

13.

**Socio-
economics
and
Recreation**

13. Socioeconomics and Recreation

13.1 Introduction

13.1.1 This chapter of the EIA Report presents the findings of the likely significant environmental effects of the Project with respect to Socio-economics and Recreation (including Human Health).

13.1.2 This chapter should be read in conjunction with:

- Chapter 2: Approach to EIA;
- Chapter 4: Project Description;
- Chapter 5: Planning Policy Context;
- Chapter 6: Landscape and Visual;
- Chapter 11: Traffic and Movement;
- Chapter 12: Noise and Vibration; and
- Chapter 15: Other Environmental Matters

13.2 Legislation and Policy

Legislation

13.2.1 The following legislation is relevant to socio-economics, recreation, and human health:

- Town and Country Planning (Scotland) Act 1997¹, as amended by the Planning (Scotland) Act 2019²;
- Climate Change (Emissions Reduction Targets) (Scotland) Act (2019)³;
- Public Health etc. (Scotland) Act 2008⁴; and
- Mental Health (Care and Treatment) (Scotland) Act 2003⁵; as amended by Mental Health (Scotland) Act 2015⁶.

National Policy

13.2.2 The following national policies are relevant:

- National Planning Framework 4 (Policy 11, Paragraph c))⁷;

¹ Town and Country Planning (Scotland) Act 1997 (1997), Scottish Government.
<https://www.legislation.gov.uk/ukpga/1997/8/contents>

² Planning (Scotland) Act 2019 (2019), Scottish Government <https://www.legislation.gov.uk/asp/2019/13/contents>

³ Scottish Government (2020), Climate Change (Emissions Reduction Targets) (Scotland) Act 2019. [Climate Change \(Emissions Reduction Targets\) \(Scotland\) Act 2019](https://www.legislation.gov.uk/asp/2019/13/contents)

⁴ Scottish Government (2008), Public Health etc. (Scotland) Act 2008 <https://www.legislation.gov.uk/asp/2008/5/contents>

⁵ Scottish Government (2003), Mental Health (Care and Treatment) (Scotland) Act 2003
<https://www.legislation.gov.uk/asp/2003/13/contents>

⁶ Scottish Government (2015), Mental Health (Scotland) Act 2015 <https://www.legislation.gov.uk/asp/2015/9/contents>

⁷ National Planning Framework 4 (2023), Scottish Government <https://www.gov.scot/publications/national-planning-framework-4/documents/>

- Climate Change Plan 2018-2032 (2020 update)⁸;
- Draft Energy Strategy and Just Transition Plan (2023)⁹;
- Local Energy Policy Statement (2021)¹⁰;
- Green Industrial Strategy (2024)¹¹;
- Public Health Scotland Strategic Plan 2022 to 2025¹²;
- Making It Easier: A Health Literacy Action Plan 2017-2025 (2017)¹³;
- Public Health Priorities for Scotland (2018)¹⁴;
- Review of Public Health in Scotland: Strengthening the Function and Re-Focusing Action for a Healthier Scotland (2015 review)¹⁵;
- Health and Social Care Delivery Plan (2016)¹⁶; and
- Mental Health and Wellbeing Strategy (2023)¹⁷.

Local Policy

13.2.3 The following local policies are relevant:

- North Lanarkshire Local Development Plan¹⁸;
- The Plan for North Lanarkshire¹⁹;
- Mental Health and Wellbeing Strategy for Lanarkshire 2019-2024²⁰
- Falkirk Local Development Plan²¹;

⁸ Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update (2020), Scottish Government <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

⁹ Draft Energy Strategy Just Transition Plan (2023), Scottish Government <https://www.gov.scot/publications/draft-energy-strategy-transition-plan/>

¹⁰ Local Energy Policy Statement (2021), Scottish Government <https://www.gov.scot/publications/local-energy-policy-statement/>

¹¹ Green Industrial Strategy (2024), Scottish Government <https://www.gov.scot/publications/green-industrial-strategy/documents/>

¹² A Scotland where everybody thrives: Public Health Scotland's strategic plan 2022 to 2025 (2022), Public Health Scotland <https://publichealthscotland.scot/about-us/what-we-do-and-how-we-work/a-scotland-where-everybody-thrives-public-health-scotland-s-strategic-plan-2022-to-2025/>

¹³ Making it easier: Health literacy action plan for Scotland 2017–2025 (2017), Scottish Government <https://www.gov.scot/publications/making-easier-health-literacy-action-plan-scotland-2017-2025/>

¹⁴ Scotland's public health priorities (2018), Scottish Government. <https://www.gov.scot/binaries/content/documents/govscot/publications/corporate-report/2018/06/scotlands-public-health-priorities/documents/00536757-pdf/00536757-pdf/govscot%3Adocument/00536757.pdf>

¹⁵ 2015 review of public health in Scotland: Strengthening the function and re-focusing action for a healthier Scotland (2016), Scottish Government <https://www.gov.scot/publications/2015-review-public-health-scotland-strengthening-function-re-focusing-action-healthier-scotland/>

¹⁶ Health and social care delivery plan (2016), Scottish Government <https://www.gov.scot/publications/health-social-care-delivery-plan/>

¹⁷ Mental health and wellbeing delivery plan 2023–2025 (2023), Scottish Government <https://www.gov.scot/publications/mental-health-wellbeing-delivery-plan-2023-2025/>

¹⁸ Current North Lanarkshire Local Development Plan (2022), North Lanarkshire Council <https://www.northlanarkshire.gov.uk/sites/default/files/2022-11/North%20Lanarkshire%20Local%20Development%20Plan.pdf>

¹⁹ The Plan for North Lanarkshire (2020), North Lanarkshire Council <http://northlanarkshire.gov.uk/sites/default/files/2020-10/The%20Plan%20for%20NLC%20v.3%20accessible.pdf>

²⁰ Mental Health and Wellbeing Strategy for Lanarkshire 2019-2024 (2019), NHS Lanarkshire <https://www.nhs.uk/nhs.uk/download/mental-health-wellbeing-strategy-2019-2024>

²¹ Falkirk Local Development Plan (2020), Falkirk Council <https://fcwebsites.blob.core.windows.net/www/media/6f222088-edcb-4906-908d-635bcb0fb757/LDP2.pdf>

- The Falkirk Plan 2021-2030²²; and
- Strategic Plan 2023–2026: Creating a Healthier Falkirk²³.

13.3 Methodology

Consultation

- 13.3.1 Scoping Opinion responses following consultation with stakeholders relating to socio-economics and recreation (including human health) are summarised within Table 13-1 below.

²² The Falkirk Plan (2021), Falkirk Council <https://fcwebsites.blob.core.windows.net/www/media/ae54eaa1-21ee-40af-bd25-5b2a2a33af3c/The%20Falkirk%20Plan%202021-2030.pdf>

²³ Strategic Plan 2023–2026: Creating a Healthier Falkirk (2023), Falkirk Health and Social Care Partnership <https://falkirkhscp.org/wp-content/uploads/sites/9/2023/04/Falkirk-HSCP-Strategic-Plan.pdf>

Table 13-1: Summary of Consultation Relevant to Socio-economics and Recreation (including Human Health)

Consultee	Summary of Comment	Response (and actions taken if appropriate)
British Horse Society	British Horse Society (BHS) emphasises the importance of safe off-road riding routes, who have equal access rights under Scottish law. They stress that equestrian needs should be considered early in infrastructure planning to preserve and enhance access.	This has been noted, and has been taken into account when assessing effects on access, including core paths, as part of the socio-economics and recreation (including human health) assessment (see Section 13.5 to 13.8).
British Horse Society	BHS highlight the opportunities to improve paths and tracks with suitable surfaces like consolidated whin dust and avoiding obstacles such as locked gates or inaccessible deer grids. They offer support and guidance to the applicant on accommodating equestrian and other outdoor access users.	This has been noted.
British Horse Society	BHS highlights that safe off-road riding routes are crucial for horse and rider wellbeing, noting that equestrians are vulnerable road users with a higher accident risk, especially on minor roads. They stress the need to prioritise off-road access in rural areas with high horse ownership. They also advise that site traffic should be made aware of equestrians on roads, enclosing guidance for drivers of large vehicles to mitigate risks.	This has been noted.
British Horse Society	BHS highlights that Scotland's equestrian industry contributes over £300 million annually to the rural economy. They explain that with growing horse numbers and riding activity, access to riding routes is vital. BHS states that loss of access has caused 27% of riders to give up their horses, which could negatively impact the local economy. They offer to discuss equestrian needs further.	This has been noted.
British Horse Society	BHS provides guidance for drivers of large vehicles to safely interact with horses on the road. Horses are naturally nervous of large vehicles due to unfamiliarity, noise (especially air brakes), and proximity, which can cause panic and accidents. BHS request that	This has been noted.

North Lanarkshire Council	drivers slow down to 10mph or less, avoid sudden noises, stop and turn off the engine if the horse is nervous, pass wide (at least 2 m) and slow, and be patient. They say precautions help keep horses and riders safe by allowing space to find safe passing spots on narrow roads. The Project spans areas of significant deprivation, recreational value, and proximity to sensitive industrial sites. As part of the EIA, key considerations should include socio-economic impacts, particularly on community amenities and access, and if appropriate, engagement with relevant public bodies should be sought. NLC highlighted that Wishaw Substation Extension and its associated infrastructure could be associated with visual effects within the Gowkthrapple area. Proposal at the Cumbernauld Substation Extension should also demonstrate a clear commitment to minimising impacts on surrounding natural assets. Our records show that this proposal could impact on the following: Palacerigg Country Park, Drumpellier Country Park, Greenhead Moss Community Park.	This comment has been noted, and the socio-economics and recreation (including human health) chapter includes assessment of the impacts raised by North Lanarkshire Council. Specifically: Engagement has been undertaken with relevant public bodies during the scoping process (see EIA Report Scoping Report (Volume 3, Appendix 2.2)). The Substation works are considered in the scope of the assessment (see Table 13-2). Community assets such as those noted by North Lanarkshire Council are considered in the assessment, as identified in Section 13.4.
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Scope of Assessment

- 13.3.2 Following the scoping process that has been undertaken, the scope of the assessment considered in this chapter of the EIA Report is set out in Table 13-2. Impacts on socio-economic and recreation (including human health) receptors are scoped in for the construction phase only and have been scoped out during the operational phase due to the limited operational works associated with the Project.
- 13.3.3 As discussed in the EIA Report Scoping Report (Volume 3, Appendix 2.2), to avoid duplication across chapters, the potential impacts on human health which are closely associated with socio-economics and recreation are assessed within this chapter. The Institute of Environmental Management and Assessment (IEMA) (now known as The Institute of Sustainability and Environmental Professionals (ISEP)) recommends that a set of ‘determinants’ are considered when undertaking the human health assessment. The determinants included within the scope of the socio-economic and recreation assessment are highlighted in italics in Table 13-2.

Table 13-2 Scope of the Socio-economic and Recreation (including Human Health) Assessment

Scope	Route Section	Rationale
Employment and Gross Value Add (GVA) generation. <i>Including human health determinant: Employment and income; and Health and social care services.</i>	Assessed centrally for the Project under Project-Wide Effects (Section 13.9). This includes: - New Build Overhead Line (WB Route) - Upgraded Overhead Line (XX Route, XR Route, ZG Route) - Ancillary Works including: - Route Removal (CB) - Undergrounding Route (AA) - Substation works	The Project may require a construction workforce that could have potential beneficial impacts on employment and job generation during construction. Economic opportunities have the potential to protect and promote good health. However, operational works associated with the Project are likely to generate a limited number of jobs. Therefore, employment and GVA impacts during operation are likely to be beneficial but not significant.

Promotion and provision of training and apprenticeship opportunities. <i>Including human health determinant: Education and training.</i>	Assessed centrally for the Project under Project-Wide Effects (Section 13.9). This includes: • New Build Overhead Line (WB Route) • Upgraded Overhead Line (XX Route, XR Route, ZG Route) • Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding ▪ Substation works	The Project may offer temporary socio-economic and health promoting training, education, and upskilling opportunities such as apprenticeships during construction which have the potential to be significant. However, operation of the Project is not likely to generate many jobs and therefore no significant impacts are expected relating to training and apprenticeships.
Disruption to access to core paths. <i>Including human health determinant: Transport modes, access, and connections.</i>	• New Build Overhead Line (WB Route) • Upgraded Overhead Line (XX Route, XR Route, ZG Route) • Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding	The Project may result in disruption / reduced access to core paths for users through diversions and temporary closures during construction which may cause significant adverse effects such as disruption to active travel networks. Impacts on core paths (including any permanent impacts) are likely to occur during construction and would be assessed as construction phase effects. Any effects on core paths arising from maintenance activities would be minimal and not likely to be significant, therefore impacts on core paths are scoped out of operation.
Land use impacts on local and private assets (including residential)	• New Build Overhead Line (WB Route)	The Project may result in disruption / reduced access to assets such as residential properties, businesses

properties, businesses, community facilities and visitor attractions).	• Upgraded Overhead Line (XX Route, XR Route, ZG Route)	and open spaces and community facilities. Construction may also result in amenity of these assets.
<i>Including human health determinants: Noise and vibration; and Open space, leisure, and play.</i>	• Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding	Effects on local and private assets are not likely beyond the construction phase, as activities associated with the Project such as maintenance will be minimal and unlikely to cause significant effects.
Impacts on development land	• New Build Overhead Line (WB Route)	The Project may impact existing or consented development activity that is under construction or programmed to come forward, and take up or impact access to land that is allocated, permitted, or otherwise identified for development, with the potential for significant adverse impacts during construction. A review of development land and planning allocations will be undertaken at assessment stage, albeit, initial review identifies a number of allocations which overlap / are in the vicinity of the Project. Land use impacts on planned developments, Projects and development permissions are unlikely during operation as operational activities such as maintenance are likely to be minimal and no land take is expected, therefore effects are not likely to be significant.

- 13.3.4 The Distribution Line Diversion works have been scoped out of the socio-economic and recreation (including human health) assessment as they are not anticipated to give rise to any measurable effects on socio-economic or health and wellbeing. The works involve short-duration, localised interventions such as temporarily dipping existing lower voltage overhead lines, excavating short tracks between poles, and reinstating overhead cables once construction of the main routes is complete. As such, they will not result in changes to the local economy, infrastructure, or health and wellbeing.

Study Area

- 13.3.5 For the purpose of assessing likely significant effects within the EIA Report, the study area for socio-economic and recreation (including human health) impacts vary depending on the effect or type of resource being assessed:

- **Socio-economic impacts** arising from the Project are considered relative to a study area that represents the principal labour market catchment area for the Project and will be derived based on analysis of reasonable travel times.
- **Land use impacts** arising from the Project on physical socio-economic receptors will consider those within the Site and the immediately adjacent land, and any direct effects that may occur due to this change. Indirect effects on physical socio-economic receptors will be extended to include communities that may potentially be affected by the Project, for example through access or severance.
- **Human health impacts** arising from the Project will be influenced by the geographic extent of the relevant technical assessments listed in Section 13.1: Introduction. The assessment will refer to the study areas identified by the relevant chapters.

13.3.6 Table 13-3 presents the different components of the socio-economics and recreation effects assessment for this EIA Report, the geographical scale at which each component is assessed, and the rationale behind these geographical scales.

13.3.7 As stated, the human health determinants included in the scope (Table 13-2) are assessed relative to the geographic extent of the relevant technical assessments in the respective chapters.

Table 13-3 Study Area of Socio-economic and Recreation Assessment

Scope	Geographical Study Area	Rationale for Study Area
Employment and GVA generation.	60-minute drive area	Research by Chartered Institute of Personnel and Development (CIPD) found that 90% of national employees commuted for 60 minutes or less each way. This was reported by CIPD in the 2018 Employee outlook 'Employee views on working life'. The 60-minute drive area represents the principal labour market catchment area for the Project.
Promotion and provision of training and apprenticeship opportunities.	North Lanarkshire and Falkirk Local Authorities	Professional judgement and experience from other projects in the UK.
Disruption to access to core paths.	Within the Site and the immediately adjacent land, extending to relevant communities where required.	Professional judgement and experience from other projects in the UK.
Land use impacts on local and private assets (including residential properties, businesses, community facilities and visitor attractions).	Within the Site and the immediately adjacent land, extending to relevant communities where required.	Professional judgement and location of sensitive receptors for impacts arising from the Project as informed by other assessments.
Impacts on development land.	Within the Site and the immediately adjacent land.	Professional judgement and experience from other projects in the UK.

Assessment Methods

Socio-economics and Recreation

- 13.3.8 For socio-economics, there is no accepted definition of what constitutes a likely significant (or not significant) socio-economic effect. It is recognised that 'significance' reflects the relationship between the scale of impact (magnitude) and the sensitivity (or value) of the affected resource or receptor. As such, the significance criteria for socio-economic effects has been assessed using the expert judgement of authors with professional experience in socio-economics, and relies on the following considerations:

- The sensitivity of a given receptor: the assessment takes account of the qualitative (rather than quantitative) ‘sensitivity’ of each receptor, particularly their ability to respond to change based on the given impacts of the Project.
- The magnitude of the impact: this entails consideration of the size of the impact, for example, on people, businesses, users of core paths, private properties, employees and development land in the context of the area in which impacts will be experienced.

13.3.9 These factors have then been combined to determine the consequent likely significance of the effect.

13.3.10 The sensitivity of socio-economic receptors is assessed as high, medium, low or very low. The criteria for assessing and classifying levels of receptor sensitivity used within the assessment are defined in Table 13-4, based on professional judgement.

Table 13-4 Sensitivity Classification

Level of Sensitivity	Classification
High	There are limited/no comparable and accessible alternatives to the receptor that exist within the relevant catchment area; and/or receptors have limited ability to absorb the change.
Medium	There are limited comparable and accessible alternatives to the receptor within the relevant catchment area; and/or receptors have limited ability to absorb the change.
Low	Receptors are able to relatively easily absorb the change; and/or there are some comparable and accessible alternatives to the receptor that exist within the relevant catchment area.
Very low	Receptors are able to relatively easily absorb the change; and/or there are many comparable and accessible alternatives to the receptor that exist within the relevant catchment area.

13.3.11 The magnitude of the socio-economic impacts associated with the Project have been assessed as being high, medium, low or very low – these are defined in Table 13-5.

Table 13-5 Magnitude Classification

Level of Magnitude	Classification
High	An impact that is expected to have considerable adverse or beneficial socio-economics effects. Such impacts will typically affect large numbers of businesses, workers or residents.
Medium	An impact that will typically have a noticeable effect on a moderate number of businesses, workers or residents, and will lead to a small change to the study area’s baseline socio-economic conditions.
Low	An impact that is expected to affect a small number of businesses, workers or residents or an impact that may affect a larger number of receptors but does not materially alter the study area’s baseline socio-economic conditions.

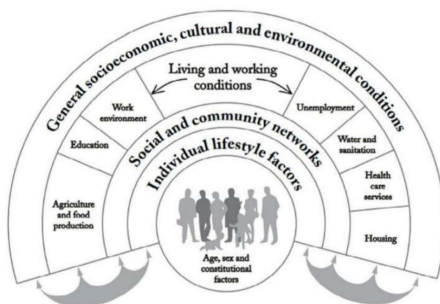
Very low

An impact which has very little change from baseline conditions where the change is barely distinguishable, approximating to a ‘no change’ situation.

Human Health

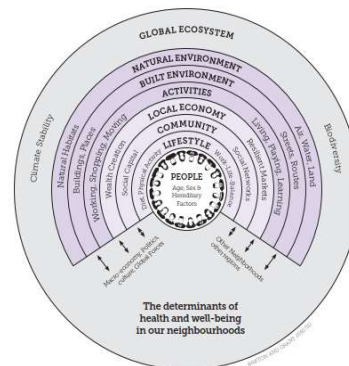
- 13.3.12 The World Health Organisation (WHO) Europe defines health as “*a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity*”²⁴. Public health therefore encompasses general wellbeing, not just the absence of illness.
- 13.3.13 The health and wellbeing of individuals is determined by a broad range of individual constitutional and behavioural factors, as well as broader environmental, social and economic factors. Some factors are direct and obvious, others are indirect.
- 13.3.14 Dahlgren and Whitehead’s model²⁵ of the main determinants of health illustrates the breadth of possible influences on health, as shown in Insert 13-1. At the centre of the illustration are factors that are largely fixed – including individual age, sex, constitutional and genetic factors. Outside of this are factors generally described as the wider or broader determinants of health. The model emphasises interactions between the layers. Moving outwards from the centre, individual lifestyle choices are embedded in social norms and community networks, and in living and working conditions, which in turn are shaped by and related to the wider socioeconomic and cultural environment. This model has been developed to show elements of the built environment and communities that are the key determinants of health, as shown in Insert 13-2²⁶.
- 13.3.15 Within a population there can also be health inequalities, defined by the WHO as “differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people

Insert 13-1 Determinants of Health



Source: Dahlgren and Whitehead (2021)²⁵.

Insert 13-1 Determinants of Health in neighbourhoods



Source: Barton and Grant (2006)²⁶.

²⁴ World Health Organisation (WHO) (1946), Constitution of the World Health Organisation

²⁵ Dahlgren, G & Whitehead, M (2021). The Dahlgren Whitehead model of health determinants: 30 years on and still chasing rainbows

²⁶ Barton, H & Grant, M (2006) A health map for the local human habitat. The Journal for the Royal Society for the Promotion of Health, 126 (6). Pp. 252-253. ISSN 1466-4240 developed from the model by Dahlgren and Whitehead, 1991

and younger populations or differences in mortality rates between people from different social classes”²⁷.

- 13.3.16 In November 2022, ISEP published new guidance on assessing human health as part of EIA²⁸. Previous to this, there was no consolidated methodology or practice for the assessment of effects on human health. The human health assessment will be based on this ISEP guidance, and it will consider the potential impacts for each phase of the Project. Wherever possible, the impacts identified in the assessment will be appraised against relevant national standards. Where relevant standards do not exist, professional experience and expert judgement will be applied and justified.
- 13.3.17 The sensitivity of Human Health receptors is also assessed as high, medium, low or very low. The criteria for assessing and classifying levels of receptor sensitivity used within the assessment are defined in Table 13-6 Sensitivity / Value Criteria for Human Health based on professional judgement.

Table 13-6 Sensitivity / Value Criteria for Human Health

Sensitivity	Value Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on resources shared (between the population and the Project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependant); people with good health status; and/or people with a very high capacity to adapt.

²⁷ World Health Organisation (2018), Health inequities and their causes <https://www.who.int/news-room/facts-in-pictures/detail/health-inequities-and-their-causes>

²⁸ Institute of Environmental Management and Assessment (2022); Effective Scoping of Human Health in Environmental Impact Assessment

13.3.18 The magnitude of the Human Health impacts associated with the Project have also been assessed as being high, medium, low or very low – these are defined in Table 13-7.

Table 13-7 Magnitude Criteria for Population and Human Health

Magnitude	Magnitude Criteria
High	High exposure or scale; long-term duration or permanent change; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications.
Medium	Low exposure or medium scale; medium-term duration; gradual reversible; frequent events; severity predominantly related to moderate changes in morbidity or major change in quality-of-life; large minority of population affected; gradual reversal; small service quality implications.
Low	Very low exposure or small scale; short-term duration; rapid reversible; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality-of-life; small minority of population affected; rapid reversal; slight service quality implications.
Very low	Negligible exposure or scale; very short-term duration; immediate reversible; one-off frequency; severity predominantly relates to a minor change in quality-of-life; very few people affected; immediate reversal once activity complete; no service quality implication.

Determining Significance

13.3.19 The ‘significance’ reflects the relationship between the scale of impact (magnitude) and the sensitivity (or value) of the affected resource or receptor²⁹. To determine the overall significance of Socio-economic and Recreation (including Human Health) effects of the Project, effects have been defined in line with the following:

- **Beneficial** – advantageous or positive effect to an environmental resource or receptor;
- **Negligible** – imperceptible effect to an environmental resource or receptor;
- **Adverse** – detrimental or negative effects to an environmental resource or receptor; and
- **No effect** – no discernible effects on a receptor.

13.3.20 The receptors are also considered with regard to:

- **Extent of change** – the absolute number of people affected and the size of area in which the impact will be experienced (i.e. the level of change to baseline conditions including the proportion of the existing workforce);
- **Scale of the impact** – the relative magnitude of each impact in its relevant market context (for example, the impacts on local employment will be considered in the context of the overall size of the local labour market); and
- **Duration of impact** – more weight is given to long-term, permanent changes than to short-term, temporary ones. Temporary to short-term impacts are those associated with

²⁹ Institute of Environmental Management and Assessment (2022), Determining Significance for Human Health in Environmental Impact Assessment

the construction works. Medium to long-term impacts are those associated with the operation of the Project.

- 13.3.21 Where an effect is assessed as being beneficial or adverse, the effect has been classified as Major, Moderate, Minor or Negligible. The assessment of significance is informed by considering the sensitivity of the receptor and the magnitude of impact as set out in Table 13-8. For the purposes of this assessment, only likely Moderate and Major effects are considered ‘significant’.

Table 13-8 Significance of Effects Matrix

		Sensitivity of Receptor			
		High	Medium	Low	Very low
Magnitude of Impact	High	Major	Moderate	Moderate	Minor
	Medium	Moderate	Moderate	Minor	Negligible
	Low	Moderate	Minor	Negligible	Negligible
	Very low	Minor	Negligible	Negligible	Negligible

- 13.3.22 The EIA Report assessment has been carried out using a number of recognised data sources and, wherever possible, the impacts of the socio-economic assessment has been appraised against relevant national standards such as those provided by HM Treasury and Homes and Communities Agency (now Homes England) (best practice guidance in absence of Scottish equivalent). Where relevant standards do not exist, professional experience and expert judgement will be applied and justified.

Additionality

- 13.3.23 Additionality is the extent to which something happens because of an intervention that would not have occurred in the absence of the intervention and is applied to calculate the net additional impact. The economic impact area of the Project is considered relative to a 60-minute drive time (car or road-based public transport) to or from the Project in any direction (shown in Figure 13.2 – Drive-time Area). In accordance with best practice, this is considered a reasonable timeframe to use as a baseline within which workers would commute to the Project (see Table 13-3 for further information). This impact area ensures that economic effects are appropriately attributed to the Project when estimating net additional impact.
- 13.3.24 Additionality has been calculated by considering the overall job gains to the area, then factoring in the level of leakage, number of displaced jobs and multiplier effects, such as

supply chains and worker spending related jobs. These assumptions have been informed by the HCA Additionality Guide³⁰.

- 13.3.25 Table 13-9 outlines the values that have been allocated within the additionality formula, enabling the tailored calculation of the net additional employment and economic impacts.

Table 13-9 Economic Additionality Assumptions Scale

Additionality Factor	Value	Justification
Leakage (% of jobs that benefit those residents outside of the study area).	25%	Leakage has been set at 25%, (medium), whereby “The majority of benefits will go to people living within the target area”, in line with the guidance from HCA Additionality Guide (HCA, 2014). This displacement level is assessed as appropriate as used in other comparable infrastructure projects.
Displacement (% of jobs that account for a reduction in related jobs in the study area).	25%	For the purpose of this assessment, a low level of displacement (25%) has been assumed, in line with the HCA Additionality Guide. This level of displacement reflects that there are expected to be some displacement effects, although these are only to a limited extent. This displacement level is assessed as appropriate as used in other comparable infrastructure projects.
Multiplier (further economic activity associated with the additional local income, supplier purchase and longer-term development effects).	1.3	The multiplier is a composite figure which takes into account both the indirect jobs created across the study area based on supply chain activity but also the induced employment created through increased spending across the study area. The HCA Additionality Guide provides a ‘ready reckoner’ of composite multipliers. The study area is likely to have average supply linkages and induced effects based on the scale of its economy. Therefore, a ‘low’ multiplier of 1.3 is determined from the HCA Additionality Guide to be the most appropriate measure.

13.4 Baseline and Future Baseline Conditions

Data Sources

- 13.4.1 The current and future baseline environment described in this section has been informed by the following data sources:
- National Records of Scotland; Census 2011³¹ and 2022³²

³⁰ Homes and Communities Agency (HCA), (2014); Additionality Guide: A Standard Approach to Assessing the Additional Effect of Projects: 4th Edition. HCA. Available at: [HCA Policy Covers](#)

³¹ National Records of Scotland (2011), Scotland's Census 2011 <https://www.scotlandscensus.gov.uk/>

³² National Records of Scotland (2022), Scotland's Census 2022 <https://www.scotlandscensus.gov.uk/>

- Office for National Statistics; Regional Gross Value Add by Industry 2023³³
- Scottish Government; Scottish Index of Multiple Deprivation; 2020³⁴
- Scottish Government; Scottish Health Survey 2023³⁵
- National Records of Scotland; Population Projections for Scottish Areas 2018-based³⁶.

Socio-Economic Profile

- 13.4.2 Given the size and length of the Project, local authority level geography has been used to present the baseline for this assessment. Local authority level data will be provided for the districts of Falkirk and North Lanarkshire combined to form the baseline study area along with the national comparator of Scotland. For the remainder of this subsection, the term “Baseline Study Area” refers to this defined area for the purpose of presenting context of the Socio-economic profile. This is shown in Figure 13.1 – Baseline Study Area.

Demographics

- 13.4.3 The Scottish Census provides data on populations and age demographics within the Baseline Study Area (Falkirk and North Lanarkshire), and the national comparator Scotland.
- 13.4.4 Figure 13-2 showcases the proportion of individuals by age band across the Baseline Study Area. In 2011, 65.8% of the population was aged 16–64, similar to the Scotland average of 65.9%. The Baseline Study Area did, however, have a higher proportion of individuals aged 0–15 (18.9%) compared to the national average (17.3%) and a lower share of those aged 65 and over (15.3%) than Scotland (16.8%).
- 13.4.5 By 2022, the proportion of residents aged 65 and over in the Baseline Study Area had slightly increased to 18.4%, in line with the national trend, where this age group increased to 20.0%, reflecting Scotland’s ageing population. The working-age population (16–64) in the Baseline Study Area also saw a slight decrease to 64.1%, mirroring a broader decline in Scotland, where it fell to 63.6%. The proportion of individuals aged 0–15 in the Baseline Study Area also fell to 17.5% in 2022, again in line with the national trend, which saw a decline to 16.4%.

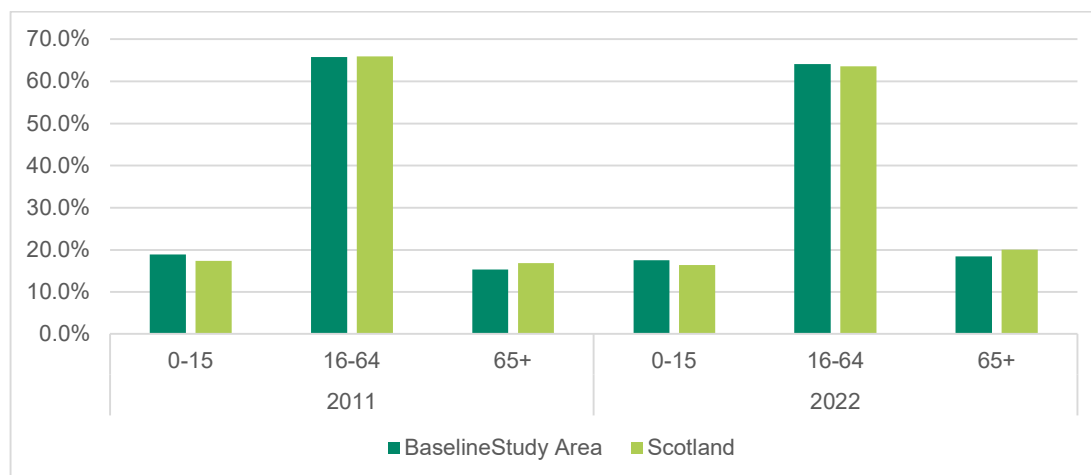
³³ Office for National Statistics (2025), Regional Gross Value Add by Industry, Local Authority 2023 [Regional gross value added \(balanced\) by industry: local authorities by ITL1 region - Office for National Statistics](#)

³⁴ Scottish Government (2020), Scottish Index of Multiple Deprivation 2020 <https://www.gov.scot/collections/scottish-index-of-multiple-deprivation-2020>

³⁵ Scottish Government (2023), Scottish Health Survey <https://www.gov.scot/collections/scottish-health-survey/>

³⁶ National Records of Scotland (2020), Population Projections for Scottish Areas 2018-based. Available at: [Population Projections for Scottish Areas 2018-based - National Records of Scotland \(NRS\)](#)

Figure 13-2 Population Cohorts



Source: Scottish Census (2011 and 2022)

Economic Activity

- 13.4.6 The Scottish Census showcases economic activity rates for all people aged over 16, as displayed in Table 13-10. The Baseline Study Area (Falkirk and North Lanarkshire) has a marginally lower proportion of individuals who are economically active (excluding full-time students) at 59.3%, compared to 56.9% for Scotland overall. The proportion of economically active full-time students (3.3%) is also slightly lower than the national average in Scotland (4.0%). The unemployment rate in the Baseline Study Area is 2.0%, which is marginally higher than Scotland's rate of 1.9%. The economically inactive population is slightly lower in the Baseline Study Area (37.4%) compared to Scotland (39.1%), suggesting a somewhat more engaged workforce in the Baseline Study Area overall.

Table 13-10 Economic Activity

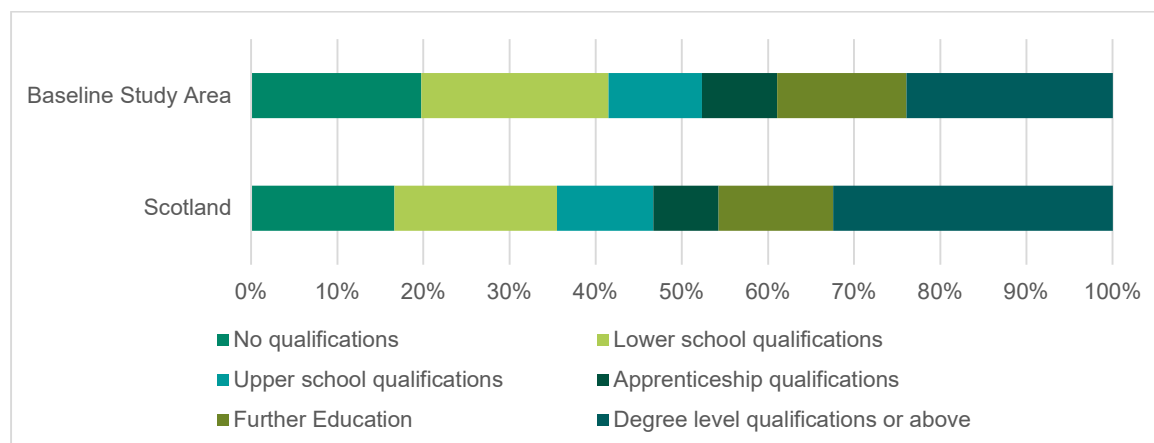
Economic Activity Indicator	Baseline Study Area	Scotland
Economically active (excluding full-time students)	59.3%	56.9%
Economically active (full-time students)	3.3%	4.0%
Unemployed (excluding full-time students)	2.0%	1.9%
Economically Inactive	37.4%	39.1%

Source: Scottish Census (2022)

Qualifications

- 13.4.7 Data from the Scottish Census shows that the Baseline Study Area (Falkirk and North Lanarkshire) has a lesser educated population in comparison to Scotland. Of the Baseline Study Area's 16+ population, 23.9% were qualified to degree level and above in 2022, compared to 32.5% in Scotland. The Baseline Study Area also had a higher proportion of individuals with no qualifications (19.8%) compared to the national average of 16.7%. The Baseline Study Area had a higher proportion of individuals educated at apprenticeship level (8.7%) compared to the Scotland average of 7.6%. This can be seen in Figure 13-3.

Figure 13-3 Qualifications



Source: Scottish Census (2022)

Employment by Industry

- 13.4.8 The most prevalent sector for employment in the Baseline Study Area (Falkirk and North Lanarkshire) is human health and social work activities (14.0%), this figure is marginally lower than the national average. The Baseline Study Area has a notably higher share of employment in comparison to Scotland in public administration (10.4%), manufacturing (9.8%), construction (9.3%), and transport and storage (6.5%). It also has slightly higher employment in wholesale and retail (12.3%) and administrative and support (4.9%). Conversely, the Baseline Study Area has a lower share of accommodation and food services (5.0%), mining (0.8%), agriculture, forestry, and fishing (0.4%), and professional scientific and technical activities (4.4%). Table 13-11 showcases this data.

Table 13-11 Employment by Industry

Industry	Baseline Study Area	Scotland
Agriculture; Forestry; Fishing	0.4%	1.6%
Mining and Quarrying	0.8%	1.6%
Manufacturing	9.8%	8.0%
Electricity, Gas, Steam and Air Conditioning Supply	0.7%	0.7%
Water Supply; Sewage; Waste Management and Remediation activities	0.9%	0.7%
Construction	9.3%	7.3%
Wholesale and Retail trade; Repair of Motor Vehicles and Motorcycles	12.3%	11.2%
Transport and Storage	6.5%	4.9%
Accommodation and Food Service Activities	5.0%	6.9%
Information and Communication	2.4%	2.9%
Financial and Insurance Activities	4.6%	4.3%

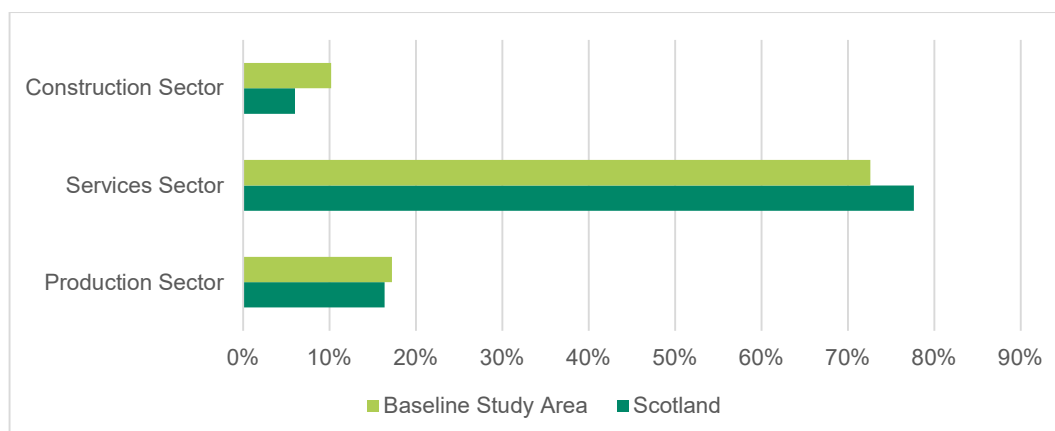
Real Estate Activities	0.9%	1.0%
Professional Scientific and Technical Activities	4.4%	5.8%
Administrative and Support Service Activities	4.9%	4.7%
Public Administration and Defence; Compulsory Social Security	10.4%	9.1%
Education	6.9%	8.2%
Human Health and Social Work Activities	14.0%	14.6%
Arts, Entertainment and Recreation	2.1%	2.7%
Other Service Activities	3.4%	3.6%
Activities of Household as Employers; Undifferentiated Goods and Services, Producing Activities of Households for Own Use	0.1%	0.1%

Source: Scottish Census (2022)

Gross Value Add (GVA)

- 13.4.9 The total GVA within the Baseline Study Area is estimated at £14.9 billion, 8.1% of Scotland's GVA output as a whole (as of 2023)³³. The sectoral composition of GVA indicates that the Baseline Study Area has a slightly higher proportion of output from the production (17.2%) and construction (10.2%) sectors relative to the national average (16.4% and 6.0%, respectively). In contrast, the services sector accounts for a smaller share of total GVA (72.6%) compared with Scotland (77.6%). This suggests a relatively greater dependence on industrial and construction activities within the local economy, with a correspondingly lower concentration of service-based employment and output.

Figure 13-4 Gross Value Add by Industry Sector



Source: ONS (2025)

Deprivation

- 13.4.10 The 2020 Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation across 6,976 Data Zones. The overall SIMD 2020 deprivation rank for each of Scotland's data zones is grouped into deciles across the whole of Scotland – decile 1 (d1) being the most deprived and d10 the least deprived. The distribution (as percentages) of each council's data zones into overall SIMD 2020 rank deciles where decile 1 is the most deprived. Councils with more of its zones distributed into ranks 1-3 have a greater percentage of its population living in deprived areas.

- 13.4.11 The data shows that on average, 9.9% of the Baseline Study Area (Falkirk and North Lanarkshire Local Authorities) data zones are ranked in d1, 15.6% in d2, and 13.5% in d3. This highlights the Baseline Study Area is moderately deprived, with 39.0% of data zones ranking in the top 3 most deprived deciles.

Health Profile

General Health

- 13.4.12 The 2022 Scottish Census provides data on self-assessed general health (Table 13-12). The Baseline Study Area has a lower percentage of individuals reporting both 'very good' and 'good' health, at 46.1% and 30.1%, respectively, compared to the Scotland average of 48.0% and 30.9%, respectively. The Baseline Study Area has more individuals reporting 'fair' health (15.4%) than the Scotland average (14.2%). The Baseline Study Area also has a higher percentage of individuals reporting both 'bad' and 'very bad' health, at 6.3% and 2.0%, respectively, compared to the Scotland average of 5.3% and 1.6%, respectively.

Table 13-12 General Health

Geography	Very Good	Good	Fair	Bad	Very Bad
Baseline Study Area	46.1%	30.1%	15.4%	6.3%	2.0%
Scotland	48.0%	30.9%	14.2%	5.3%	1.6%

Source: Scottish Census (2022)

Disability and Long-Term Illness

- 13.4.13 The Baseline Study Area (Falkirk and North Lanarkshire) has a slightly higher proportion of individuals whose day-to-day activities are "limited a lot" (12.6%) compared to Scotland overall (10.8%). The Baseline Study Area does, however, have a similar proportion of individuals whose day-to-day activities are 'limited a little', with both geographies reporting 13.3%. The percentage of individuals whose day-to-day activities are "not limited" (74.2%) is lower in the Baseline Study Area compared to Scotland (75.9%), indicating a higher prevalence of disability-related limitations in the Baseline Study Area (Table 13-13).

Table 13-13 Long-Term Conditions

Geography	Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities not limited
Baseline Study Area	12.6%	13.3%	74.2%
Scotland	10.8%	13.3%	75.9%

Source: Scottish Census (2022)

Wider Determinants of Health

- 13.4.14 The Scottish Government presents results for the Scottish Health Survey 2023 (data collected between 2019-2023), providing information on the health and factors relating to health of people living in Scotland. The Baseline Study Area's (Falkirk and North Lanarkshire Local Authorities) performance on different health indicators varies widely, as set out below.

- In the Baseline Study Area, 15.5% of individuals report having a cardiovascular condition, which is marginally lower than the Scottish average of 16.0%.
- In the Baseline Study Area, 30.5% of individuals report life satisfaction levels above the mode (extremely satisfied), slightly lower than the Scottish average of 33.0%.
- In the Baseline Study Area, 7.5% of individuals have been diagnosed with diabetes, slightly higher than the Scottish average of 7.0%.
- In the Baseline Study Area, 15.0% of individuals are current smokers, which is in line with the Scottish average of 15.0%.
- In the Baseline Study Area, 15.5% of individuals report alcohol consumption over 6/8 units, slightly higher than the Scottish average of 15.0%.
- In the Baseline Study Area, 31.5% of individuals are classified as obese, which is slightly higher than the Scottish average of 29.0%.
- In the Baseline Study Area, 22.5% of individuals report engaging in very low physical activity, slightly higher than the Scottish average of 20.0%. Fewer individuals in the Baseline Study Area (61.5%) meet physical activity recommendations compared to Scotland (65.0%).

Local Infrastructure

- 13.4.15 The Baseline Study Area is located within the administrative boundaries of Falkirk and North Lanarkshire. This incorporates several population centres in relative proximity to the Project which will accommodate residential properties, agricultural land, community facilities, businesses, open spaces and visitor attractions. A review of receptors which are deemed to have the potential for impacts via direct works or indirect impacts identified by other disciplines assessments as a result of the Project are presented.
- 13.4.16 As noted in Section 13.3, receptors within or immediately adjacent to the Site will be considered. Due to the geographical length of the works, receptors of each classification have been grouped into the sections of the Project that they are relevant for, comprising:
- New Build Overhead Line (WB Route);
 - Upgraded Overhead Line (XX Route, XR Route, ZG Route);
 - Ancillary Works, including:
 - CB Route Removal;
 - AA Route Undergrounding; and
 - Substation works.

Residential Receptors

- 13.4.17 There are a number of residential properties within and in the vicinity of the Site and are therefore assessed on a community and settlement basis (Table 13-14). These are shown in Figure 13.3 – Local Infrastructure.

Table 13-14 Residential Receptors

Section	Residential Community / Settlement
New Build Overhead Line (WB Route)	Farm residences on Beam Road, South of High Bonnybridge Arns Farm, Old Shields Farm residences on Palacerigg Road Cottage on Loanhead Road, North of Greengairs Cottage on Cameron Road, North of Wattston Properties on Mill Road, Brackenhirst Road, and Stirling Road at Riggend Farm residence on Cullochrig Road, West of Riggend Farm residence on Brackenhirst Road, West of Stand
Uprated Overhead Line (XR Route)	Rannoch Drive, Wishaw Wishaw Road, East of the Overtown Road Roundabout Mill Road Properties, Allanton Properties on the B7066 – Biggar Road Junction
Uprated Overhead Line (XX Route)	Chapelhall Town, including Dundrennan Drive, Main Street, Roslin Place, Dalbeattie Braes, Honeywell Crescent, St Abbs Way, Lanton Path, Bowhill Road, and Arnton Grove. Properties on Church Crescent, Airdrie Properties in North Airdrie on Bowmore Place, Dalwhinnie Place, Fettercairn Place, and Balblair Road Properties in East Glenmavis on Dunnet Avenue, Crathie Drive, Grantown Gardens, Arran Drive, Balmoral venue, Branchory Avenue, and Strathyre Gardens, Garliston Farm Residences
Uprated Overhead Line (ZG Route)	There are no residential properties within the Site relevant to Route ZG
Ancillary Works	Farm residence on unnamed road West of Beam Road Farm residences South of B816 Bonnyhill Road

Business Receptors

Similar to residential receptors, business receptors within or directly adjacent to the Site have been considered, and where clusters of businesses exist, these have been grouped as employment sites, rather than individual premises.

13.4.18 Table 13-15 shows relevant business receptors by section of the Project. These are shown in Figure 13.3 – Local Infrastructure.

Table 13-15 Business Receptors

Section	Business Receptor	Location
New Build Overhead Line (WB Route)	Brackenhirst Boarding Kennels	Brackenhirst Road, west of Stand, partially within the Site
	Highland Fuels Riggend Service Station	Riggend, adjacent to the Site
	Songbird cattery	North of Riggend, within the Site
	Crackerjacks Hores Riding and Stables	Hulks Road, north of Greengairs, partially within the Site
Uprated Overhead Line (XR Route)	Smith Avenue Industrial Units	Smith Avenue, Wishaw, 200m southeast of Wishaw Substation Extension and adjacent to the Site
	Miller Fabrications	A71, North of Waterloo, Wishaw, adjacent to the Site
	Frederick Place Industrial Units	A73, southwest of Morningside, within the Site
	One Stop Access Scotland Ltd	Biggar Road, 700m east of Newarthill Substation, within the Site
Uprated Overhead Line (XX Route)	Newhouse Industrial Estate, Holytown	Northeast of Holytown, intersected by the Site
	Inver House Distillers	East of Airdrie, intersected by the Site
	Stirling Road Industrial Estate	Sitrling Road, Airdrie, partially within the Site
	Albert Bartlett Wholesalers	Sitrling Road, East of Gelnamvis, partially within the Site
Uprated Overhead Line (ZG Route)	There are no business receptors within the Site relevant to Route ZG.	
Ancillary Works	Hayfield Riding School	Beam Road, South of High Bonnybridge, within the Site
	Marine Cruises Boat Hire	The Falkirk Wheel, West of Camelon, adjacent to the Site

Community facilities and open spaces

- 13.4.19 The community assets that may be affected by the Project are detailed in Table 13-16. These are shown in Figure 13.3 – Local Infrastructure.

Table 13-16: Community Facilities and Open Spaces

Section	Community Facilities and Open Space	Location
New Build Overhead Line (WB Route)	Palacerigg Country Park	East Cumbernauld, intersected by the Site
Upgraded Overhead Line (XR Route)	Pather Football Pitch	South Wishaw, partially within the Site
	Greenhead Moss Community Nature Park	Southeast Wishaw, intersected by the Site
	Torrance Park Golf Club	East of Holytown, intersected by the Site
Upgraded Overhead Line (XX Route)	Kids Playzone, off Bowhill Road, South Chapelhall	South Chapelhall, partially within the Site
	Playground on Dundrennan Road, Chapelhall	Southeast Chapelhall, within the Site
	Saint Aloysius Church	South Chapelhall, adjacent to the Site
	Airdrie Golf Club	Northeast Airdrie, partially within the Site
	Clarkston Parish Church and Cemetery	Northeast Airdrie, partially within the Site
	Playground on Grantown Gardens, east Glenmavis	East Glenmavis, within the Site
	New Monkland Cemetery	Northwest Airdrie, adjacent to the Site
Upgraded Overhead Line (ZG Route)	There are no community facilities or open spaces within or immediately adjacent to the Site that are relevant to Route ZG.	
Ancillary Works	Palacerigg Country Park	East Cumbernauld, intersected by the Site
	Palacerigg Golf Course	East Cumbernauld, partially within the Site
	Bonnybridge Eco Camping Site	South of Bonnybridge, within the Site
	Easter Carmuir Park	West Camelon, partially within the Site
	Falkirk Wheel	West Camelon, partially within the Site
	Falkirk Wheel Mini Golf Course	West Camelon, within the Site
	Drumpellier Country Park	Coatbridge, adjacent to the Site (Easterhouse Substation)

Core Paths

- 13.4.20 There are 53 core paths that intersect the Site, these are listed in Table 13-17 and shown in Figure 13.4 – Core Paths.
- 13.4.21 The National Cycle Network (NCN) Route 754 intersects the study area east to west through Bonnybridge and to the north of Castlecary, with NCN Route 75 intersecting the study area through Airdrie. Both routes are predominantly traffic-free with some short on-road sections.

Table 13-17: Core Paths

Route Section	Core Path	Local Authority
New Build Overhead Line (WB Route)	NL/157/1	North Lanarkshire
	013/466/1	Falkirk
	003/1114/1	Falkirk
	NL/157/1	North Lanarkshire
	NL/131/1	North Lanarkshire
	001/54/1	Falkirk
	003/1155/1	Falkirk
	NL/248/1	North Lanarkshire
	001/6/1	Falkirk
	NL/137/1	North Lanarkshire
	NL/149/1	North Lanarkshire
	NL/149/1	North Lanarkshire
	NL/135/1	North Lanarkshire
	013/411/1	Falkirk
	001/32/1	Falkirk
	001/34/1	Falkirk
	NL/248/1	North Lanarkshire
	NL/133/1	North Lanarkshire
	013/384/1	Falkirk
	003/1116/1	Falkirk
	013/420/1	Falkirk
	003/1134/1	Falkirk
	013/383/1	Falkirk
	013/377/1	Falkirk
	NL/140/1	North Lanarkshire
	NL/165/1	North Lanarkshire
	NL/305/1	North Lanarkshire

Upgraded Overhead Line (XR Route)	NL/329/1	North Lanarkshire
	NL/298/1	North Lanarkshire
	NL/329/1	North Lanarkshire
	NL/249/1	North Lanarkshire
Upgraded Overhead Line (XX Route)	NL/178/1	North Lanarkshire
	NL/162/1	North Lanarkshire
	NL/201/1	North Lanarkshire
	NL/223/1	North Lanarkshire
	NL/154/1	North Lanarkshire
	NL/153/1	North Lanarkshire
	NL/165/1	North Lanarkshire
Upgraded Overhead Line (ZG Route)	011/172/2	Falkirk
	011/209/2	Falkirk
Ancillary Works	003/1155/1 (AA)	Falkirk
	013/466/1 (CB)	Falkirk
	NL/131/1 (CB)	North Lanarkshire
	013/399/1 (CB)	Falkirk
	003/1155/1 (CB)	Falkirk
	013/443/1 (CB)	Falkirk
	NL/137/1 (CB)	North Lanarkshire
	NL/135/1 (CB)	North Lanarkshire
	NL/136/1 (CB)	North Lanarkshire
	013/411/1 (CB)	Falkirk
	003/1200/1 (CB)	Falkirk
	NL/133/1 (CB)	North Lanarkshire
	013/420/1 (CB)	Falkirk

Development Land

- 13.4.22 The planning applications within the study area (as detailed in Table 13-3) are detailed in Table 13-18. This summarises the planning applications within or immediately adjacent to the Site for the New Build Overhead Line (WB Route) section as per the scope of this assessment.

Table 13-18: Planning Applications Within or Immediately Adjacent to the New Build Overhead Line (WB Route) section of the Site ³⁷

Section	Development Land Allocation / Planning Application	Local Planning Authority	Status	Location
New Build Overhead Line (WB Route)	P/18/0065/FUL - leisure	Falkirk Council	Granted	Intersects the Site (Also intersects CB Route)
	P/17/0683/FUL - Formation of a Containerised Electricity Storage Facility with Associated Fencing and Infrastructure	Falkirk Council	Granted	Intersects Site Boundary (Also intersects Bonnybridge Substation Extension and Upgraded Overhead Line (ZG Route))
	P/24/0076/FUL - Change of use from Gypsy/Traveller Site to Holiday and Rural Enterprise Site Comprising Chalets, Enterprise and Learning Space and Landscaping	Falkirk Council	Permitted	Intersects the Site
	P/23/0570/RAIL -Site at Carmuir's Tunnel to The North of The Falkirk Wheel Falkirk	Falkirk Council	Awaiting Decision	Intersects the Site
	22/01442/EIASCR - Proposed residential development with associated infrastructure	North Lanarkshire Council	Unknown	Adjacent to the Site
	24/01227/MSR – Residential development with local retail/services and ancillary works	North Lanarkshire Council	Permitted	Intersects the Site (Also intersects CB Route)

³⁷ Where an allocation intersects / is adjacent to multiple sections of the route, this is noted in brackets.

25/00593/PAN - Creation of a new single-carriageway road link with associated earthworks, drainage, lighting, landscaping, signage and environmental mitigations	North Lanarkshire Council	Decided – Unknown Result	Intersects the Site
16/00184/FUL - Erection of Dwellinghouse & Garage	North Lanarkshire Council	Permitted	Intersects the Site
15/01540/EIASC - Request for EIA Screening Opinion: Solar Farm	North Lanarkshire Council	Unknown	Intersects the Site

13.4.23 The Project lies close to several local planning allocations and designated environmental assets, including a mixed-use/housing allocation within Falkirk Council's Local Development Plan, intersecting the Site, including the CB Route Removal, and adjacent to the New Build Overhead Line (WB Route), AA Route Undergrounding, and Bonnybridge Substation Extension. It is also in proximity to Natural Environment and Green Network Assets identified in North Lanarkshire's Local Development Plan, including Palacerigg Country Park, Drumpellier Country Park, and Greenhead Moss Community Park. In addition, the site is located near several designated Green and Urban Green Network areas, including Chapelhall, Cumbernauld, Glenmavis, Pather, and the Seven Lochs Wetland Park.

Future Baseline

- 13.4.24 2040 is used as the baseline year as it provides a consistent and practical reference point for assessing the long-term economic and employment effects of the Project, as well as the likely land use context in which it will operate. The future baseline is anticipated to be largely the same as the existing baseline for socio-economics and recreation. According to the National Records of Scotland Population Projections, the population of North Lanarkshire is forecast to decrease from 341,134 in 2018 to 338,453 in 2040, representing a 0.8% decrease. The population of Falkirk is expected to increase from 163,675 in 2024 to 169,264 in 2040, representing a 3.4% increase. The overall population of Scotland is forecasted to grow 1.3% between 2024 and 2040, from 5,504,866 to 5,574,675. These projections are based off 2018 data which use assumed levels of future fertility, mortality and migration. The projections did not consider the findings of the Census 2022.
- 13.4.25 In terms of local infrastructure, it is expected that Core Paths will continue to be used, and businesses and community facilities may open and close. However, it is not expected that there will be any perceptible changes to the local economic baseline assessment, and the

Project should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to the baseline.

13.5 Assessment of Effects, Mitigation and Residual Effects of the New Build Overhead Line

Introduction

- 13.5.1 This section identifies the likely impacts and effects, and their significance, on socio-economics and recreation (including human health) resulting from the New Build Overhead Line element of the Project.

Embedded Mitigation Measures

- 13.5.2 Embedded mitigation measures apply centrally for the Project, rather than made specific for each section of the Project. Therefore, this section represents the embedded mitigation measures for the wider Project.
- 13.5.3 The Project has been designed, as far as possible, to avoid or minimise impacts and effects on socio-economics and Recreation (including Human Health), the process of design development, and by embedding measures into the design of the Project.
- 13.5.4 The following embedded mitigation measures have been incorporated into the Project design, with detailed proposals and locations to be submitted with the application:
- Primary mitigation measures are embedded within the Project, as set out in the respective chapters, to reduce other construction and operational effects (such as noise, transport, and landscape and visual) which in turn would mitigate the effects on the local community and existing facilities from a socio-economic and recreation (including human health) perspective.
- 13.5.5 The following standard construction practices are relevant to this assessment. These measures are relevant to the socio-economic and recreation (including human health) assessment as they ensure that environmental controls help to minimise disruption to local communities during construction phases:
- A Construction Environmental Management Plan (CEMP) describes the specific mitigation measures to be followed to control and reduce impacts on the environment during the construction phase. The measures detailed include controls associated with:
 - Traffic and access;
 - Resource and material management;
 - Noise and vibration;
 - Dust generation; and
 - Waste management.
 - A Construction Traffic Management Plan (CTMP) will be produced for each component of the Project providing an overview of proposed construction traffic movements, and associated management strategy, and mitigation measures to be considered to minimise

impacts on the local trunk road networks and environment, site traffic, and disruption to local communities.

Assessment of Effects

Disruption to access to core paths

- 13.5.6 Changes to journey times, local travel patterns, and certainty of routes for users (including for access, recreation, and equestrian) would arise from the temporary closures and diversions of core paths. As noted in Section 13.4, there are 26 core paths which intersect the New Build Overhead Line (WB Route).
- 13.5.7 In the absence of detailed construction phasing and access information for all locations, it is not possible to confirm which specific routes would be affected, nor the duration of any disruption. A precautionary, worst-case assumption has therefore been adopted that all 26 core paths could be temporarily disrupted for a duration of construction activities. Where temporary closure or restriction of access to a core path is required, this will be undertaken in accordance with relevant statutory procedures. It is assumed that a Section 11 Order under the Land Reform (Scotland) Act 2003 shall be obtained from the local authority. Confirmed information indicates that access to towers WB052 and WB053 utilises core paths in the wooded area to the west of the Falkirk Wheel Development. These footpaths will be off-limits to the public. Signage will be in place to divert the public away from these paths, with suggestions of alternative routes to maintain safe walking access in the area.
- 13.5.8 Any disruption to core paths intersecting the New Build Overhead Line will be temporary in nature for a duration for the construction phase and will be reinstated following construction in an unchanged condition. Desktop review identifies a limited number of alternative routes within the wider area which may remain available for use, although some diversions may result in increased journey distances, though it is assumed that these alternatives will be marked and signposted during the diversion or closure of the relevant core path. Taking into account the precautionary assumption that all 26 core paths may be affected, the temporary nature of the disruption, and the availability of alternative routes, impact magnitude is assessed to be **medium**.
- 13.5.9 Given the rural nature of the surrounding area, it is expected that the majority of trips that are taken on these core paths are for leisure and recreational purposes, rather than for commuting or access to land. Taking this into account, the core paths relevant for the New Build Overhead Line are assessed to be of **low** sensitivity.
- 13.5.10 Overall, the likely effects on core paths during the construction phase of the New Build Overhead Line is assessed to be **minor adverse (not significant)**.

Human Health Determinant: Transport Modes, Access and Connections

- 13.5.11 Residents of properties in the towns and villages surrounding the New Build Overhead Line attempting to access healthcare, educational, and community facilities are likely to use the same strategic roads as construction traffic associated with the New Build Overhead Line. Increased traffic flows and severance effects may inhibit the ability of local residents to access these facilities.

- 13.5.12 The Baseline Study Area experiences lower rates of self-reported good health compared to the national average, alongside a generally lower educational profile, as reflected in a higher proportion of residents with no formal qualifications and a lower proportion educated to higher levels. These characteristics suggest a degree of socio-economic vulnerability within the community, therefore the sensitivity of the general population in relation to accessing these services is therefore assessed to be **medium**.
- 13.5.13 An assessment of potential movement effects during construction is provided in Chapter 11 Traffic and Movement. This finds no likely significant effects in terms of severance of communities as a result of the New Build Overhead Line works. This assessment is considered in terms of the likely impact on health and wellbeing, by which community connectivity may be compromised for users as a result of identified significant adverse effects. As such, the magnitude of impact is considered to be **low**.
- 13.5.14 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase is assessed to be temporary **minor adverse (not significant)**.

Land use impacts on local and private assets including residential properties, businesses, community facilities and visitor attractions

Land Take

- 13.5.15 The New Build Overhead Line works intersect a range of private amenity land, agricultural holdings, commercial land interests, and local authority-owned land. On this basis, the socio-economic receptor of the landholdings is assessed as being of **medium** sensitivity, reflecting local economic value, while acknowledging that individual holdings are unlikely to be fundamentally compromised by partial land take. Where land is in ownership of the Applicant, there is assumed to be no effect from land take effects.
- 13.5.16 Detail of the towers and construction compounds for the New Build Overhead Line are described in Chapter 4 Project Description and shown in Figure 4.2 Project Works Plan, and Appendix 4.1 Project Tower Schedule provides additional information on the tower works and access points.

Permanent Land Take

- 13.5.17 Permanent land take is required for the installation of 66 new L8c towers from Glenmavis to Cumbernauld Substation Extension and Bonnybridge Substation Extension as part of the New Build Overhead Line.
- 13.5.18 The overall scale of land required for each tower location is typically limited to the immediate tower footprint and associated access requirements. It is assumed that land will retain its existing use, and landowners will retain the ability to continue operation in the vicinity of the towers. It is assumed that land directly below the overhead lines which is not affected by the towers or access requirements will be able to be used as normal. The magnitude of impact is assessed as **low**, as the land take is limited and unlikely to displace businesses or entire holdings, with access maintainable through mitigation. As set out in 13.5.15, socio-economic receptors of the landholdings are assessed as being of **medium** sensitivity. This results in a **minor adverse effect (not significant)** on the landholdings as a result of permanent land take.

- 13.5.19 There is no other permanent land take requirements associated with the construction of the New Build Overhead Line.

Temporary Land Take

- 13.5.20 Each proposed tower location for the New Build Overhead Line also requires a tower working area compound. Each of these compounds will be approximately 50m x 50m in area and will comprise a construction laydown area, turning head and segregated bunding area. It is assumed that these temporary works will be required for the duration of construction only and will be fully reinstated following completion of installation. As set out in 13.5.15, socio-economic receptors of the landholdings are assessed as being of **medium** sensitivity. The magnitude of impact is assessed as **low**, given the limited spatial footprint of each compound compared to total land ownership parcel, the temporary nature of works, and the assumed reinstatement measures. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors of landholdings as a result of temporary land take.
- 13.5.21 A temporary construction compound for the New Build Overhead Line is in private land ownership. As set out in 13.5.15, socio-economic receptors of the landholdings are assessed as being of **medium** sensitivity. The magnitude of impact is assessed as **low**, given the limited footprint of the compound relative to the wider landholding, the temporary duration of use, and the assumed reinstatement of land to its former condition post-construction. This results in a **minor adverse** effect (**not significant**) on socio-economic receptor of the landholding as a result of temporary land take.
- 13.5.22 Temporary access routes for each tower will be required to enable the delivery of materials, plant, and personnel to each tower location and associated working area. The land is assessed as being of **medium** sensitivity as set out in Paragraph 13.5.15 reflecting its local economic value. Construction site access will be taken from the existing Council and Trunk road network via a combination of existing, upgraded, and new temporary tracks. Where able, existing farm or estate tracks will be utilised to minimise the need for new infrastructure. Where new access is necessary, short sections of stone track will be constructed to provide stable access for heavy plant and construction vehicles. Improvements to existing bellmouths from the public highway will be undertaken where required, including local widening and sightline enhancement works, subject to agreement with the local authority. Each proposed access route had been selected following detailed site appraisal to maximise use of existing tracks and minimise environmental and land use disturbance. All temporary access tracks will be removed and the ground reinstated following completion of construction, with vegetation and soils replaced to match existing conditions. The magnitude of impact is assessed as **low** given the temporary nature and limited footprint of these works. This results in a **minor adverse** effect (**not significant**) on socio-economic receptor of the landholdings as a result of temporary land take.
- 13.5.23 There is no other temporary land take requirements associated with the construction of the New Build Overhead Line.

Amenity Impacts

- 13.5.24 There is potential for noise, visual, and traffic effects arising from the construction of the New Build Overhead Line to impact on the amenity of residents, businesses, users of community facilities and visitor attractions. The sensitivity of all of these receptors is assessed to be **medium**, due to their importance and moderate potential to respond to noise or visual effects which may affect the quality, performance, or visitor experience.
- 13.5.25 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration, Chapter 6 Landscape and Visual, and Chapter 11 Traffic and Movement relating to the construction activities, two community facilities (the Falkirk Wheel and Falkirk Wheel Mini Golf Course) and one business (Marine Cruises Boat Hire) have been identified as having significant visual and noise (arising from construction access arrangements) effects during the construction phase. Chapter 11 Traffic and Movement concludes that there will be no significant transport effects either as a result of one or more individual components of the Project or the Project in its entirety.
- 13.5.26 The construction access arrangements that would generate significant noise effects on these receptors is likely to only last for a number of weeks, and, as outlined in Chapter 12 Noise and Vibration, the construction programme can be finalised in order to ensure the exceedances do not occur for a period of 10 or more days of working in any 15 consecutive days or for a total number of days exceeding 40 in any 6 consecutive months. Therefore, the duration of likely significant overlapping visual and noise effects that would drive amenity effects is limited. Given this, the magnitude of effect on these receptors is assessed to be **low**.
- 13.5.27 Overall, while there is potential for temporary reductions in amenity during construction, these effects are limited in extent and duration. This results in a **minor adverse effect (not significant)**, on amenity of the two community facilities and one business.

Human Health Determinant: Noise and Vibration

- 13.5.28 The construction activities of the New Build Overhead Line have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities. As detailed within Chapter 12 Noise and Vibration, the New Build Overhead Line passes through a largely rural area with a low baseline noise profile. Additionally, as outlined within Section 13.4, the health profile of the Baseline Study Area indicates that the health of the local population is slightly worse than the national average. Therefore, the sensitivity of the local population to noise and vibration-related health effects is assessed to be **medium**.
- 13.5.29 An assessment of the risk of noise and vibration impacts during construction is provided in Chapter 12. It finds that there would be residual significant effects from construction vibration. Chapter 12 Noise and Vibration indicates that significant effects are expected to be temporary, lasting only a number of weeks. The construction programme can be managed to ensure that noise exceedances do not occur for 10 or more days within any 15 consecutive working days, or exceed a total of 40 days within any six-month period. Additionally, a programme of community liaison is to be put in place. Accordingly, any noise and vibration effects with the potential to impact human health are anticipated to be

short-term and localised, affecting only a limited proportion of the population. On this basis, the magnitude of effect on these receptors is assessed as **low**.

- 13.5.30 Overall, the likely effect on human health arising from impacts on noise and vibration during the New Build Overhead Line construction phase is assessed as **minor adverse (not significant)**.

Human Health Determinant: Open Space, Leisure and Play

- 13.5.31 Construction activities of the New Build Overhead Line may intersect, or otherwise impact upon, the accessibility of open space and core paths in the study area, which could impact the health and wellbeing of local residents.
- 13.5.32 As noted in Section 13.4, there are 26 core paths which intersect the New Build Overhead Line. Paragraph 13.5.7 details that, assuming a worst-case scenario, all 26 of these paths may need to be closed or diverted, and therefore, magnitude has been assessed to be **medium** for the disruption to core paths.
- 13.5.33 Given the rural location of these core paths, it is likely that they are used for recreational purposes, and disrupted access to these paths would affect resident's access to open space and leisure. There are a number of core paths in the surrounding area which could be used as alternative recreational paths. Taking these factors into account, the sensitivity of core path users has been assessed to be **low**.
- 13.5.34 Overall, the likely effect on human health arising from impacts on access to open space, leisure, and play areas during the Uprated Overhead Line construction phase is assessed as **minor adverse (not significant)**.

Impacts on Development Land

- 13.5.35 There are multiple planning applications and existing permissions within the vicinity of the New Build Overhead Line, as stated in Table 13-18. There is a degree of spatial overlap between the New Build Overhead Line and a number of the planning applications and permissions identified. This could lead to effects on development land due to the shared land and infrastructure needs.
- 13.5.36 Furthermore, as stated in Paragraph 13.4.23, the New Build Overhead Line is situated close to several local planning allocations and designated environmental assets within Falkirk Council's Local Development Plan and North Lanarkshire's Local Development Plan.
- 13.5.37 While this indicates a potential for land use interaction, there is limited indication that construction of the New Build Overhead Line would materially constrain the delivery of these other schemes or impact on safeguarded sites. This is based on the Local Plan policies and the New Build Overhead Line allowing coordination with other developments.
- 13.5.38 The sensitivity of development land is **medium**, taking into account its relative importance and reflecting its value for planned or potential use. The magnitude of impact during the construction phase is deemed to be **low** given the anticipated balance of infrastructure requirements from a land use perspective. Therefore, the effect of the New Build Overhead Line on development land during the construction phase has the potential to be **minor adverse (not significant)**.

Summary of Significant Effects

- 13.5.39 Based on this assessment of Socio-economic and Recreation (including Human Health) impacts, it is considered that there are no significant effects associated with the construction of the New Build Overhead Line.

Proposed Additional Mitigation Measures

- 13.5.40 Additional mitigation measures are not proposed. However, as set out in Paragraphs 13.5.2 to 13.5.5, the CEMP and CTMP include embedded measures to minimise disruption during construction. These are considered to manage potential effects as far as reasonably practicable without affecting the New Build Overhead Line overall design or delivery.

Residual Effects

- 13.5.41 No residual significant effects are expected from the construction of the New Build Overhead Line.

Monitoring

- 13.5.42 There are no monitoring measures proposed for Socio-economic and Recreation (including Human Health).

13.6 Assessment of Effects, Mitigation and Residual Effects of the Uprated Overhead Lines

Introduction

- 13.6.1 This section identifies the likely impacts and effects on socio-economics and recreation (including human health) resulting from the Uprated Overhead Line element (XX, XR and ZG Route) of the Project.

Embedded Mitigation Measures

- 13.6.2 Embedded mitigation measures for the Project relevant for Socio-economics and Recreation (including Human Health), are set out in Paragraphs 13.5.2 to 13.5.5.

Assessment of Effects

Disruption to access core paths

- 13.6.3 Changes to journey times, local travel patterns, and certainty of routes for users (including for access, recreation, and equestrian) would arise from the temporary closures and diversions of core paths. As noted in Section 13.4, there are 14 core paths which intersect the Uprated Overhead Line (XX, XR and ZG Route).
- 13.6.4 The Palacerigg Country Parkrun utilises the corepath network within the park. These corepaths shall be occupied for a temporary period of time during the construction of the Project. The proposed Overhead line route will cross the parkrun course between towers WB020 and WB021, WB021A and WB021B, and WB022 and WB023. Representatives of the Palacerigg Country Parkrun attended the public consultation events. The applicant shall endeavour to work collaboratively with Palacerigg Country Parkrun to identify an alternative and safe route during the period of works affecting this organisation.

- 13.6.5 In the absence of detailed construction phasing and access information for all locations, it is not possible to confirm which specific routes would be affected, nor the duration of any disruption. A precautionary, worst-case assumption has therefore been adopted that all 14 core paths could be temporarily disrupted for a duration of construction activities. Where temporary closure or restriction of access to a core path is required, this will be undertaken in accordance with relevant statutory procedures. It is assumed that a Section 11 Order under the Land Reform (Scotland) Act 2003 shall be obtained from the local authority.
- 13.6.6 Any disruption to core paths intersecting the Uprated Overhead Line will be temporary in nature for a duration for the construction phase and will be reinstated following construction in an unchanged condition. Desktop review identifies a limited number of alternative routes within the wider area which may remain available for use, although some diversions may result in increased journey distances, though it is assumed that these alternatives will be marked and signposted during the diversion or closure of the relevant core path. Taking into account the precautionary assumption that all 14 core paths may be affected, the temporary nature of the disruption, and the availability of alternative routes, impact magnitude is assessed to be **medium**.
- 13.6.7 Whilst the ZG Route is primarily rural, routes XX and XR pass through some built-up areas, such as Wishaw and Airdrie. A small proportion of the 14 intersecting core paths are in residential neighbourhoods, meaning that these core paths may be used modestly for commuting and access purposes, however, it is likely that most users will use them for recreational and leisure purposes. Taking this into account, the core paths relevant for the Uprated Overhead Line is assessed to be of **low** sensitivity.
- 13.6.8 Overall, the likely effects on core paths during the construction phase of the Uprated Overhead Line is assessed to be **minor adverse (not significant)**.
- Human Health Determinant: Transport Modes, Access and Connections
- 13.6.9 As described in paragraphs 13.5.11 and 13.5.12, residents within the towns and villages surrounding the Uprated Overhead Line may experience changes in access to healthcare, education and community facilities as a result of increased construction traffic and associated severance on shared strategic road routes. Baseline conditions within the Study Area indicate comparatively lower levels of self-reported good health and educational attainment, suggesting a degree of socio-economic vulnerability within the local population. On this basis, the sensitivity of receptors in relation to access to these services is assessed as **medium**.
- 13.6.10 Chapter 11 Traffic and Movement finds no likely significant effects in terms of severance of communities as a result of the Uprated Overhead Line works. This assessment is considered in terms of the likely impact on health and wellbeing, by which community connectivity may be compromised for users as a result of identified significant adverse effects. As such, the magnitude of impact is considered to be **low**.
- 13.6.11 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase is assessed to be temporary **minor adverse (not significant)**.

Land use impacts on local and private assets including residential properties, businesses, community facilities and visitor attractions

Land Take

- 13.6.12 The Upated Overhead Line works intersect a range of private amenity land, agricultural holdings, commercial land interests, and local authority-owned land. On this basis, the socio-economic receptor of the landholdings is assessed as being of **medium** sensitivity, reflecting local economic value, while acknowledging that individual holdings are unlikely to be fundamentally compromised by partial land take. Where land is in ownership of the Applicant, there is assumed to be no effect from land take effects.
- 13.6.13 Detail of the towers and construction compounds for the towers, construction compounds, and access points for the Upated Overhead Line are described in Chapter 4 Project Description and shown in Figure 4.2 Project Works Plan, and Appendix 4.1 Project Tower Schedule provides additional information on the tower works and access points.

Permanent Land Take

- 13.6.14 Permanent land take will be required for the installation of new towers and associated reconfiguration works along the Upated Overhead Lines (ZG Route, XX Route, and XR Route).
- 13.6.15 Permanent land take will be required for the installation of two new L6 terminal towers (ZD096A and ZD096B) and associated downloads at Denny North Substation Works and Bonnybridge substation Extension, forming the connection between the Upated Overhead Line (ZG route) and the New Build Overhead Line (WB route). The new towers will be located within the Applicant's existing operational land, supplemented by small areas of adjoining private agricultural land required for tower bases and construction access. Considering that the land required for permanent land take is in utility ownership of the Applicant and directly associated with existing substation infrastructure, there is assumed to be **no effect** as a result of permanent land take for the ZG upated route.
- 13.6.16 For the XR Route, permanent land take will be required for the installation of a new L8c terminal tower (XX001A) at Newarthill Substation, alongside minor modifications to the existing tower arrangement. The new terminal tower will be located within existing operational land of the Applicant. Considering that the land is in utility ownership of the Applicant and directly associated with existing substation infrastructure, there is assumed to be **no effect** as a result of permanent land take for the XR route.
- 13.6.17 For the XX Route, permanent land take will be required for the installation of a new L8c terminal tower (XX048A) at the southern end of the XX route, and five new L8c towers between existing towers XX019 and XX022 (together with minor reconfiguration works to existing adjacent towers). The new towers will replace existing structures to accommodate the upgraded double-circuit 400 kV configuration. The affected land comprises private landholdings between Bonnybridge and Glenmavis, and adjacent to Newarthill Substation. As set out in 13.6.12, the sensitivity of the landholdings is assessed as **medium**. The overall scale of permanent land scale for each tower is limited to the tower footprint and associated access. It is assumed that landowners will retain the ability to continue operations, and no displacement of active business or holdings is anticipated. It is assumed that land directly below the overhead lines which is not affected by the

towers or access requirements will be able to be used as normal. The magnitude of impact is assessed as **low**, given the localised loss of small areas of land to tower bases. This results in **minor adverse** effect (**not significant**) on socio-economic receptors as a result of permanent land take for the XX uprated route.

- 13.6.18 No other permanent land take requirements are associated with the uprating of the existing overhead lines beyond those identified.

Temporary Land Take

- 13.6.19 A temporary construction compound for the Uprated Overhead Line is proposed on land adjacent to Denny North Substation. This compound area is located on land owned by The Applicant. This therefore does not result in the displacement of third-party receptors and does not affect ongoing access or use by external parties. On this basis, there is **no effect**.
- 13.6.20 Each tower location for the Uprated Overhead Lines requires a temporary working area compound to facilitate construction activities. Each of these compounds will be approximately 50m x 50m in area and will comprise a construction laydown area, turning head and segregated bunding area for fuel or materials. These areas will be used for welfare, plant and materials storage, and safe working during excavation, foundation construction, tower erection, and stringing operations. All temporary areas will be reinstated to their former condition upon completion. As set out in 13.6.12, the sensitivity of the landholdings is assessed as **medium**. The magnitude of impact is assessed as **low**, given the limited spatial footprint of each compound compared to total land ownership parcel, the temporary nature of works, and the assumed reinstatement measures. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors of landholdings as a result of temporary land take.
- 13.6.21 For Route ZG, temporary land take will be required for access to the two new L6 terminal towers at Denny North and Bonnybridge, as well as for reconductoring and dismantling works along the 3.95 km route. Access will be taken from existing public roads (M80, M876, A73, A883 and B905) via existing, upgraded and short new stone access tracks. Where possible, existing non-public tracks will be reused to minimise land disturbance, and new tracks will be removed with topsoil reinstated after use. As set out in 13.6.12, the sensitivity of the landholdings is assessed as **medium**. Given the limited footprint, temporary duration, and reinstatement commitment, the magnitude of impact is assessed as **low**. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors of landholdings as a result of temporary land take.
- 13.6.22 For the XX Route, temporary land take will occur for access to the new L8c terminal tower (XX048A) at the southern end of the XX route and the five new L8c towers between existing towers XX109 and XX022. Access will be via a combination of existing, upgraded and new stone access tracks from adopted/Trunk roads including the M80, M876, A73 and A775. Existing bellmouths will be improved through local widening and sightline enhancement works. All new access tracks will be temporary and reinstated following construction. As set out in 13.6.12, the sensitivity of the socio-economics receptor of the landholdings is assessed as **medium**. Given the localised footprint and reinstatement, the magnitude of impact is assessed as **low**. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors of landholdings as a result of temporary land take.

13.6.23 For the XR Route, temporary land take will be required for working areas at the new terminal tower XR100A near Newarthill Substation and for access to existing tower sites along the 16 km uprated alignment. Construction access will be taken from the existing adopted / Trunk road network, including the M80, M876, A73, A775, A71 and A73 Main Street, using a combination of existing, upgraded, and new stone access tracks. Improvements to bellmouths, visibility splays, and track surfacing will be implemented as required. All temporary access tracks and working areas will be removed and reinstated post-construction. The affected land, a mix of operational land owned by the Applicant and private landholdings is assessed to have, **medium** sensitivity as set out in 13.6.12. Given the limited spatial extent, temporary duration, and full reinstatement, the magnitude of impact is assessed as **low**. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors of landholdings as a result of temporary land take.

13.6.24 There is no other temporary land take requirements associated with the construction of the Uprated Overhead Line.

Amenity Impacts

13.6.25 There is potential for noise, visual, and traffic effects arising from the construction of the Uprated Overhead Line to impact on the amenity of residents, businesses, users of community facilities and visitor attractions. The sensitivity of all of these receptors is assessed to be medium, due to their importance and moderate potential to respond to noise or visual effects which may affect the quality, performance, or visitor experience.

13.6.26 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration, Chapter 6 Landscape and Visual, and Chapter 11 Traffic and Movement relating to the construction activities for the Uprated Overhead Line, there are no likely overlapping significant noise, visual or traffic effects which would result in amenity effects.

Human Health Determinant: Noise and Vibration

13.6.27 The construction activities of the Uprated Overhead Line have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities. As detailed within Chapter 12 Noise and Vibration, the New Build Overhead Line passes through a largely rural area with a low baseline noise profile. Additionally, as outlined within Section 13.4, the health profile of the Baseline Study Area indicates that the health of the local population is slightly worse than the national average. Therefore, the sensitivity of the local population to noise and vibration-related health effects is assessed to be **medium**.

13.6.28 An assessment of the risk of noise and vibration impacts during construction is provided in Chapter 12 Noise and Vibration. It finds that there would be residual significant effects from construction traffic noise and construction vibration. Chapter 12 Noise and Vibration indicates that significant noise effects are expected to be temporary, lasting only a number of weeks. The construction programme can be managed to ensure that noise exceedances do not occur for 10 or more days within any 15 consecutive working days, or exceed a total of 40 days within any six-month period. Additionally, a programme of community liaison is to be put in place. Accordingly, any noise effects with the potential to impact human health are anticipated to be short-term and localised, affecting only a

limited proportion of the population. On this basis, the magnitude of effect on these receptors is assessed as **low**.

- 13.6.29 Overall, the likely effect on human health arising from impacts on noise and vibration during the Uprated Overhead Line construction phase is assessed as **minor adverse (not significant)**.

Human Health Determinant: Open Space, Leisure and Play

- 13.6.30 Construction activities of the Uprated Overhead Line may intersect, or otherwise impact upon, the accessibility of open space and core paths in the study area, which could impact the health and wellbeing of local residents.
- 13.6.31 As noted in Section 13.4, there are 14 core paths which intersect the Uprated Overhead Line. Paragraph 13.6.5 details that, assuming a worst-case scenario, all 14 of these paths will need to be closed or diverted, and therefore, magnitude has been assessed to be **medium** for the disruption to core paths.
- 13.6.32 Given the rural location of these core paths, it is likely that they are used for recreational purposes, and disrupted access to these paths would affect resident's access to open space and leisure. There are a number of core paths in the surrounding area which could be used as alternative recreational paths. Taking these factors into account, the sensitivity of core path users has been assessed to be **low**.
- 13.6.33 Overall, the likely effect on human health arising from impacts on access to open space, leisure, and play areas during the Uprated Overhead Line construction phase is assessed as **minor adverse (not significant)**.

Summary of Significant Effects

- 13.6.34 Based on this assessment of Socio-economic and Recreation (including Human Health) impacts, it is considered that there are no significant effects associated with the construction of the Uprated Overhead Line.

Proposed Additional Mitigation Measures

- 13.6.35 Additional mitigation measures are not proposed. However, as set out in Paragraphs 13.5.2 to 13.5.5, the CEMP and CTMP include embedded measures to minimise disruption during construction. These are considered to manage potential effects as far as reasonably practicable without affecting the Uprated Overhead Line overall design or delivery.

Residual Effects

- 13.6.36 No residual significant effects are expected from the construction of the Uprated Overhead Line.

Monitoring

- 13.6.37 There are no monitoring measures proposed for Socio-economic and Recreation (including Human Health).

13.7 Assessment of Effects, Mitigation and Residual Effects of the CB Route Removal

Introduction

- 13.7.1 This section identifies the likely impacts and effects on socio-economics and recreation (including human health) resulting from the CB Route Removal element of the Project.

Embedded Mitigation Measures

- 13.7.2 Embedded mitigation measures for the Project relevant for Socio-economics and Recreation (including Human Health), are set out in Paragraphs 13.5.2 to 13.5.5.

Assessment of Effects

Disruption to access to core paths

- 13.7.3 Changes to journey times, local travel patterns, and certainty of routes for users (including for access, recreation, and equestrian) would arise from the temporary closures and diversions of core paths. As noted in Section 13.4, there are 12 core paths which intersect the CB Route Removal.
- 13.7.4 In the absence of detailed construction phasing and access information for all locations, it is not possible to confirm which specific routes would be affected, nor the duration of any disruption. A precautionary, worst-case assumption has therefore been adopted that all 12 core paths could be temporarily disrupted for the duration of construction activities. Where temporary closure or restriction of access to a core path is required, this will be undertaken in accordance with relevant statutory procedures. It is assumed that a Section 11 Order under the Land Reform (Scotland) Act 2003 shall be obtained from the local authority.
- 13.7.5 Any disruption to core paths intersecting the CB Route Removal will be temporary in nature for the duration of the construction phase and will be reinstated following construction in an unchanged condition. Desktop review identifies a limited number of alternative routes within the wider area which may remain available for use, although some diversions may result in increased journey distances, though it is assumed that these alternatives will be marked and signposted during the diversion or closure of the relevant core path. Taking into account the precautionary assumption that all 12 core paths may be affected, the temporary nature of the disruption, and the availability of alternative routes, impact magnitude is assessed to be **medium**.
- 13.7.6 Given the rural nature of the surrounding area, it is expected that the majority of trips taken on these core paths are for leisure and recreational purposes, rather than for commuting or access to land. Taking this into account, the core paths relevant for the CB Route Removal is assessed to be of **low** sensitivity.
- 13.7.7 Overall, the likely effects on core paths during the construction phase of the CB Route Removal is assessed to be **minor adverse (not significant)**.

Human Health Determinant: Transport Modes, Access and Connections

- 13.7.8 As described in paragraphs 13.5.11 and 13.5.12, residents within the towns and villages surrounding the CB Route Removal may experience changes in access to healthcare,

education and community facilities as a result of increased construction traffic and associated severance on shared strategic road routes. Baseline conditions within the Study Area indicate comparatively lower levels of self-reported good health and educational attainment, suggesting a degree of socio-economic vulnerability within the local population. On this basis, the sensitivity of receptors in relation to access to these services is assessed as **medium**.

- 13.7.9 Chapter 11 Traffic and Movement finds no likely significant effects in terms of severance of communities as a result of the CB Route Removal works (which is assessed under the New Build Overhead Line). This assessment is considered in terms of the likely impact on health and wellbeing, by which community connectivity may be compromised for users as a result of identified significant adverse effects. As such, the magnitude of impact is considered to be **low**.

- 13.7.10 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase is assessed to be temporary **minor adverse (not significant)**.

Land use impacts on local and private assets including residential properties, businesses, community facilities and visitor attractions

Land Take

- 13.7.11 The CB Route Removal works intersect a range of private amenity land, agricultural holdings, commercial land interests, and local authority-owned land. On this basis, the socio-economic receptor of the landholdings is assessed as being of **medium** sensitivity, reflecting local economic value, while acknowledging that individual holdings are unlikely to be fundamentally compromised by partial land take. Where land is in ownership The Applicant, there is assumed to be no effect from land take effects.
- 13.7.12 Detail of the towers and construction compounds for the towers, construction compounds, and access points for the CB Route Removal are described in Chapter 4 Project Description and shown in Figure 4.2 Project Works Plan, and Appendix 4.1 Project Tower Schedule provides additional information on the tower works and access points.

Permanent Land Take

- 13.7.13 The CB Route Removal extends between Bonnybridge Substation Extension and Cumbernauld Substation Extension and is to provide a clear corridor for the new WB Route. The existing 132kV overhead line CB Route must be decommissioned, dismantled and removed from site. This involves removing all hardware including conductors and fittings, dismantling of towers and removal of foundations. The removal of the existing CB Route would not, in itself, result in any permanent land take. While removal of the CB Route facilitates construction of the WB Route, including reuse of parts of the existing wayleave, any permanent land take would be attributable solely to the WB Route itself. As such, the CB Route Removal would not give rise to any additional permanent land take beyond that required for the WB Route and would not result in a separate land use or socio-economic effect. Therefore, there is assumed to be **no effect** as a result of permanent land take for the CB Route Removal.
- 13.7.14 No other permanent land take requirements are associated with the CB Route Removal.

Temporary Land Take

- 13.7.15 Temporary land take will be required to facilitate construction access and works along the CB Route Removal.
- 13.7.16 Each existing tower will require a temporary working area compound, approximately 50 m x 50 m in size, to facilitate construction activities including tower dismantling. The land temporarily occupied will be predominantly agricultural. In proximity to substations (Bonnybridge and Denny North), a small proportion of operational or semi-industrial land will also be affected. Given this mix of agricultural and operational land, the affected landholdings are assessed to have a **medium** sensitivity as set out in Paragraph 13.7.11, reflecting their local economic and land-use value. The magnitude of impact is assessed as **low**, given the small spatial footprint relative to the wider landholding, the temporary duration of use, and the full reinstatement of land and vegetation following completion. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors as a result of temporary land take for the CB Route Removal.
- 13.7.17 Construction access will be via the existing local road network, using existing, upgraded, and short new temporary stone access tracks where required. Access points will be taken from the M80, M876, A883, and B905, with existing bellmouths improved locally to accommodate construction traffic and ensure visibility and safety. As set out in Paragraph 13.7.11 the affected landholdings are assessed to have a **medium** sensitivity reflecting its local economic value. The magnitude of impact is assessed to be **low**, given the confined footprint, temporary duration, and full reinstatement of land following construction. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors as a result of temporary land take for the CB Route Removal.
- 13.7.18 No other temporary land take requirements are associated with the construction of the CB Route Removal beyond those identified above.

Amenity Impacts

- 13.7.19 There is potential for noise, visual, and traffic effects arising from the construction of the CB Route Removal to impact on the amenity of residents, businesses, users of community facilities and visitor attractions. The sensitivity of all of these receptors is assessed to be medium, due to their importance and moderate potential to respond to noise or visual effects which may affect the quality, performance, or visitor experience.
- 13.7.20 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration, Chapter 6 Landscape and Visual, and Chapter 11 Traffic and Movement relating to the construction activities for the CB Route Removal, there are no likely overlapping significant noise, visual or traffic effects which would result in amenity effects.

Human Health Determinant: Noise and Vibration

- 13.7.21 The construction activities of the CB Route Removal have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities. As detailed within Chapter 12 Noise and Vibration, the New Build Overhead Line passes through a largely rural area with a low baseline noise profile. Additionally as outlined within Section 13.4, the health profile of the Baseline Study Area indicates that the health of the local population is slightly worse than

the national average. Therefore, the sensitivity of the local population to noise and vibration-related health effects is assessed to be **medium**.

- 13.7.22 An assessment of the risk of noise and vibration impacts during construction is provided in Chapter 12 Noise and Vibration. It finds that there would be no residual significant effects from construction noise and construction vibration. Associated with the CB Route Removal. Accordingly, the magnitude of any noise effects with the potential to impact human health are anticipated to be **low**.
- 13.7.23 Overall, the likely effect on human health arising from impacts on noise and vibration during the CB Route Removal construction phase is assessed as **minor adverse (not significant)**.

Human Health Determinant: Open Space, Leisure and Play

- 13.7.24 Construction activities of the CB Route Removal may intersect, or otherwise impact upon, the accessibility of open space and core paths in the study area, which could impact the health and wellbeing of local residents.
- 13.7.25 As noted in Section 13.4, there are 12 core paths which intersect the CB Route Removal. Paragraph 13.7.4 details that, assuming a worst-case scenario, all 12 of these paths will need to be closed or diverted, and therefore, magnitude has been assessed to be **medium** for the disruption to core paths.
- 13.7.26 Given the rural location of these core paths, it is likely that they are used for recreational purposes, and disrupted access to these paths would affect resident's access to open space and leisure. There are a number of core paths in the surrounding area which could be used as alternative recreational paths. Taking these factors into account, the sensitivity of core path users has been assessed to be **low**.
- 13.7.27 Overall, the likely effect on human health arising from impacts on access to open space, leisure, and play areas during the CB Route Removal construction phase is assessed as **minor adverse (not significant)**.

Summary of Significant Effects

- 13.7.28 Based on this assessment of Socio-economic and Recreation (including Human Health) impacts, it is considered that there are no significant effects associated with the construction of the CB Route Removal.

Proposed Additional Mitigation Measures

- 13.7.29 Additional mitigation measures are not proposed. However, as set out in Paragraphs 13.5.2 to 13.5.5, the CEMP and CTMP include embedded measures to minimise disruption during construction. These are considered to manage potential effects as far as reasonably practicable without affecting the CB Route Removal overall design or delivery.

Residual Effects

- 13.7.30 No residual significant effects are expected from CB Route Removal.

Monitoring

- 13.7.31 There are no monitoring measures proposed for Socio-economic and Recreation (including Human Health).

13.8 Assessment of Effects, Mitigation and Residual Effects of the AA Route Undergrounding

Introduction

- 13.8.1 This section identifies the likely impacts and effects on socio-economics and recreation (including human health) resulting from the AA Route Undergrounding element of the Project.

Embedded Mitigation Measures

- 13.8.2 Embedded mitigation measures for the Project relevant for Socio-economics and Recreation (including Human Health), are set out in Paragraphs 13.5.2 to 13.5.5.

Assessment of Effects

Disruption to access to core paths

- 13.8.3 Changes to journey times, local travel patterns, and certainty of routes for users (including users for access, recreation, and equestrian) would arise from the temporary closures and diversions of core paths. As noted in 13.4, there is one core path which solely intersects the AA Route Undergrounding.
- 13.8.4 In the absence of detailed construction phasing and access information for all locations, it is not possible to confirm the detail of any disruption. A precautionary, worst-case assumption has been adopted that this core path could be temporarily disrupted for a duration of construction activities. Where temporary closure or restriction of access is required, this will be undertaken in accordance with relevant statutory procedures. It is assumed that a Section 11 Order under the Land Reform (Scotland) Act 2003 shall be obtained from the local authority.
- 13.8.5 Any disruption to the core path intersecting the AA Route Undergrounding will be temporary in nature for a duration for the construction phase and will be reinstated following construction in an unchanged condition. Desktop review identifies a limited number of alternative routes within the wider area which may remain available for use, although diversion may result in increased journey distances, though it is assumed that alternatives will be marked and signposted during the diversion or closure of the core path. Taking into account the precautionary assumption that the core path may be affected, the temporary nature of the disruption, and the availability of alternative routes, impact magnitude is assessed to be **medium**.
- 13.8.6 Given the rural nature of the surrounding area, it is expected that the majority of trips taken on this core path are for leisure and recreational purposes, rather than for commuting or access to land. Taking this into account, the core path intersecting the AA Route Undergrounding is assessed to be of **low** sensitivity.
- 13.8.7 Overall, the likely effects on core paths during the construction phase of the AA Route Undergrounding is assessed to be **minor adverse (not significant)**.

Human Health Determinant: Transport Modes, Access and Connections

- 13.8.8 As described in paragraphs 13.5.11 and 13.5.12, residents within the towns and villages surrounding the AA Route Undergrounding may experience changes in access to

healthcare, education and community facilities as a result of increased construction traffic and associated severance on shared strategic road routes. Baseline conditions within the Study Area indicate comparatively lower levels of self-reported good health and educational attainment, suggesting a degree of socio-economic vulnerability within the local population. On this basis, the sensitivity of receptors in relation to access to these services is assessed as **medium**..

- 13.8.9 Chapter 11 Traffic and Movement finds no likely significant effects in terms of severance of communities as a result of the AA Route Undergrounding works (which is assessed under the New Build Overhead Line). This assessment is considered in terms of the likely impact on health and wellbeing, by which community connectivity may be compromised for users as a result of identified significant adverse effects. As such, the magnitude of impact is considered to be **low**.

- 13.8.10 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase is assessed to be temporary **minor adverse (not significant)**.

Land use impacts on local and private assets including residential properties, businesses, community facilities and visitor attractions

Land Take

- 13.8.11 The AA Route Undergrounding works intersect a number of private land holdings. On this basis, the socio-economic receptor of the landholdings is assessed as being of **medium** sensitivity, reflecting local economic value, while acknowledging that individual holdings are unlikely to be fundamentally compromised by partial land take. Where land is in ownership of the Applicant, there is assumed to be no effect from land take effects.
- 13.8.12 Detail of the towers and construction compounds for the towers, construction compounds, and access points for the AA Route Undergrounding are described in Chapter 4 Project Description and shown in Figure 4.2 Project Works Plan, and Appendix 4.1 Project Tower Schedule provides additional information on the tower works and access points.

Permanent Land Take

- 13.8.13 The AA Route Undergrounding runs between Bonnybridge and Bathgate, and involves the undergrounding of two sections where it would be crossed by the New Build Overhead Line. All permanent works are confined to existing tower footprints and substation interfaces. Therefore, no new or extended land take beyond the established wayleave is anticipated. Uses of surrounding land will continue unaffected, and landowners will retain access for ongoing operations. It is assumed that land directly below the overhead lines which is not affected by the towers or access requirements will be able to be used as normal. As such there is assumed to be **no effect** as a result of permanent land take for the AA Route Undergrounding.
- 13.8.14 No other permanent land take requirements are associated with the AA Route Undergrounding.

Temporary Land Take

- 13.8.15 Temporary land take will be required to facilitate construction access and underground cable installation along the AA Route Undergrounding.
- 13.8.16 Works will include trench excavation, cable laying, joint bay installation, and the establishment of temporary working areas at cable pulling locations and jointing compounds. Each active work area will require a temporary construction compound, approximately 50 m x 50 m in size, to accommodate laydown space, welfare facilities, plant, and materials. The land temporarily occupied will be predominantly agricultural, and a small proportion of operational or semi-industrial land. Given this mix of agricultural and operational land, the affected landholdings are assessed to have a **medium** sensitivity as set out in Paragraph 13.8.11, reflecting their local economic and land-use value. The magnitude of impact is assessed as **low**, given the small spatial footprint relative to the wider landholding, the temporary duration of use, and the full reinstatement of land and vegetation following completion. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors as a result of temporary land take for the AA Route Undergrounding.
- 13.8.17 Access will be taken from the existing Council and Trunk road network, including the M80, M876, A73, and A803, via existing, upgraded, and new temporary stone access tracks. Where able, existing farm and estate tracks will be reused to minimise land disturbance. New access tracks and temporary compounds will be reinstated to their original condition, with soils and vegetation restored following completion of works. The land is assessed to have a **medium** sensitivity as set out in Paragraph 13.8.11. The magnitude of impact is assessed to be **low**, reflecting the small footprint and temporary duration of the works, as well as reinstatement commitments. This results in a **minor adverse** effect (**not significant**) on socio-economic receptors as a result of temporary land take for the AA Route Undergrounding.
- 13.8.18 No other temporary land take requirements are associated with the construction of the AA Route Undergrounding beyond those identified above.

Amenity Impacts

- 13.8.19 There is potential for noise, visual, and traffic effects arising from the construction of the AA Route Undergrounding to impact on the amenity of residents, businesses, users of community facilities and visitor attractions. The sensitivity of all of these receptors is assessed to be medium, due to their importance and moderate potential to respond to noise or visual effects which may affect the quality, performance, or visitor experience.
- 13.8.20 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration, Chapter 6 Landscape and Visual, and Chapter 11 Traffic and Movement relating to the construction activities for the AA Route Undergrounding there are no likely overlapping significant noise, visual or traffic effects which would result in amenity effects.

Human Health Determinant: Noise and Vibration

- 13.8.21 The construction activities of the AA Route Undergrounding have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities. As detailed within Chapter 12 Noise

and Vibration, the New Build Overhead Line passes through a largely rural area with a low baseline noise profile. Additionally, as outlined within Section 13.4, the health profile of the Baseline Study Area indicates that the health of the local population is slightly worse than the national average. Therefore, the sensitivity of the local population to noise and vibration-related health effects is assessed to be **medium**.

- 13.8.22 An assessment of the risk of noise and vibration impacts during construction is provided in Chapter 12 Noise and Vibration. It finds that there would be residual significant effects from construction vibration. Chapter 12 Noise and Vibration indicates that significant noise effects are expected to be temporary, lasting only a number of weeks. The construction programme can be managed to ensure that noise exceedances do not occur for 10 or more days within any 15 consecutive working days, or exceed a total of 40 days within any six-month period. Additionally, a programme of community liaison is to be put in place. Accordingly, any noise effects with the potential to impact human health are anticipated to be short-term and localised, affecting only a limited proportion of the population. On this basis, the magnitude of effect on these receptors is assessed as **low**.
- 13.8.23 Overall, the likely effect on human health arising from impacts on noise and vibration during the AA Route Undergrounding construction phase is assessed as **minor adverse (not significant)**.

Human Health Determinant: Open Space, Leisure and Play

- 13.8.24 Construction activities of the AA Route Undergrounding may intersect, or otherwise impact upon, the accessibility of open space and core paths in the study area, which could impact the health and wellbeing of local residents.
- 13.8.25 As noted in Section 13.4, there is one core path which solely intersects the AA Route Undergrounding. Paragraph 13.8.4 details that, assuming a worst-case scenario, this core path will need to be closed or diverted, and therefore, magnitude has been assessed to be **medium** for the disruption to core paths.
- 13.8.26 Given the rural location, it is likely the core path is used for recreational purposes, and disrupted access would affect resident's access to open space and leisure. There are a number core paths in the surrounding area which could be used as alternative recreational paths. Taking these factors into account, the sensitivity of core path users has been assessed to be **low**.
- 13.8.27 Overall, the likely effect on human health arising from impacts on access to open space, leisure, and play areas during the AA Route Undergrounding construction phase is assessed as **minor adverse (not significant)**.

Summary of Significant Effects

- 13.8.28 Based on this assessment of Socio-economic and Recreation (including Human Health) impacts, it is considered that there are no significant effects associated with the construction of the AA Route Undergrounding.

Proposed Additional Mitigation Measures

- 13.8.29 Additional mitigation measures are not proposed. However, as set out in Paragraphs 13.5.2 to 13.5.5, the CEMP and CTMP include embedded measures to minimise disruption during construction. These are considered to manage potential effects as far as

reasonably practicable without affecting the AA Route Undergrounding overall design or delivery.

Residual Effects

- 13.8.30 No residual significant effects are expected from the construction of the AA Route Undergrounding.

Monitoring

- 13.8.31 There are no monitoring measures proposed for Socio-economic and Recreation (including Human Health).

13.9 Project-wide Effects

Introduction

- 13.9.1 This chapter of the EIA Report presents details of the ‘project-wide’ effects of the project for Socio-economic and Recreation (including Human Health). Project-wide (combined) effects are defined here as:

- effects that are considered centrally for the Project (including local economy effects); and
- effects that are considered separately in relation to various elements of Project which are reported in previous separate sections of this EIA Report, but which have the potential to be of greater significance when considered in combination.

Identification of Shared Receptors

- 13.9.2 Table 13-19 presents a screening of the receptors identified as having project-wide effects for Socio-economic and Recreation (including Human Health).

Table 13-19 Screening of Project-wide Receptors for Socio-economic and Recreation (including Human Health)

Receptor	Relevant Elements of the Project
Local economy as a result of impacts from employment and GVA generation (including human health determinant: <i>Employment and income; and Health and social care services</i>);	Assessed centrally for the Project, including: • New Build Overhead Line (WB Route) • Upgraded Overhead Line (XX Route, XR Route, ZG Route) • Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding ▪ Substation works
Local economy as a result of impacts from the promotion and provision of training and apprenticeship opportunities (including human health determinant: <i>Education and training</i>);	Assessed centrally for the Project, including: • New Build Overhead Line (WB Route)

Core paths as a result of impacts from disruption to access (including human health determinant: <i>Transport modes, access, and connections</i>);	• Uprated Overhead Line (XX Route, XR Route, ZG Route) • Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding ▪ Substation works
Local and private land assets as a result of land use impacts (including human health determinants: <i>Noise and vibration; Open space, leisure, and play</i>); and	• New Build Overhead Line (WB Route) • Uprated Overhead Line (XX Route, XR Route, ZG Route) • Ancillary Works including: ▪ CB Route Removal ▪ AA Route Undergrounding
Development land as a result of land use impacts.	• New Build Overhead Line (WB Route)

Assessment of Potential Project-wide Effects

- 13.9.3 In addition to assessing effects that are considered centrally for the Project, the assessment of project-wide effects brings together the findings from each route section and associated works to determine whether combined impacts on shared receptors result in a different overall effect than those identified at the individual section level. For each receptor screened into the assessment, the project-wide effects are evaluated using the same criteria and significance framework applied throughout this chapter. The following subsections present the residual project-wide effects for each receptor for Socio-economic and Recreation (including Human Health).

Local Economy – Employment and GVA Generation

- 13.9.1 The generation of employment and GVA is expected to be organised centrally for the Project, rather than specific for each route section. Therefore, this section represents the assessment of employment and GVA for the wider Project.

Gross construction employment

- 13.9.2 It is estimated that construction employment for the Project will reach an average of 205 direct gross construction workers per day over the construction programme.

Net construction employment

- 13.9.3 In estimating construction employment generation, it is important to consider not just the gross effects, but also net effects considering leakage, displacement, and multiplier effects as set out in Table 13-9.
- 13.9.4 Based on the gross construction worker requirements in the construction schedule and the additional factors outlined in Table 13-9, it is estimated that 200 net construction jobs would be generated by the construction of the Project, of which around 150 are expected to be from the 60-minute drive time study area.
- 13.9.5 Table 13-20 summarises the net construction employment arising from the Project construction phase in the 60-minute drive time study area.

Table 13-20: Net Construction Employment (Project)

Employment impact	Within the 60-minute drive time study area	Outside of the 60-minute drive time study area	Total
Gross direct employment	154	51	205
Displacement	38	13	51
Net direct employment	115	38	154
Net indirect/induced employment	35	12	46
Total net employment	150	50	200

Gross Value Added

- 13.9.6 Applying the average gross direct value added per construction worker in the Baseline Study Area to the total number of construction workers generated from the Project gives the total GVA arising from the construction labour force during the period.
- 13.9.7 In Falkirk and North Lanarkshire Local Authorities, the average GVA per worker in the construction sector was approximately £65,748 in 2023, calculated by dividing the GVA in Falkirk and North Lanarkshire Local Authorities construction industry (£1.5 billion in 2023) by the number of construction workers (23,012 in 2023). By applying this figure to the net direct construction workers (excluding multiplier³⁸) generated by the Project, it is estimated that the construction workforce would directly contribute approximately £10.1m to the national economy, of which approximately £7.8m would likely be within the 60-minute drive time study area.

Summary

- 13.9.8 The sensitivity of the local economy to employment changes has been assessed as **medium**, due to the balance of economic activity rate reported in the Baseline Study Area (59.3%) compared to Scotland overall (56.9%) and the construction employment profile (9.3%), compared to 7.3% in Scotland. This indicates an existing workforce with capacity to benefit from additional employment and income opportunities. The magnitude of the impact of the Project upon employment and GVA generation during the construction

phase is considered **low** due to the relatively low net employment from the Project in the context of construction employment in a 60-minute drive time study area. Therefore, this results in a **minor beneficial (not significant)** effect.

Human Health Determinant: Employment and Income

- 13.9.9 As set out above, baseline data with respect to employment and income indicates that the economic activity rate and construction employment profile in the Baseline Study Area is above the Scottish average. Therefore, the local labour force is assessed to be of **medium** sensitivity due to the existing workforce potential with capacity to benefit from additional employment and income opportunities.
- 13.9.10 There is evidence that employment matters to health, not only from an economic standpoint, but also in terms of quality of life. Good quality work protects against social exclusion through the provision of income, social interaction, a core role and identity and purpose. Therefore, the generation of jobs is assessed to be a beneficial outcome. The additional jobs within the 60-minute drive time study area would represent local job growth, and additional income could lead to beneficial health impacts in terms of protecting against social exclusion. However, the overall change would be small in the context of the overall number of jobs locally. Therefore, the magnitude of impact is assessed to be **low**.
- 13.9.11 Overall, likely effect on human health arising from impacts on employment and income during the construction phase of the Project is assessed to be **minor beneficial (not significant)**.

Human Health Determinant: Health and Social Care

- 13.9.12 The project-wide construction of the Project will create a peak of 400 gross direct FTE jobs during construction (expected in December 2028). These construction workers for the Project may place extra demand on health and social care services if they move to the area, or if emergency treatment is required.
- 13.9.13 Local healthcare services and users are assessed as medium sensitivity, reflecting generally lower health indicators in the study area compared to comparator geographies. Workers already residing locally will be registered at a local GP and will not therefore place additional demand for services upon local GPs, and it is not expected that many workers will move to live in the immediate area and therefore need to access the surgeries located near to the Project. Due to the limited impact expected upon healthcare services, the magnitude of these impacts is assessed to be low.
- 13.9.14 Overall, the likely effect on human health arising from impacts on health and social care services during the project-wide construction of the Project is assessed as minor adverse (not significant).

Promotion and provision of training and apprenticeship opportunities

- 13.9.15 The promotion and provision of training and apprenticeships is expected to be organised centrally for the Project, rather than specific for each route section. Therefore, this section represents the assessment of promotion and provision of training and apprenticeships for the wider Project.

- 13.9.16 A number of opportunities for training of workforce involved in construction, as well as the wider supply chain, have been identified. Firstly, all construction and supply chain staff members have access to the Supply Chain Sustainability School (SCSS), and staff members will be encouraged to access and make use of the training available as part of this resource, which includes (but is not limited to) inclusivity, diversity, human rights, and social value.
- 13.9.17 As part of the construction plan, the principal contractor has committed to offering graduate and apprenticeship training opportunities for staff and new employees. It is estimated that there will be six graduate opportunities and four apprenticeship opportunities. These prospects will help to support a large sector to fill vacancies and maximise opportunities for young people.
- 13.9.18 Given that the data from the Baseline Study Area has lower educational attainment than Scotland as a whole, with a larger proportion of the population with no qualifications and a smaller proportion with a level 4+ qualification, sensitivity of the local population to training and apprenticeship opportunities has been assessed to be **medium**.
- 13.9.19 Considering the total estimated workforce for the Project (gross average of 205 and gross peak of 400 in December 2028) and the small number of graduate and apprenticeship positions available proportionally, the magnitude of the impact of these opportunities is assessed to be **low**. Therefore, the likely socio-economic impact arising from the promotion and provision of training and apprenticeship opportunities as part of the Project is assessed to be **minor beneficial (not significant)**.

Human Health Determinant: Education and Training

- 13.9.20 The promotion and provision of education and training is expected to be organised centrally for the Project, and this section therefore represents the assessment of the effect of education and training for Project in its entirety.
- 13.9.21 The education and training opportunities noted above would support the education of residents within the local area, potentially driving future employment and additional income. The initial training, combined with improved employment opportunities would contribute to social cohesion, interaction and sense of identity, ultimately resulting in improved local mental health.
- 13.9.22 As the current population of the Baseline Study Area is less educated than the national average, and residents have a lower perceived life satisfaction than the Scottish national average, the sensitivity of the local area to education and training has been assessed to be **medium**.
- 13.9.23 As stated above, considering the total estimated workforce for the Project (gross average of 205 and gross peak of 400 in December 2028) and the small number of graduate and apprenticeship positions available proportionally, the magnitude of the impact of these opportunities is assessed to be **low**. Therefore, the likely human health impact arising from the promotion and provision of training and apprenticeship opportunities as part of the Project is assessed to be **minor beneficial (not significant)**.

Core Paths

- 13.9.24 The assessment of project-wide effects draws together disruption and access impacts on core paths from all construction activities across the Project.
- 13.9.25 The project-wide construction of the Project would directly impact 53 core paths as set out in Section 13.4. It is anticipated, in a worst-case scenario, that all 53 may be temporarily closed or diverted during the necessary works for a duration of the construction period.
- 13.9.26 Given that most use of these core paths is leisure-related rather than essential access, sensitivity is assessed as **low**. The number of paths affected, and the likely increase in journey distance during diversions, results in a **medium** magnitude impact. Overall, the likely effects on core paths during the project-wide construction of the Project is assessed to be **minor adverse (not significant)**.

Human Health Determinant: Transport Modes, Access and Connections

- 13.9.27 The assessment of project-wide effects draws together likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase across the Project.
- 13.9.28 As described in paragraphs 13.5.11 and 13.5.12, residents within the towns and villages surrounding the Project may experience changes in access to healthcare, education and community facilities as a result of increased construction traffic and associated severance on shared strategic road routes. Baseline conditions within the Study Area indicate comparatively lower levels of self-reported good health and educational attainment, suggesting a degree of socio-economic vulnerability within the local population. On this basis, the sensitivity of receptors in relation to access to these services is assessed as **medium**.
- 13.9.29 Chapter 11 Traffic and Movement finds no likely significant effects in terms of severance of communities as a result of the project-wide effects of the Project. This assessment is considered in terms of the likely impact on health and wellbeing, by which community connectivity may be compromised for users as a result of identified significant adverse effects. As such, the magnitude of impact is considered to be **low**.
- 13.9.30 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the project-wide construction of the Project is assessed to be temporary **minor adverse (not significant)**.

Local and Private Land Assets

- 13.9.31 The assessment of project-wide effects draws together land use impacts from all construction activities across the Project.

Land Take

- 13.9.32 The project-wide construction of the Project intersects a range of private amenity land, agricultural holdings, commercial land interests, and local authority-owned land. The socio-economic receptor of the landholdings is assessed as being of **medium** sensitivity, reflecting local economic value, while acknowledging that individual holdings are unlikely to be fundamentally compromised by partial land take.

- 13.9.33 Considering the project-wide construction of the Project, permanent land take is limited and will not prevent continued operation of affected landholdings. This results in a **low** magnitude impact and a **minor adverse (not significant)** effect.
- 13.9.34 Temporary land take is short-term and land will be reinstated post-construction. The **low** magnitude of impact results in a **minor adverse (not significant)** effect.

Amenity Impacts

- 13.9.1 The project-wide construction of the Project is expected to impact the amenity of residents, businesses, users of community facilities and visitor attractions. The sensitivity of all of these receptors is assessed to be **medium**, due to their importance and moderate potential to respond to noise or visual effects which may affect the quality, performance, or visitor experience.
- 13.9.2 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration, Chapter 6 Landscape and Visual, and Chapter 11 Traffic and Movement relating to the construction activities of the project-wide construction of the Project, the effects are temporary in nature, and taken together, are identified as **low** magnitude of change. Overall, while there is potential for temporary reductions in amenity during construction, these effects are limited in extent and duration. Taking into account the medium sensitivity of receptors, the overall effect on amenity is assessed as **minor adverse and not significant**.

Human Health Determinant: Noise and Vibration

- 13.9.3 The project-wide construction of the Project has the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities. The sensitivity of all of these receptors is assessed to be **medium**, owing to the baseline noise profile and baseline health profile of the population.
- 13.9.4 Taking into account the residual effect assessment conclusions of Chapter 12 Noise and Vibration relating to the construction noise and vibration of the project-wide construction of the Project, any noise effects with the potential to impact human health are anticipated to be short-term and localised, affecting only a limited proportion of the population. On this basis, the magnitude of effect on these receptors is assessed as **low**. Overall, while there is potential for temporary effects on human health from construction noise and vibration, these effects are limited in extent and duration. Taking into account the medium sensitivity of receptors, the overall effect on human health is assessed as **minor adverse and not significant**.

Human Health Determinant: Open Space, Leisure and Play

- 13.9.5 Project-wide construction of the Project may intersect, or otherwise impact upon, the accessibility of open space and core paths in the study area, which could impact the health and wellbeing of local residents.
- 13.9.6 As noted in Section 13.4, there are 53 core paths which intersect the Project. The majority of trips taken on these core paths are for leisure and recreational purposes, rather than for commuting or access to land. Taking this into account, the core paths relevant for the project-wide construction of the Project is assessed to be of **low** sensitivity. Paragraph

13.9.25 details that, assuming a worst-case scenario, all 53 of these paths may need to be closed or diverted, and therefore, magnitude has been assessed to be **medium** for the disruption to core paths. Overall, the likely effect on human health arising from impacts on access to open space, leisure, and play areas during the project-wide construction of the Project is assessed as **minor adverse (not significant)**.

Development Land

- 13.9.1 No project-wide effects have been identified for development land as a result of land use impacts as it is only assessed for the New Build Overhead Line (WB Route) section of the route and do not combine at a wider project scale. Therefore the project-wide effect on development land during the construction phase remains **minor adverse (not significant)** as assessed in Section 13.5.

Summary of Potential Project-wide Effects

- 13.9.2 The residual project-wide effects identified for Socio-economic and Recreation (including Human Health) are summarised in Table 13-21.

Table 13-21 Summary of Potential Project-wide Effects for Socio-economic and Recreation (including Human Health)

Receptor	Summary of Potential Project-wide Effects of the Project
Local economy as a result of impacts from employment and GVA generation	Minor Beneficial (Not Significant)
(Including Human Health Determinant: <i>Employment and Income</i>)	Minor Beneficial (Not Significant)
(Including Human Health Determinant: <i>Health and social care services</i>)	Minor Adverse (Not Significant)
Local economy as a result of impacts from the promotion and provision of training and apprenticeship opportunities	Minor Beneficial (Not Significant)
(Including Human Health Determinant: <i>Education and Training</i>)	Minor Beneficial (Not Significant)
Core paths as a result of impacts from disruption to access	Minor Adverse (Not Significant)
(Including Human Health Determinant: <i>Transport Modes, Access, and Connections</i>);	Minor Adverse (Not Significant)
Local and private land assets as a result of land use impacts	Minor Adverse (Not Significant)
Local and private land assets as a result of amenity impacts	Minor Adverse (Not Significant)

(Including Human Health Determinants: <i>Noise and Vibration; Open Space, Leisure, and Play; and Health and Social Care Services</i>)	Minor Adverse (Not Significant)
Development land as a result of land use impacts.	Minor Adverse (Not Significant)