



# **Environmental Impact Assessment Report (EIAR)**

## **Volume 6 of 6: Appendices**

### **(Appendix A15.1) Scope of Human Health Determinants**

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## 1. Scoping of Health Determinants for Human Health Assessment

1. This Appendix (A15.1) to Chapter 15 Human Health of this Environmental Impact Assessment Report (EIAR) sets out a scoping checklist of health determinants considered for human health assessment. The checklist has been adapted from those provided in recent guidance by Institute of Environmental Management and Assessment (IEMA) and the Institute of Public Health (IPH). It allowed for a systematic review of health determinants. The reasons for scoping in or out each health determinant is noted in Table A15.1. In undertaking this review of scope, consideration has been given to issues raised by the Health Services Executive (HSE). In undertaking this review of scope, consideration has been given to issues raised by the Health Services Executive (HSE).
2. This Appendix should be read in conjunction with Chapter 15 of this EIAR. Figures which are referenced in the text are provided in Volume 5 of this EIAR.

**Table A15.1: Scoping of Health Determinants for Human Health Assessment<sup>1</sup>**

| Scoped In/Out | Determinant of health: and health issues, including risk factors, within each determinant of health | Relevance of individual issue to the assessment? |           | Rationale summary   |
|---------------|---|--|-----------|---|
|               |   | Construction                                     | Operation |   |
|               | <b>Health Related Behaviours</b>  |  |           |   |
| Out           | <b>Healthy lifestyles and risk taking behaviours:</b>   |  |           | The Proposed Project is not likely to significantly influence lifestyle behaviours such as substance misuse, gambling, communicable illness or diet. It may affect physical activity via impacts on open space or active travel, which are scoped below and therefore scoped out here to avoid duplication. |
|               | Physical activity   | No   | No        |   |
|               | Health promotion (including smoking cessation)  | No   | No        |   |
|               | Substance misuse (including alcohol)  | No   | No        |   |
|               | Problem gambling  | No   | No        |   |
|               | Communicable illness (including STIs and other infections)  | No   | No        |   |
|               | Diet and nutrition (including production and access to affordable healthy food options)             | No   | No        |   |
|               | <b>Social Environment</b>   |  |           |   |
| In            | <b>Open space, leisure and play</b>   |  |           | Proposed Project has potential to affect areas of outdoor space and land used for recreation in terms of access, amenity and land-take, particularly during the construction stage. This may affect the level of use and enjoyment of such land.  |
|               | Open space (green and blue) and physical activity (including in natural habitats)                   | Yes  | No        |   |
|               | Sports, leisure and recreational amenities and facilities (including play)                          | Yes  | No        |   |
|               | Sports, leisure and recreational connectivity and access (including safety)                         | Yes  | No        |   |
|               | Sports, leisure and recreational age, sensory and mobility considerations                           | Yes  | No        |   |

| Scoped In/Out | Determinant of health: and health issues, including risk factors, within each determinant of health                        | Relevance of individual issue to the assessment? |           | Rationale summary  |
|---------------|--|--|-----------|--|
|               |  | Construction                                     | Operation |  |
| Out           | <b>Safe and cohesive communities: Housing</b>  |  |           | The Proposed Project would not alter housing supply or mix, social housing, affordability or adaptations, nor is any loss of existing housing expected.  |
|               | Dwelling mix for community needs (supply)  | No   | No        |  |
|               | Community cohesion and social isolation  | No   | No        |  |
|               | Indoor environment (indoor air quality, safety, hygiene and level of crowding)   | No   | No        |  |
|               | Residential segregation  | No   | No        |  |
|               | Affordability  | No   | No        |  |
|               | Connectivity and access  | No   | No        |  |
|               | Community services (including childcare and social services) accessibility and quality                                     | No   | No        |  |
|               | Social housing   | No   | No        |  |
|               | Specialist adaptations (e.g. age or disability)  | No   | No        |  |
|               | Loss of existing housing   | No   | No        |  |
| Out           | <b>Safe and cohesive communities: Transport modes, access and connections</b>  |  |           | The Proposed Project would result in some increases in traffic along certain routes during construction. However, scoping for the Traffic and Transport assessment identified that there would be no likely significant effects on journey times for public transport users; severance effects for pedestrians; fear and intimidation for pedestrians or journey distance and time effects for pedestrians. This is due to the agreement of specific haul roads for HGV vehicles and other measures as set out in the Traffic Management Plan. No likely significant impacts on cycling for active travel is predicted due to the avoidance of key settlements with the Haul Routes and the availability of other routes for cyclists in the wider lane network. A Stage 2 Road Safety Audit (RSA) will be carried out at detail design stage and a Stage 3 RSA following construction. This will assess and address issues of road safety and therefore the issue is scoped out of this health assessment at this time. |
|               | Road or route safety   | No   | No        |  |
|               | Active travel (pedestrians and cyclists)   | No   | No        |  |
|               | Public transport (access, connectivity and quality)  | No   | No        |  |
|               | Health, education and social care journey times  | No   | No        |  |
|               | Emergency response times   | No   | No        |  |
|               | Community severance  | No   | No        |  |
|               | Age, sensory and mobility considerations   | No   | No        |  |
| In            | <b>Safe and cohesive communities: Community safety</b>   |  |           | The Proposed Project is not likely to change the social or built environment to an extent that would significantly influence actual or perceived crime. Company and legislation mean that safeguarding and modern slavery are not likely significant issues. Consultation with National Environmental Health Service has highlighted potential for construction activities to cause potential increase in rodent activity, therefore disease vector habitats are scoped in as 'vermin'. Injury risks are relevant considerations during construction. Susceptibility to major accidents is scoped in as a specific chapter (Chapter 20: Risk of Major Accidents and/or Disasters) and therefore not repeated in the human health assessment scope.   |
|               | Police/security and emergency response   | No   | No        |  |
|               | Actual and perceived crime   | No   | No        |  |
|               | Safeguarding and modern slavery  | No   | No        |  |
|               | Outdoor environment (safety, green and blue spaces and proximity to disease vector habitats)                               | Yes  | No        |  |
|               | Flood risk   | No   | No        |  |
|               | Injury risk (including drowning and falls)   | Yes  | No        |  |
|               | Susceptibility to major accidents and/or disasters (including earthquake, water surge, wildfire, landslide, pandemic etc.) | No   | No        |  |

| Scoped In/Out  | Determinant of health: and health issues, including risk factors, within each determinant of health   | Relevance of individual issue to the assessment? |           | Rationale summary   |
|--|---|--|-----------|---|
|  |   | Construction                                     | Operation |   |
| Out  | <b>Safe and cohesive communities: Community identity</b>  |  |           | The Proposed Project would not result in any notable demographic change (aside from the short-term influence of construction workers in given locations), and any changes to landscape during construction or as a result of new permanent infrastructure is not expected to be of a scale that affects community and cultural identity.  |
|  | Population in-migration (including effects on minorities, community cohesion and social isolation)  | No   | No        |   |
|  | Population out-migration (including effects on minorities, community cohesion and social isolation)   | No   | No        |   |
|  | Visual landscape/townscape change   | No   | No        |   |
|  | Visual lighting change (night lighting, overshadowing or reflections)   | No   | No        |   |
|  | Social networks and culture (including meeting spaces for voluntary, social, cultural or spiritual participation or sites of cultural significance) | No   | No        |   |
| <b>Economic Environment</b>                                    |   |  |           |   |
| Out  | <b>Education and training</b>   |  |           | The Proposed Project is not expected to result in any notable disruption to school access or quality. Temporary disruption to educational facilities is scoped under 'Transport' and 'Noise'. Furthermore it is not likely to have a likely significant impact on adult skills development due to the relatively limited scale of construction and operational workforces involved.   |
|  | School accessibility, capacity and quality  | No   | No        |   |
|  | Adult skills development  | No   | No        |   |
|  | Transitional arrangements (e.g. during construction)  | No   | No        |   |
| In   | <b>Employment and income</b>  |  |           | While the Operational Phase of the Proposed Project would require relatively limited workforce (see section 4.15 of Chapter 4 of the EIAR), the Construction Phase may enable some temporary and/or permanent employment. The Safety, Health and Welfare at Work Act 2005 and Safety, Health and Welfare at Work (Construction) Regulations 2013 cover working conditions for construction workforces. On this basis, working conditions is scoped out. The Proposed Project is not of scale or nature to tackle issues of health inequalities, social exclusion and poverty. |
|  | Employment (including quality and income)   | Yes  | No        |   |
|  | Unemployment (including job insecurity)   | No   | No        |   |
|  | Procurement and investment  | No   | No        |   |
|  | Working conditions (rewards, controls and occupational hazards)   | No   | No        |   |
|  | Family structure and relationships  | No   | No        |   |
|  | Health inequalities, social exclusion and poverty   | No   | No        |   |
| <b>Biophysical Environment</b>                                 |   |  |           |   |
| Out  | <b>Environmental conditions: Climate change</b>   |  |           | The vulnerability of the water resources infrastructure to extreme weather events is a relevant consideration but is scoped in relation to 'wider societal benefits' below. Whilst climate change is a major public health concern, the Proposed Project is not expected to significantly mitigate or otherwise influence impacts of climate change on health (other than water resources). The Proposed Project's impacts on climate change specifically are addressed in Chapter 13 (Climate).  |
|  | Extreme weather, heat stress and flood risk and fire injury risk  | No   | No        |   |
|  | Exacerbation of chronic cardiovascular and respiratory conditions   | No   | No        |   |
|  | Exposure to food-, water- and vector-borne infection or toxins  | No   | No        |   |
|  | Food production and malnutrition  | No   | No        |   |
| Population displacement, labour productivity and economic loss | No  | No   |           |   |

| Scoped In/Out | Determinant of health: and health issues, including risk factors, within each determinant of health | Relevance of individual issue to the assessment? |           | Rationale summary   |
|---------------|---|--|-----------|---|
|               |   | Construction                                     | Operation |   |
| In            | <b>Environmental conditions: Air quality</b>  |  |           | Construction activities have the potential to cause dust and vehicle emissions which may contribute to local air pollution and loss of amenity. Odour is not anticipated to be an issue for the Proposed Project due to the nature of the water supply infrastructure.  |
|               | Dust, particulates and aerosols (indoor and outdoor)  | Yes  | No        |   |
|               | Plant, processes and vehicle emissions  | Yes  | No        |   |
|               | Odour   | No   | No        |   |
| In            | <b>Environmental conditions: Water</b>  |  |           | The Proposed Project would affect waterbodies used for drinking water and amenity during the Construction and Operational Phases. Drinking water quantity and access is scoped in below for the Operation Phase in relation to wider societal benefits of water infrastructure.   |
|               | Drinking water quality (including biological and chemical agents)                                   | Yes  | Yes       |   |
|               | Drinking water – quantity or access   | No   | No        |   |
|               | Bathing water quality (including biological and chemical agents, disease vectors)                   | Yes  | No        |   |
| In            | <b>Environmental conditions: Soil</b>   |  |           | The Proposed Project would be largely constructed on agricultural land. Historic ground contaminants and new pollutants are environmental risks to be managed during construction.  |
|               | Mobilisation of historic pollution  | Yes  | No        |   |
|               | Risk of new ground pollution (e.g. industrial agents or accidental spills)                          | Yes  | No        |   |
|               | Food resources and safety (e.g. agricultural land availability and quality)                         | Yes  | No        |   |
| In            | <b>Environmental conditions: Noise</b>  |  |           | Construction of the Proposed Project may have noise and vibration related impacts to relatively tranquil communities. Some of the water infrastructure plant and associated traffic may generate noise during the Operational Phase which may disturb local communities. Occupational noise exposure for staff is scoped out as addressed through legislation such as The Safety, Health and Welfare at Work Act 2005 (as amended). No noise impacts from the pipeline are anticipated. No elements of the Proposed Project are expected to generate significant vibration during operation so this issue is scoped out of the health assessment. |
|               | Plant, processes and vehicle disturbance  | Yes  | Yes       |   |
|               | Vibration   | Yes  | No        |   |
| Out           | <b>Environmental conditions: Radiation</b>  |  |           | The Proposed Project would generate electromagnetic fields (EMF) due to some electrical infrastructure. Despite extensive research, to date there is no evidence to conclude that exposure to low level EMF is harmful to human health (WHO, 2016). While there is relatively widespread public concern over possible health effects from exposure to EMF as indicated by news headlines and social media posts, water resource infrastructure does not typically generate such concerns. Radon gas is present in the study area but the Proposed Project is not likely to change population exposure to this hazard.                             |
|               | Electro-magnetic fields, actual risk  | No   | No        |   |
|               | Electro-magnetic fields, understanding of risk (risk perception)                                    | No   | No        |   |
|               | Ionising, actual risk   | No   | No        |   |
|               | Ionising, understanding of risk (risk perception)   | No   | No        |   |

| Scoped In/Out   | Determinant of health: and health issues, including risk factors, within each determinant of health                                    | Relevance of individual issue to the assessment? |           | Rationale summary   |
|---|--|--|-----------|---|
|   |  | Construction                                     | Operation |   |
|   | <b>Institutional and built environment</b>   |  |           |   |
| Out   | <b>Health and social care services</b>   |  |           | The Proposed Project would not affect the availability of, or institutional access to health and social care services. Potential impacts on physical access would relate to transport, scoped in above and not duplicated here. The size of workforce during construction, and duration of stay in any given location, is not likely to affect the capacity or availability of health and social care services.   |
|   | Primary care accessibility, capacity and quality   | No   | No        |   |
|   | Secondary care (including hospitals) accessibility, capacity and quality   | No   | No        |   |
|   | Ambulance service accessibility, capacity and quality  | No   | No        |   |
|   | Social services accessibility, capacity and quality (including use of community centres)   | No   | No        |   |
|   | Health protection (including screening and epidemic response) accessibility, capacity and quality                                      | No   | No        |   |
|   | Occupational health services accessibility, capacity and quality   | No   | No        |   |
|   | Dental service accessibility, capacity and quality   | No   | No        |   |
|   | Pharmacy accessibility, capacity and quality   | No   | No        |   |
|   | Sexual health services accessibility, capacity and quality   | No   | No        |   |
|   | Mental health services accessibility, capacity and quality   | No   | No        |   |
|   | Transitional arrangements (e.g. during construction)   | No   | No        |   |
|   | Recruitment and retention of staff   | No   | No        |   |
| Preparedness for emergency scenarios (major accidents and/or disasters) | No   | No   |           |   |
| Out   | <b>Built environment</b>   |  |           | The Proposed Project would not significantly influence spatial planning or access to retail, financial or commercial services. Wastes arising during construction and operation will be assessed as part of the Resources & Waste Management assessment. Uisce Éireann is moving towards a circular economy model with respect to sludge management, with water sludge viewed as a valuable resource and source of precious finite materials. Construction and demolition wastes will be managed in accordance with the requirements of the Waste Framework Directive, no likely significant effects on human health are anticipated. Therefore waste is scoped out of the health assessment. |
|   | Spatial planning, use classes, zoning and land allocations (including streets and routes, places, urban green space, parks, landscape) | No   | No        |   |
|   | Waste management (including sanitation systems and wastewater reuse)   | No   | No        |   |
|   | Access to shops, retail food resources, financial and commercial services  | No   | No        |   |

| Scoped In/Out   | Determinant of health: and health issues, including risk factors, within each determinant of health                              | Relevance of individual issue to the assessment? |           | Rationale summary  |
|---|--|--|-----------|--|
|   |  | Construction                                     | Operation |  |
|   | <b>Wider societal infrastructure and resources</b>   |  |           |  |
| In  | <b>Wider societal benefits:</b>  |  |           | In the Operational Phase, the Proposed Project will be of benefit to wider society, also including the support of economic growth in the Greater Dublin Area and resilience to climate change. It may also relieve pressure on some natural resources such as the River Liffey, which is potentially of benefit to biodiversity. However this issue is not within the scope of the Biodiversity chapter and therefore not considered likely significant for health. During construction it may affect some utilities, transport and energy infrastructure as covered in Chapter 18 (Material Assets) but is not likely to be of a scale and duration to affect population health and therefore wider societal benefits is scoped out of the Construction Phase assessment. |
|   | Energy infrastructure  | No   | No        |  |
|   | Transport infrastructure   | No   | No        |  |
|   | Waste management infrastructure  | No   | No        |  |
|   | Water infrastructure   | No   | Yes       |  |
|   | Communication and IT infrastructure  | No   | No        |  |
|   | Economic   | No   | Yes       |  |
|   | Climate change (including improved air quality and preparedness for extreme weather events such as heat, storms and/or flooding) | No   | Yes       |  |
| Natural environment (including biodiversity, natural spaces and habitats) | No   | No   |           |  |

<sup>1</sup> Checklist adapted from Table 5.1 in the IEMA Guide to Effective Scoping of Human Health in Environmental Impact Assessment (Pyper et al., 2022) in combination with Table 08 in the Institute of Public Health's Health Impact Assessment Guidance: A Manual. Standalone Health Impact Assessment and health in environmental assessment. (Pyper et al., 2021).