

# **A12 Chelmsford to A120 widening scheme TR010060**

## **6.3 ENVIRONMENTAL STATEMENT APPENDIX 13.2 STAKEHOLDER ENGAGEMENT AND SCOPING FOR HUMAN HEALTH**

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**ENVIRONMENTAL STATEMENT**  
**APPENDIX 13.2 STAKEHOLDER ENGAGEMENT AND SCOPING FOR**  
**HUMAN HEALTH**

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# 1 Stakeholder engagement

## 1.1 Scoping feedback

- 1.1.1 Table 1.1 identifies the key feedback received from the Scoping Opinion (Planning Inspectorate, 2021) for the population and human health aspect.

**Table 1.1 Key Scoping Opinion feedback for population and human health**

Stakeholder	Comment	Response
Planning Inspectorate	Human health effects associated with large-scale earthworks can be scoped out of assessment in population and health.	This matter has been scoped out of the assessment.
Planning Inspectorate	The assessment should include figures showing where temporary or permanent loss of land would occur, where demolition of residential properties would be required, and where temporary or permanent diversions to public rights of way (PRoW) and other routes would be required during construction and operation of the proposed scheme. Locations of sensitive community assets and equestrian routes should be shown on a figure.	Figure 13.2 of the Environmental Statement [TR010060/APP/6.2] shows land use and accessibility impacts, including public rights of way. Reference should also be made to the Land Plans [TR010060/APP/2.7] for more detail.
Planning Inspectorate and Public Health England	The assessment should consider increasing the length and changing the amenity of PRoW. Alternative access for agricultural vehicles should be provided where necessary, and any permanent severance should be justified. Temporary traffic management proposals should make provision for walkers, cyclists and horse riders.	These issues are assessed in Section 13.10 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1] and the requirement for traffic management proposals to make provision for walkers, cyclists and horse riders is set out in the Register of Environmental Actions and Commitments (REAC), which is within the first iteration of the Environmental Management Plan (EMP) [TR010060/APP/6.5].

Stakeholder	Comment	Response
Essex County Council and Public Health England	The assessment of health impacts should consider health inequalities and should assess effects on both physical and mental health.	The assessment addresses impacts on both physical and mental health as well as the issue of health inequalities. A mental wellbeing impact assessment (MWIA) is provided in Appendix 13.4 of the Environmental Statement [TR010060/APP/6.3]. The MWIA has provided a tool to inform the human health assessment provided in Section 13.18 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Essex County Council and Public Health England	The proposed scheme should make a positive contribution to active travel, physical activity levels and access to greenspace.	The current design includes provision for walkers, cyclists and horse riders which is described in Chapter 2: The proposed scheme, of the Environmental Statement [TR010060/APP/6.1]. The effect on active travel and health is assessed in the human health assessment in Section 13.18 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Essex County Council	Reference was made to specific community assets that should be described in the baseline, including Beaulieu Central, Maltings School, Rivenhall End C of E Primary School, Hatfield Peverel Infant School, St Andrews Junior School, Little Bears Nursery and Hatfield Peverel Nursery.	The identified assets are described within Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1] and shown on Figure 13.1 of the Environmental Statement [TR010060/APP/6.2].
Essex County Council	Impacts on bus services and on 'blue light' services should be considered.	Potential impacts on bus stops, in terms of accessibility for walkers and cyclists, are considered in Section 13.10 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1]. Impacts on bus services and emergency services are assessed in relation to the wider determinant 'Access to facilities, services, employment, education and skills'.

Stakeholder	Comment	Response
Essex County Council	Impacts on socioeconomics should be considered. Specifically, opportunities for local employment and training opportunities.	The assessment considers impacts on socio-economics as one of the wider determinants of human health. The applicant is considering opportunities to provide social value such as local employment which is set out in Section 13.17 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Public Health England <sup>1</sup>	<p>Support for design development that minimises public exposure to air quality pollutants, addresses inequalities of exposure and maximises opportunities for physical activity.</p> <p>Identification of wider determinants of health that the assessment should address, and of vulnerable groups that should be considered.</p> <p>Suggested guidance to follow for assessment of health impacts associated with noise, which involves quantification approaches.</p>	A follow up meeting was held on 29 January 2021 with Public Health England to discuss the scoping response and the approach to the assessment. Further clarification of the scope of wider determinants and the methodology for assessing impacts on mental health was provided to Public Health England on 5 February 2021 (see Section 2 of this Appendix) and has informed the detailed methodology provided in Section 13.12 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].

1.1.2 The full Scoping Opinion, as well as the applicant's response regarding how and where comments have been addressed in the Environmental Statement and draft Development Consent Order (DCO), is included within Appendix 5.1 of the Environmental Statement [TR010060/APP/6.3].

1.1.3 Following the Scoping Opinion, a meeting was held with Public Health England on 29 January 2021 to discuss some of the issues raised in the scoping feedback and how that could inform the assessment for inclusion in the Environmental Statement. A supplementary methodology document was subsequently prepared and issued to Public Health England for comment on 9 March 2021. The supplementary methodology has informed the identification of vulnerable groups and scope of wider determinants included in the assessment of human health. It also set out the applicant's proposed approach to carrying out a Mental Wellbeing Impact Assessment, as set out in Appendix 13.4 of the Environmental Statement [TR010060/APP/6.3].

<sup>1</sup> Public Health England has now been disbanded and its relevant functions relevant for the context of EIA were transferred to the UK Health Security Agency (UKHSA) and the Office for Health Improvement and Disparities (OHID) in October 2021. Since all consultation feedback comments were made before October 2021, the name Public Health England is used.

- 1.1.4 Table 1.2 identifies the key feedback received from the statutory consultation. All comments raised during the statutory consultation, as well as the applicant's responses, are included in the Consultation Report [TR010060/APP/5.1].

**Table 1.2 Key statutory consultation feedback for population and human health**

Stakeholder	Comment	Response
Essex County Council	Requested impacts on active travel should be mitigated and highlighted need to promote and maximise potentially new active travel opportunities through the construction and operation stages.	Section 13.10 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1] provides an assessment of likely significant effects on active travel through the construction and operational phases of the proposed scheme. Embedded design and mitigation measures for active travel are set out in section 13.9 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Essex County Council	Where previous severance of off-road routes for these [walking, cycling, horse rider] users has occurred or where public footways are lacking, Essex County Council highlights there will be valuable opportunities to address severance, make positive improvements and to improve connections with public transport provision.	Section 13.18 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1], has considered the potential impacts and opportunities of the proposed scheme on past severance and on existing walking, cycling and horse riding provision.
Essex County Council	Cumulative impact of similar and concurrent schemes should be considered, particularly regarding employment opportunities, impact to existing local companies, and potential opportunities for skills training programmes, shared apprenticeships, and traineeships.	This is considered in Chapter 16: Cumulative effects assessment, of the Environmental Statement [TR010060/APP/6.1].
Essex County Council	Additionally, inclusion of a clear statement around ensuring that growth and jobs benefit the local area directly during the construction phase is necessary.	A commitment has been made for the Contractor to advertise jobs locally. This is set out in Section 13.9 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1]

Stakeholder	Comment	Response
Essex County Council	<p>Access to NHS services, both during the day and night during the construction phase of the development, could be prejudiced and would need to be safeguarded.</p> <p>The rerouting of blue-light vehicles, healthcare workers, and patients to all healthcare settings needs to be further explained and the selection process of alternative routes needs to be further explained.</p>	<p>This is addressed in the Outline Construction Traffic Management Plan within Volume 7 of the DCO application [TR010060/APP/7.7].</p>
Essex County Council	<p>Another major issue highlighted is the burden to health services on the influx of construction workers introduced to the area.</p>	<p>This is considered in Chapter 16: Cumulative effects assessment, of the Environmental Statement [TR010060/APP/6.1].</p>
Essex County Council	<p>Consideration of carrying out a Health Impact Assessment (HIA) to ensure that human health is fully integrated and connected with the other subject matters of the Environmental Statement.</p>	<p>The health assessment is integrated into the Environmental Statement through this population and human health chapter.</p>
Essex County Council	<p>Economic impacts, both positive and negative, accordingly require greater attention within the Environmental Statement.</p>	<p>Economic impacts are assessed as part of the Combined Modelling and Appraisal Report for the proposed scheme TR010060/APP/7.3.</p> <p>The scope of this population and human health assessment is to assess effects on land use, accessibility and human health in accordance with the Design Manual for Roads and Bridges (DMRB) LA 112 standard (Highways England, 2020a). The human health assessment includes consideration of potential impacts on socio-economic determinants of health and how these may influence health outcomes in local communities.</p>



Stakeholder	Comment	Response
Public Health England (PHE)	PHE is concerned that the number of people that will experience an increase in noise is approximately eight times higher than those experiencing a decrease in the long term, and a more detailed consideration should be given to opportunities to reduce the number of people experiencing an increase in noise exposure. Additionally, the primary emphasis should be on noise control at source over noise insulation.	This assessment has drawn on the findings of Chapter 12: Noise and vibration of the Environmental Statement [TR010060/APP/6.1]. Section 12.10 of Chapter 12 sets out proposals for noise mitigation at source.
Public Health England	Given the large number of dwellings predicted to exhibit an increase in noise level, PHE recommends that the impacts of noise exposure are quantified in terms of health outcomes such as annoyance, sleep disturbance and cardiovascular disease. This would provide a clearer picture of the potential for adverse health effects.	Quantification has been undertaken as described in Section 13.12 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1]  The assessment within Chapter 13 Population and human health has drawn on those findings as evidence for the likely significance of effect on health outcomes.
Public Health England	PHE recommends that the population and human health chapter refers in greater detail to the noise and vibration chapter, in order to ensure that the full extent of potential health impacts is presented.	The assessment within Chapter 13 Population and human health of the Environmental Statement [TR010060/APP/6.1] has drawn on the findings of Chapter 12: Noise and vibration, of the Environmental Statement [TR010060/APP/6.1] to inform the assessment of likely significant effects on human health.
Public Health England	The Environmental Statement and any Equalities Impact Assessment should not be completely separated.	The assessment within Chapter 13 Population and human health of the Environmental Statement [TR010060/APP/6.1] has considered the potential for differential or disproportionate impacts on certain groups of people.

Stakeholder	Comment	Response
Public Health England	Vulnerable groups identified by the Wales Health Impact Assessment Support Unit should be referred to, to inform assessments of any possible differential impacts. In addition to health data, this should encompass deprivation, demographics and other socio-economic factors as these are currently missing.	The health baseline presented in the Preliminary Environmental Information Report (PEIR) (Highways England, 2021) did include information on age-groups and income deprivation. The socio-economic and demographic baseline has been expanded further in relation to vulnerable groups as set out in Table 13.12 in Section 13.12 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Public Health England	When drawing on the Mental Well-being Impact Assessment (MWIA) as a methodology, ensure that based on the findings there are clear mitigation strategies that are adequately linked to any local services or assets.	Mitigation proposals are set out in Sections 13.9 and 13.17 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1]. No significant impact on local services or assets has been identified during the assessment, as reported in Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1], nor the MWIA in Appendix 13.4 [TR010060/APP/6.3].
Public Health England	The scoping report does not identify any proposed approaches to monitoring for health and wellbeing. It is acknowledged that the need for and type of monitoring will evolve but a rational, robust and transparent monitoring strategy is required within the Environmental Statement, given the length of the proposed scheme.	Proposals for monitoring are set out in Section 13.19 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].

Stakeholder	Comment	Response
Braintree District Council	The human health study area in the assessment...should include Nounsley, although the addition of this village is unlikely to affect overall outcomes.	The village of Nounsley is outside of the study area for air quality and noise, as well as outside of the land use and accessibility study area as defined by DMRB LA 112. It is not considered there would be any likely significant effects for this village that warranted a need to extend the study areas. However, the village has been considered in the wider context of likely origins and destinations for people who may interact with the land use and accessibility study area.
Braintree District Council	Generally, land use and accessibility is set out logically, however, human health is not easy to follow as many of the determinants are linked back to land use and accessibility sections. It would be useful to summarise the effects according to the determinants... We would suggest assessment against health and wellbeing outcomes would also be a useful aid for understanding the proposed scheme... Identifying opportunities for enhancing health and wellbeing can also be a key outcome of the mitigation process.	The assessment of human health in Section 13.10 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1] has summarised the impacts on land use and accessibility before providing an assessment of how these impacts may potentially affect health and wellbeing outcomes. An attempt has been made to set out the assessment more clearly, with clear headings for each health determinant. Opportunities to enhance human health are identified in Section 13.17 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1].
Braintree District Council	For the baseline assessment, the housing allocations and planning applications used are inaccurately identified and the number of dwellings at each site needs updating.	This has been updated in the baseline (Table 13.6, within Section 13.7 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1]).

Stakeholder	Comment	Response
Braintree District Council	The future baseline assessment utilises Office for National Statistics (ONS) 2018 household projections which leads to residential property and housing in the Braintree area accruing a medium value and sensitivity... We believe population increase will be around 20% and the assessment should assign high value and sensitivity along with Chelmsford, Colchester and Maldon.	The assessment has taken on board this local advice and now considers the sensitivity of the housing resource in Braintree as 'high' in line with the neighbouring districts in the study area.
Braintree District Council	Impacts for each matter on both land use and accessibility and human health are identified at a high level generally, thus lacking any geography or granularity such as identifying or cross referencing which properties are at risk of sleep disturbance... There is a lack of geographical context despite the baseline identifying many of the affected land uses. These issues should be picked up though the Environmental Statement.	The assessment of land use impacts (excluding agriculture) has now been reported on a community by community basis to provide more local context. The human health assessment is dependent on the reporting of other aspect chapters in the Environmental Statement [TR010060/APP/6.1] and the level of geographical detail therein. It should be noted that the human health assessment reports likely significant effects on population health (see glossary), and as such has been generalised according to the likely pattern of impacts across the study area.
Braintree District Council	The assessment also does not appear, by way of referencing the likely significant adverse effects on noise, to take into account development likely to occur before first year of construction, i.e. in 2024 for example, is noise and air pollution impact on residents within new development at Land East of Gleneagles Way taken into account? We have similar concerns with the use of Strava heatmaps which provides data for land use now, but not in 2027. A measured adjustment should be made to the baseline data to account for planned changes.	The noise assessment that has informed this population and human health assessment now takes account of future receptors in planned developments. While Strava Global Heatmap data has been used to inform baseline use of routes, consideration has been made to the expected future baseline context. For example, if there are housing allocations on land which is currently agricultural, consideration has been given to the potential needs of future residents, and whether existing routes are likely to become more used in the future as proposed development is built out.

Stakeholder	Comment	Response
Braintree District Council	<p>There is little in the methodology about mental health which, as well as access to greenspace, could also be affected by access to other services, employment opportunities, noise and pollution... Mental health issues typically have a strong correlation in areas with lower social-economic resources and poor physical health outcomes but there isn't baseline in the PEIR for mental health... The report identifies there are no human health issues, including mental health, identified in relation to employment. This is due to the position that the viability of businesses relying on passing trade will not require assessment which we consider to be unsatisfactory. The impacts on mental health on changes to employment due to a number of businesses relying on passing trade is therefore unaccounted.</p>	<p>Section 13.12 of Chapter 13 Population and human health in the Environmental Statement [TR010060/APP/6.1] provides further detail on the human health assessment methodology, while a MWIA is included as Appendix 13.4 of the Environmental Statement [TR010060/APP/6.3] to help better inform the assessment with further evidence and analysis. The MWIA has considered potential impacts on the protective factors for mental health, for example concerns about financial security due to impacts on business.</p>
Braintree District Council	<p>We note that Witham scores significantly poorly across a range of physical health measures. The Environmental Statement should also include socio-economic measures to show why Witham scores worse than its peers to further understand the matter. Any mitigation measures for inequality (to be included in the Environmental Statement), any legacy improvement funds and accessibility, should improve outcomes at this location.</p>	<p>Socio-economic indicators have been included as part of the human health baseline. It should be noted that health indicator data has been updated since the dataset used in the PEIR, which show a narrowing of health and socio-economic inequality between wards in Witham compared to average for England.</p>

## 2 Wider determinants of health

### 2.1 Scope of wider determinants assessed

- 2.1.1 Table 1 in Appendix 1 of PHE's scoping response identified 21 wider determinants of health, which were categorised under four broad themes derived from PHE's analysis of the wider determinants of health mentioned in National Policy Statements:
- Access
  - Traffic and transport
  - Socioeconomic
  - Land use
- 2.1.2 The PHE stated in its scoping response that it '*will expect an assessment to have considered all of the determinants listed in Table 1 of Appendix 1 [of its scoping consultation response] as a minimum*'. Table 2.1 below lists each of the wider determinants under the themes and sets out the scoping considerations made for the assessment which has been reported in Chapter 13: Population and human health, of this Environmental Statement [TR010060/APP/6.1].
- 2.1.3 The proposed scope for these wider determinants was sent to PHE for comment on 26 February 2021. Two changes have subsequently been made to the scope, which were to scope in 'T2 access to/from public transport' and 'S6 community engagement' for construction impacts, as these issues were deemed relevant for the Environmental Statement once further information about the construction phase became available.
- 2.1.4 DMRB LA 112 sets out indicative types of health determinants to be identified for the baseline scenario (which then informs the assessment based on changes to these determinants).
- 2.1.5 There are considerable interrelationships between some of the determinants identified in PHE's scoping consultation response and those identified in DMRB LA 112. For this reason, many of the determinants have been grouped under one or more wider determinant themes for the health assessment. Table 2.1 presents the list of determinants identified in the PHE scoping advice, as well as the list of health determinants identified to be considered in DMRB LA 112. These determinants are grouped according to assessment themes used in the human health assessment, as presented in Chapter 13: Population and human health, of the Environmental Statement [TR010060/APP/6.1]. Table 2.1 therefore shows how the requirements of PHE's scoping response and the DMRB LA 112 are addressed within the Environmental Statement.

**Table 2.1 Scope of wider determinants of health identified by PHE**

Determinant	Scoping considerations	Scoping conclusion for this human health assessment	
		Construction	Operation
<b>Access</b>			
A1 Access to local public and key services and facilities	The proposed scheme has potential to affect access to community services and facilities on a temporary or permanent basis, either as a result of land take or through changes in the ability to access services or facilities via private or public transport, or active travel means. This determinant is heavily interrelated with determinants under 'traffic and transport' (T1, T2, T3 and T7).	In	In
A2 Access to good quality affordable housing	<p>One of the aims of the proposed scheme is to support planned housing growth in Essex and the surrounding region, however once in operation, the proposed scheme would not have a significant influence on the availability of good quality affordable housing, which is influenced more by housing policies and wider economic and market conditions.</p> <p>It is noted that there are several large developments proposed in the region and that there is some concern that pressure would be put on the housing stock due to numbers of construction workers coming into the area, which in turn may increase house prices. This is considered to be a potential cumulative effect. However, it is unlikely that sufficient information on other (third party) projects will be available to support this assessment and there is limited scope for the proposed scheme to address the issue in isolation.</p> <p>A small number of residential dwellings would require demolition to accommodate the proposed scheme, but this is not likely to be of a scale to influence access to good quality affordable housing as a wider determinant for population health.</p>	Out	Out

Determinant	Scoping considerations	Scoping conclusion for this human health assessment	
		Construction	Operation
A3 Access to healthy affordable food	The proposed scheme is not anticipated to significantly alter access to the range, type or affordability of food available for local communities, and therefore this is not considered a key issue for the assessment.	Out	Out
A4 Access to the natural environment	The proposed scheme is routed through urban fringe and rural areas and has potential to affect access between settlements and the countryside via public rights of way (PRoW) and local road networks. This determinant is interrelated with determinant A6 and those under 'traffic and transport' (T1, T3, T4 and T7).	In	In
A5 Access to the natural environment within the urban environment	The main potential way that the proposed scheme could influence this determinant would be through potential land-take affecting people's gardens. There is also the potential for loss of trees and vegetation that people see from their urban environment, further disconnecting people from the natural environment.	In	In
A6 Access to leisure, recreation and physical activities within the urban and natural environments	The proposed scheme has potential to affect access to existing outdoor recreational facilities such as parks, playing fields, cycleways and fishing lakes and also indoor recreational facilities such as leisure centres. This determinant is interrelated to determinants listed under 'traffic and transport' (T1, T3 and T7).	In	In
<b>Traffic and transport</b>			
T1 Accessibility	There are potential opportunities to improve the accessibility of the walking and cycling network in proximity to the proposed scheme, including removing or creating barriers to access for people with mobility impairments.	In	In



Determinant	Scoping considerations	Scoping conclusion for this human health assessment	
		Construction	Operation
T2 Access to/by public transport	During construction there is potential to disrupt access to public transport facilities such as bus stops and train stations, for example at Hatfield Peverel and Marks Tey. The existing A12 is used by local and regional bus services, but some bus stops are no longer serviced as the conditions are considered unsafe. The proposed scheme has potential to improve access to public transport once operational.	In	In
T3 Opportunities for access by cycling and walking	There are opportunities to improve provision for walkers, cyclists and horse riders as a result of the proposed scheme, including improving highway crossing provision opportunities. Access on some routes may be disrupted during construction. This determinant is interrelated to determinants listed under 'Access' (A1, A4, A6); 'Traffic and transport' (T1, T2, T4, T5, T6, T7); and 'Socio-economic' (S5).	In	In
T4 Links between communities	Once in operation there is potential for increased connectivity between communities as a result of improvements to road, cycling and pedestrian infrastructure. Construction activities have the potential to disrupt access. This is interrelated to determinants A1, T3 and T5.	In	In
T5 Community severance	The bypasses promoted by the proposed scheme would likely reduce through-traffic on the existing A12 through some settlements, potentially reducing severance in some locations once operational. However, there is also potential to alter traffic patterns generally and potentially induce increased traffic along some routes, which may contribute to severance. Construction activities have the potential to disrupt access. This is interrelated to determinants A1, T3, T4 and S5.	In	In
T6 Connections to jobs	The construction phase of the proposed scheme has the potential to disrupt connectivity. Once in operation, there is potential for improved ease of access between communities and employment, services, and leisure opportunities as a result of	In	In

Determinant	Scoping considerations	Scoping conclusion for this human health assessment	
		Construction	Operation
T7 Connections to services, facilities and leisure opportunities	improvements to road, cycling and pedestrian infrastructure. This is interrelated with determinants T3, T2, A1 and A6.	In	In
<b>Socio-economic</b>			
S1 Employment opportunities, including training opportunities	The proposed scheme may generate employment or training opportunities, predominantly associated with the construction phase of works. Whilst these are unlikely to have a significant impact on the local economy, there may be opportunities to address health inequalities by targeting training opportunities to disadvantaged groups as part of the proposed scheme's social value initiatives. It is not considered the proposed scheme would create employment and training opportunities in operation over and above the baseline situation where operation and maintenance of the highway is required.	In	Out
S2 Local business activity	De-trunking of the existing A12 has potential to affect footfall along this route for local businesses. In addition, land take from agricultural holdings may affect the viability of these businesses.	In	In
S3 Regeneration	Facilitating regeneration is not a direct objective of the proposed scheme, and the population and health baseline has not identified any potential regeneration areas within the study area for land use and access.	Out	Out
S4 Tourism and leisure industries	The tourism and leisure industry has not been identified as a key industry within the study area and the proposed scheme is unlikely to greatly influence this area of the economy. It is proposed to consider access to individual leisure facilities, where relevant, under determinants A6 and T7.	Out	Out

Determinant	Scoping considerations	Scoping conclusion for this human health assessment	
		Construction	Operation
S5 Community/social cohesions and access to social networks	For a scheme of this nature the key pathway to potential effects on social cohesion and social networks would be through changes to local traffic conditions and physical and perceived community severance. This is strongly interrelated to determinant T5 and also linked to T1, T3 and T4.	In	In
S6 Community engagement	As a nationally significant infrastructure project (NSIP), extensive public consultation and engagement is undertaken as part of the pre-application process for the development consent order (DCO). Community engagement is also an important consideration during the construction process and may be linked to mental wellbeing.	In	Out
<b>Land use</b>			
L1 Land use in urban and/or rural settings	The proposed scheme has potential to affect current and future land uses, particularly agricultural land and land allocated for housing development, as a result of direct land take and changes in access and amenity of land parcels.	In	In
L2 Quality of urban and natural environments	The proposed scheme has potential to change the amenity of the natural and/or built environment, for example through changes to air and noise pollution, as well as the introduction of new lighting or infrastructure. The implications of this on health are described, drawing on assessment results in Chapter 6: Air quality, Chapter 12: Noise and vibration, Chapter 8: Landscape and visual, Chapter 10: Geology and soils, and Chapter 14: Road drainage and the water environment, of this Environmental Statement [TR010060/APP/6.1].	In	In

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