Water e.g. Review of Consent process and Water Resource Management Plan. Please refer to Chapter 11 of this ES and Environment Agency Position Statement for full details.	Southern Water – beyond remit of the OHH Project	Southern Water Abstraction Consent	Catchment wide strategy beyond the remit of the development	N/A

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Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION – ALL PHASES Phased delivery of development and associated reduction in nutrient inputs as agricultural activities cease and zero/low nutrient/sediment input/output activities start. This will include interim land use change to reduce existing nutrient levels from the soil to reduce duration of legacy release from soils to water once agricultural activities cease. Please refer to Chapter 11 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance. See also Chapter 11.	Phased throughout development in accordance with strategy agreed pre-construction
OPERATION – ALL PHASES Provision of an extensive network of footpaths and play/sports facilities within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. This includes the provision of a 5km (optional shorter 2.5km) SANG route, that includes at least 2.5km of this within semi-natural settings that offer a	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of recreational provision that is utilised widely by residents	Delivered on a phased basis in accordance with strategy agreed pre-construction See Chapter 14

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
greater element of open space provision provided by more distant open greenspace, including at least 2.5km of route that allows informal access and dog walking. Please refer to Chapter 14 of this ES.			See Chapter 14	
OPERATION – ALL PHASES Subject to final negotiations between EBC and with Natural England in relation to the extent on-site features prevent recreational impacts, if required, an appropriate financial contribution will be paid into the Solent Aware SPD fund, to effectively prevent associated disturbance effects that could result in likely significant effects on the features of interest (bird assemblage and supporting habitats). Please refer to Chapter 14 of this ES.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of compliant measures to ensure that there is no significant effect on Solent SPA	Delivered on a phased basis in accordance with strategy agreed pre-construction.
CONSTRUCTION AND OPERATION – ALL PHASES A 50m wide green infrastructure corridor (measured from tree stems on outer edge of perimeter woodland) will separate the developed areas from areas of highly valuable woodland habitat, including ancient woodland. This 50m corridor includes a 15m ecological buffer in which the following specifications apply: No excavation (except SuDS, respecting RPAs) No construction related activities or activities likely to have negative effect on habitat Biodiversity Enhancement permitted No additional lighting >0.5lux The 15m ecological buffer will be demarcated with a significant species rich hedgerow and ditch features to prevent public access into these areas. The ecological buffer will be planted to echo the existing habitats within the SINC woodland and to provide a transitional habitat and structure,	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP.	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of habitat to minimise interval between loss and maturation of new habitats. LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
replicating natural woodland expansion/succession to increase diversity and to protect and enhance the existing habitat. The zone between 15-50m from the habitat boundary will be subject to the following restricted uses and constraints: Footpaths Cycleways SuDS Biodiversity enhancement permitted Minimal additional lighting where this does not compromise ecological function, ideally >0.5lux.				
CONSTRUCTION AND OPERATION – ALL PHASES Design measures have been included to avoid changes to the hydrological regime or soil levels that would negatively affect trees and shrubs.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No effects on retained trees	Pre-construction strategy agreed.
CONSTRUCTION AND OPERATION – ALL PHASES A detailed long term habitat management plan will be implemented to deliver habitat management and enhancement.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of all relevant measures as set out in this chapter	LEMP agreed pre-construction
CONSTRUCTION AND OPERATION – ALL PHASES A robust habitat monitoring regime will be implemented to provide feedback on the efficacy of buffers and habitat creation measures and to inform a responsive system of remedial works to ensure that the condition of	Eastleigh Borough Council or agents thereof under the	Planning Condition	Delivery of relevant measures as set out in this chapter	Habitat Monitoring Strategy agreed pre-construction

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
retained habitats is maintained, the intended habitat conditions of newly created habitats are realised and that the long-term function of these features is maintained. Public access is excluded from the majority of this SINC, therefore the impact of increased recreational pressure will be limited to the narrow strip to the north and west of Chalcroft business park that lies outside the perimeter security fence.	control of Eastleigh Borough Council			
OPERATION – ALL PHASES An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of recreational provision that is utilised widely by residents See Chapter 14	Delivered on a phased basis in accordance with strategy agreed pre-construction See Chapter 14
OPERATION – ALL PHASES The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of on-site open space strategy and homeowner information packs See Chapter 14	Pre-occupation See Chapter 14
CONSTRUCTION AND OPERATION – ALL PHASES A 15m ecological buffer subject to the specifications as described in G will be implemented between the link road and the woodland to protect the habitat and to ensure that root protection areas are respected.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No effects on retained trees	LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
OPERATION – ALL PHASES Acoustic fencing will be installed to minimise operational phase noise disturbance from the link road on sensitive habitats (and associated species receptors e.g. breeding birds). Please refer to Chapter 12 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Measures designed to avoid disturbance to wildlife where required. Please refer to Chapter 12 of this ES for full details.	Strategy agreed prior to construction within CEMP. Please refer to Chapter 12 of this ES for full details.
OPERATION – ALL PHASES Additional (2.2ha) of grassland recreational areas that will provide suitable alternative areas for recreation. CONSTRUCTION AND OPERATION – ALL PHASES The new woodland extension to the west of the existing woodland will provide high value habitat for a broad range of receptors including GCN, bats, birds, invertebrates and reptiles.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of on-site open space strategy and homeowner information packs See Chapter 14	Pre-occupation See Chapter 14
CONSTRUCTION AND OPERATION – ALL PHASES Flight pond will be restored and enhanced for invertebrates, fish, amphibian, reptiles, birds and mammals.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pond enhanced to good condition (GCN HSI category)	In accordance with GCN Masterplan Strategy.
CONSTRUCTION AND OPERATION – ALL PHASES Hedgerows with mature trees at regular intervals (SINC or non SINC) will have a 15m buffer (measured from tree stems) Hedgerows without mature trees or only occasional trees (SINC or non SINC) will have a minimum 5m ecological buffer (plus RPA around any mature trees to be retained) measured from the centre line of the hedgerow.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Retained hedgerows protected as per the measures agreed within CEMP and LEMP.	Protection measures delivered during construction by CEMP LEMP agreed prior to construction

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
These buffers will be subject to the following constraints: No excavation (except SuDS, respecting RPAs) No construction related activities or activities likely to have negative effect on habitat Biodiversity Enhancement permitted No additional lighting >0.5lux All hedgerows will be managed for biodiversity in accordance with a long-term management plan, including new planting to infill gaps in hedgerows and ongoing high quality management. See A to N				
CONSTRUCTION AND OPERATION – ALL PHASES Where the removal or severance of woodland is unavoidable, compensatory native species rich planting will occur in accordance with the prescriptions detailed in the DEFRA Biodiversity metric 2.0. New areas of woodland and woodland extension are also included in the proposals. Woodland management and monitoring will be implemented from the start of the project delivery process if not before to maximise habitat value, structure and longevity, including the control of non-native invasive species.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process. and LEMP Delivered through CEMP	Preconstruction avoidance through design. Habitat creation to be completed as to minimise the interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP
CONSTRUCTION– ALL PHASES	Eastleigh Borough Council or agents thereof under the	Planning Condition and EPS mitigation	Delivered in accordance with EPS Mitigation licences as appropriate, including	

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Roost Loss A number of low status roosts for common bats species are present within the buildings on site, the majority of which are to be demolished. These will be compensated for through the provision of roost type/species appropriate bat boxes and "natural" roost features created on retained trees in appropriate locations (i.e. in close proximity to existing flight lines, adjacent to high value habitat, relatively undisturbed and unlit areas). A maternity roost for brown long-eared bats will be directly affected by the demolition. A mitigation roost will be constructed in the vicinity of Hearts Copse following the criteria for this roost type as described in the bat mitigation guidelines and delivered under an EPS licence. Substantial tree and shrub planting will reinforce the connection this location to existing flight lines and maternity roost locations within Hearts Copse. The removal of mature trees has been minimised through careful masterplan layout. Where trees containing potential roost features are retained, these will be protected by the buffer specifications as described for hedgerows (O & P) and woodland (G). Where trees with potential roost features are required to be removed, a precautionary principle will be applied that assume the presence of the most likely roost type for the feature. This is considered appropriate as tree roosts are dynamic and can be readily occupied/abandoned by a variety of species at any given time, making firm assessment of the roost types present particularly challenging. Mitigation and licensing requirements will therefore be informed by subsequent inspections prior to any impacts on these features.	control of Eastleigh Borough Council	licence as required.	post construction monitoring.	Bat Mitigation Strategy Approved pre-construction. EPS licence secured as required. Preconstruction avoidance through design. Habitat creation to be completed as to minimise the interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES Bat Habitat Severance/Road Collision Mitigation Three locations where the link road severs high value foraging and connective habitat have been identified on site that present a traffic collision risk to bats. Minimising habitat loss in these areas by designing the road approach to the habitat in a perpendicular orientation Minimising the width of the road crossing Clear span design Incorporation of suitable measures to ensure safe crossing following the most recent research into the efficacy of such measures to minimise road collision mortality. A minimum height of 3m under bridge crossings. Sensitive design of any lighting that may be required in these areas. Additional compensatory habitat may be required. Significant vegetation will be retained either side of the construction areas in these locations to encourage the use of underpasses.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Bat Mitigation Strategy to be approved pre-construction No impact observed on commuting bats. Minimal road casualties observed	
CONSTRUCTION AND OPERATION – ALL PHASES Bat Loss/degradation of foraging habitat Mitigation	Eastleigh Borough Council or agents thereof under the	Planning Condition	Bat Mitigation Strategy to be approved pre-construction	

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
The loss of foraging habitat across the site has been minimised through the retention of key high value habitats. These habitats will be protected and enhanced, with connectivity between these habitat areas and potential roost sites maintained both across the site and the wider landscape through the measures to protect these specific habitats (see G, H, I, O & P). OPERATION – ALL PHASES Bat Lighting Mitigation (also for other nocturnal species). Specific design measures have been included as a key design principle to keep additional lighting to a minimum across the site. Where lux levels must exceed 0.5 lux on any valuable retained or created habitat, a further detailed assessment of the lighting design to include wavelength, directionality and duration/timing of lighting will be conducted to inform lighting design for each phase of development to ensure no deleterious effect on affected habitats. OPERATION – ALL PHASES Bats and cat predation (also relevant to other fauna). Home owner packs will provided to identify the effects of cat predation on biodiversity and to encourage homeowners to not own cats, or if they do to take a responsible approach including keeping cats in at night, use of bells etc.	control of Eastleigh Borough Council			
CONSTRUCTION AND OPERATION – ALL PHASES Bat mitigation efficacy. A suite of species and habitat specific monitoring regimes will be implemented to provide feedback on the efficacy of mitigation and habitat creation measures for specific receptor species in accordance with legislative and policy requirements. This monitoring will inform a responsive system of remedial measures to ensure that the intended function of these measures is realised and maintained in perpetuity.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition and/or EPS Mitigation licences as required	Bat Mitigation Strategy to be approved pre-construction	

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION Great crested newt and other amphibian/reptile mitigation Key amphibian/reptile habitats have been avoided and will be protected and enhanced. Where valuable amphibian habitats must be affected, appropriate measures will be implemented to ensure that animals are protected during construction and that there is no detrimental effect on the favourable conservation status of the populations present on site. These measures include: Implementation of a series of linked Natural England EPS licences coordinated through the implementation of a great crested newt masterplan Avoidance measures to minimise areas of habitat loss and to maintain habitat connectivity Sensitive approach to vegetation clearance including consideration of timing, duration and methodology. This will employ measures of phased vegetation removal in accordance with best practise under a detailed method statement. Exclusion from working areas until works have ceased and habitat reinstated Capture from exclusion areas and translocation to retained receptor habitat Translocation of the southern low size class Chalcroft population from the single poor quality pond and associated poor quality and disturbed terrestrial habitat within 500m to two restored and two created and	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Successful delivery of EPS mitigation licence measures to maintain favourable conservation status of GCN population on site.	GCN Strategy Approved pre-construction. EPS licence secured as required.

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ECOLOGY

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
optimised northern ponds in Chalcroft Wood on land owned by Eastleigh Borough Council, with high quality terrestrial habitat. This will provide a closer association with the larger part of the existing metapopulation promoting breeding success and genetic diversity, increasing the territory used by great crested newt into optimal habitat for the construction phase. Chalcroft pond will be retained and restored, including connectivity for great crested newt to return to the southern habitat. A necklace of new ponds will link the northern population with restored and enhanced habitats in the south. Measures to prevent entrapment in drainage systems and connectivity across roads Provision of enhanced terrestrial habitat and a network of created and restored ponds and wetlands, together with resting and overwintering habitats Habitat compensation and enhancement measures will be delivered in accordance with industry best practise ensuring compliance with policy and legislation. The management of recreation on site, particularly dogs, and cats through landscape design, householder packs and appropriate fencing and signage in key habitat areas, particularly close to known and potential future breeding ponds and adjacent habitats. Key elements of GCN mitigation will be delivered under EPS mitigation licences, as appropriate, with additional elements of the development delivered under a non-licensable method statement where the likelihood of an offence is negligible. Habitat connectivity will be maintained through the designation, enhancement and long-term management of ecological connective corridors to maintain the landscape permeability both on and across the site for amphibians/reptiles. Measures will also be incorporated in road				

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
designs at key severance locations to facilitate safe passage to avoid collision mortality and entrapment risk. Measures have been incorporated into the masterplan to minimise risk and disturbance to the populations present and to facilitate the recolonisation and natural dispersal/recolonisation of the population across the site post construction to new wildlife ponds constructed to appeal to breeding GCN via a comprehensive network of suitable connective habitats linking existing populations to these new features. All habitats managed for amphibians/reptiles will be subject to a detailed long-term management plan.				
CONSTRUCTION AND OPERATION – ALL PHASES Watercourse road crossing points locations to be designed as single span to facilitate continuation of hydrological regime and landscape permeability for terrestrial mammals including otter. Mammal crossings will be included where provision for mammal access cannot be incorporated along the stream at water level.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of landscape connectivity for nocturnal mammals along watercourses	Protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION AND OPERATION – ALL PHASES Watercourse restoration using best practice measures (e.g. as defined by the UK River Restoration Centre) to increase physical habitat diversity, reconnect to the floodplain, increase light levels to the channel and riparian corridor and maximise species diversity, controlling non-native species.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of watercourse enhancement measures.	Watercourse Enhancement Strategy agreed prior to construction with enhancements delivered during construction at appropriate timings through development lifespan.
CONSTRUCTION AND OPERATION – ALL PHASES Water vole has not been recorded during 2018-2020, although historic records are present. Further surveys will be conducted on a precautionary basis to ensure no effects and legal compliance. Measures outlined in A – O will be relevant to habitat that could be used by this species. Measures set out in FF and GG are also relevant and will avoid effects on water vole should they be recorded in the area in the future.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of landscape connectivity for nocturnal mammals along watercourses	Protection measures delivered during construction by CEMP LEMP agreed prior to construction

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION – ALL PHASES Precautionary surveys will continue to ensure any new setts or re-activated setts are taken into account in the construction programme. Should it be necessary Natural England badger licences will be sought to ensure legal compliance in terms of disturbance of any setts and any requirements for exclusions/sett closure/provision of artificial setts. Deep excavations will be covered at night or suitable mammal ladders/earth maps will be provided to allow large mammals including badger to exit excavations.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pre-construction inspections completed, and actions taken to ensure no effects on badger setts.	Protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION – ALL PHASES Habitats requiring works during the nesting season (March-September inclusive) will be subject to a pre-works nesting bird check with measures implemented to protect any active nests likely to be affected by the works. Please refer to Chapter 12 for full details on measures to minimise construction disturbance through noise and vibration. CONSTRUCTION Where areas of suitable nesting habitat for valued bird species is lost, suitable alternative nesting habitat will be provided on site through a network of bird boxes, features incorporated to buildings, new tree and shrub planting and enhanced grassland, woodland, wetlands. CONSTRUCTION AND OPERATION – ALL PHASES Measures to minimise the risk of disturbance to birds during nesting will be implemented as defined elsewhere above in A to O, including both on site and off sites notably SSSI, SPA and SAC habitats. Please refer to Chapter 12 for full details on measures to minimise construction and occupation disturbance through noise and vibration.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pre-construction surveys inspections and actions taken to ensure no effects on badger setts.	
CONSTRUCTION– ALL PHASES The existing barn owl nest box will be relocated into the area in the vicinity of Hearts Copse (>600m from link road) to reduce road collision risk associated with the link road. Delivery of	Eastleigh Borough Council or agents thereof under the	Planning Condition	Pre-construction surveys inspections as required and actions	Barn Owl Strategy agreed prior to construction.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
significant screening of link road as it proceeds northwards from Chalcroft Farm to avoid road traffic mortality. Enhancement of grassland habitats and hedgerow buffers for small mammals will provide additional foraging resource for barn owl to compensate for the loss of low value foraging habitats.	control of Eastleigh Borough Council		taken to ensure site continues to safely support breeding barn owl without acting as a population sink.	
CONSTRUCTION AND OPERATION – ALL PHASES The loss of high value invertebrate habitats across the site has been minimised through the retention of key high value habitats. These habitats will be protected and enhanced, with connectivity between these habitat areas and potential roost sites maintained both across the site and the wider landscape through the measures to protect these specific habitats (See A to O and T to X).	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net loss of high value invertebrate habitats. Delivery of sensitive lighting plan	Habitat protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION Ongoing annual dormouse tube monitoring to inform licencing requirements for each phase of the project. CONSTRUCTION Avoidance of hedgerow severance within 150m of confirmed records (currently only within woodland north of solar farm). OPERATION No lighting associated with road crossings of woodland copses CONSTRUCTION AND OPERATION Installation of suitable aerial structure (e.g. Peoples Trust for Endangered Species, 2019⁴) across roads severing woodland, in combination with suitable planting to strengthen vegetated corridors	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of the favourable conservation status of dormouse on site.	Dormouse Strategy approved pre-construction. EPS licence secured as required.

4 <https://ptes.org/wp-content/uploads/2019/09/White-Hughes-2019-dormouse-bridge.pdf>

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
OPERATION Provision of replacement woodland adjacent to key retained woodland corridor to ensure no net loss of habitat and to maximise availability of food plants throughout the active part of the year. CONSTRUCTION AND OPERATION Provision of 150 dormouse nest boxes within retained woodland corridors to maximise and extend suitable nesting habitats. Annual nest box monitoring to be carried out. CONSTRUCTION AND OPERATION Sensitive woodland management to restore and maximise opportunities for dormouse (e.g. Forestry Commission 2019⁵ and the Hampshire Dormouse Group⁶) OPERATION Provision of suitable advice in homeowner packs and on information boards regarding dormouse and responsible enjoyment of the countryside. NB access is limited to key habitats suitable for dormouse.				

HYDROLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CEMP	Principal Contractor	Planning Condition	Compliance with WFD assessment criteria	Construction Phase
SuDS	Developer/Principal Contractor	Planning Condition	Surface water quality monitoring and management feedback loop	Lifetime of development / Phased delivery

5 Forestry Commission. 2019. A Protocol for Undertaking Woodland Management in England Where Dormice Are Present. Protocol Version 4.

6 <https://hampshiredormousegroup.co.uk/resources/woodland-habitat-management/>

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Appropriately designed watercourse crossings	Developer/Principal Contractor	Planning Condition / Land Drainage Consent	Compliance with Land Drainage Consent	Construction Phase
Surface water quality monitoring	Developer/Principal Contractor	Planning Condition	Compliance with WFD assessment criteria	Construction Phase through to Operation
Connection to Peel Common WwTW	Developer	Planning Condition / S106 / S98	Compliance with Planning Condition on Foul Water Drainage Strategy	Lifetime of development / Phased delivery

NOISE AND VIBRATION

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Construction Environmental Managements Plan	Contractor	Planning condition	CEMP submitted and approved by LPA	Construction Phase
Acoustic screening	Contractor	Planning condition	Mitigation scheme submitted and approved by LPA	Prior to start of works
Glazing and ventilation scheme	Contractor	Planning condition	Strategy be submitted and approved by LPA	Prior to start of works

LANDSCAPE AND VISUAL

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Applies to both Scenario 1 and 2				
Tree Protection, habitat, designed transition areas and soil protection and management, control of working hours	Developer/Contractor	Approved Planning Documents including Arboricultural Impact Assessment (AIA), Tree Protection and Removal Plan and Arboricultural Method Statement (AMS), CEMP and CMP.	Arboricultural Method Statement (AMS), Construction Environmental Management Plan (CEMP), Construction Management Plan (CMP) Monitoring and Review Procedures	Construction Phase
Scheme Design, implementation and establishment	Developer/Contractor	Planning Permission and approved drawings and documents	Construction in accordance with approved drawings and documents	Construction Phase, up to 10 years
Open Spaces and maintenance	Developer/Contractor/Council	Planning Permission and S. 106	Landscape and Ecological Management Plan (LEMP)	Operation Phase and in perpetuity

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Table 14.6: Mitigation Implementation – Wider OPA

SOCIO ECONOMICS				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Financial Contribution	District Council	Planning Obligation/CIL	GP Places	Upon phased occupation of the Proposed Development

AIR QUALITY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Construction Measures in CEMP	Contractor	Planning Condition		Construction Phase

TRANSPORT AND ACCESS				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Bubb Lane to Burnetts Lane link road and associated junctions	Developer	S278/S38	N/A	Spring 2021
Burnetts Lane to Allington Lane link road	Developer	S278/S38	N/A	TBC
Improvement to eastern end of Fir Tree Lane	Developer	S278/S38	N/A	TBC
Pedestrian/cycle route along eastern end of WEF3 (Chalcroft Farm Access Road)	Developer	S278/S38	N/A	TBC
Traffic calming along Burnetts Lane	Developer or HCC	S278/S106	N/A	TBC
Improvements to local footpath route which runs to the south of the railway (route to secondary school)	Developer or HCC	S278/S106	N/A	TBC
Upgrades to FOHHF7 to accommodate pedestrians and cyclists	Developer or HCC	S278/S106	N/A	TBC

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Financial contributions towards surfacing improvements at local PROW routes	HCC	S106	N/A	TBC
Infrastructure at Bubbs Lane/Link Road roundabout including extended footway and pedestrian crossing	Developer	S278/S106	N/A	TBC
Masterplan provision of pedestrian and cycle routes	Developer	S278/S38	N/A	TBC
Downgrading of central section of Fir Tree Lane to become footway/cycleway	Developer	S278/S38	N/A	TBC
Provision of bus serving the development and associated infrastructure	Developer or HCC	S106	N/A	TBC
Off-site highway contributions (EBC as developer has already paid £2,880,776.74)	HCC	S106	N/A	TBC
Provision of Framework Travel Plan	Developer	S106	N/A	3 months prior to 1 st occupation

CULTURAL HERITAGE				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Heritage assessment following identification of change of use to Firtree Farmhouse	Developer	Listed Building Consent; Planning Condition	Assessment to be submitted as part of future planning application and Listed Building Consent.	At reserved matters application for Phase 3 (or any stand-alone application for works to the Listed Building).
Mitigation by design to ensure appropriate layout and design which responds sensitively to the Listed Building and its setting	Developer/LPA	Planning Condition	Through planning application as part of reserved matters stages for Phases 3 and 6.	At reserved matters application stage for Phases 3 and 6.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
	e.g. Developer/Contractor/Council	e.g. Planning Condition S.106	How will the implementation of the mitigation measure be monitored?	e.g. construction phase or specific trigger
INHERENT DESIGN MITIGATION MEASURE				
Production of a detailed Construction Environmental Management Plan (CEMP)	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	CEMP management responsibilities, duties, monitoring, reporting, improvement plan Communications and complaints reporting system	Pre-construction
Watercourses protected by 10m ecological buffer (excluding SuDS)	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP.	Pre-construction (design)
Hedgerow removal and severance has been minimised through the design process. Where the removal or severance of hedgerows is unavoidable, compensatory native species rich hedgerows will be created in accordance with the prescriptions detailed in the DEFRA Biodiversity metric 2.0. Suitable protection barriers will be installed to prevent accidental damage to retained hedgerows and their root protection areas.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process. and LEMP	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of habitat to minimise interval between loss and maturation of new habitats.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
			Delivered through CEMP	Protection measures delivered during construction by CEMP
Woodland and tree removal and severance has been minimised through the design process. Retained existing woodlands will be enhanced through the introduction of a high quality Woodland Management Plan, discussed later in the ES Chapter.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of habitat to minimise interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP
Areas of important marshy grassland have been excluded from the development area and will be enhanced by the project. These areas will be subject to high quality conservation management discussed later in the ES Chapter.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP	Preconstruction avoidance through design. LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP
ADDITIONAL MITIGATION, COMPENSATION AND ENHANCEMENT				
OPERATION – ALL PHASES Discharge of foul water (sewage) to Peel Common Waste Water Treatment Works and not into the River Itchen. Suitable treatment at Peel Common Wastewater Treatment Works within consented limits. Comprehensive SuDS infrastructure including features such as interceptors, permeable paving, rain gardens, swales, vegetated SuDS ponds, sediment forebays. Successful treatment of nitrates and phosphates using robust methodology.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to	Construction: Suitable temporary measures to be implemented during construction as required to avoid

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Purchase of Defra/NE/ EBC nutrient credits if necessary, to demonstrate overall net zero nutrient emissions from the development, monitoring regime to demonstrate no emissions and feedback mechanism to enable effective management intervention if necessary. This approach has been designed with the express requirement that the development is nutrient neutral and does not result in any increase in nitrate, phosphate or sediment runoff into the receiving watercourses, the River Itchen and the Solent systems. Please refer to Chapter 11 of this ES for full details.			demonstrate efficacy of measures employed for previous phases as development progresses. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance.	construction related effects (see CEMP) Operation: SuDS to be delivered in advance of each phase to ensure that no negative effects on water quality.
CONSTRUCTION AND OPERATION – ALL PHASES Retention, protection and restoration of watercourses and associated riparian corridors including bankside and in channel enhancement measures, promoting reconnection with the floodplain and Stage 0 features, delivered in accordance with a detailed long-term water features management plan. All watercourses will be protected by a 10m ecological buffer (excluding SUDS connections and ecological improvements) with an associated 10-50m green infrastructure corridor (measured from the bank edge of water limit when watercourse is full i.e. bankfull). This buffer will be enhanced with appropriate habitat management and habitat creation measures that complement and enhance the watercourses.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to	Construction: Suitable temporary measures to be implemented during construction as required to avoid construction related effects (see CEMP) Operation: SuDS to be delivered in advance of each phase to ensure that no negative effects on water quality.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
			design for subsequent phases to be informed by on site monitoring of SuDS performance.	
CONSTRUCTION AND OPERATION – ALL PHASES Inclusion of wetland/watercourse features within the GI and watercourse corridors to promote on-site attenuation of surface waters emerging from the OHH area to enable long-term high quality wetland/watercourse habitats, promoting physical habitat diversity, reconnection to the floodplain and Stage 0 headwater processes, to ensure no further downstream mobilisation of soil/riverine sediment and nutrients and to provide ecologically valuable natural filtration features within the development such as wetland areas reed beds etc that is above and beyond the net zero nutrient and sediment emission measures described in above.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance.	
OPERATION – ALL PHASES Potable water abstraction and balancing River Itchen flows is comprehensively dealt through strategic measures being implemented by	Southern Water – beyond remit of the OHH Project	Southern Water	Catchment wide strategy beyond the	N/A

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Southern Water e.g. Review of Consent process and Water Resource Management Plan. Please refer to Chapter 11 of this ES and Environment Agency Position Statement for full details.		Abstraction Consent	remit of the development	
CONSTRUCTION – ALL PHASES Phased delivery of development and associated reduction in nutrient inputs as agricultural activities cease and zero/low nutrient/sediment input/output activities start. This will include interim land use change to reduce existing nutrient levels from the soil to reduce duration of legacy release from soils to water once agricultural activities cease. Please refer to Chapter 11 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net increase in nitrate, phosphate or sediment discharge into watercourses. Monitoring program designed to demonstrate efficacy of measures employed for previous phases as development progresses to evidence not net increase in nitrate, phosphate or sediment discharged into watercourses originating from the development. Corrective measures or adaptations to design for subsequent phases to be informed by on site monitoring of SuDS performance. See also Chapter 11.	Phased throughout development in accordance with strategy agreed pre-construction

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ECOLOGY

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
OPERATION – ALL PHASES Provision of an extensive network of footpaths and play/sports facilities within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. This includes the provision of a 5km (optional shorter 2.5km) SANG route, that includes at least 2.5km of this within semi-natural settings that offer a greater element of open space provision provided by more distant open greenspace, including at least 2.5km of route that allows informal access and dog walking. Please refer to Chapter 14 of this ES.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of recreational provision that is utilised widely by residents See Chapter 14	Delivered on a phased basis in accordance with strategy agreed pre-construction See Chapter 14
OPERATION – ALL PHASES Subject to final negotiations between EBC and with Natural England in relation to the extent on-site features prevent recreational impacts, if required, an appropriate financial contribution will be paid into the Solent Aware SPD fund, to effectively prevent associated disturbance effects that could result in likely significant effects on the features of interest (bird assemblage and supporting habitats). Please refer to Chapter 14 of this ES.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of compliant measures to ensure that there is no significant effect on Solent SPA	Delivered on a phased basis in accordance with strategy agreed pre-construction.
CONSTRUCTION AND OPERATION – ALL PHASES A 50m wide green infrastructure corridor (measured from tree stems on outer edge of perimeter woodland) will separate the developed areas from areas of highly valuable woodland habitat, including ancient woodland. This 50m corridor includes a 15m ecological buffer in which the following specifications apply: No excavation (except SuDS, respecting RPAs) No construction related activities or activities likely to have negative effect on habitat Biodiversity Enhancement permitted	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process and appropriate management delivered under a detailed LEMP.	Preconstruction avoidance through design. Habitat creation to be completed as early as possible but must be completed prior to the loss of habitat to minimise interval between loss and maturation of new habitats. LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
No additional lighting >0.5lux The 15m ecological buffer will be demarcated with a significant species rich hedgerow and ditch features to prevent public access into these areas. The ecological buffer will be planted to echo the existing habitats within the SINC woodland and to provide a transitional habitat and structure, replicating natural woodland expansion/succession to increase diversity and to protect and enhance the existing habitat. The zone between 15-50m from the habitat boundary will be subject to the following restricted uses and constraints: Footpaths Cycleways SuDS Biodiversity enhancement permitted Minimal additional lighting where this does not compromise ecological function, ideally >0.5lux.				
CONSTRUCTION AND OPERATION – ALL PHASES Design measures have been included to avoid changes to the hydrological regime or soil levels that would negatively affect trees and shrubs.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No effects on retained trees	Pre-construction strategy agreed.
CONSTRUCTION AND OPERATION – ALL PHASES A detailed long term habitat management plan will be implemented to deliver habitat management and enhancement.	Eastleigh Borough Council or agents thereof under the	Planning Condition	Delivery of all relevant measures as set out in this chapter	LEMP agreed pre-construction

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
	control of Eastleigh Borough Council			
CONSTRUCTION AND OPERATION – ALL PHASES A robust habitat monitoring regime will be implemented to provide feedback on the efficacy of buffers and habitat creation measures and to inform a responsive system of remedial works to ensure that the condition of retained habitats is maintained, the intended habitat conditions of newly created habitats are realised and that the long-term function of these features is maintained. Public access is excluded from the majority of this SINC, therefore the impact of increased recreational pressure will be limited to the narrow strip to the north and west of Chalcroft business park that lies outside the perimeter security fence.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of relevant measures as set out in this chapter	Habitat Monitoring Strategy agreed pre-construction
OPERATION – ALL PHASES An extensive network of footpaths and play/sports facilities are incorporated within the scheme, both within the developed areas and the green infrastructure corridors across the site to provide easy local access to outdoor recreational facilities and to deliver on site recreational capacity. Please refer to Chapter 14 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of recreational provision that is utilised widely by residents See Chapter 14	Delivered on a phased basis in accordance with strategy agreed pre-construction See Chapter 14
OPERATION – ALL PHASES The management of public access recreation on site, particularly dogs, will be restricted within sensitive habitats and buffers through landscape design, site interpretation and community outreach, householder packs and appropriate fencing and signage in key habitat areas. Access will be focussed on the existing network of paths and public Rights of Way within the northern reaches of the woodland that are currently subject to moderate levels of recreational disturbance through the location of site linkages to the PROW network and the selective use of site interpretation and waymarking. Public access into the majority of the woodland and ecologically rich habitat adjacent to the OHH site will be discouraged through the construction of new fencing/ditches and the creation of densely planted scrub and hedgerows. Please refer to Chapter 14 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of on-site open space strategy and homeowner information packs See Chapter 14	Pre-occupation See Chapter 14

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES A 15m ecological buffer subject to the specifications as described in G will be implemented between the link road and the woodland to protect the habitat and to ensure that root protection areas are respected.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No effects on retained trees	LEMP agreed prior to habitat loss Protection measures delivered during construction by CEMP
OPERATION – ALL PHASES Acoustic fencing will be installed to minimise operational phase noise disturbance from the link road on sensitive habitats (and associated species receptors e.g. breeding birds). Please refer to Chapter 12 of this ES for full details.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Measures designed to avoid disturbance to wildlife where required. Please refer to Chapter 12 of this ES for full details.	Strategy agreed prior to construction within CEMP. Please refer to Chapter 12 of this ES for full details.
OPERATION – ALL PHASES Additional (2.2ha) of grassland recreational areas that will provide suitable alternative areas for recreation. CONSTRUCTION AND OPERATION – ALL PHASES The new woodland extension to the west of the existing woodland will provide high value habitat for a broad range of receptors including GCN, bats, birds, invertebrates and reptiles.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of on-site open space strategy and homeowner information packs See Chapter 14	Pre-occupation See Chapter 14
CONSTRUCTION AND OPERATION – ALL PHASES Flight pond will be restored and enhanced for invertebrates, fish, amphibian, reptiles, birds and mammals.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pond enhanced to good condition (GCN HSI category)	In accordance with GCN Masterplan Strategy.
CONSTRUCTION AND OPERATION – ALL PHASES Hedgerows with mature trees at regular intervals (SINC or non SINC) will have a 15m buffer (measured from tree stems)	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Retained hedgerows protected as per the measures agreed	Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Hedgerows without mature trees or only occasional trees (SINC or non SINC) will have a minimum 5m ecological buffer (plus RPA around any mature trees to be retained) measured from the centre line of the hedgerow. These buffers will be subject to the following constraints: No excavation (except SuDS, respecting RPAs) No construction related activities or activities likely to have negative effect on habitat Biodiversity Enhancement permitted No additional lighting >0.5lux All hedgerows will be managed for biodiversity in accordance with a long-term management plan, including new planting to infill gaps in hedgerows and ongoing high quality management. See A to N			within CEMP and LEMP.	LEMP agreed prior to construction
CONSTRUCTION AND OPERATION – ALL PHASES Where the removal or severance of woodland is unavoidable, compensatory native species rich planting will occur in accordance with the prescriptions detailed in the DEFRA Biodiversity metric 2.0. New areas of woodland and woodland extension are also included in the proposals. Woodland management and monitoring will be implemented from the start of the project delivery process if not before to maximise habitat value, structure and longevity, including the control of non-native invasive species.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery through master planning process. and LEMP Delivered through CEMP	Preconstruction avoidance through design. Habitat creation to be completed as to minimise the interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION– ALL PHASES Roost Loss A number of low status roosts for common bats species are present within the buildings on site, the majority of which are to be demolished. These will be compensated for through the provision of roost type/species appropriate bat boxes and “natural” roost features created on retained trees in appropriate locations (i.e. in close proximity to existing flight lines, adjacent to high value habitat, relatively undisturbed and unlit areas). A maternity roost for brown long-eared bats will be directly affected by the demolition. A mitigation roost will be constructed in the vicinity of Hearts Copse following the criteria for this roost type as described in the bat mitigation guidelines and delivered under an EPS licence. Substantial tree and shrub planting will reinforce the connection this location to existing flight lines and maternity roost locations within Hearts Copse. The removal of mature trees has been minimised through careful masterplan layout. Where trees containing potential roost features are retained, these will be protected by the buffer specifications as described for hedgerows (O & P) and woodland (G). Where trees with potential roost features are required to be removed, a precautionary principle will be applied that assume the presence of the most likely roost type for the feature. This is considered appropriate as tree roosts are dynamic and can be readily occupied/abandoned by a variety of species at any given time, making firm assessment of the roost types present particularly challenging. Mitigation and licensing requirements will therefore be informed by subsequent inspections prior to any impacts on these features.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition and EPS mitigation licence as required.	Delivered in accordance with EPS Mitigation licences as appropriate, including post construction monitoring.	Bat Mitigation Strategy Approved pre-construction. EPS licence secured as required. Preconstruction avoidance through design. Habitat creation to be completed as to minimise the interval between loss and maturation of new habitats. Protection measures delivered during construction by CEMP

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES Bat Habitat Severance/Road Collision Mitigation Three locations where the link road severs high value foraging and connective habitat have been identified on site that present a traffic collision risk to bats. Minimising habitat loss in these areas by designing the road approach to the habitat in a perpendicular orientation Minimising the width of the road crossing Clear span design Incorporation of suitable measures to ensure safe crossing following the most recent research into the efficacy of such measures to minimise road collision mortality. A minimum height of 3m under bridge crossings. Sensitive design of any lighting that may be required in these areas. Additional compensatory habitat may be required. Significant vegetation will be retained either side of the construction areas in these locations to encourage the use of underpasses.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Bat Mitigation Strategy to be approved pre-construction No impact observed on commuting bats. Minimal road casualties observed	

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ECOLOGY

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES Bat Loss/degradation of foraging habitat Mitigation The loss of foraging habitat across the site has been minimised through the retention of key high value habitats. These habitats will be protected and enhanced, with connectivity between these habitat areas and potential roost sites maintained both across the site and the wider landscape through the measures to protect these specific habitats (see G, H, I, O & P). OPERATION – ALL PHASES Bat Lighting Mitigation (also for other nocturnal species). Specific design measures have been included as a key design principle to keep additional lighting to a minimum across the site. Where lux levels must exceed 0.5 lux on any valuable retained or created habitat, a further detailed assessment of the lighting design to include wavelength, directionality and duration/timing of lighting will be conducted to inform lighting design for each phase of development to ensure no deleterious effect on affected habitats. OPERATION – ALL PHASES Bats and cat predation (also relevant to other fauna). Home owner packs will provided to identify the effects of cat predation on biodiversity and to encourage homeowners to not own cats, or if they do to take a responsible approach including keeping cats in at night, use of bells etc.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Bat Mitigation Strategy to be approved pre-construction	
CONSTRUCTION AND OPERATION – ALL PHASES Bat mitigation efficacy. A suite of species and habitat specific monitoring regimes will be implemented to provide feedback on the efficacy of mitigation and habitat creation measures for specific receptor species in accordance with legislative and policy requirements. This monitoring will inform a responsive	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition and/or EPS Mitigation	Bat Mitigation Strategy to be approved pre-construction	

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
system of remedial measures to ensure that the intended function of these measures is realised and maintained in perpetuity.		licences as required		
CONSTRUCTION Great crested newt and other amphibian/reptile mitigation Key amphibian/reptile habitats have been avoided and will be protected and enhanced. Where valuable amphibian habitats must be affected, appropriate measures will be implemented to ensure that animals are protected during construction and that there is no detrimental effect on the favourable conservation status of the populations present on site. These measures include: Implementation of a series of linked Natural England EPS licences coordinated through the implementation of a great crested newt masterplan Avoidance measures to minimise areas of habitat loss and to maintain habitat connectivity Sensitive approach to vegetation clearance including consideration of timing, duration and methodology. This will employ measures of phased vegetation removal in accordance with best practise under a detailed method statement. Exclusion from working areas until works have ceased and habitat reinstated	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Successful delivery of EPS mitigation licence measures to maintain favourable conservation status of GCN population on site.	GCN Strategy Approved pre-construction. EPS licence secured as required.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Capture from exclusion areas and translocation to retained receptor habitat Translocation of the southern low size class Chalcroft population from the single poor quality pond and associated poor quality and disturbed terrestrial habitat within 500m to two restored and two created and optimised northern ponds in Chalcroft Wood on land owned by Eastleigh Borough Council, with high quality terrestrial habitat. This will provide a closer association with the larger part of the existing metapopulation promoting breeding success and genetic diversity, increasing the territory used by great crested newt into optimal habitat for the construction phase. Chalcroft pond will be retained and restored, including connectivity for great crested newt to return to the southern habitat. A necklace of new ponds will link the northern population with restored and enhanced habitats in the south. Measures to prevent entrapment in drainage systems and connectivity across roads Provision of enhanced terrestrial habitat and a network of created and restored ponds and wetlands, together with resting and overwintering habitats Habitat compensation and enhancement measures will be delivered in accordance with industry best practise ensuring compliance with policy and legislation. The management of recreation on site, particularly dogs, and cats through landscape design, householder packs and appropriate fencing and signage in key habitat areas, particularly close to known and potential future breeding ponds and adjacent habitats. Key elements of GCN mitigation will be delivered under EPS mitigation licences, as appropriate, with additional elements of the development				

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
delivered under a non-licensable method statement where the likelihood of an offence is negligible. Habitat connectivity will be maintained through the designation, enhancement and long-term management of ecological connective corridors to maintain the landscape permeability both on and across the site for amphibians/reptiles. Measures will also be incorporated in road designs at key severance locations to facilitate safe passage to avoid collision mortality and entrapment risk. Measures have been incorporated into the masterplan to minimise risk and disturbance to the populations present and to facilitate the recolonisation and natural dispersal/recolonisation of the population across the site post construction to new wildlife ponds constructed to appeal to breeding GCN via a comprehensive network of suitable connective habitats linking existing populations to these new features. All habitats managed for amphibians/reptiles will be subject to a detailed long-term management plan.				
CONSTRUCTION AND OPERATION – ALL PHASES Watercourse road crossing points locations to be designed as single span to facilitate continuation of hydrological regime and landscape permeability for terrestrial mammals including otter. Mammal crossings will be included where provision for mammal access cannot be incorporated along the stream at water level.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of landscape connectivity for nocturnal mammals along watercourses	Protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION AND OPERATION – ALL PHASES Watercourse restoration using best practice measures (e.g. as defined by the UK River Restoration Centre) to increase physical habitat diversity, reconnect to the floodplain, increase light levels to the channel and riparian corridor and maximise species diversity, controlling non-native species.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Delivery of watercourse enhancement measures.	Watercourse Enhancement Strategy agreed prior to construction with enhancements delivered during construction at appropriate timings through development lifespan.

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ECOLOGY

Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION – ALL PHASES Water vole has not been recorded during 2018-2020, although historic records are present. Further surveys will be conducted on a precautionary basis to ensure no effects and legal compliance. Measures outlined in A – O will be relevant to habitat that could be used by this species. Measures set out in FF and GG are also relevant and will avoid effects on water vole should they be recorded in the area in the future.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of landscape connectivity for nocturnal mammals along watercourses	Protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION – ALL PHASES Precautionary surveys will continue to ensure any new setts or re-activated setts are taken into account in the construction programme. Should it be necessary Natural England badger licences will be sought to ensure legal compliance in terms of disturbance of any setts and any requirements for exclusions/sett closure/provision of artificial setts. Deep excavations will be covered at night or suitable mammal ladders/earth maps will be provided to allow large mammals including badger to exit excavations.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pre-construction inspections completed, and actions taken to ensure no effects on badger setts.	Protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION – ALL PHASES Habitats requiring works during the nesting season (March-September inclusive) will be subject to a pre-works nesting bird check with measures implemented to protect any active nests likely to be affected by the works. Please refer to Chapter 12 for full details on measures to minimise construction disturbance through noise and vibration. CONSTRUCTION Where areas of suitable nesting habitat for valued bird species is lost, suitable alternative nesting habitat will be provided on site through a network of bird boxes, features incorporated to buildings, new tree and shrub planting and enhanced grassland, woodland, wetlands. CONSTRUCTION AND OPERATION – ALL PHASES Measures to minimise the risk of disturbance to birds during nesting will be	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pre-construction surveys inspections and actions taken to ensure no effects on badger setts.	

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
implemented as defined elsewhere above in A to O, including both on site and off sites notably SSSI, SPA and SAC habitats. Please refer to Chapter 12 for full details on measures to minimise construction and occupation disturbance through noise and vibration.				
CONSTRUCTION– ALL PHASES The existing barn owl nest box will be relocated into the area in the vicinity of Hearts Copse (>600m from link road) to reduce road collision risk associated with the link road. Delivery of significant screening of link road as it proceeds northwards from Chalcroft Farm to avoid road traffic mortality. Enhancement of grassland habitats and hedgerow buffers for small mammals will provide additional foraging resource for barn owl to compensate for the loss of low value foraging habitats.	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Pre-construction surveys inspections as required and actions taken to ensure site continues to safely support breeding barn owl without acting as a population sink.	Barn Owl Strategy agreed prior to construction.
CONSTRUCTION AND OPERATION – ALL PHASES The loss of high value invertebrate habitats across the site has been minimised through the retention of key high value habitats. These habitats will be protected and enhanced, with connectivity between these habitat areas and potential roost sites maintained both across the site and the wider landscape through the measures to protect these specific habitats (See A to O and T to X).	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	No net loss of high value invertebrate habitats. Delivery of sensitive lighting plan	Habitat protection measures delivered during construction by CEMP LEMP agreed prior to construction
CONSTRUCTION Ongoing annual dormouse tube monitoring to inform licencing requirements for each phase of the project. CONSTRUCTION Avoidance of hedgerow severance within 150m of confirmed records (currently only within woodland north of solar farm). OPERATION No lighting associated with road crossings of woodland copses	Eastleigh Borough Council or agents thereof under the control of Eastleigh Borough Council	Planning Condition	Maintenance of the favourable conservation status of dormouse on site.	Dormouse Strategy approved pre-construction. EPS licence secured as required.

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ECOLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CONSTRUCTION AND OPERATION Installation of suitable aerial structure (e.g. Peoples Trust for Endangered Species, 2019⁷) across roads severing woodland, in combination with suitable planting to strengthen vegetated corridors OPERATION Provision of replacement woodland adjacent to key retained woodland corridor to ensure no net loss of habitat and to maximise availability of food plants throughout the active part of the year. CONSTRUCTION AND OPERATION Provision of 150 dormouse nest boxes within retained woodland corridors to maximise and extend suitable nesting habitats. Annual nest box monitoring to be carried out. CONSTRUCTION AND OPERATION Sensitive woodland management to restore and maximise opportunities for dormouse (e.g. Forestry Commission 2019⁸ and the Hampshire Dormouse Group⁹) OPERATION Provision of suitable advice in homeowner packs and on information boards regarding dormouse and responsible enjoyment of the countryside. NB access is limited to key habitats suitable for dormouse.				

⁷ <https://ptes.org/wp-content/uploads/2019/09/White-Hughes-2019-dormouse-bridge.pdf>

⁸ Forestry Commission. 2019. A Protocol for Undertaking Woodland Management in England Where Dormice Are Present. Protocol Version 4.

⁹ <https://hampshiredormousegroup.co.uk/resources/woodland-habitat-management/>

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HYDROLOGY				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
CEMP	Principal Contractor	Planning Condition	Compliance with WFD assessment criteria	Construction Phase
SuDS	Developer/Principal Contractor	Planning Condition	Surface water quality monitoring and management feedback loop	Lifetime of development / Phased delivery
Appropriately designed watercourse crossings	Developer/Principal Contractor	Planning Condition / Environmental Permit /Land Drainage Consent	Compliance with Environmental Permit /Land Drainage Consent	Construction Phase
Surface water quality monitoring	Developer/Principal Contractor	Planning Condition	Compliance with WFD assessment criteria	Construction Phase through to Operation
Connection to Peel Common WwTW	Developer	Planning Condition / S106 / S98	Compliance with Planning Condition on Foul Water Drainage Strategy	Lifetime of development / Phased delivery

NOISE AND VIBRATION				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Construction Environmental Managements Plan	Contractor	Planning condition	CEMP submitted and approved by LPA	Construction Phase
Acoustic screening	Contractor	Planning condition	Mitigation scheme submitted and approved by LPA	Prior to start of works
Glazing and ventilation scheme	Contractor	Planning condition	Strategy be submitted and approved by LPA	Prior to start of works

LANDSCAPE AND VISUAL				
Mitigation Measure	Implementing Agent(s)	Legal Instrument	Compliance Target	Implementation Timescale
Applies to both Scenario 1 and 2				
Tree Protection, habitat, designed transition areas and soil protection and management, control of working hours	Developer/Contractor	Approved Planning Documents including Arboricultural Impact Assessment (AIA), Tree Protection and Removal Plan and Arboricultural Method	Arboricultural Method Statement (AMS), Construction Environmental Management Plan (CEMP), Construction Management Plan (CMP)	Construction Phase

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		Statement (AMS), CEMP and CMP.	Monitoring and Review Procedures	
Scheme Design, implementation and establishment	Developer/Contractor	Planning Permission and approved drawings and documents	Construction in accordance with approved drawings and documents	Construction Phase, up to 10 years
Open Spaces and maintenance	Developer/Contractor/Council	Planning Permission and S. 106	Landscape and Ecological Management Plan (LEMP)	Operation Phase and in perpetuity