

M25 junction 10/A3 Wisley interchange TR010030

6.3 Environmental Statement Chapter 17: Summary

Regulation 5(2)(a)
Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

M25 junction 10/A3 Wisley interchange

The M25 junction 10/A3 Wisley interchange Development Consent Order 202[x]

6.3 ENVIRONMENTAL STATEMENT CHAPTER 17: SUMMARY

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Table of contents

Chapter	Pages
17. Summary	4
17.1 Introduction	4
17.2 Significance of effects	4
17.3 Mitigation	4
17.4 Residual effects	5
17.5 Summary of residual likely significant effects	5

Tables

Table 17.1: Summary of significant residual environmental effects detailed in the individual topic chapters (Chapters 5 to 15, Volume 6.1)	6
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17. Summary

17.1 Introduction

- 17.1.1 This chapter summarises likely significant residual effects reported in this Environmental Statement (ES). Topic specific impact assessments are presented in detail in Chapters 5 to Chapter 15 of Volume 6.1.
- 17.1.2 To assist in the understanding of the summary findings a number of assessment fundamentals are outlined below.

17.2 Significance of effects

- 17.2.1 The significance of environmental effects is largely defined by reference to 2 key factors:
- The value or sensitivity of the receptor; and
 - The magnitude of scale of the impact.
- 17.2.2 Chapter 4 Environmental Assessment Methodology of Volume 6.1 describes the general approach to the environmental assessment for each topic. For most topics the significance of an effect is defined in 5 categories (Neutral, Slight, Moderate, Large and Very Large). With the addition of the terms Adverse or Beneficial, the categories can be applied as a balanced 9-point scale (Neutral; Slight Adverse; Moderate Adverse; Large Adverse; Very Large Adverse; Slight Beneficial; Moderate Beneficial, Large Beneficial and Very Large Beneficial).
- 17.2.3 For the majority of environment assessment chapters, effects that are Moderate Beneficial/Adverse or above will be considered significant, with the exception of the methodology used to determine significance of effects associated with material assets (contained within Chapter 12 Materials and Waste, (Application Ref: TR010030/APP/6.3), for which effects that are Large Beneficial/Adverse or above will be considered significant.
- 17.2.4 Chapter 5 Air Quality, Chapter 6 Noise and Vibration, Chapter 14 Health and Chapter 15 Climate do not explicitly follow this general approach to determining the significance of effects, due to the nature of the topics and their methodologies. The criteria used to determine the significance of effects are outlined in these individual chapters.
- 17.2.5 In all cases, the assessment is based on the worst case scenario principle noted in Chapter 2 The Scheme of Volume 6.3, and the individual topic chapters (Chapters 5 to 15 of Volume 6.1) where relevant.

17.3 Mitigation

- 17.3.1 Measures to mitigate the effects of the Scheme have been identified and included within the topic chapters (Chapters 5 to 15, Volume 6.3). Mitigation measures have also been included in the Register of Environmental Actions and Commitments (REAC) which forms part of the Outline Environmental Management Plan (OEMP) (Application Ref: TR010030/APP/7.2), to be developed into a full Construction Environmental Management Plan (CEMP) by the appointed contractor.

17.4 Residual effects

- 17.4.1 Significant environmental effects that are identified with mitigation in place are referred to as residual effects. These are described in each topic chapter (Chapters 5 to 15 of Volume 6.3).
- 17.4.2 Some design features and mitigation measures may result in an environmental improvement. In these instances, the residual effect is recorded as beneficial.

17.5 Summary of residual likely significant effects

- 17.5.1 ~~Table 17.1~~~~Table 17.1~~~~Table 17.1~~~~Table 17.1~~ summarises the required mitigation measures and the likely significant effects (those residual effects with a significance of Moderate Adverse or Beneficial or greater) except for Air Quality, Noise and Vibration, Materials and Waste, Health and Climate where affects are recorded as noted in paragraphs 17.2.3 and 17.2.4 above.

Table 17.1: Summary of significant residual environmental effects detailed in the individual topic chapters (Chapters 5 to 15, Volume 6.1)

Receptor(s)	Description of effects	Adverse / beneficial	Construction / operation	Temporary / long term	Mitigation requirements	Mitigation delivery mechanism	Significance of residual effect(s) after mitigation
Air Quality – no significant effects							
Chapter 6 Noise and Vibration							
Construction vibration	Significant adverse effects from construction vibration predicted at seven sensitive receptors situated within 100 m of the percussive piling works for retaining walls and 25-50 m of work sites using a vibratory roller.	Adverse	Construction	Temporary	Where percussive piling is proposed, an alternate method resulting in lower levels of vibration should be used where practicable, such as rotary bored piling, vibratory piling, pre-boring prior to piling or the Giken method.	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP and Section 61 consents.	Significant adverse at two sensitive receptors (The Spinney and Squirrel Wood).
Chapter 7 Biodiversity							
Thames Basin Heaths Special Protection Area	<p>Short-term: Temporary loss of 8.67 ha within SPA (3.9 % of the Ockham and Wisley Commons SSSI component of the SPA).</p> <p>Potential temporary reduction in invertebrate resource for qualifying species due to loss of woodland buffering habitat.</p> <p>Potential temporary disturbance to qualifying species (noise).</p> <p>Long-term: Permanent loss of 5.9 ha within SPA (2.7 % of this component of the SPA).</p> <p>SPA suite of compensatory measures will lead to enhancement of 47.4 ha of the SPA (21.3 % of this component of the SPA) to include 22.5 ha of newly created heathland habitat and 24.9 ha of enhanced woodland habitats. Along with the permanent provision of 8.1 ha of wood pasture within the SPA compensation land.</p> <p>These measures will enhance the habitats present for invertebrates and nesting habitat for the qualifying species.</p>	Beneficial	Construction	Long term	<p>Habitat reinstatement of 8.2 ha of in temporary clearance areas/woodland buffer area.</p> <p>The site will be subject to protection from incursion and pollution prevention measures will be implemented during construction of the Scheme.</p>	As set out in the SPA management and monitoring document	Large beneficial
Ockham and Wisley Commons SSSI	<p>Short-term: Temporary loss of 16.01 ha within SSSI (7.26.0 % of the total SSSI). Loss of notable invertebrates (reason for SSSI designation) within the Scheme during clearance.</p> <p>Long-term: Permanent loss of 11.5 ha within SSSI (5.2 % of SSSI).</p> <p>The SPA suite of compensatory measures will lead to 22.5 ha of newly created heathland habitat and 24.9 ha of woodland enhancement and enhancement of Bolder Mere within the SSSI. With further measures adjacent to the SSSI to include creation of 10.4 ha of wood pasture; 20.2 ha of woodland enhancement at Chatley Wood, Park Barn Farm and Hatchford End; creation of 5.8 ha of acid grassland/heathland.</p> <p>Resultant overall loss of land within SSSI will be 11.5 ha, but the suite of compensation measures provided as part of the Scheme will result in habitats of better condition to compensate for this loss.</p>	Beneficial	Construction	Long term	<p>Habitat reinstatement of 12.3 ha in temporary clearance areas (trees, shrub, grassland and sandy banks).</p> <p>The site will be subject to protection from incursion and pollution prevention measures will be implemented during construction of the Scheme.</p>	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP and Section 61 consents.	Large beneficial

Receptor(s)	Description of effects	Adverse / beneficial	Construction / operation	Temporary / long term	Mitigation requirements	Mitigation delivery mechanism	Significance of residual effect(s) after mitigation
Ockham and Wisley LNR	<p>Short-term: Temporary loss of 19.3 ha within LNR (5.8 % of LNR).</p> <p>Long-term: Permanent loss of 12.7 ha within LNR (3.8 % of LNR).</p> <p>Resultant overall loss of land within LNR will be 12.7 ha, but embedded compensation measures provided as part of the Scheme will result in habitats of better condition to compensate for this loss.</p>	Beneficial	Construction	Long term	<p>Habitat reinstatement of 13.5 ha in temporary clearance areas (trees, shrub, grassland and sandy banks)</p> <p>The site will be subject to protection from incursion and pollution prevention measures will be implemented during construction of the Scheme.</p>	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP and Section 61 consents.	Moderate beneficial
Ancient woodland (Elm Corner and Heyswood)	<p><u>Construction</u></p> <p>Long-term: Permanent loss of 0.4 ha of ancient woodland at Elm Corner and Heyswood.</p> <p>Minor habitat fragmentation between two ancient woodlands due to construction of site access roads.</p> <p>43 ha of woodland planting and improved woodland linkages, soil translocation from ancient woodlands lost to provide seed bank for ancient woodland ground flora to establish in newly created areas.</p> <p>Enhancement of ancient woodland at Chatley Farm.</p> <p>Due to irreplaceable nature of ancient woodland, despite the increases in woodland area and enhancement of retained ancient woodland, there still remains a permanent loss of 0.4 ha of ancient woodland at Elm Corner and Heyswood.</p>	Adverse	Construction	Long term	Due to the irreplaceable nature of ancient woodland habitat, all habitat loss within ancient woodland, whether permanent or temporary, is considered as permanent loss of ancient woodland.	N/A	Moderate adverse
Veteran trees	<p>Long-term: Permanent loss of up to 11 veteran trees: two confirmed losses with the loss/retention of the nine veteran trees to be determined during detailed design</p> <p>For every veteran tree loss, three trees of the same native species will be planted with space around them to develop into an open crown.</p> <p>Due to irreplaceable nature of veteran trees, despite the increase of trees planted there will still be a permanent negative effects as a result of the Scheme.</p>	Adverse	Construction	Long term	Confirmation of tree to be lost/managed will be undertaken prior to construction and detailed within an Arboricultural Method Statement (AMS), that shall also confirm protection measures for the retained trees. Any trees which have not been previously surveyed (or areas where design changes occur during detailed design) will be assessed following the methodology detailed in British Standard 5837: 2012 'Trees in relation to Design, Demolition & Construction – Recommendations' and this information will feed into the AMS.	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP and Section 61 consents.	Moderate adverse
Sand lizard	<p>Short-term: It is considered unlikely that the sand lizard population will be affected during construction.</p> <p>Long-term: Creation of 22.5 ha of heathland habitat suitable for sand lizards, of which 13.2 ha are located adjacent to Chatley Heath.</p>	Beneficial	Construction	Long term	<p>Clearance of habitat under PMW for reptiles.</p> <p>Construction exclusion fencing will be used to prevent encroachment onto adjacent habitats.</p> <p>Potential use of reptile fencing (to be determined at detailed design) to ensure sand lizards do not move into the working area.</p>	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP.	Moderate beneficial
Spotted flycatcher	<p>Short-term: Vegetation clearance of 22.5 ha of Scots pine plantation is likely to result in the loss of up to three spotted flycatcher territories.</p> <p>Long-term: Creation and enhancement of habitats provided as part of the Scheme including enhancement of retained woodland and planting of</p>	Beneficial	Construction	Permanent	Habitat clearance and enhancement works carried out under a PMW for nesting birds. Embedded environmental design (habitat enhancement)	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP.	Temporary adverse but overall a permanent neutral effect of moderate significance

Receptor(s)	Description of effects	Adverse / beneficial	Construction / operation	Temporary / long term	Mitigation requirements	Mitigation delivery mechanism	Significance of residual effect(s) after mitigation
	new woodland and open nest boxes to be provided for spotted flycatcher.						
Chapter 8 Road Drainage and the Water Environment – no significant effects							
Chapter 9 Landscape and Visual							
Visual impact	Sixteen receptors (including residential properties, rights of way, commons/public open space, visitor attractions and places of work) would experience significant effects during construction due to loss of screening vegetation and the presence of the machinery required to build the Scheme.	Adverse	Construction	Temporary	Mitigation would not be possible for these temporary effects.	N/A	Moderate adverse
Visual impact	Nine visual receptors would experience significant adverse impacts during operation in year 1 as mitigation planting wouldn't have matured. By year 15 the mitigation planting would have reached a level of maturity to reduce the number of significant adverse impacts to none.	Adverse	Operation year 1	Temporary	Mitigation planting wouldn't have reached maturity to offset the impacts resulting from construction activities.	N/A	Moderate adverse
Road users	Moderate adverse effects on road users due to loss of planting and presence of construction infrastructure and machinery.	Adverse	Construction	Temporary	Mitigation would not be possible for these temporary effects.	N/A	Moderate adverse
Landscape character	Landscape character would be adversely affected during construction due to loss of planting and presence of construction infrastructure and machinery. Felling and thinning works associated with the SPA enhancement and replacement land works will alter the character of the area, reverting parts back to pre-existing heathland.	Adverse	Construction	Temporary	Mitigation would not be possible for these temporary effects. Restoration to heathland is an effect not to be mitigated although replacement woodland planting is included in the scheme.	N/A	Moderate adverse
Chapter 10 Geology and Soils							
Controlled Waters (within the Scheme)	Remediation / removal of existing contamination will be undertaken where necessary to reduce the risk to the receptor via leaching/vertical migration of contaminants in soils to underlying groundwater.	Beneficial	Operation	Long term	GI and risk assessment as necessary to confirm risk. Design and implementation of appropriate remediation if risk assessments deem necessary.	Design / Implemented as part of the Scheme.	Moderate beneficial
Controlled Waters (within the study area)	Remediation / removal of existing contamination will be undertaken where necessary to reduce the risk to the receptor via leaching/vertical migration of contaminants in soils to underlying groundwater followed by lateral migration.	Beneficial	Operation	Long term	GI and risk assessment as necessary to confirm risk. Design and implementation of appropriate remediation if risk assessments deem necessary.	Design / Implemented as part of the Scheme.	Moderate beneficial
Chapter 11 Cultural Heritage – no significant effects							
Chapter 12 Materials and Waste – no significant effects							
Chapter 13 People and Communities							
Community Assets	Temporary land take during construction is considered to be significant residual adverse at the high sensitivity receptors of Ockham Common and other open space	Adverse	Construction	Temporary	Restoration of land to former condition after construction.	As set out in the Outline CEMP (TR010030/APP/7.2) to be implemented through the CEMP.	Significant
	Moderate adverse amenity effects at Feltonfleet School during construction.	Adverse	Construction	Temporary	Construction activities to be programmed to minimise noise effects as far as possible. Consider the use of temporary noise barriers and works outside school hours/terms	As set out in the Outline CEMP (TR010030/APP/7.2)	Significant

Receptor(s)	Description of effects	Adverse / beneficial	Construction / operation	Temporary / long term	Mitigation requirements	Mitigation delivery mechanism	Significance of residual effect(s) after mitigation
						to be implemented through the CEMP.	
	Permanent loss of 13 ha and temporary loss of 143ha of common land and open space.	Adverse	Construction	Temporary	Replacement land to be put in place before the land is lost and then to be managed inperpetuity for public access.	Provided as part of the Scheme	Significant
	Provision of equally advantageous replacement land for that lost which will contiguous with the the existing common land and open space.	Beneficial	Construction	Permanent	None	Provided as part of the Scheme	Significant
Non motorised Users	Beneficial effects once the Scheme is operational are forecast along the new A3 Bridleway route, with new additional overbridges across the A3 and M25, linking into the new Wisley Lane Bridleway and new pedestrian crossings at Painshill and Ockham junctions. Existing footbridges across the A3 and M25 are to be replaced with some being incorporated into the A3 Bridleway route. Bridleways are to be created within the commons either from new or existing permissive paths. This will result in significant beneficial residual effects to NMUs in operation.	Beneficial	Operation	Permanent	None	Provided as part of the Scheme.	Significant
Vehicle Travellers	During construction, moderate adverse effects are likely to be experienced by road users around Junction 10 (A3 and M25) due to loss of amenity planting and changes to the landscape.	Adverse	Construction	Temporary	Replacement of roadside planting with new planting after construction. Once mitigation plantation has matured (by Year 15), the significance of effect would consequently be reduced to neutral.	Implemented as part of the Scheme.	Significant (Year 1), Not significant (Year 15)
Chapter 14 Health							
Local economy and employment	An increase in the number and quality of jobs and the stability of jobs through an improvement in the local (jobs for residents) and wider economy (jobs for people in the district and region) has positive health benefits on non-communicable disease, mental health and wellbeing, and, to a lesser extent, nutritional disorders. The proposed Scheme will generate construction jobs and procure goods and services form construction-related businesses. It has the potential to provide jobs for local people directly on the Scheme and through construction-related business that the Scheme procures from.	Beneficial	Construction	Temporary	Ensuring that local job centres are actively make local residents aware of the job opportunities on the Scheme. Scheme to promote recruitment locally and regionally.	Through community engagement.	Significant benefit
Chapter 15 Climate – no significant effects							
Chapter 16 Cumulative Effects							
Human - residents, including community and private assets, sensitive receptors and vulnerable groups	In-combination and cumulative noise and landscape effects on some receptors, notably Felton Fleet School and West Lodge and moderate adverse effects on community, residential and business receptors in relation to land take. Cumulative effects related to delays in the delivery of proposed community facilities.	Adverse	Construction	Temporary	Mitigation described in each relevant EIA chapter.	Mitigation to be implemented through the CEMP.	Moderate adverse
Human - all travellers, i.e. vehicle travellers,	In-combination and cumulative effects on driver stress and users of public rights of way during construction related to noise, dust, land take, access	Adverse	Construction	Temporary	Mitigation described in each relevant EIA chapter.	Mitigation to be implemented through the CEMP.	Moderate adverse

Receptor(s)	Description of effects	Adverse / beneficial	Construction / operation	Temporary / long term	Mitigation requirements	Mitigation delivery mechanism	Significance of residual effect(s) after mitigation
cyclists, and pedestrians	changes, visual amenity and physical disruption to Public Rights of Way.						

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