

East Meath - North Dublin Grid Upgrade Environmental Impact Assessment Report (EIAR): Volume 3

Appendix A6.1 – Human Health Scoping

EirGrid

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Appendix A6.1 – Human Health Scoping Assessment

1. Scope of Human Health Assessment

1.1 Scoping of Health Determinants

Table 1.1 sets out the scope of the human health assessment based on the determinants identified in Institute of Environmental Management and Assessment (IEMA) Guide to: Effective Scoping of Human Health In Environmental Impact Assessment (IEMA 2022).

Table 1.1: Scoping of Health Determinants

Wider Determinant of Health	Scoped In or Out of Assessment	Justification for Scoping Assessment
Health Related Behaviours		
Physical activity	Out	As identified under 'Open space, leisure and play' and 'Transport modes, access and connections', there is the potential for disruption in access to community facilities used for recreational physical activity and walking and cycling routes which provide opportunities for physical activity through active travel. As these are the only two potential pathways to impacts on health outcomes associated with changes in physical activity levels, potential impacts will therefore be considered under the 'Open space, leisure and play' and 'Transport modes, access and connections' determinants.
Risk taking behaviour	Out	No potential pathway for a potential impact between this determinant and the Proposed Development has been identified.
Diet and nutrition	Out	No potential pathway for a potential impact between this determinant and the Proposed Development has been identified.
Social Environment		
Housing	Out	No demolition or land take from residential facilities is anticipated, and therefore, there is no potential pathway for a potential impact between these two determinants and the Proposed Development.
Relocation		
Open space, leisure and play	In	There are off-road sections of the proposed underground cable that will be located within or adjacent to settlements, for example at Hollystown and within Dublin. There is the potential for temporary disruption in access to areas of open space and recreational facilities during the Construction Phase, both where the proposed cable route will intersect such facilities, and if lane or road closures hinder access. There is also the potential for permanent disruption to access where easements will be required along the proposed cable route, although only infrequent maintenance access is likely to be required during the Operational Phase.
Transport modes, access and connections	In	Approximately 26km of the proposed underground cable will be routed along public roads (termed in-road), and the activities required to facilitate this during the Construction Phase may require the temporary closure or diversion of routes used by motorised vehicles, cyclists and walkers, affecting access to places of employment or study, community facilities such as shops, post offices, banks and medical facilities or transport connections such as bus stops and railway stations. Whilst it is anticipated that periodic access to the proposed underground cables for maintenance or testing may be needed during the Operational Phase, this is not considered likely to be sufficiently frequent in nature, or lengthy in duration, to result in a population level health effect.
Community safety	Out	The Proposed Development is not considered likely to affect risk of crime or perceived risk of crime. There are potential injury risks to the construction workers and members of the public associated with the Construction Phase. However, it is anticipated that these will be fully mitigated through compliance with S.I. No. 528/2021 - Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021 and the implementation of standard good construction practice measures.
Community identity, culture, resilience and influence	Out	No potential pathway for potential impacts between these determinants and the Proposed Development has been identified. Whilst the Proposed Development may result in temporary severance of transport routes or community facilities during the Construction Phase, this will be assessed under the 'Transport modes, access and connections' and 'Open space, leisure and play' determinants.
Social participation, interaction and support		

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Wider Determinant of Health	Scoped In or Out of Assessment	Justification for Scoping Assessment
Economic Environment		
Education and training	Out	Due to the specialised nature of the construction workforce required for Proposed Development, opportunities for vocational training are anticipated to be very limited. Temporary disruption to transport routes have the potential to affect access to places of study. However, this will be considered under the 'Transport, access and connections' determinant. No effects during the Operational Phase are anticipated.
Employment and income	In	Temporary and permanent land take from commercial facilities, predominantly agricultural land holdings, will be required during the Construction Phase. Depending on the extent and nature of these requirements, local employment opportunities within certain sectors has the potential to be affected. No effects during the Operational Phase are anticipated.
Biophysical Environment		
Climate change and adaptation	Out	Whilst the Proposed Development will result in construction carbon emissions (embodied carbon and relating to plant emissions), the magnitude of these emissions is not considered likely to be sufficient to contribute to localised changes in climate with the potential for significant impacts on public health. In addition, once operational, the Proposed Development will support increased contributions from renewable electricity generation sources. The Proposed Development will not offer opportunities to contribute to climate change resilience or adaptation as the majority of the proposed new infrastructure is located underground (with the exception of works to Woodland Substation and Belcamp Substation). No pathway for impact between this determinant and the Proposed Development has been identified.
Air quality	In	Construction works required to facilitate the Proposed Development will generate dust and air pollutant emissions from construction plant. Traffic re-routing due to lane or road closures during construction has the potential to also change traffic patterns locally. However, these changes are not thought likely to be sufficient to trigger the assessment threshold for air quality assessment (see Section 7.4.1 of Chapter 7 (Air Quality) in Volume 2 of this Environmental Impact Assessment Report (EIAR)), and therefore, no population level health effects are considered likely. Similarly, the number of traffic movements associated with maintenance of the proposed underground cables and substations would be very low (below the threshold for air quality assessment (see Section 7.4.2 of Chapter 7 (Air Quality) in Volume 2 of this of this EIAR) and no population level human health effects are considered likely.
Water quality or availability	Out	Chapter 10 (Soils, Geology and Hydrogeology) of Volume 2 of this EIAR identifies private and public water supplies that have the potential to be affected by the Proposed Development. However, all identified potential pollutant pathway linkages would be broken through the use of standard good practice mitigation, and therefore no significant human health impact are considered likely.
Flood Risk*	Out	The Flood Risk Assessment (FRA) for the Proposed Development, which is included as Appendix A12.1 in Volume 3 of this EIAR, concludes that no impact on coastal, groundwater, fluvial or pluvial flooding is anticipated.
Land quality	Out	Chapter 10 (Soils, Geology and Hydrogeology) of Volume 2 of this EIAR identifies potential sources of land contamination within the footprint of the Proposed Development. However, all identified potential pollutant pathway linkages would be broken through the use of standard good practice mitigation, and therefore no significant human health impacts are considered likely.
Noise and vibration	In (noise only)	Activities required during the Construction Phase to facilitate the Proposed Development will generate noise and vibration. Noise will be emitted from the new transformer and compensation reactor installed at Belcamp Substation, and therefore, effects during the Operational Phase associated with noise emissions from Belcamp Substation for residents of the three small areas which fall within 300 metres of the facility are also scoped into assessment. While vibration can cause annoyance, there is limited scientific literature to suggest vibration from construction activities poses a significant health risk to the general public, and therefore it is scoped out.
Radiation	Out	Electromagnetic Fields (EMFs) surround any object that is generating, transmitting or using electricity, including appliances, wiring, office equipment, batteries and any other electrical devices. Therefore, EMFs are common in modern life. EMFs are invisible and cannot be felt or heard. In many cases, domestic electrical appliances and tools can

Wider Determinant of Health	Scoped In or Out of Assessment	Justification for Scoping Assessment
		<p>generate much higher magnetic and electric fields, if in close proximity to a sensitive receptor, than transmission lines at standard separation distances. EirGrid designs, develops and operates the transmission grid in accordance with stringent safety recommendations which are made by national and international agencies. Several of these recommendations come from the International Council on Non-Ionising Radiation Protection (ICNIRP). This is an independent body, funded by public health authorities around the world. ICNIRP has reviewed the safety of EMFs and recommended limits on exposure that are far below levels where adverse effects might occur. Electricity cables have been placed underground in Ireland since the 1960s. There are currently approximately 320 kilometres of underground transmission cables in Ireland, with multiples of this figure of underground cabling associated with the lower-voltage distribution system. Given that EirGrid design standards require all electricity infrastructure to operate under existing public exposure guidelines from ICNIRP, there would be no direct impact on human health from EMF. As a result, they are scoped out of further assessment within this health assessment, as no significant impacts on health as a result of exposure to EMF are considered likely.</p>
Institutional and Built Environment		
Health and social care services	Out	<p>There is the potential for a temporary reduction in access to health and social care facilities as a result of lane or road closures during the Construction Phase to facilitate the installation of the proposed underground cables, which may necessitate diversion or closure of pedestrian and cyclist routes and relocation of bus stops. However, as this is the only potential pathway for impacts on health and social care services identified, potential impacts on health outcomes will be considered under the 'Transport, access, and connections' determinant.</p>
Built environment	Out	<p>Additional infrastructure required at Woodland Substation and Belcamp Substation will be constructed within the existing footprint of Woodland Substation and within the extended footprint of Belcamp Substation which is being facilitated by a separate permitted development (planning application reference F23A/0040) and would not be particularly noticeable in context of the existing substation environments. No potential pathway for impact between this determinant and the Proposed Development has been identified.</p>
Wider societal infrastructure and resources	Out	<p>Once operational, the Proposed Development will contribute to maintaining and improving electricity provision in the east of Meath and north of Dublin which is essential for many aspects of daily life that promote good health as well as the provision of health services. However, the effect of this Proposed Development in isolation is not considered significant, and therefore, this determinant is scoped out of further assessment.</p>
<p>*Flood risk is not included as a health determinant in the Guide to: Effective Scoping of Human Health In Environmental Impact Assessment (IEMA 2022), but has been considered as part of the scoping assessment as new infrastructure projects frequently have potential to affect flood risk.</p>		

1.2 References

IEMA (2022). Guide to: Effective Scoping of Human Health In Environmental Impact Assessment.

Directives and Legislation

S.I. No. 528/2021 - Safety, Health and Welfare at Work (Construction) (Amendment) Regulations 2021