

A14
Cambridge to Huntingdon
improvement scheme
Development Consent Order Application

HE/A14/EX/240

TR010018

HE/A14/EX/240

Environmental Statement Chapter 19:

Summary of the EIA

November 2015

19 Summary of the environmental impact assessment

19.1 Introduction

- 19.1.1 This updated chapter summarises the findings of the impact assessments reported in the *Environmental Statement (ES)*. This chapter has regard for representations and discussions on the ES, errata noted in relation to the ES (noted in the *Errata Report (HE/A14/EX/10)* submitted in May 2015), and refinements to design and mitigation proposed for the scheme during the DCO examination resulting in changes to the residual likely significant effects reported.
- 19.1.2 Likely significant effects are tabulated in *Table 19.1*. Impact assessments are presented in detail in *Chapters 8 to Chapter 17* of the *ES*. This updated chapter completely replaces the version submitted with the DCO application in December 2014. It should be noted that no additional likely significant adverse environmental effects have been identified that were not previously reported in the original ES in December 2014 or noted in the subsequent *Errata Report (HE/A14/EX/10)* submitted in May 2015. It should also be noted that updated ES chapters on noise and vibration (Chapter 14, HE/A14/EX/197) and water (Chapter 17, HE/A14/EX/235) have been submitted during the examination to reflect refinements to mitigation proposed during the examination and these updates have been taken into account in this updated summary.
- 19.1.3 To aid in understanding the summary findings, the following sections outline some assessment fundamentals.

19.2 Significance of effects

- 19.2.1 The significance of environmental effects is largely defined by reference to two key factors:
- the 'value' or 'sensitivity' of the receptor; and
 - the 'magnitude' or 'scale' of the impact.
- 19.2.2 All the environmental assessments are based on the application of published, topic-specific guidance found in the *Design Manual for Roads and Bridges (DMRB)* (Highways Agency et al., 1993), where this is available, or other appropriate guidance. In most cases, effects are defined according to the following broad descriptors:
- adverse or beneficial (i.e. they are undesirable effects, or they represent an improvement over the baseline situation);
 - construction or operational (i.e. caused by the construction of the scheme, or by the operation of the scheme after opening);
 - short-term or long-term (i.e. they are felt for less than 15 years, or they would still be felt 15 years after construction and beyond); and
 - significant or not significant.

- 19.2.3 *Chapter 6* describes the general approach to the environmental assessment for each topic. For most topics the significance of an effect is described on a five point scale:
- neutral;
 - slight;
 - moderate;
 - large; and
 - very large.
- 19.2.4 In this assessment, for the purposes of the *EIA Directive (2014/52/EU)* (European Union, 2014), an effect is considered to be significant if it is moderate or greater.
- 19.2.5 Some topics in this assessment have used a different approach to assessing the level of significance in accordance with discipline specific best practice guidance. The specific approach applied to each environmental topic is fully described in the assessment chapters (*Chapters 8 to 17*).
- 19.2.6 In all cases, the assessment is based on the worst case scenario as described in *Chapter 6* and the individual topic chapters.

19.3 Mitigation

- 19.3.1 Measures to mitigate the effects of the scheme have been identified and included as scheme features or commitments (*Chapter 20 and Appendix 20.1*). Appendix 20.1 has been updated during the examination to incorporate refinements to mitigation proposed for the scheme during the DCO examination (HE-A14-EX-203). These mitigation measures have been taken into account in the assessment of residual effects for each topic.

19.4 Residual effects

- 19.4.1 Following implementation of mitigation, the environmental effects envisaged to remain are referred to as residual effects. These are described in each topic chapter.
- 19.4.2 Some design features and mitigation measures may result in an environmental improvement. In these instances, the residual effect is recorded as 'beneficial'.

19.5 Summary of environmental effects

- 19.5.1 *Table 19.1* summarises the likely significant effects, i.e. residual effects with a significance of moderate or greater. The required mitigation measures are also outlined.

19.6 Transboundary effects

- 19.6.1 Regulation 24 of the *Infrastructure Planning (Environmental Impact Assessment) Regulations 2009* requires the consideration of any likely

significant effects on the environment of another European Economic Association (EEA) State.

- 19.6.2 Guidance on the consideration of transboundary effects is provided in Planning Inspectorate's Advice Note Twelve: Development with significant *transboundary impacts consultation, version 3* (April, 2012).
- 19.6.3 The transboundary screening effects matrix is provided in *Appendix 19.1*. This confirms that the only transboundary effect relates to increases in greenhouse gases.

Table 19.1: Summary of significant residual environmental effects

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
Chapter 8: Air quality– none to report					
Chapter 9: Cultural heritage					
Effects on historic buildings¹					
Beneficial impacts would result from the reduction of traffic levels and noise intrusion from de-trunking of the existing A14 on three conservation areas and Huntingdon Bridge.	Beneficial	O	L	Effects on historic buildings would be mitigated by historic building recording, and hard and soft landscaping.	Very large beneficial
The removal of the existing A14 viaduct would have beneficial effects on the character of Huntingdon Conservation Area and Huntingdon Train Station.	Beneficial	O	L		Large beneficial
Adverse impacts would result from the presence of new road infrastructure on Mill Common in the landscape, and visual and noise intrusion resulting from its operation on Huntingdon Conservation Area.	Adverse	O	L		Moderate beneficial
Three buildings would experience beneficial adverse impacts as a result of the scheme through decrease in traffic noise.	Beneficial	O	L		<ul style="list-style-type: none"> • Godmanchester Post Street Conservation Area • Godmanchester Earning Street Conservation Area
The same three buildings would	Adverse	O	L		Moderate adverse and large beneficial <ul style="list-style-type: none"> • Huntingdon Conservation Area Moderate adverse and slight beneficial <ul style="list-style-type: none"> • 2 The Walks North, Huntingdon • 3-4 The Walks North, Huntingdon • 5-6 The Walks North,

¹ DMRB notes there is no requirement to produce a single overall score. Where there are adverse and beneficial effects these will need to be brought out in the assessment, and not obscured by balancing them off against one another.

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
experience adverse impacts as a result of the scheme through loss of setting.					Huntingdon
Chapter 10: Landscape					
Landscape designations There are a number of mature trees with tree preservation order (TPO) status within the scheme area.	Adverse	C/O	L	The outline design has been adjusted to retain TPO trees where practicable and further mitigation would be incorporated at the detail design stage. However, it is not possible to fully mitigate the removal of TPO trees.	Large adverse
Landscape character The introduction and expansion of major highway infrastructure would affect the character of the existing landscape and there would be some localised loss of privately owned green space within Huntingdon. The removal of the existing A14 viaduct in Huntingdon would benefit the townscape and some views, such as from users of public rights of way and people accessing Huntingdon railway station. The proposed borrow pit areas would change land use and landscape character.	Adverse	C/O	L	Mitigation measures are proposed to lessen the landscape impacts. Environmental bunds and extensive proposed tree and shrub planting would help to integrate the scheme and the borrow pits into the wider landscape.	Residual effects - summer year 15: <ul style="list-style-type: none"> North Flowing Ouse Valley Floodplain Huntingdon: Eastern Part of Mill Common Large adverse
	Adverse	C/O	L		<ul style="list-style-type: none"> Huntingdon: Hinchbrooke and Central Part of Views Common Moderate adverse
	Beneficial	C/O	L		<ul style="list-style-type: none"> Huntingdon: Station Environs Large beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
<p>Visual impact</p> <p>There would be views of major highway infrastructure and junctions, associated gantries, noise barriers and environmental bunds, signage and lighting, and extensive borrow pit areas from surrounding housing, businesses, public rights of way and public areas. Removal of existing vegetation would open up views towards the scheme and increase the prominence of highway infrastructure within the landscape. Reduction in traffic in some areas would benefit the landscape character as well as views from within the area.</p>	Adverse / beneficial	C/O	L	Mitigation measures are proposed to lessen the visual impacts. Environmental bunds and extensive proposed tree and shrub planting would help screen the highway and traffic flow.	<p>Residual effects - summer year 15:</p> <p><u>Residential properties:</u></p> <ul style="list-style-type: none"> • large adverse – 29 • moderate adverse – 48 • moderate beneficial – 137 • large beneficial -96 <p><u>Public rights of way:</u></p> <ul style="list-style-type: none"> • very large adverse – 1 • large adverse – 7 • moderate adverse – 17 • moderate beneficial – 1 • large beneficial - 3 • very large beneficial – 1 <p><u>Commercial properties:</u></p> <ul style="list-style-type: none"> • moderate adverse – 1 • moderate beneficial – 1 <p><u>Public receptors:</u></p> <ul style="list-style-type: none"> • large adverse – 1 • moderate adverse – 4 • very large beneficial – 1
Chapter 11: Nature conservation					
Habitat gain during operation.	Beneficial	O	L	The restoration and long term management of the borrow pits (as set out in HE/A14/EX/207) would provide new habitats for	Slight to Moderate beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
				all species found in the zone of influence of the scheme. Construction of the scheme would result in a significant amount of new semi-natural habitat (271ha) which would be beneficial to all species.	
Chapter 12: Geology and soils – none to report					
Chapter 13: Materials					
The impact would involve the use of high volumes of primary aggregate resources won on-site. Potential impacts associated with land-use, ecology, water resources and dust associated with on-site excavation and storage of borrow pit materials are covered under <i>Chapters 8, 12, 14, 17 and Appendix 3.2.</i>	Adverse	C	L	On-site materials would be reused wherever practicable subject to appropriate testing for suitability for the proposed end use.	Moderate adverse
The impact would involve the use of high volumes of materials that would need to be imported.	Adverse	C	L	Methods to reduce the use of and impacts of importing primary materials would be considered throughout the development of the scheme. This would include reuse of on-site materials and use of secondary/recycled materials locally and responsibly sourced.	Moderate adverse

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
				Where importation of materials is required, the methods of this would be explored with the contractor which would include exploring the use of railheads. Transport routes for road haulage would be identified and discussed with the highways authority. Incorporate the use of recycled content in new materials to at least 25%.	
The impact of the scheme upon carbon emissions are an inevitable result of the use of materials and energy expended in construction.	Adverse	C	T/L	Materials to be re-used and recycled, as far as practicable. Exploration of the use of railheads for transport, and routes for road haulage would be identified and discussed with the highways authority.	Construction phase: 981,432 tonnes of CO ₂ e (tCO ₂ e)
Chapter 14: Noise and vibration					
Construction noise impact upon sensitive receptors.	Adverse	C	T	The method of controlling construction noise and vibration on site is defined in the Code of Construction Practice (CoCP)(Appendix 20.2) as updated during the examination (HE/A14/EX/244). Principally, that the works will shall be	A significant residual construction noise effect is identified at 5 communities, on a temporary basis (as set out in HE/A14/EX/197): <ul style="list-style-type: none"> approximately 10 dwellings at the south west corner of RAF

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				undertaken in a manner which demonstrates that best practicable means (as defined in Control Of Pollution Act 1974) is adopted at all times to minimise construction noise and vibration. Furthermore, the CoCP (<i>Appendix 20.2</i>), as updated during the examination (HE/A14/EX/244), identifies off-site mitigation which would ensure that a significant adverse effect is not identified at any individual dwelling.	<p>Brampton</p> <ul style="list-style-type: none"> • six dwellings on A14 between Bar Hill and Girton. • approx. 25 dwellings on Girton Road and Wellbrook Court, Girton • approx. 25 dwellings on Lone Tree Ave and Cambridge Road, Impington • approx. 30 dwellings on St George St, Huntingdon
Noise impact during scheme operation.	Beneficial	O	L	Base scheme mitigation with acoustic barriers and very low noise surfacing where sustainable.	As set out in <i>HE/A14/EX/197</i> , during operation, over 3,200 dwellings along existing A14 corridor through Huntingdon, Godmanchester and Fenstanton and many sensitive non-residential facilities, including Hinchingsbrooke Hospital, Stukeley Meadow Primary School and Hemingford Nursery School would benefit from noise reductions as a result of scheme. These

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
					<p>include several Important Areas identified in action plans published under the Government's environmental noise regulations.</p> <p>There would be around 75 dwellings with a minor adverse or greater noise impact predominantly along new bypass section of the scheme between Brampton interchange and Fen Drayton.</p> <p>A single residential property situated close to scheme would qualify for noise insulation under the Government's regulations. Noise insulation combined with mitigation integrated into the scheme would avoid any significant adverse impact on health and quality of life, consistent with Government noise policy.</p>
Chapter 15: Effects on all travellers					
Substantial disruption to bridleways Madingley 2 and Girton 6 during construction.	Adverse	C	T	The Construction Code of Practice would require contractors to provide effective	Large adverse

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
Substantial disruption and loss of amenity to bridleway Boxworth 1 during construction, due to the proximity to borrow pit 5.				measures to minimise disruption to the public.	
<p>Loss of amenity and temporary disruption to NMU on public rights of way and permissive paths at Views Common, Mill Common and Hinchingsbrooke Park Road in Huntingdon during construction, and particularly cyclists at Histon junction during construction.</p> <p>Substantial loss of amenity to footpaths Brampton 2 and 15 and loss of amenity and disruption to bridleway Brampton 19, during construction due to large scale earthworks, a new private means of access (Ref. design change DR1.28b, made to allow Lenton Farms access to land west of borrow pit 1 and submitted in the <i>Consolidated Report on Proposed Non-Material Changes to the Application (HE/A14/EX/163)</i> September 2015), and the length of construction programme at this location.</p> <p>Loss of amenity to footpaths Brampton 3 and 4, Fenstanton 6</p>	Adverse	C	T	The Code of Construction Practice would require contractors to provide effective measures to manage disruption, and maintain public access as far as is practicable.	Moderate adverse

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
<p>during construction, as very close to borrow pits and soil storage areas.</p> <p>Loss of amenity and physical disruption to footpaths Fenstanton 6 and 7, Conington 1 and bridleway Dry Drayton 12 during construction including, in the case of footpath Fenstanton 7, the close proximity of borrow pit 3.</p> <p>Substantial construction activities associated with the Swavesey and Bar Hill junctions would cause inconvenience and loss of amenity to NMU crossing at these locations.</p>					
<p>Loss of amenity (rural character) for public rights of way from Silver Street and proposed New Barns Lane bridge. (Pathfinder long distance walk, Godmanchester 1, Offords 2 and 7, Hemingford Abbot 10 and 9, Hemingford Grey 10 and 13, and Mere Way).</p>	Adverse	C/O	L	<p>Sensitive landscaping proposals would help to integrate the new road with the landscape as much as possible and mitigate some of the noise and visual intrusion.</p> <p>Connectivity of public rights of way north and south of the new road would be maintained through the provision of shared use paths over the new bridges.</p>	Moderate adverse
<p>The linking of bridleway Brampton 19 with the proposed new bridleway and crossing of the A1 would allow people to safely cross the A1 and access</p>	Beneficial	O	L	<p>None. Sensitive borrow pit restoration would improve the diversity of landscape features and access to Brampton Wood</p>	Large beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
open space to the west and Brampton Hut service area and the area of new wetland created from borrow pits.				and Grafham Water would be improved with the new bridleway provision.	
Improved links and function of bridleways Swavesey 14 and 15 (Scotland Drove and Utton Drove) and footpaths Lolworth 5 and 6, bridleway Lolworth 10, Robin's Lane, Cambridge Road, New Barns Road, bridleway Dry Drayton 12, Conington 2, Fen Drayton 3, and footpaths Girton 7 and 8.	Beneficial	O	L	None. These public rights of way would link into the proposed new NMU route between Fenstanton and Girton. They currently terminate at the A14 from where there is no further access except on the A14 trunk road itself.	Large beneficial
Improved connectivity for NMU along A14 corridor between Swavesey and Girton.	Beneficial	O	L	None. The design includes provision of NMU bridges at Swavesey junction and Bar Hill junction which link to the proposed new NMU route and areas of residential and employment land use. Also there would be an NMU path and crossing facilities at the modified Dry Drayton junction bridge. These new facilities allow NMU to travel parallel to the A14 and to cross the A14 where previously there was not suitable provision.	Large beneficial
Improved connectivity for NMU between Ellington junction, Woolley	Beneficial	O	L	None. The design mitigates for the current lack of opportunity	Moderate beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
Road and Brooklands Lane, Alconbury. The construction of a local access road between new Ellington junction and Woolley Road with a footway, cycleway and equestrian track between the proposed NMU route adjacent to Brampton Meadow SSSI and Woolley Road, and a new bridleway from Woolley Road to Brooklands Lane, would provide a direct route, providing NMU with a new opportunity. (Ref. design change DR1.66, made following request from Huntingdonshire District Council and submitted in the <i>Consolidated Report on Proposed Non-Material Changes to the Application (HE/A14/EX/163)</i> September 2015)				to reach Woolley Road and Brooklands Lane in Alconbury except via the A1 trunk road which has hazardous conditions for NMU.	
The linking of footpaths Brampton 15 and Brampton 28 with the proposed new bridleway and crossing of the A1 would allow people to safely cross the A1 and access open space to the west and Brampton Hut service area.	Beneficial	O	L	None. The design provides new opportunities by linking existing public rights of way with proposed new non-motorised user (NMU) provision.	Moderate beneficial
Improved conditions for cyclists to use byways Brampton 1/Buckden 11.	Beneficial	O	L	None. The proposals to improve these byways may be beneficial for cyclists and improve connectivity between National Cycle Route (NCN) 12	Minor beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
				and Buckden.	
Improved convenience for NMU on Buckden Road (B1514).	Beneficial	O	L	None. The design includes a new NMU route alongside the road to a point where it meets existing provision.	Moderate beneficial
Improved provision on Potton Road (B1040) to link existing public rights of way (Hemingford Grey 10 and 14 and Conington 7).	Beneficial	O	L	A new shared use NMU path would be provided across the new Potton Road bridge (B1040) which would provide new links to existing public rights of way where there is currently no segregation between NMU and traffic on the B1040.	Moderate beneficial
Improved connectivity of Washpit Road to wider proposed NMU network.	Beneficial	O	L	None. The design links Washpit Road to new NMU path, where currently it meets A14 with limited connectivity to other routes.	Moderate beneficial
Improved amenity of footpaths across Views Common in Huntingdon.	Beneficial	O	L	None. The demolition of the A14 viaduct would remove a visually domineering structure and reduce traffic noise to open up and improve the overall amenity of the area for NMU.	Moderate beneficial
New roads to be crossed for NMU on Brampton Road (NCN 12 and 51) and Hinchingsbrooke Park Road.	Adverse	O	L	The design includes crossing facilities (pelican crossings) and signalised junctions to provide	Moderate adverse

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
				opportunities for NMU to cross and to reduce journey delay for NMU.	
Increased driver stress on the A1 trunk road from Brampton Hut junction to Brampton junction.	Adverse	O	L	The design would have improved highway standards which may help to reduce some contributors to driver stress such as frustration, route uncertainty and fear of accidents.	Significant adverse
Reduced driver stress on the A14 trunk road between Godmanchester and Trinity Foot/Swavesey junction	Beneficial	O	L	Provision of Huntingdon Southern Bypass results in likely levels of driver stress to be reduced from high to low.	Significant beneficial
Relocation of existing bus stops on A14 trunk road between Trinity Foot and Girton to proposed local access road.	Beneficial	O	L	None. Bus travellers currently have to take long diversions on foot across junction bridges with no NMU provision or to cross A14 carriageway directly to cross between east-bound and west-bound services. The scheme relocates bus stops onto local access road where they would be reached via the new NMU facility and be accessible by wheelchair and other pedestrians currently unable to access them.	Significant beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
Chapter 16: Community and private assets					
Overall approximately 1,000ha of agricultural land classified as 'best and most versatile' would be lost as a result of the scheme.	Adverse	C/O	L	Mitigation is through avoidance during scheme detailed design where practicable, and the careful storage and re-use of top soil.	Major adverse
Numerous (approximately 30) farms would be significantly impacted by loss of land, severance and access changes.	Adverse	C/O	L	Mitigation to involve the maintenance of access routes throughout scheme construction and operation phases as set out in the Code of construction practice.	Moderate adverse
Overall the scheme wide effects on community facilities and private property are expected not to be significant, but on an individual basis, a number will be significantly adversely impacted as follows: Cambridge Services, Cambridgeshire Constabulary HQ and Trinity College Wood, due to land take; three residential buildings due to demolition; and a few businesses due to land take and change in traffic patterns.	Adverse	C/O	L/T	Maintain essential access for private residences, community facilities and businesses throughout the construction period. General approach in <i>CoCP Appendix 20.2</i> as updated during the examination (HE/A14/EX/244). Ongoing consultation of design to ensure appropriate provision for replacement access where required.	Moderate Adverse
Development land primarily to be impacted by changes in access which may affect the viability of the development proposals. The effect on	Beneficial	O	L	Improved access included as part of scheme design.	Beneficial

Description of effect	Adverse/ beneficial	Construction / operational	Long term/ temporary	Mitigation requirements	Significance of residual effect after mitigation
development is likely to be beneficial overall as the scheme would improve access to as yet unbuilt planning allocations.					
Overall the effects of the scheme on community severance are not thought to be significant, but at the individual community level Boxworth is expected to have moderate adverse effects due to the proximity of borrow pit 5.	Adverse	C	T	Construction effects are managed through the <i>CoCP Appendix 20.2</i> as updated during the examination (HE/A14/EX/244).	Moderate Adverse
Socio-economic impacts from the scheme in terms of the impact employment in the region to result in approximately 800 to 1,600 additional jobs to the local region.	Beneficial	C	T	The regional economy would benefit from the creation of additional direct and indirect jobs to the local region during construction of the scheme.	Beneficial
Chapter 17: Road drainage and the water environment					
Flood risk and drainage – none to report					
Surface water – hydromorphology – none to report					
Surface water quality – none to report					
Groundwater – none to report					
Adverse or beneficial	Construction (C) or operational (O)		Long term (L) or temporary (T)		

19.7 Bibliography

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