



Land North of Camer Road, Meopham

Chapter 13: Residual Effects, Mitigation, Monitoring and Cumulative Effects

Iceni Projects on behalf of

The McManus Family

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Iceni Projects Ltd.

Da Vinci House, 44 Saffron Hill, London, ECN1 8FH

T: 020 3640 8508 **W:** iceniprojects.com

13. RESIDUAL EFFECTS, MITIGATION, MONITORING AND CUMULATIVE EFFECTS

Introduction

- 13.1 The following chapter provides a summary of the residual effects and the potential cumulative effects for each technical topic considered within this ES.
- 13.2 This chapter is accompanied by the following technical appendix:
- **Appendix 13.1 Schedule of Mitigation Measures within the ES.**
- 13.3 This chapter of the ES summarises the residual effects of the Proposed Development. **Tables 13.2** to **13.5** report the possible environmental effects associated with the Proposed Development, proposed mitigation and the identification of residual effects.
- 13.4 Residual effects are defined as those effects which remain following the implementation of identified mitigation measures.
- 13.5 The evolution of the Proposed Development has been an iterative process undertaken in parallel with the assessment of environmental effects. As a consequence, some measures to mitigate potentially significant negative effects have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset such effects.
- 13.6 Where it has not been possible to incorporate mitigation measures into the iterative design process, mitigation may be achieved by one of the following means:
- Mitigation through controls on demolition and construction activities; or
 - Mitigation to be applied through ongoing management and monitoring once the Proposed Development commences; or
 - During the operation of the Proposed Development.
- 13.7 Each technical ES Chapter includes detailed consideration of the beneficial and adverse residual effects anticipated as a result of the Proposed Development. The general criteria applied to determine the significance of the residual effects is set out in **Chapter 1: Introduction and EIA Methodology** of this ES, with topic-specific methodologies presented in each technical chapter.
- 13.8 The residual effects listed within the technical chapters of this ES are described with reference to:

- The scale of the effect (i.e. negligible, minor, moderate or major) and whether this is significant or not;
- The geographic scale (i.e. global, national, regional, district, borough, local etc.); and
- The nature of the effect (i.e. adverse, negligible or beneficial).

13.9 Within **Table 13.2** to **13.5** the following shading has been applied to identify significant residual effects.

Table 13.1 Shading Applied to Identify Residual Effects

Description	Shading
Major Beneficial/ Major to Moderate Beneficial	
Moderate Beneficial	
Minor Beneficial/ Negligible/ Minor Adverse	No shading (not significant)
Moderate Adverse	Only if significant
Major Adverse	

Table 13.2 Summary of Construction Phase Effects

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Socio-Economics						
Construction employment (direct and indirect)	Existing construction employment (Medium)	Short term (temporary) effect in the WIA and the South East	Low	Minor Beneficial (Not Significant)	Provision of local apprenticeship schemes, use of local supply chain and businesses	Minor Beneficial (Not Significant)
Economic Output	Existing economic output (Medium)	Short term (temporary) effect in the WIA and the South East	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Health and wellbeing	Existing population (Medium)	Short term (temporary) effect in the LIA	Low	Minor Adverse (Not Significant)	Construction Environmental Management Plan (CEMP) sets out measures to reduce impacts from construction dust	Minor Adverse (Not Significant)
Transport and Access						
2031 Future Baseline plus Peak Construction						
Severance	Pedestrians (High)	Local and strategic	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Driver Delay	Vehicle drivers (Low)	Local	Low	Negligible	Embedded mitigation	Negligible (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Pedestrian Delay	Pedestrians, cyclists, equestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Non-motorised user Amenity	Pedestrians, cyclists, equestrians (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Fear and Intimidation	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Road Safety	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	Adherence to UK requirements	Minor Adverse (Not Significant)
Hazardous Loads / Large Loads	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Air Quality						
Dust Nuisance	Existing and Future Residential Properties (High)	Local Temporary	Large	High Risk	Mitigation measures follow the IAQM guidance. These measures will be incorporated into a DMP and approved by GBC prior to	Negligible

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
					commencement of any work on-Site.	
PM ₁₀ Health Impacts	Existing and Future Residential Properties (Low)	Local Temporary	Large	Low Risk	Mitigation measures follow the IAQM guidance. These measures will be incorporated into a DMP and approved by GBC prior to commencement of any work on-Site.	Negligible
Noise and Vibration						
Construction Noise	surrounding residential receptors (high)	Short-term, local	Negligible (short term Medium impacts)	Negligible (Moderate to Negligible Temporary)	Implementation of Best Practicable Means to control noise emissions	Negligible (Moderate to Negligible Temporary)
Construction Vibration	surrounding residential receptors (high)	Short-term, local	Negligible (short term Medium impacts)	Negligible (Moderate to Negligible Temporary)	Implementation of Best Practicable Means to control vibration	Negligible (Moderate to Negligible Temporary)
Hydrology, Flood Risk and Drainage						
Silt pollution and spillage incidents	Downstream surface water environment (Low)	Temporary, Local	Very Low	Negligible	None required	Negligible

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Oil/chemical spillage	North Kent Medway Chalk groundwater body (Medium)	Temporary, Local	Medium	Moderate Adverse	Adherence to the CEMP	Negligible
Archaeology						
Loss of Prehistoric remains	Low	Local	High	Moderate Adverse (Significant)	Archaeological mitigation	Negligible
Loss of Roman remains	Low	Local	High	Moderate Adverse (Significant)	Archaeological mitigation	Negligible
Loss of Medieval remains	Low	Local	High	Moderate Adverse (Significant)	Archaeological mitigation	Negligible
Loss of post-medieval remains	Low	Local	High	Moderate Adverse (Significant)	Archaeological mitigation	Negligible
Built Heritage						
1. Hook Green Conservation Area						
General construction activities (visual, noise, dust, vibration)	Hook Green Conservation Area (including associated listed buildings)	Indirect change at local scale, but temporary and reversible	Very Low	No Effect (Not Significant)	Embedded measures via CEMP: dust suppression, noise and vibration controls, hoarding, restricted working hours	No Effect (Not Significant)
2. Norwood Lane						
General construction activities (visual, noise, dust, vibration)	Norwood Farmhouse (Medium)	Temporary, indirect change at local scale; to contribution of	Low	Minor Adverse (Not Significant)	Embedded measures via CEMP: dust suppression,	Minor Adverse (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
		setting to significance, but temporary and reversible.			noise and vibration controls, hoarding, restricted working hours	
3. Sole Street Group						
General construction activities (visual, noise, dust, vibration)	Bower Cottage (Medium) Sole Street House (Medium) Yeomans House (Medium)	Indirect change at local scale, but temporary and reversible.	Very Low	Negligible Adverse – Not Significant	Embedded measures via CEMP: dust suppression, noise and vibration controls, hoarding, restricted working hours	Negligible Neutral (Not Significant)
4. Camer Group						
General construction activities (visual, noise, dust, vibration)	9 and 10 Camer Street (Medium) Camer House (Medium) Building approx. 30m west of Camer House (Medium) Somers (Medium) Camer Green Cottage (Medium) 5 and 6 Camer Street (Medium)	Temporary, indirect change at local scale to contribution of setting to significance, but temporary and reversible	Very Low	Negligible Adverse (Not Significant)	Embedded measures via CEMP: dust suppression, noise and vibration controls, hoarding, restricted working hours	Negligible Neutral (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
General construction activities (visual, noise, dust, vibration)	Bailiff's House (Medium)	Temporary, indirect change at local scale to contribution of setting to significance, but temporary and reversible	Low	Minor Adverse (Not Significant)	Embedded measures via CEMP: dust suppression, noise and vibration controls, hoarding, restricted working hours	Minor Adverse (Not Significant)

Table 13.3 Summary of Completed and Operational Phase Effects

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Socio-Economics						
Employment (direct and indirect)	Local labour market and local economy (Medium)	Permanent effect in the Local Impact Area (LIA) and Wider Impact Area (WIA)	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Economic Output from commercial space	Existing economic output (Medium)	Permanent effect in the LIA and WIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Income Generation	Local labour market and local economy (Medium)	Permanent effect in the LIA and WIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Residential Expenditure from the proposed dwellings	Local economy (Medium)	Permanent effect in the LIA and WIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Increase housing supply - 725 net additional homes	Housing supply (High)	Permanent effect in the LIA	Medium	Minor Beneficial (Not Significant)	None Required	Moderate Beneficial (Significant)
		Permanent effect in the WIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Increased demand for early years education	Existing early years provision (High)	Permanent effect in the LIA	Low	Minor Adverse (Not Significant)	Planning Contributions	Minor Adverse (Not Significant)
Increased demand for primary education provision	Existing primary school provision (High)	Permanent effect in the LIA and WIA	Medium	Moderate Beneficial (Significant)	Two Form Entry Primary School	Moderate Beneficial (Significant)
Increased demand for secondary education provision	Existing secondary school provision (High)	Permanent effect in the LIA and WIA	Low	Minor Adverse (Not Significant)	Planning Contributions	Minor Adverse (Not Significant)
Increased demand for healthcare provision	Existing GP provision (Low)	Permanent effect in the LIA	Low	Minor Adverse (Not Significant)	Planning Contributions	Minor Adverse (Not Significant)
Increased demand for open space, play space and sports facilities	Existing and new open space, play space and sport provision (Low)	Permanent effect in the LIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Increased demand for community facilities	Existing community facilities provision (Low)	Permanent effect in the LIA	Low	Negligible (Not Significant)	None Required	Negligible (Not Significant)
Deprivation	Existing levels of deprivation (Low)	Permanent effect in the LIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Health and wellbeing	Health of existing population (Medium)	Permanent effect in the LIA	Low	Minor Beneficial (Not Significant)	None Required	Minor Beneficial (Not Significant)
Transport and Access						
2024 Future Baseline plus Proposed Development						
Severance	Pedestrians (High)	Local and strategic	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Driver Delay	Vehicle drivers (Low)	Local and strategic	Low	Negligible	N/A	Negligible (Not Significant)
Pedestrian Delay	Pedestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Non-motorised user Amenity	Pedestrians, cyclists, equestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Fear and Intimidation	Pedestrians, cyclists, equestrians (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Road Safety	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Hazardous Loads / Large Loads	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	Adherence to UK requirements	Minor Adverse (Not Significant)
2042 Future Baseline plus Proposed Development plus Local Plan						
Severance	Pedestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Driver Delay	Vehicle drivers (Low)	Local and strategic	Medium	Minor Adverse	N/A	Minor Adverse (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Pedestrian Delay	Pedestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Non-motorised user Amenity	Pedestrians, cyclists, equestrians (High)	Local	Very Low	Minor Adverse	Embedded mitigation	Minor Adverse (Not Significant)
Fear and Intimidation	Pedestrians, cyclists, equestrians (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Road Safety	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	N/A	Minor Adverse (Not Significant)
Hazardous Loads / Large Loads	Pedestrians, cyclists, equestrians, vehicle drivers (High)	Local and strategic	Very Low	Minor Adverse	Adherence to UK requirements	Minor Adverse (Not Significant)
Air Quality						
NO ₂ , PM ₁₀ , and PM _{2.5} Concentrations	Future and Existing Residents	Local Permanent	Negligible	Negligible	Encourage sustainable modes of transport.	Negligible
N-deposition and airborne NO _x	Ecological Sites	Local Permanent	Negligible	Negligible	Encourage sustainable modes of transport.	Negligible
Noise and Vibration						
Ambient Noise	Proposed residential dwellings (high)	Long-term, local	Medium to Negligible	Moderate to Negligible	Incorporation of suitable glazing and attenuated ventilation	Negligible
Noise from changes in road traffic noise at existing residential receptors	surrounding residential receptors (high)	Long-term, local	Negligible to Low Beneficial	Negligible to Minor Beneficial	None	Negligible to Minor Beneficial

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
Hydrology, Flood Risk and Drainage						
Built development in surface water flood risk area	People and property (High)	Permanent, Local	Nil – risk areas preserved free of built development	Negligible	None required	Negligible
Increase in surface water runoff due to increase in impermeable surface area	People and property (High)	Permanent, Local	Very Low – embedded primary mitigation (Sustainable Drainage Systems (SuDS) strategy)	Negligible	None required	Negligible
Impact on groundwater quality from development runoff being discharged to ground	North Kent Medway Chalk groundwater body (Medium)	Permanent, Local	Very Low – embedded primary mitigation (SuDS strategy)	Negligible	None required	Negligible
Increased pollution at Wastewater Treatment Works (WTW) outfall due to Proposed Development foul drainage flows	Public wastewater infrastructure (Medium)	Permanent, WTW Catchment	Very Low	Negligible	None required	Negligible
Increased sewer flood risk downstream	Public wastewater infrastructure (Medium)	Permanent, WTW Catchment	Medium	Moderate Adverse	Southern Water network upgrades	Negligible
Archaeology						
No operational-phase groundworks; therefore no direct or indirect impacts on buried heritage assets are anticipated during operational phase.						
Built Heritage						

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
1. Hook Green Conservation Area						
Introduction of new development within wider context	Hook Green Conservation Area (including associated listed buildings)	Permanent, indirect change at local scale	Very Low	No Effect (Not Significant)	None	No Effect (Not Significant)
2. Norwood Lane						
Introduction of new development in proximity of this asset.	Norwood Farmhouse (Medium)	Permanent, indirect change at local scale	Low	Minor Neutral (Not Significant)	Embedded landscaping measures including provision for areas of landscaped open space / buffers from the asset to preserve its immediate setting and screening boundary planting.	Minor Neutral (Not Significant)
3. Sole Street Group						
Introduction of new development within wider context	Bower Cottage (Medium) Sole Street House (Medium) Yeomans House (Medium)	Permanent, indirect change at local scale	Very Low	Negligible Neutral (Not Significant)	None	Negligible Neutral (Not Significant)
4. Camer Group						
Introduction of new development in relative proximity of this asset	9 and 10 Camer Street (Medium)	Permanent change at local scale due to	Very Low	Negligible Neutral (Not Significant)	Landscape Buffer area to Camer Road including retained	Negligible Neutral (Not Significant)

Effect	Receptor (Sensitivity / Importance)	Geographic Scale	Magnitude of Impact	Classification of Effect (Prior to Mitigation)	Mitigation and Monitoring	Residual Effect
	Camer House (Medium) Building approx. 30m west of Camer House (Medium) Somers (Medium) Camer Green Cottage (Medium) 5 and 6 Camer Street (Medium)	erosion of wider rural setting			hedgerow and additional planting	
Change within the immediate context of this asset.	Bailiff's House (Medium)	Permanent change at local scale due to erosion of wider rural setting	Low	Minor Neutral (Not Significant)	Landscape Buffer area to Camer Road including retained hedgerow and additional planting	Negligible Neutral (Not Significant)

Table 13.4 Summary of Likely Ecology Residual Effects During Construction and Operational Phase

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Construction Phase				
Habitats – Habitat Loss – Bramble scrub	Study area	Minor Adverse	Creation and enhancement of scrub habitat, implementation of appropriate management to ensure maximum benefit for a range of floral and faunal species	Minor Beneficial (Not Significant)

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Habitats – Habitat Loss – Hedgerows	Study area	Minor Adverse	Creation and enhancement of hedgerows, implementation of appropriate management to ensure maximum benefit for a range of floral and faunal species	Minor Beneficial (Not Significant)
Habitats – Habitat Loss – Trees	Study area	Minor Adverse	Planting of new trees and implementation of appropriate management to ensure maximum benefit for a range of floral and faunal species	Minor Beneficial (Not Significant)
Habitats – Fragmentation	Study area	Minor Adverse	Creation and enhancement of habitats to provide greater connectivity to the wider landscape	Minor Beneficial (Not Significant)
Habitats – Physical Disturbance	Study area	Minor Adverse	Best practice pollution guidelines adhered to throughout works, provision of attenuation features to prevent runoff and pollution	Not Significant
Habitats – Contamination	Study area	Minor Adverse	Best practice construction methods, provision of diverse, wildlife-friendly planting to benefit of a range of wildlife. Attenuation features provide long-term contamination prevention	Not Significant
Badger – Habitat Loss	Study area	Minor Adverse	Enhancement and creation of woodland, grassland and scrub habitats will provide a native planting scheme on-site combined with the phased working and restoration of the Site throughout the construction period.	Minor Beneficial (Not Significant)

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Badger – Fragmentation	Study area	Minor Adverse	Enhancement and creation of woodland, grassland and scrub habitats will provide increased connectivity between the Site and wider landscape.	Minor Beneficial (Not Significant)
Badger – Mortality	Local	Minor Adverse	Demarcation of a 30m buffer zone in which no construction or access will occur. Protection of on-site setts from development activities. Sett closure licence if required and best practice construction measures.	Not Significant
Badger – Physical Disturbance	Study area	Minor adverse	Demarcation of a 30m buffer zone around setts to be protected from any disturbance impacts inclusive of light, noise, vehicular access etc. Sensitive lighting scheme, including directional lighting and no lighting of retained and created habitats and setts.	Not Significant
Bats – Habitat Loss	Study area	Minor adverse	The inclusion of a range of bat box designs within any retained habitat (trees) and integrated into the new buildings would increase the Site's potential post development for roosting bats. Enhancement and creation of woodland, grassland and hedgerow habitats will provide a native planting scheme on-Site combined with the phased working and restoration of the Site throughout the construction period.	Minor Beneficial (Not Significant)

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Bats – Fragmentation	Study area	Minor adverse	Enhancement and creation of woodland, grassland and hedgerow habitats will provide increased connectivity between the Site and wider landscape.	Minor Beneficial (Not Significant)
Bats – Mortality	Study area	Minor adverse	Mitigation measures to be followed for the felling of four trees assessed as Further Assessment Required (FAR).	Not Significant
Bats – Physical Disturbance	Study area	Minor adverse	Sensitive lighting scheme, including directional lighting and no lighting of retained and created habitats	Not Significant
Birds – Habitat Loss / Mortality	Local	Minor adverse	Creation of new hedgerow, woodland, scrub and grassland areas. Skylark mitigation area to be created. Timings of works to avoid sensitive periods for breeding birds.	Minor Beneficial (Not Significant)
Birds – Fragmentation	Study area	Minor adverse	Enhancement and creation of woodland, grassland and scrub habitats will provide increased connectivity between the Site and wider landscape.	Minor Beneficial (Not Significant)
Birds – Physical Disturbance	Local	Minor adverse	Timing of works to avoid sensitive periods for breeding birds.	Not Significant

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Dormice – Habitat Loss / Fragmentation / Mortality	Study area	Minor adverse	Creation of new hedgerow and woodland areas with a focus on dormouse food species such as bramble, hazel and honeysuckle will increase suitable habitats within the Site and increase connectivity. Timing of works to avoid sensitive periods for dormouse. Works under supervision and under Natural England mitigation licence.	Minor Beneficial (Not Significant)
Dormice – Physical Disturbance	Study area	Minor adverse	Timing of works to avoid sensitive periods for dormouse. Works under supervision and under Natural England mitigation licence	Not Significant
Reptiles – Habitat Loss and Mortality	Study area	Minor adverse	Creation and enhancement of grassland and scrub habitats with appropriate management measures. Supervision of works under an Ecological Clerk of Works (ECoW) and during appropriate timings.	Minor Beneficial (Not Significant)
Reptiles – Fragmentation	Study area	Minor adverse	Creation and enhancement of grassland and scrub habitats to improve connectivity with the Site and surrounding landscape.	Minor Beneficial (Not Significant)
Reptiles – Physical Disturbance	Not significant	Negligible	Timing of works to avoid sensitive periods for reptiles. Supervision of works under an ECoW.	Not Significant
Operational Phase				

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Designated Sites – Contamination	None / Not significant	Negligible	N/A	Not Significant
Thames Estuary and marshes Ramsar, the Thames Estuary and Marshes Special Protection Area and the South Thames Estuary and Marshes Site of Special Scientific Interest. – Recreational Pressures	Study area	Minor Adverse	Inclusion of significant areas of green space, designated dog parks, footpaths and travel routes.	Not Significant

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
North Downs Woods Special Area of Conservation, Shorne and Ashenbank Woods SSSI and North Kent Woods and Downs National Nature Reserve – Recreational Pressures	Local	Minor Adverse	Inclusion of significant areas of green space, designated dog parks, footpaths and travel routes.	Not Significant
Non-statutory designated sites – Recreational Pressures	None / Not significant	Negligible	Inclusion of significant areas of green space, designated dog parks, footpaths and travel routes	Not Significant
Habitats – Contamination	Study area	Minor Adverse	Signage, designated footpaths and travel routes and restricted access to sensitive habitats	Not Significant

Effect	Nature of Effect and Geographic Scale (CIEEM)	Classification of Effect	Mitigation and Monitoring	Residual Effect
Habitats – Recreational Pressures / Disturbance	Study area	Minor Adverse	Signage, designated footpaths and travel routes, provision of bins, restricted access to sensitive habitats	Not Significant
Protected Species – Disturbance and Mortality	Study area	Minor Adverse	Designated areas of green space, enhanced to encourage use by wildlife; intensive management of habitats within built up areas to discourage use; restricted access for people to sensitive habitats (such as woodland); designated footpaths through habitats; signage	Not Significant

Table 13.5 Summary of Likely Landscape Residual Effects During Construction and Operational Phase

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
Cropland	Landscape Value Medium	Construction – Winter	Large	Moderate Adverse (Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
	Landscape Susceptibility Medium Landscape Sensitivity Medium	Operation – Year 1 Winter	Large	Moderate Adverse (Significant)
		Operation – Year 15 Summer	Large	Moderate Adverse (Significant)
Grassland	Landscape Value Low Landscape Susceptibility Medium Landscape Sensitivity Medium	Construction – Winter	Very Small	Negligible Adverse (Not Significant)
		Operation – Year 1 Winter	Large	Moderate Beneficial (Significant)
		Operation – Year 15 Summer	Large	Moderate Beneficial (Significant)
Hedgerows, scrub and treebelts	Landscape Value Low Landscape Susceptibility Low Landscape Sensitivity Low	Construction – Winter	Small	Negligible Adverse (Not Significant)
		Operation – Year 1 Winter	Very Small	Neutral (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
		Operation – Year 15 Summer	Small	Negligible Beneficial (Not Significant)
Public Footpaths on Site	Landscape Value Medium Landscape Susceptibility Low Landscape Sensitivity Medium	Construction – Winter	Medium	Minor Adverse (Not Significant)
		Operation – Year 1 Winter	Large	Moderate Beneficial (Significant)
		Operation – Year 15 Summer	Large	Moderate Beneficial (Significant)
Woodland	Landscape Value Medium Landscape Susceptibility High Landscape Sensitivity High	Construction – Winter	None	Neutral (Not Significant)
		Operation – Year 1 Winter	Very Small	Negligible Beneficial (Not Significant)
		Operation – Year 15 Summer	Small	Minor Beneficial (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
Ash Downs LCA	Landscape Value Medium Landscape Susceptibility Medium Landscape Sensitivity Medium	Construction – Winter	Small	Minor Adverse (Not Significant)
		Operation – Year 1 Winter	Very Small	Negligible Adverse (Not Significant)
		Operation – Year 15 Summer	Very Small	Negligible Beneficial (Not Significant)
Luddesdown: West Kent Downs Landscape Character Area (LCA)	Landscape Value Medium Landscape Susceptibility High Landscape Sensitivity High	Construction – Winter	Very Small	Negligible Adverse (Not Significant)
		Operation – Year 1 Winter	Very Small	Negligible Adverse (Not Significant)
		Operation – Year 15 Summer	Very Small	Neutral (Not Significant)
Meopham Downs LCA	Landscape Value Medium	Construction – Winter	Small	Minor Adverse (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
	Landscape Susceptibility Medium Landscape Sensitivity Medium	Operation – Year 1 Winter	Small	Negligible Adverse (Not Significant)
		Operation – Year 15 Summer	Small	Negligible Beneficial (Not Significant)
Character of the Site and its Immediate Surroundings	Landscape Value Medium Landscape Susceptibility Medium-Low Landscape Sensitivity Medium	Construction – Winter	Large	Moderate Adverse (Significant)
		Operation – Year 1 Winter	Large	Minor Adverse (Not Significant)
		Operation – Year 15 Summer	Medium	Negligible Beneficial (Not Significant)
Kent Downs National Landscape	Landscape Value Very High Landscape Susceptibility Medium Landscape Sensitivity Very High	Construction – Winter	Very Small	Negligible Adverse (Not Significant)
		Operation – Year 1 Winter	Very Small	Neutral (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
		Operation – Year 15 Summer	Very Small	Negligible Beneficial (Not Significant)
Residents on Camer Road and Camer Street	Visual Value Low Visual Susceptibility High Visual Sensitivity Medium	Construction – Winter	Medium	Minor Adverse (Not Significant)
		Operation – Year 1 Winter	Medium	Minor Adverse (Not Significant)
		Operation – Year 15 Summer	Small	Minor Adverse (Not Significant)
Residents on Nursery Road and Fairview Gardens	Visual Value Low Visual Susceptibility High Visual Sensitivity Medium	Construction – Winter	Large	Moderate Adverse (Significant)
		Operation – Year 1 Winter	Large	Moderate Adverse (Significant)
		Operation – Year 15 Summer	Medium	Negligible Adverse (Not Significant)
Residents on Tradescant Drive	Visual Value Low Visual Susceptibility High	Construction – Winter	Medium	Minor Adverse (Not Significant)
		Operation – Year 1 Winter	Medium	Minor Adverse (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
	Visual Sensitivity Medium	Operation – Year 15 Summer	Medium	Minor Adverse (Not Significant)
Residents on Norwood Lane	Visual Value Low Visual Susceptibility High Visual Sensitivity Medium	Construction – Winter	Large	Moderate Adverse (Significant)
		Operation – Year 1 Winter	Large	Moderate Adverse (Significant)
		Operation – Year 15 Summer	Medium	Minor Adverse (Not Significant)
Residents on Manor Road	Visual Value Low Visual Susceptibility High Visual Sensitivity Medium	Construction – Winter	None	Neutral (Not Significant)
		Operation – Year 1 Winter	None	Neutral (Not Significant)
		Operation – Year 15 Summer	None	Neutral (Not Significant)
Residents on Melliker Hill	Visual Value Low Visual Susceptibility High Visual Sensitivity Medium	Construction – Winter	None	Neutral (Not Significant)
		Operation – Year 1 Winter	None	Neutral (Not Significant)
		Operation – Year 15 Summer	None	Neutral (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
Users of Camer Road / Green Lane	Visual Value Low	Construction – Winter	Large	Minor Adverse (Not Significant)
	Visual Susceptibility Low	Operation – Year 1 Winter	Large	Minor Adverse (Not Significant)
	Visual Sensitivity Low	Operation – Year 15 Summer	Medium	Negligible Adverse (Not Significant)
Users of Camer Street	Visual Value Low	Construction – Winter	Medium	Negligible Adverse (Not Significant)
	Visual Susceptibility Low	Operation – Year 1 Winter	Medium	Negligible Adverse (Not Significant)
	Visual Sensitivity Low	Operation – Year 15 Summer	Medium	Negligible Adverse (Not Significant)
Users of Norwood Lane	Visual Value Low	Construction – Winter	Large	Minor Adverse (Not Significant)
	Visual Susceptibility Low	Operation – Year 1 Winter	Large	Minor Adverse (Not Significant)
	Visual Sensitivity Low	Operation – Year 15 Summer	Medium	Negligible Adverse (Not Significant)
	Visual Value High	Construction – Winter	Very Small	Negligible Adverse (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
Users of Camer Park	Visual Susceptibility High	Operation – Year 1 Winter	Very Small	Negligible Adverse (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	Very Small	Neutral (Not Significant)
Users of the PRoW NS250	Visual Value Medium	Construction – Winter	Medium	Moderate Adverse (Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Medium	Moderate Adverse (Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	Small	Minor Adverse (Not Significant)
Users of the PRoW NS252	Visual Value Medium	Construction – Winter	None	Neutral (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	None	Neutral (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	None	Neutral (Not Significant)
Users of the PRoW NS192	Visual Value Medium	Construction – Winter	Large	Major Adverse (Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Medium	Moderate Adverse (Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
	Visual Sensitivity High	Operation – Year 15 Summer	Medium	Moderate Adverse (Significant)
Users of the PRoW NS308	Visual Value Medium	Construction – Winter	None	Neutral (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	None	Neutral (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	None	Neutral (Not Significant)
Users of the PRoW NS242	Visual Value Medium	Construction – Winter	Small	Minor Adverse (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Very Small	Negligible Adverse (Not Significant)
	Visual High	Operation – Year 15 Summer	Very Small	Negligible Beneficial (Not Significant)
Users of the PRoW NS223	Visual Value Medium	Construction – Winter	Very Small	Negligible Adverse (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Very Small	Neutral (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
	Visual Sensitivity High	Operation – Year 15 Summer	Very Small	Neutral (Not Significant)
Users of the PRow NS304	Visual Value Medium	Construction – Winter	None	Neutral (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	None	Neutral (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	None	Neutral (Not Significant)
Users of the PRow NS191	Visual Value Medium	Construction – Winter	Very Small	Negligible Adverse (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Very Small	Neutral (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	Very Small	Neutral (Not Significant)
Users of the PRow NS190	Visual Value Medium	Operation – Year 15 Summer	Small	Minor Adverse (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	Very Small	Negligible Adverse (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	Very Small	Neutral (Not Significant)

Landscape Receptors	Sensitivity	Phase	Magnitude of Effect	Likely Residual Effect
Users of the PRow NS173	Visual Value Medium	Operation – Year 15 Summer	None	Neutral (Not Significant)
	Visual Susceptibility High	Operation – Year 1 Winter	None	Neutral (Not Significant)
	Visual Sensitivity High	Operation – Year 15 Summer	None	Neutral (Not Significant)

Summary of Residual Effects

- 13.10 A comprehensive and robust assessment of the potential impacts of the demolition/ construction and operation phases are outlined below.

Summary of Residual Effects during Construction

- 13.11 There would be significant residual effects during the construction phase, as follows:

Landscape effects, in relation to:

- Cropland (moderate adverse); and
- Landscape character of the Site and its immediate surroundings (moderate adverse).

Visual effects, in relation to:

- Residents on Nursery Road and Fairview Gardens (moderate adverse);
- Residents on Norwood Lane (moderate adverse);
- Users of the PRow NS250 (moderate adverse); and
- Users of the PRow NS192 (major adverse).

Summary of Residual Effects during the Operational Phase

- 13.12 There would be significant residual effects during the operational phase, as follows:

Socio Economics effects, in relation to:

- 725 net additional homes – (moderate beneficial); and
- Increased demand for primary education provision (moderate beneficial).

Landscape effects, in relation to:

- Cropland – Year 1 Winter (moderate adverse);
- Cropland – Year 15 Summer (moderate adverse);
- Grassland – Year 1 Winter (moderate beneficial);
- Grassland – Year 15 Summer (moderate beneficial);

- Public Footpaths on Site – Year 1 Winter (moderate beneficial); and
- Public Footpaths on Site – Year 15 Summer (moderate beneficial).

Visual effects, in relation to:

- Residents on Nursery Road and Fairview Gardens – Year 1 winter (moderate adverse);
- Residents on Norwood Lane – Year 1 winter (moderate adverse);
- Users of the PRoW NS250 – Year 1 winter (moderate adverse);
- Users of the PRoW NS192 – Year 1 winter (major adverse); and
- Users of the PRoW NS192 – Year 15 summer (major adverse).

Cumulative Effects

13.13 In addition to the assessments already undertaken, the EIA Regulations require an ES to consider 'cumulative effects'. These are effects which result from incremental changes caused by other past, present or reasonably foreseeable actions together (i.e. cumulatively) with the Proposed Development.

13.14 For the cumulative assessment, two types of effects have been considered:

- **Type 1:** The combined effect of individual effects, for example noise, airborne dust or traffic on a single receptor (defined as 'effect interactions'); and
- **Type 2:** The combined effects of nearby development schemes which are either consented or under construction which may, on an individual basis, not be significant but, cumulatively, have a likely significant effect (defined as 'cumulative effects'). The schemes considered within this assessment vary according to topic. The schemes are listed in **Table 13.9** and shown in **Figure 13.1**.

Effect Interactions (Type 1 Effects)

13.15 There is no established EIA methodology for assessing and quantifying effect interactions that lead to combined effects on sensitive receptors. The European Commission (EC) has produced guidelines for assessing these Type 1 Effects^a, however these "are not intended to be formal or

^a European Commission (EC), (1999); Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. Available at: <http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf>

prescriptive but are designed to assist EIA practitioners in developing an approach which is appropriate to a project...". These have been reviewed by Icen Projects and used to develop the approach to the assessment of effect interactions presented in this ES.

- 13.16 Whilst not necessarily considered significant individually, several effects on one receptor or receptor group could interact or combine to produce a significant overall effect. For the purposes of the assessment, only adverse or beneficial effects classified as minor, moderate or major have been considered in the effect interactions assessment.
- 13.17 **Table 13.6** presents a summary of the residual effects on sensitive receptors which have been scoped into the effect interactions assessment. On the basis of the below, no effect interactions are anticipated to occur during either the construction or operational phases of the Proposed Development.

Table 13.6 Summary of Residual Effects on Sensitive Receptors

Receptor	Construction Phase	Operational Phase
Employment and the Local Labour Market	(SE)*	(SE)
Local Housing Supply	X	SE
Local Economy and Economic Output	(SE)*	(SE)
Health	(SE)*	(SE) / (SE)
Neighbouring and local primary education facilities	X	SE
Neighbouring and local secondary education facilities	X	(SE)
Deprivation	X	(SE)
Open Space, Play Space and Sports Facilities	X	(SE)
Users on local highway network	(T)* / (LVIA)	(T) / (LVIA)
Local Air Quality	X	X
Noise	X	(NV)
Existing Water Networks	X	X
Non-designated Archaeological Heritage Asset	X	X
Designated and non-designated Built Heritage Asset	(BH)*	(BH)
Loss of Habitats	(E) / LVIA / (LVIA)	LVIA / LVIA / (LVIA)
Species Abundance	(E)	X
Designated Ecological Sites	X	(E)
Public Footpaths	(LVIA)* / LVIA	LVIA / (LVIA) / LVIA
Landscape Site wide character and Landscape Character Areas	LVIA / (LVIA)	(LVIA)

Receptor	Construction Phase	Operational Phase
Neighbouring local residents and pedestrians	(T)* / (NV*) LVIA / (LVIA)	(T) / (NV) / LVIA / (LVIA)

Key: **SE** – Socio-Economics; **AQ** – Air Quality; **T** – Transport; **NV** – Noise and Vibration; **E** – Ecology; **LA** – Landscape and Visual Impact; **LVIA** – Archaeology; **BH** – Built Heritage;

RED – adverse effect; **GREEN** – beneficial effect; () – non-significant effect; * - intermittent/short-term effect.

- 13.18 Given the above, it is not considered that any additional significant environmental effects are identified when effects are considered in-combination.

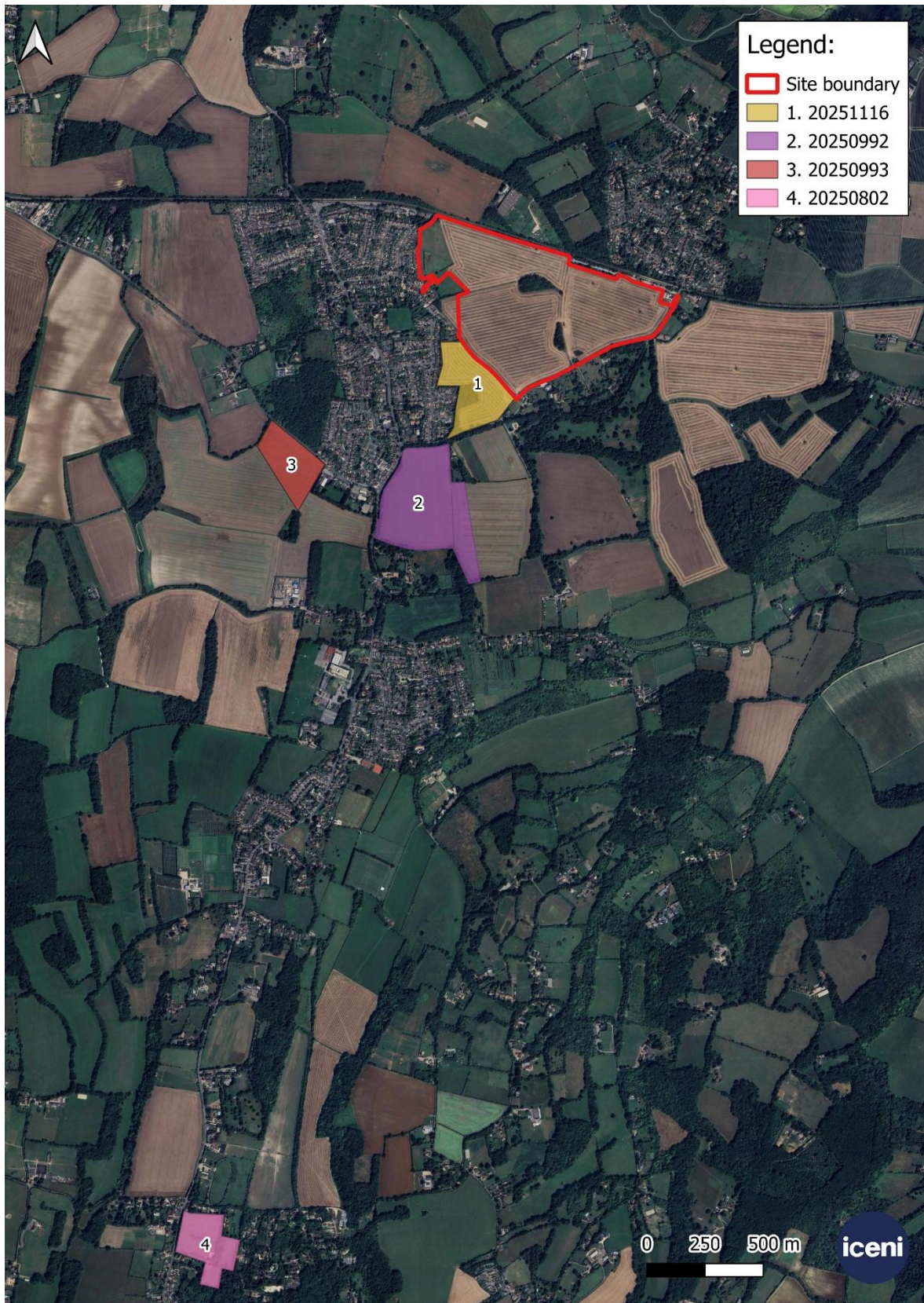
Cumulative Effects (Type 2 Effects)

- 13.19 The schemes set out within **Table 13.7** and **Figure 13.1** have been submitted since receipt of the Scoping Opinion and have been assessed by the EIA project team.

Table 13.7 Cumulative Schemes

Planning Reference	Address	Description	Status	Distance from the Site boundary (closest point)
1. 20251116	Land West Of Norwood Lane Meopham Gravesend Kent DA13 0YE	Outline application with all matters reserved (except access) for a development of up to 150 dwellings (Use Class C3), including affordable dwellings, and associated landscaping, public open space and infrastructure works.	Application validated 07 November	Adjacent to the south-west
2. 20250992	Land At Wrotham Road Meopham Gravesend Kent DA13 0AA	Outline application for the erection of up to 350 residential dwellings, public open space and associated works. Approval is sought for the principal means of vehicular access from Wrotham Road and all other matters are reserved.	Application validated 07 November	0.36km south-west
3. 20250993	Land Adjacent To Longfield Road Meopham Gravesend Kent DA13 0EW	Outline application for the erection of up to 120 residential dwellings, public open space and associated works. Approval is sought for the principal means of vehicular access from Longfield Road and all other matters are reserved.	Application validated 07 November	0.82km south-west
4. 20250802	Blackthorn Farm Wrotham Road Meopham Gravesend Kent	Outline planning application for up to 100No. residential dwellings (including affordable housing), with all matter reserved except for access and creation of a new access from A227/South Street.	Application validated 01 September	3.7km south

Figure 13.1 Cumulative Schemes



13.20 Socio-Economics

Cumulative Effects of the Proposed Development with Other Development Schemes

13.21 It is considered unlikely that the Proposed Development would generate any cumulative impacts that would warrant mitigation with regard to those aspects identified above that result in a Beneficial impact. As such, only those areas where the potential residual impacts were considered to be of Adverse or Negligible significance, is there potential for a cumulative effect to occur that could result in an Adverse impact. Therefore, the following aspects have been considered with regard to cumulative effects:

- Healthcare facilities (local GP facilities); and
- Local education provision (early years', primary and secondary).

Table 13.10 Inter-development Cumulative Effects Assessment

Cumulative scheme	Scheme Description	Potential for cumulative effects?
Land West of Norwood Lane Meopham Gravesend Kent DA13 0EY (REF 20251116)	Outline application with all matters reserved (except access) for a development of up to 150 dwellings (Use Class C3), including affordable dwellings, and associated landscaping, public open space and infrastructure works.	Yes – the scheme proposes 150 residential units
Land at Wrotham Road Meopham Gravesend Kent DA13 0AA (REF 20250992)	Outline application for the erection of up to 350 residential dwellings, public open space and associated works. Approval is sought for the principal means of vehicular access from Wrotham Road and all other matters are reserved.	Yes – the scheme proposes 350 residential units
Land Adjacent to Longfield Road Meopham Gravesend Kent DA13 0EW (REF 20250993)	Outline application for the erection of up to 120 residential dwellings, public open space and associated works. Approval is sought for the principal means of vehicular access from Longfield Road and all other matters are reserved.	Yes – the scheme proposes 120 residential units
Blackthorn Farm Wrotham Road Meopham Gravesend Kent (REF 20250802)	Outline planning application for up to 100No. residential dwellings (including affordable housing), with all matter reserved except for access and creation of a new access from A227/South Street.	Yes – the scheme proposes 100 residential units

Cumulative Effects During Construction

13.22 In terms of the construction phase, it is recognised that adverse cumulative socio-economic effects could arise if several large developments come forward concurrently, as this could place pressure

on the availability of construction labour. The proposed schemes in Meopham are being advanced within the same planning cycle and therefore have the potential to overlap during delivery..

- 13.23 However, even where construction periods coincide, the demand for labour and specific skills is expected to be manageable. Construction activity would still be staggered to some extent due to differing commencement dates, discharge of conditions, infrastructure requirements and build-out rates. Moreover, construction firms typically rely on a combination of their own established workforce and local contractors, meaning that the availability of local labour is unlikely to act as a significant constraint. Following the sustained uplift in construction activity in recent years, it is also likely that there is now a strengthened supply of workers and businesses with relevant skills in the area. As of January 2026, 23.3% of Gravesham enterprises are construction-related¹, higher than at the regional and national level. As such, any adverse cumulative construction-phase effects are assessed as negligible (not significant), and no mitigation measures are considered necessary.

Cumulative Effects Once the Proposed Development is Operational

- 13.24 In total, the schemes will bring forward 720 residential units. Based on an average household size of 2.46 people in each residential unit, the cumulative developments could generate a resident population of around 1,771 people. Together with the 1,784 persons generated by the Proposed Development, this is a total of 3,555 new residents in the area.

Local Healthcare Facilities

- 13.25 The baseline assessment indicates that within a 1.6km walking distance of the Site there is one GP practice Meopham Medical Centre, currently operating at a GP to patient ratio of 1 GP per 2,101 patients.
- 13.26 An additional 1,771 residents from the cumulative schemes, combined with the current number of registered patients and the population expected to be brought forward by the Proposed Development increases the GP to patient ratio to 1 GP per 2,825patients which is above best practice ratios.
- 13.27 It should be noted that some of the new residents may already be registered at GP practices in the local area. Therefore, the cumulative impact is anticipated to be permanent Minor Adverse (not significant) in the long-term.

Local Education Provision

- 13.28 To identify the likely number of school aged children generated by the residential cumulative schemes, the new likely child yield has been calculated using the Department of Education Pupil yield from housing developments^{xxxiii} for early years and post – 16 education, and Kent County Council published multipliers for primary and secondary school pupils. These yields are dependant on whether units are flats or houses. As we don't yet know the breakdown of the residential units

included in cumulative schemes, we have used those for houses as these result in higher estimated pupil numbers in order to analyse a worst-case scenario.

Table 13.11 Pupil Yield from Cumulative Schemes

Cumulative Scheme	Predicted Pupils			
	Early Years	Primary School	Secondary School	Post-16 Education
Land West of Norwood Lane Meopham Gravesend Kent DA13 0EY (REF 20251116)	11	42	30	12
Land at Wrotham Road Meopham Gravesend Kent DA13 0AA (REF 20250992)	25	98	70	28
Land Adjacent to Longfield Road Meopham Gravesend Kent DA13 0EW (REF 20250993)	8	34	24	10
Blackthorn Farm Wrotham Road Meopham Gravesend Kent (REF 20250802)	7	28	20	8
Total	50	202	144	58

13.29 The cumulative schemes will bring forward around 50 children aged 0-4 years which, when combined with the Proposed Development, totals 100 children aged 0-4 years.

13.30 The baseline assessment identified a wide range of services of Early Years and Childcare facilities within the WIA and two within 1.6km of the Site. As a result, the cumulative impact on nursery provision is anticipated to be permanent **Minor Adverse (Not Significant)** in the long-term.

13.31 The cumulative schemes will bring forward 202 pupils of primary school age which, when combined with the Proposed Development, totals 390 pupils of primary school age. The baseline assessment determined that there is currently capacity for 25 primary school pupils across the primary schools within a 20-minute walking distance of the Site. In addition, the primary school included in the proposed development will create an estimated 420 primary school places.

13.32 According to the Commissioning Plan for Education Provision in Kent² Forecasts indicate that there are surplus Reception places across the Primary planning groups in the Borough, and KCC is working with schools in the areas, with the larger surpluses, to see whether there is any need to reduce their PAN in order to remain viable. However, small pockets of primary deficits are forecast in more rural parts of Gravesham, which are expected to be covered by adjacent planning groups. However, the two form entry primary school included in the Proposed Development is expected to offset additional pupils with pupil places. Therefore, the cumulative impact on primary schools is anticipated to be **Minor Beneficial (Not Significant)** in the long-term.

13.33 The cumulative schemes will bring forward 144 secondary school pupils which, when combined with the Proposed Development, totals 279 secondary school children. The baseline assessment identified that there are 170 places at second

13.34 ary schools within three miles of the Site.

13.35 The Commissioning Plan states that demand is expected to fluctuate throughout the forecast period which will require additional capacity. KCC intends to commission 30 temporary Year 7 places for 2020/21 and expand Meopham School by 1 FE. The following year KCC intends to add a further 1 FE at both Meopham and Thamesview Schools. A further 3 FE of provision will be required from September 2023/24 which will be managed through the expansion of existing provision. As such, there would be a **minor adverse (not significant)** effect on primary education facilities in the LIA.

Transport and Access

Cumulative Effects Once the Proposed Development is Operational

13.36 The cumulative impacts remain as forecast for the 2042 Baseline plus Proposed Development with no significant adverse effects forecast as a result of the cumulative impacts.

Air Quality

Cumulative Effects During Construction

13.37 Cumulative effects of dust and particulate matter may potentially occur if two developments are under construction simultaneously and within close proximity to each other. Guidance provided by the IAQM states that effects of dust and particulate matter arising from a construction site should be considered up to 250m from a site. The closest committed / proposed development is located approximately 350m to the southwest of the Site, therefore there is only a small area that would likely experience impacts from both sites if construction occurs simultaneously.

13.38 Following the recommended mitigation measures, the residual effects of dust and particulate matter arising from the Site are negligible. It is considered that other construction sites will also be subject to the same mitigation measures and therefore no cumulative effects are anticipated.

Cumulative Effects Once the Proposed Development is Operational

13.39 The traffic flows used for the assessment were calculated to account for the additional traffic from general growth in the area and a number of committed developments. The assessment of the significance of the Proposed Development effects has therefore taken into account the cumulative effect of the Site and a likely amount of development in the area on predicted future pollutant concentrations.

Noise and Vibration

Cumulative Effects During Construction

13.40 The construction activity at future committed development sites has the potential to cause localised noise disturbance around each development site. However, it is not known whether the construction activities from each development will occur at the same time as those on the Site.

13.41 Construction activities may give rise to cumulative effects in instances where construction activity takes place in close proximity to an identified receptor at both the Site and a nearby development site. The nearest sites to the Proposed Development are:

- Land Adjacent To Longfield Road Meopham Gravesend Kent DA13 0EW; and
- Land At Wrotham Road Meopham Gravesend Kent DA13 0AA.

13.42 With consideration to the short-term nature of the identified effects and the nature of effects during activities at typical distances it is unlikely that combined activities would give rise to cumulative effects higher than those already identified.

13.43 There are unlikely to be any cumulative effects from construction noise at other development sites due to the intervening distance between the Proposed Development and the other development sites.

Cumulative Effects Once the Proposed Development is Operational

13.44 The noise assessment has considered the combined road traffic movements from these future committed developments as part of the calculated future baseline conditions. Accordingly, there are no identified additional cumulative effects at proposed residential receptors.

Hydrology, Flood Risk and Drainage

13.45 The cumulative schemes identified earlier in this ES are in the same hydrological catchment as the Proposed Development and therefore could have a potential cumulative effect on the local hydrology, flood risk and drainage. However, the mitigation measures required for the Proposed Development – the SuDS strategy (embedded), the CEMP and Southern Water's network upgrades – will also be required for the other development schemes. With such measures in place, any cumulative effects will be mitigated.

Archaeology

Cumulative Effects During Construction

- 13.46 Cumulative effects on archaeological assets can occur during construction where areas of archaeology or contiguous or contemporaneous archaeology assets are affected by more than one development footprint.
- 13.47 For such effects to occur development footprints need to overlap or be adjacent and where this is not the case the distance of separation is such that the inter-project development proposal can be scoped out of any cumulative assessment for this aspect of the historic environment topic.
- 13.48 Nonetheless, it is possible that different developments within a Study Area may have the potential to harm similar remains (both in terms of archaeological sensitivity and cultural/historical association) even if not adjacent. This includes also the potential for fragmentation and isolation from surroundings.
- 13.49 As no construction activities related to other developments will be carried out within the Site, it is expected that no effects arising from other developments will cause any effect on surviving archaeological assets within the Site. The distance between the Proposed Development and the list of Cumulative Schemes included in Chapter 12 is considered sufficient to avoid instances of fragmentation and isolation from surroundings arising from archaeological assets being affected by more than one scheme.
- 13.50 It is also assumed that any other direct or indirect impact arising from construction activities relating to other developments will be assessed by the relevant LPAs, and adequate mitigation will be implemented. Therefore, it is not expected that the cumulative effect to be greater than the predicted effects arising from any individual development, which will be assessed and mitigated separately.

Cumulative Effects Once the Proposed Development is Operational

- 13.51 It is not expected that operation, maintenance and decommissioning phases of the Proposed Development will result in any further intrusive ground activities not already addressed for the construction phase.

Ecology

Cumulative Effects During Construction

- 13.52 No significant adverse cumulative effects have been identified. When considered in combination with other projects for the construction of the Proposed Development, there are either no cumulative effects due to the absence of receptors in other schemes; or either no residual effects or significant beneficial effects have been identified for the identified receptors.

Cumulative Effects Once the Proposed Development is Operational

- 13.53 No significant adverse cumulative effects have been identified. When considered in combination with other projects for the operation of the Proposed Development, there are either no cumulative effects due to the absence of receptors in other schemes; or either no residual effects or significant beneficial effects have been identified for the identified receptor.

Built Heritage

Cumulative Effects During Construction

- 13.54 Potential cumulative construction effects could arise where construction of the Proposed Development overlaps with other committed or emerging schemes within the study area. The four schemes identified below have all been validated and represent the current baseline for cumulative assessment.

- Scheme 1: Land West of Norwood Lane, Meopham, Gravesend, Kent, DA13 0YE, (Planning Ref: 20251116) Up to 150 dwellings (Use Class C3) - Includes affordable housing, landscaping, public open space, and infrastructure. Adjacent to the south-west
- Scheme 2: Land at Wrotham Road, Meopham, Gravesend, Kent DA13 0AA, (Planning Ref: 20250992) Up to 350 dwellings - Includes public open space and associated works. 0.36 km south-west
- Scheme 3: Land Adjacent to Longfield Road, Meopham, Gravesend, Kent DA13 0EW, (Planning Ref: 20250993) Up to 120 dwellings - Includes public open space and associated works. 0.82 km south-west
- Scheme 4: Blackthorn Farm, Wrotham Road, Meopham, Gravesend, Kent (Planning Ref: 20250802) Up to 100 dwellings (including affordable housing). 3.7 km south

- 13.55 All of these schemes (Schemes 1–4) are situated at sufficient distance from the Hook Green Conservation Area and from listed buildings in Groups 1 and 2 such that, even if construction periods overlap with the Proposed Development, no significant cumulative effects on heritage assets are anticipated.

13.56 The separation of Schemes 2-4 from the Site, ranging from approximately 0.36 km to 3.7 km, combined with variations in topography and intervening modern development, would prevent shared or intensifying visual, noise, or vibration effects capable of altering the assets' significance. Similarly, no cumulative construction effects are anticipated for heritage receptors in Sole Street (Group 3) or the Camer Group (Group 4). There is no direct functional or visual connection between these assets and the three cumulative schemes. Even in the event of overlapping construction periods, effects would remain temporary, localised, and controlled under standard Construction Environmental Management Plans (CEMPs), meaning that no materially increased cumulative impact on the settings or significance of these heritage assets is expected.

13.57 Scheme 1 is a development for up to 150 dwellings located immediately adjacent to the Site (validated 7 November 2025) and has the greatest potential for cumulative interaction during construction, given its proximity to receptors within the Camer Group (Group 4). At the time of writing, only an outline submission (with access) is available. A further short addendum review will be undertaken once the full application package is available to confirm whether any additional cumulative assessment is necessary. This addendum will specifically consider potential shared construction corridors, overlapping activity zones, and any temporary effects on the setting of nearby heritage assets. However, as the Proposed Development is not anticipated to cause any harm, cumulative effects with this scheme are unlikely and the impact of Scheme 1 is only anticipated to reduce with future Reserved Matters Applications.

Cumulative Effects Once the Proposed Development is Operational

13.58 Once operational, the Proposed Development would form part of a wider pattern of incremental residential growth around Meopham. The three validated cumulative schemes (Schemes 1–3) sit at considerable distance from the key heritage receptors identified in this assessment. None share direct visual, spatial, or experiential relationships with the Hook Green Conservation Area, the Sole Street Group, the Norwood Farmhouse Group, or the Camer Group. As such, the combined effect of these developments, when considered with the Proposed Development, would not result in any change to the significance of the identified heritage assets.

13.59 The assessment concludes that the Proposed Development results in no harm to the significance of any heritage assets. As the cumulative schemes do not introduce new development within the immediate settings of these receptors, no cumulative operational effects are predicted.

13.60 The anticipated Scheme 1, located immediately adjacent to the Site, may have greater potential for cumulative operational interaction, but cannot be assessed fully until an application is submitted. A targeted cumulative review will be undertaken at that time. Based on current understanding, it is expected that any cumulative effects are likely to remain limited and consistent with the prevailing pattern of development along Camer Road.

13.61 Accordingly, no significant cumulative operational effects on built heritage assets are anticipated from the current set of validated schemes, and cumulative conclusions for Scheme 1 will be updated once details become available.

Landscape and Visual Effects

13.62 The assessment has considered the combined effects of the Proposed Development with the following other cumulative developments in the vicinity of the Site:

- Cumulative Development 1 – Land West of Norwood Lane (20251116), comprising an outline application for up to 150 dwellings and associated landscaping;
- Cumulative Development 2 – Land at Wrotham Road to Longfield Road (20250992), comprising an outline application for up to 350 dwellings and public open space;
- Cumulative Development 3 – Land adjacent to Longfield Road (20250993), comprising an outline application for up to 120 dwellings and public open space; and
- Cumulative Development 4 – Land at Blackthorn Farm (20250802), comprising an outline application for up to 100 dwellings and public open space.

13.63 Cumulative effects can relate to the loss and/or addition of features as a result of development that alter the physical fabric and character of a landscape, or they may relate to a change in the composition of views and the visual amenity experienced. With regards to cumulative visual effects, the Proposed Development need not necessarily be visible at the same time as a cumulative development in order to bring about an effect e.g. in-succession and/or sequential effects.

13.64 For the purposes of this assessment it is assumed that all the cumulative developments are brought forward, with their construction and operational phases coinciding with those of the Proposed Development. The assessment takes into consideration:

- The extent to which the emerging schemes and the Proposed Development extend or intensify the landscape and/or visual effects of each scheme;
- The extent to which the landscape resource is altered due to the modifications in land use and pattern;
- The interrelations between the different types of built forms;
- The incremental changes as a result of successive built forms being introduced;
- The temporal effects arising due to simultaneous or successive construction activities over an extended period of time; and
- The indirect effects arising from the enabling works of each emerging scheme and/or the consequences of the removal of elements of the landscape.

- 13.65 Given the separation distance between the Site and Cumulative Developments 2 - 4 there would be no potential for significant combined and/or in-succession visual effects. However, evidently as Cumulative Development 1 adjoins the Site to the west combined and in-succession visual effects will arise, whereby the construction works and future emergence of built form within Cumulative Development 1 will be perceived to be associated with / form an extension to the Site and the Proposed Development. This is likely to be most readily appreciated by residents on Camer Road, whereby the horizontal extent of the view occupied by construction works and/or new built form will be noticeably increased, and Large magnitude of effect will be experienced in both the construction phase and at Year 1 of operation, leading to a Moderate Adverse significant cumulative effect in each scenario respectively. With respect to the potential for sequential effects, this is limited to those using the local PRoW network (i.e. those travelling along PRoW NS250) and the highway network whereby people travelling between Culverstone Green and Sole Street (via the A227 and Camer Road).
- 13.66 With respect to those on PRoW NS250, evidently they will experience significant cumulative visual effects during both construction and operation as this PRoW passes through the Cumulative Development 1 area. Receptors will experience an altered visual amenity experience in all directions, with their existing views of open farmland replaced by construction works and in turn built form. Over time landscaping measures are likely to soften and partially ameliorate the harm, but nonetheless significant effects are likely to remain. On balance, a Large magnitude of effect will occur at construction and Year 1, resulting in a Major Adverse significant cumulative effect, and a Medium magnitude at Year 15, resulting in a Moderate Adverse significant cumulative effect.
- 13.67 Concerning users of the highway network travelling between Culverstone Green and Sole Street (via the A227 and Camer Road there is the potential for sequential visibility of the Proposed Development and each of the cumulative developments, with the receptors using this route of low sensitivity. When travelling along the route the overriding visual experience will not be overtly altered, currently there is a clear pattern of passing through several residential communities, broken-up by areas of farmland. This pattern will remain, with the most substantive change relating to a greater sense of development on arrival to Hook Green (be that either from the direction of Sole Street or Meopham).
- 13.68 With respect to landscape effects, those direct impacts on landscape features naturally relate to the fabric of each site in question and therefore they are considered holistically as part of the assessment with regards to cumulative effects on landscape character. Each cumulative development lies within the same published character areas as the Site: Ash Downs LCA, Luddesdown: West Kent Downs LCA, and Meopham Downs LCA. However, given that Cumulative Development 1 would be perceived as forming part of the Proposed Development and the discrete nature of each remaining cumulative development and the way in which effects will be experienced locally coupled with the limited geographic extent of the LCAs altered, it is considered that cumulative landscape effects would not arise. Accordingly, there would be no cumulative landscape effects over and above those reported for the cumulative developments in isolation due to existing modern development and/or

settlement edge characteristics being common across the area and the nature of the cumulative developments not departing from this prevailing character.

References

¹ Kent County Council (2026) Statistical Bulletin: Construction Industry in Kent

² **Kent County Council** (2025) Commissioning Plan for Education Provision in Kent 2025-2029