

Chapter 20: Socio-economics

Table of Contents

20.	Socio-economics	1
20.1	Introduction	1
20.2	Legislation, Policy and Guidance	2
20.3	Consultation	3
20.4	Scope of Assessment	4
20.5	Assessment Methodology	10
20.6	Project-Wide Environmental Design, Standards and Management	24
20.7	Project-wide	27
20.8	Part 1a: Minworth AWTP	43
20.9	Part 1b: Minworth to Atherstone Pipeline	52
20.10	Part 2: Works to the Coventry, Oxford and Grand Union Canals	62
20.11	Part 3: Works to Daventry and Drayton Reservoirs	93
20.12	Part 4a: Abstraction, Storage and Treatment	107
20.13	Part 4b: Pipeline to an Existing Underground Reservoir near Luton	117
20.14	Combined Effects between Proposed Development Parts	130
20.15	Summary and Next Steps	132
20.16	References	134

Plates

Plate 20-1: Project-Wide Age Profile	28
Plate 20-2: Part 1a - Age Profile	44
Plate 20-3: Part 2 Population Age Profile	64
Plate 20-4: Part 3 Age Profile	94
Plate 20-5: Part 4a Age Profile	108
Plate 20-6: Part 4b Age Profile	118

Tables

Table 20-1: Supporting documentation	1
Table 20-2: Summary of socio-economics assessment scope	7
Table 20-3: Summary of study areas for the socio-economics assessment	12
Table 20-4: Project-wide Impact Sensitivity Criteria	17
Table 20-5: Local and Private Assets Sensitivity Criteria	18
Table 20-6: Agricultural Land Holdings Sensitivity Criteria	18
Table 20-7: Sensitivity Criteria	19
Table 20-8: PRow and Canal Towpath Impact Sensitivity Criteria	19
Table 20-9: Project-wide Impact Magnitude Criteria	20

Table 20-10: Local and Private Assets, Recreational/leisure and Commercial Canal Users, Tourism and Agricultural Land Holdings Magnitude Criteria...	21
Table 20-11: Development Land Magnitude Criteria.....	21
Table 20-12: PRoW and Canal Towpath Magnitude Criteria.....	22
Table 20-13: Impact Assessment and Significance.....	22
Table 20-14: Economic Activity	28
Table 20-15: Qualification levels	29
Table 20-16: Employment by Industry	30
Table 20-17: Gross Value Added (GVA).....	31
Table 20-18: Seasonally Adjusted Visitor Accommodation within 60-minutes' Drive Time of the Proposed Development	32
Table 20-19: Project-wide Population Projections by Local Authority	32
Table 20-20: Project-wide Age Breakdown Projections	33
Table 20-21: Average net additional construction employment.....	37
Table 20-22: Gross Direct Value Added per annum from the Proposed Development during the construction phase.....	38
Table 20-23: Project-Wide Visitor Accommodation Capacity during Construction	39
Table 20-24: Summary of Project-Wide Residual Effects	41
Table 20-25: Part 1a - Economic Activity	44
Table 20-26- Part 1a Qualifications.....	45
Table 20-27: Summary of residual effects – Part 1a	50
Table 20-28: Summary of residual effects – Part 1b	60
Table 20-29: Part 2 Population	63
Table 20-30: Part 2 Economic Activity	64
Table 20-31: Part 2 Demographic Qualifications.....	65
Table 20-32 Part 2 IMD Rankings.....	66
Table 20-33: Public Rights of Way and National Cycle Network Routes Overlapping with Towpath within Indicative Work Area.....	67
Table 20-34: Summary of residual effects – Part 2	88
Table 20-35: Part 3 Economic Activity	94
Table 20-36: Part 3 Demographic Qualifications.....	95
Table 20-37: Summary of residual effects – Part 3	104
Table 20-38: Part 4a Economic Activity	108
Table 20-39: Part 4a Demographic Qualifications.....	109
Table 20-40: Summary of residual effects – Part 4a	115
Table 20-41: Part 4b Economic Activity	118
Table 20-42: Part 4b Qualifications.....	119
Table 20-43: Summary of residual effects – Part 4b	128
Table 20-44: Potential for combined effects between Parts 1b and 2	130
Table 20-45: Summary of potential combined effects between Parts 1b and 2	131
Table 20-46: Potential for combined effects between Parts 2 and 3	131
Table 20-47: Summary of potential combined effects between Parts 2 and 3	132

20. Socio-economics

20.1 Introduction

- 20.1.1 This Preliminary Environmental Information (PEI) Report chapter presents the preliminary assessment of likely significant environmental effects arising from the Proposed Development in relation to socio-economics. This preliminary assessment follows the methodology outlined within the Environmental Impact Assessment (EIA) Scoping Report and EIA Scoping Opinion (provided in **Appendices 5-PD-1** and **5-PD-2** in PEI Report **Volume 4**) and is based on the environmental information obtained to date and the description of the Proposed Development as presented in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**. Further review of the potential for significant socio-economic effects will be undertaken at the ES stage and assessed if required.
- 20.1.2 The socio-economics assessment presented within this PEI Report chapter covers the methodology used, the datasets that have informed the assessment, baseline conditions, mitigation measures and the socio-economic residual significant effects that could result from the Proposed Development.
- 20.1.3 Supporting information, including figures and appendices, is listed in **Table 20-1**.

Table 20-1: Supporting documentation

Reference	Title
<i>Figures (provided in PEI Report Volume 3)</i>	
Figure 20-PD-1	60-minute Drive Time from the Proposed Development
<i>Appendices (provided in PEI Report Volume 4)</i>	
Appendix 20-PD-1	Consultation

- 20.1.4 There are interrelationships between the potential socio-economics effects and other environmental topics. Therefore, the following should be read in conjunction with this chapter:
- Chapter 8: Air Quality** in PEI Report **Volume 2** considers the air quality and odour impacts arising from changes in air pollutants from construction activities and road traffic;
 - Chapter 15: Human Health** in PEI Report **Volume 2** considers how environmental effects arising from the Proposed Development may affect mental and physical health;

- c. **Chapter 16: Landscape and Visual** in PEI Report **Volume 2** considers changes in the visual amenity of public areas of open space, active travel walking and cycling routes;
 - d. **Chapter 19: Noise and Vibration** in PEI Report **Volume 2** considers the noise and vibration impacts of changes in traffic flow on those road links utilised by traffic generated by the Proposed Development; and
 - e. **Chapter 21: Traffic and Transport** PEI Report **Volume 2** considers impacts on changes in severance and impacts on the local road network and public transport as a result of the construction of the Proposed Development.
- 20.1.5 A social value strategy is likely to be published as part of the Development Consent Order (DCO) application. This strategy is likely to include a number of opportunities as part of the construction and operation of the Proposed Development that are of relevance to socio-economics. Where relevant and appropriate, these opportunities will be considered further at the ES stage as part of this chapter.

20.2 Legislation, Policy and Guidance

- 20.2.1 Legislation, policy¹ and standards and guidance relating to socio-economics and pertinent to the Proposed Development comprises the documents listed below.

Legislative Framework

- 20.2.2 There is currently no specific legislation related to the socio-economics assessment that should be referenced as part of the PEI Report.

National Policy

- 20.2.3 National policy considered includes:
- a. National Policy Statement for Water Resources Infrastructure (NPSWRI) (the relevant national policy statement that has effect in relation to the Proposed Development) (Ref. 1);

¹For the purposes of this PEI Report an overview of relevant policy is provided to show how relevant policy has informed scope, method and in some cases mitigation. It is not the purpose of the PEI Report (or the Environmental Statement [ES]) to present a review of the compliance of the Proposed Development with the requirements of policy. The Planning Statement, to be submitted with the DCO application, will present an assessment of the extent to which the Proposed Development accords with policy.

- b. National Planning Policy Framework (NPPF) (Ref. 2);
- c. Water Industry Act 1991 (Ref. 3); and
- d. Countryside Rights of Way Act 200 (Ref. 4).

Local Policy

20.2.4 Local policy which has been considered includes relevant Local Plans (both adopted and emerging) and other adopted policy documents attributed with the ten local authorities that the Proposed Development is situated within. More detail is provided in Table 1-4 in **Chapter 1: Introduction** in PEI Report **Volume 2**.

National Guidance

20.2.5 National guidance considered includes:

- a. Planning Practice Guidance (PPG): Housing and economic land availability assessment (Ref. 5);
- b. Design Manual for Roads and Bridges (DMRB): LA 112 Population and Human Health (Ref. 6);
- c. Homes and Communities Agency (HCA)² Additionality Guide (Ref. 7);
- d. HM Treasury Green Book (Ref. 8); and
- e. Institute of Sustainability and Environmental Professionals (ISEP): Social Impact Assessment in Environmental Impact Assessment in the UK and Ireland (Ref. 9).

20.3 Consultation

20.3.1 This section provides an overview of consultation undertaken to date in relation to socio-economics.

Phase One Public Consultation

20.3.2 Below is a summary of key topics raised from Phase One Public Consultation undertaken between 11 September to 25 October 2024 with regards to socio-economics:

- a. Potential disturbance to residents and businesses;
- b. Potential temporary loss of canal moorings during construction;

² The HCA has now been replaced by Homes England and the Regulator of Social Housing. However, the Additionality Guide continues to remain highly regarded within the industry and serves as a cornerstone of best practice.

- c. Potential impact on canal-based leisure and recreational activities and businesses;
- d. Potential impact on access to property during construction;
- e. Potential impact of road closures during construction;
- f. Potential impacts on Public Rights of Way (PRoW) and towpaths; and
- g. Potential for community, leisure and recreation benefits.

20.3.3 These topics have been taken into consideration for the Proposed Development and EIA³.

EIA Scoping

20.3.4 **Appendix 20-PD-1** in PEI Report **Volume 4** outlines a summary of the key comments raised in the EIA Scoping Opinion (provided in **Appendix 5-PD-2** in PEI Report **Volume 4**) that have influenced the originally proposed scope and outlines how and where these issues have been addressed within the PEI Report or will be later addressed within the ES to ensure they are taken account of as part of the ongoing socio-economics assessment.

Other consultation

20.3.5 No consultation has so far taken place outside the EIA Scoping process for the socio-economics assessment. The requirement for further consultations with relevant bodies such as Local Planning Authorities, Parish Councils and user groups will be determined at the ES stage with the final Proposed Development design.

20.4 Scope of Assessment

20.4.1 This section identifies the scope of the socio-economics assessment following EIA Scoping and subsequent consultation, design refinement, surveys/studies and assessment.

Amendments to Scope Following EIA Scoping

Matters Scoped Out

20.4.2 There were three matters that the Applicants proposed to scope out in the EIA Scoping Report that PINS requested further evidence for in their EIA

³ A Phase 1 Consultation Report has been made available at Phase 2 Consultation, and also to be submitted with the DCO Application, which sets out activities undertaken to deliver the consultation (including the technical bodies consultation at this stage). It also provides a summary of the key themes and issues raised, and how the project has considered these.

Scoping Opinion. Further evidence to support the scoping out of those matters is provided below.

- 20.4.3 In regard to potential effects during the Operational Phase on planned and proposed developments, some permanent land use impacts on these resources / receptors may arise as a result of land-take or access constraints arising from the construction works. Any such impacts will be assessed as permanent effects arising during the Construction Phase. As there would be no further land-take required beyond construction with maintenance activities during operation being minimal and highly intermittent, with no permanent on-site staff, impacts on these resources / receptors from the Proposed Development will have been assessed comprehensively in the Construction Phase and no significant effects are expected during the Operational Phase.
- 20.4.4 Regarding potential effects during the Operational Phase on Permanent disruption to Public Rights of Way (PRoW) and canal towpath access, impacts may arise as a result of land-take for construction activities. The impact of temporary diversions to these receptors would be limited to the Construction Phase only, with use returning to previous alignments after the duration of such activities. With the Operational Phase maintenance works themselves anticipated to be spatially and temporally limited (as outlined in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**) with no closures to PRoWs / towpath expected, there would be no significant effects arising on these during operation of the Proposed Development.
- 20.4.5 In consideration of potential effects on local and private assets during the Operational Phase, as outlined above, there would be no direct impacts on these from maintenance activities. Indirect impacts, which would be derived from consideration of other discipline assessments, would not be significant on the basis that such impacts have been scoped out of their assessments.

Scope of Assessment

- 20.4.6 **Table 20-2** provides a summary of all matters scoped in and out of the socio-economics assessment on the basis of whether they were considered to have the potential to result in significant effects during the EIA Scoping process. The table uses the following coding:
- a. In = refers to likely effects that are considered potentially significant and therefore do require further assessment in the EIA;
 - b. Out = refers to likely effects that are not considered potentially significant and therefore do not require further assessment in the EIA; and
 - c. n/a = refers to where there is no prospect of an effect from a particular Proposed Development Part(s), either due to the particular

nature or location of the Proposed Development Part and/or the absence of a receptor within the study area for that particular Proposed Development Part.

Table 20-2: Summary of socio-economics assessment scope

Likely significant impact	Receptor(s)	Parts of the Proposed Development					
		1a	1b	2	3	4a	4b
Construction Phase							
Temporary direct and indirect / induced employment generation	Labour force residing within 60-minute Drive Time	In	In	In	In	In	In
Goss Value Added (GVA) generation	Labour force residing within 60-minute Drive Time	In	In	In	In	In	In
Promotion / provision of training and apprenticeship opportunities	Labour force residing within 60-minute Drive Time	In	In	In	In	In	In
Impacts on temporary accommodation facilities	Visitor accommodation providers within a 60-minute drive time of the Proposed Development	In	In	In	In	In	In
Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions) via direct works or indirect via in combination effects identified by other discipline assessments	Existing sensitive receptors within the locality and the surrounding area, including residents, business and community facilities operators, users of open space and of visitor attractions.	In	In	In	In	In	In
Impacts on agricultural land holdings	Agricultural land holdings within the locality and the surrounding area.	Out	In	Out	Out	In	In
Impacts on the use of the canal network as a recreational and leisure resource via direct works or indirect via in combination effects identified by other discipline assessments	Users of the canal network for recreation and leisure including (but not limited to) boating clubs, paddle sports clubs, angling clubs, and marinas.	Out	Out	In	In	Out	Out
Impacts on the use of the canal network for commercial uses via direct works or indirect via in combination effects identified by other discipline assessments	Users of the canal network for commercial purposes including waterway travel operators, boat repairs and maintenance, boat rental and sales, and boating supplies.	Out	Out	In	In	Out	Out

Likely significant impact	Receptor(s)	Parts of the Proposed Development					
		1a	1b	2	3	4a	4b
Land use impacts on planned and proposed developments	Planning applications and development land allocations.	In	In	In	In	In	In
Temporary disruption to PRow and canal towpath access	Users of PRow and canal towpath, including walkers, cyclists, equestrians and any other non-motorised users.	In	In	In	In	In	In
Impacts on the tourism sector	Users of the canal network for recreational and leisure uses as visitors and tourists.	Out	Out	In	In	Out	Out
Operational Phase							
Permanent direct and indirect employment generation	Labour force residing within 60-minute Drive Time	Out	Out	Out	Out	Out	Out
GVA generation	Labour force residing within 60-minute Drive Time	Out	Out	Out	Out	Out	Out
Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions) via direct works or indirect via in combination effects identified by other discipline assessments	Existing sensitive receptors within the locality and the surrounding area, including residents, business and community facilities operators, users of open space and of visitor attractions.	Out	Out	Out	Out	Out	Out
Impacts on the use of the canal network as a recreational and leisure resource directly through operation via direct works or indirectly via in combination effects identified by other discipline assessments	Users of the canal network for recreation and leisure including (but not limited to) boating clubs, paddle sports clubs, angling clubs, and marinas.	Out	Out	In	In	Out	Out
Impacts on the use of the canal network for commercial uses via direct works or indirect via in combination effects identified by other discipline assessments	Users of the canal network for commercial purposes including waterway travel operators, boat repairs and maintenance, boat rental and sales, and boating supplies.	Out	Out	In	In	Out	Out

Likely significant impact	Receptor(s)	Parts of the Proposed Development					
		1a	1b	2	3	4a	4b
Permanent disruption to PRow and canal towpath access	Users of PRow and canal towpath, including walkers, cyclists, equestrians and any other non-motorised users.	Out	Out	Out	Out	Out	Out
Impacts on the tourism sector	Users of the canal network for recreational and leisure uses as visitors and tourists.	Out	Out	In	In	Out	Out
Land use impacts on planned and proposed developments	Planning applications and development land allocations.	Out	Out	Out	Out	Out	Out

20.5 Assessment Methodology

20.5.1 This section presents the methodology used to assess the potential effects on socio-economics during the construction and operational phases of the Proposed Development.

Defining the Study area

20.5.2 This section sets out the study areas adopted for the socio-economic assessment.

20.5.3 The impacts of the Proposed Development with respect to socio-economics are considered at varying spatial levels according to the likely extent of the effect under consideration. This approach is consistent with the HCA, now known as Homes England, guidance entitled 'Additionality Guide, A Standard Approach to Assessing the Additional Impact of Projects', 4th Edition (Ref. 7).

Employment, Gross Value Added, Training and Temporary Accommodation Facilities

20.5.4 The potential economic and employment impacts arising from the Proposed Development, as well as any temporary impacts on local accommodation capacity are considered relative to a 60-minute drive time from the Proposed Development (**Figure 20-PD-1** in PEI Report **Volume 3**) as this represents the principal labour market catchment area (Travel to Work Area).

Local and Private Assets

20.5.5 The study area for land use impacts on local and private assets varies between non-waterway and waterway receptors.

20.5.6 Non-waterway receptors (assessed in all Parts) include residential properties, businesses, open space / recreation, and community facilities. Those impacted are likely to be those within 500 m of the Preliminary Order Limits or within 2 km of the Preliminary Order Limits for community facilities and open spaces.

20.5.7 Waterway receptors (assessed in Parts 2 and 3 only), include moorings⁴, and commercial operators and businesses. In relation to these, works are only expected within the Indicative Work Area (as shown in **Figure 3-P2&3-1** in PEI Report **Volume 3**), rather than Preliminary Order Limits, and as such it is expected that only receptors within 500 m of the Indicative Work Area could be directly or indirectly affected by the Proposed Development.

⁴ The Glossary defines various types of moorings provided along the Trust's network. The types of moorings to be assessed as sensitive receptors for socio-economics will be considered and addressed in the ES.

Agricultural Land Holdings

- 20.5.8 Land use effects on agricultural land holdings that intersect or encroach into the Preliminary Order Limits are assessed as these land holdings are expected to only experience effects if subject to temporary or permanent Land-take.

Use of the Canal Network for Recreation and Leisure and Commerce

- 20.5.9 The study area for effects on recreational, leisure, and commercial users of the canal is the canal network itself.

Development Land

- 20.5.10 Effects on development land within and up to 500 m radius from the Proposed Development are assessed in this PEI Report, except in respect of mineral resources which are assessed in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**. Development land refers to sites on which there are planning applications, planning permissions and local plan designations / allocations, specifically housing or employment allocations, employment areas, waste safeguarding areas, and transport safeguarding areas. Effects on development land have considered direct (land-take) and indirect (access) impacts on any of the delivery of development proposals or designations / allocations both within and adjacent to the Preliminary Order Limits. As with local and private assets, it is expected that only local and private assets within 500 m of the Indicative Work Area (rather than the Preliminary Order Limits) of Parts 2 and 3 could be directly or indirectly affected by the Proposed Development.

Public Rights of Way and Canal Towpath

- 20.5.11 The assessment of effects on PRoW users considers resources which could be affected by closures and diversions of routes. For Parts 1a, 1b, 4a, and 4b, this includes any PRoWs that are within the Preliminary Order Limits. For Parts 2 and 3, any PRoWs or sections of canal towpath within the Indicative Work Area have been considered.

Tourism

- 20.5.12 Effects on the tourism sector have been assessed through consideration of the findings of the assessments (for Part 2 and 3 only) of impacts on local and private assets engaged in tourism, such as visitor attractions and accommodation, and impacts on the use of the canal by recreation and leisure users and commercial users. The assessment considers whether in addition to these there are also potential effects on tourism sector arising catalytically from effects on multiple receptors during either construction and/or operation.
- 20.5.13 **Table 20-3** provides a summary of the study areas by Proposed Development Part.

Table 20-3: Summary of study areas for the socio-economics assessment

Proposed Development Part	Impact	Study Area
Project-Wide	Employment generation during construction phase, GVA during construction phase and impact on temporary accommodation facilities	60-minute drive time (estimated using GIS data for 09:30 on a typical Wednesday ⁵ , based on proposed construction compounds and sites along the Proposed Development)
1a: Minworth AWTP	Residential properties, business premises, visitor attractions and development land	Within 500 m of the Preliminary Order Limits.
	Community facilities and open space	Within 1 km of the Preliminary Order Limits.
	Public rights of way	Within the Preliminary Order Limits
1b: Minworth to Atherstone Pipeline	Residential properties, business premises, visitor attractions and development land	Within 500 m of the Preliminary Order Limits
	Public rights of way and agricultural land holdings	Within the Preliminary Order Limits
	Community facilities and open space	Within 1 km of the Preliminary Order Limits
2: Works to the Coventry, Oxford and Grand Union Canals	Local and private assets – waterways: moorings, commercial operators and businesses	Within the Indicative Work Area
	Local and private assets – non-waterways: residential properties, business premises, visitor attractions and development land	Within 500 m of the Indicative Work Area
	Community facilities and open space	Within 1 km of the Indicative Work Area
	Public rights of way and canal towpath	Within the Indicative Work Area

⁵The approach towards date and time selection for the Study Area follows a typical approach informing consented DCO assessments prepared by the consultants. Whilst small day-to-day variation may be expected, this would be limited. The population within the study area would change, however, given the large size of the study area, this change would be minimal and not alter the overall characteristics of the study area with no possibility of changing/influencing the assessment conclusions based on the methodology.

Proposed Development Part	Impact	Study Area
	Use of the canal network for commercial and recreational / leisure uses	Sections of canal / waterway within or adjacent to the Preliminary Order Limits
	Tourism	Sections of canal / waterway within or adjacent to the Preliminary Order Limits
3: Works to Daventry and Drayton Reservoirs	Local and private assets – waterways: moorings, commercial operators and businesses	Within 500 m of the Indicative Work Area
	Local and private assets – non-waterways: residential properties, business premises, visitor attractions and development land	Within the Indicative Work Area
	Public rights of way and canal towpath	Within the Indicative Work Area
	Community facilities and open space	Within 1 km of the Indicative Work Area
	Use of the canal network for commercial and recreational uses	Sections of canal / waterway within or adjacent to the Preliminary Order Limits
	Tourism	Sections of canal / waterway within or adjacent to the Preliminary Order Limits
4a: Abstraction, Storage and Treatment	Residential properties, business premises, visitor attractions and development land	Within 500 m of the Preliminary Order Limits
	Public rights of way and agricultural land holdings	Within the Preliminary Order Limits
	Community facilities and open space (Including Galley WTW storage site)	Within 1 km of the Preliminary Order Limits
4b: Pipeline to an existing underground reservoir near Luton	Residential properties, business premises, visitor attractions and development land	Within 500 m of the Preliminary Order Limits
	Public rights of way and agricultural land holdings	Within the Preliminary Order Limits
	Community facilities and open space	Within 1 km of the Preliminary Order Limits

Determining Baseline Conditions

- 20.5.14 This section sets out how baseline conditions were determined for the Proposed Development.
- 20.5.15 For purposes of the PEI Report, the reporting of baseline conditions will be split into two sections for each part of the Proposed Development. The first of these sections, the socio-economic profile, describes the population and the economy local to the Proposed Development.
- 20.5.16 Baseline conditions are established for each part of the Proposed Development. At project-wide level, these conditions are assessed for the area within a 60-minute drive time of the Proposed Development. For individual parts, conditions are established in accordance with the local authority / authorities that the part falls within. The Proposed Development as a whole is within the following local authority areas:
- a. Birmingham City Council;
 - b. Coventry City Council;
 - c. North Warwickshire Borough Council;
 - d. Warwickshire County Council;
 - e. Nuneaton and Bedworth Borough Council;
 - f. Rugby Borough Council;
 - g. Buckinghamshire Council;
 - h. Milton Keynes City Council;
 - i. West Northamptonshire Council; and
 - j. Central Bedfordshire Council.
- 20.5.17 The data gathered is also compared to the corresponding region(s) and England as a whole.
- 20.5.18 Data for Warwickshire County Council has not been included within the socio-economic profile. This is on the basis that data is available for all indicators reported at the lower-tier authority area level, such that inclusion of Warwickshire would in effect either double-count this or influence conclusions using baseline conditions which are beyond the study area in these regards.
- 20.5.19 Baseline data illustrating the existing socio-economic conditions within and surrounding the Proposed Development, including employment and the economy, has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications. These sources are listed below:

- a. Office for National Statistics (ONS) (2022); 2021 Census Data (Ref. 10);
- b. ONS (2024); UK Business Register and Employment Survey 2023 (Ref. 11);
- c. ONS (2024); Regional Gross Value Added (balanced) by Industry: local authorities by ITL1 Region (Ref. 12);
- d. Ministry of Housing, Community and Local Government (2025); English Indices of Deprivation 2025 (Ref. 13);
- e. CoStar (2025); Hospitality Occupancy Data (Ref. 14);
- f. VisitEngland (2025); Seasonal Occupancy Data (Ref. 15); and
- g. ONS (2022); Subnational Population (Ref. 16).

20.5.20 The content of the socio-economic profile for the Proposed Development, presented within section 20.7, varies between the constituent parts of the Proposed Development. At a Project-wide level the profile comprises analysis of key demographic and economic indicators and directly informs the assessment of sensitivity to economic and employment-related effects arising from the Proposed Development during construction.

20.5.21 The socio-economic profile set out for each part of the Proposed Development focuses on key demographic information and analysis of deprivation to provide appropriate local context for the assessment of effects, without directly informing an assessment of sensitivity.

20.5.22 The local receptor baseline assessment goes on to identify socio-economic assets and resources local to the site which could be affected by the Proposed Development either directly (i.e. via Land-take) or indirectly (via in-combination effects). The land use receptors identified include, for Parts 1a, 1b, 4a and 4b, residential properties, visitor attractions, business premises, open spaces, community facilities, PRow, and development land. For Parts 2 and 3, also included in addition to these are moorings, commercial operators and businesses, recreational and leisure users of the canal network, and tourists. To identify these assets, publicly available mapping resources have been used.

Assessment of Effects

20.5.23 This section sets out how the scoped in effects are assessed. The assessment follows best practice methodology and professional judgement applied to assessments undertaken for developments of a comparable nature in regard to the scale and linear nature.

20.5.24 The Proposed Development has the potential to have a range of temporary and permanent effects. Based on professional judgement and experience,

as well as national policy, due consideration has been given to the Proposed Development in terms of effects on the following:

- a. Construction employment generation (direct, indirect and induced impacts);
- b. Gross Value Added (GVA) generation from the construction workforce;
- c. Construction skills and training impacts through upskilling;
- d. Temporary accommodation facilities;
- e. Local and private assets (including moorings) (via direct works, indirect and in combination effects);
- f. Use of the canal network as a recreational / leisure and commercial resource (via direct works or indirect via in combination effects);
- g. Public rights of way (PRoW) and canal towpath;
- h. Agricultural land holdings;
- i. Development land; and
- j. The tourism sector.

Assessment Criteria

20.5.25 Where possible, socio-economic impacts have been appraised against relevant national standards, such as those provided by the HCA (now separated into Homes England and the Regulator of Social Housing). Where relevant standards do not exist, professional experience and expert judgement have been used to assess the scale and nature of the effects of the Proposed Development against baseline conditions.

20.5.26 For the socio-economics assessment, there is no accepted definition of what constitutes a likely significant (or not significant) socio-economic effect. It is, however, recognised that effects are classified based upon the relationship between the scale (or magnitude) of an impact and the sensitivity (or value) of the affected resource or receptor. As such, socio-economic effects are assessed using professional judgment and experience, considering:

- a. Sensitivity of resources / receptors: the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and their ability to respond to change based on recent rates of change and turnover (if appropriate); and
- b. Magnitude of impact: this entails consideration of the size of the impact on people or business in the context of the area in which impacts would be experienced.

20.5.27 Definitions of magnitude of impact and sensitivity of receptor types assessed in this chapter deviate from the broader definitions outlined in **Chapter 6: EIA Methodology** in PEI Report **Volume 2** and are reported in the following section.

Sensitivity of Receptors

20.5.28 Different criteria have been used to assess the sensitivity of receptors based on type of effect.

Project-wide effects

20.5.29 The following criteria, shown in **Table 20-4**, have been used to assess the sensitivity of socio-economic receptors in relation to employment, GVA, skills and training and temporary accommodation facilities. These economic impacts are assessed at a project-wide level and have been named as such.

Table 20-4: Project-wide Impact Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	Businesses, workers or residents who have little or no capacity to experience the impact without incurring an economic loss or have substantial capacity to experience an economic gain.
Medium	Businesses, workers or residents that have some capacity to experience the impact without incurring a change on their economic well-being.
Low	Businesses, workers or residents that generally have good capacity to experience impacts without incurring an economic loss or are unlikely to experience an economic gain.
Very low	Businesses, workers or residents that are resilient to, or unlikely to experience, impacts on their economic well-being.

Local and private assets

20.5.30 The sensitivity criteria which have been used to assess the Proposed Development's impacts on local and private assets have been deemed applicable to both waterway and non-waterway receptors as defined earlier in this section.

20.5.31 **Table 20-5** identifies criteria informing the assessment of impacts on these receptors applicable across all parts of the Proposed Development.

Table 20-5: Local and Private Assets Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	Receptor is of high importance and rarity with limited potential for substitution or access to alternatives.
Medium	Receptor is of medium importance and rarity with moderate potential for substitution or access to alternatives.
Low	Receptor is of low importance and rarity with alternatives available.
Very Low	Receptor is of very low importance and rarity with alternatives available.

Agricultural Land Holdings

20.5.32 **Table 20-6** identifies the sensitivity criteria which have been used to assess the Proposed Development's effects on agricultural land holdings.

Table 20-6: Agricultural Land Holdings Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	Areas of land in which the enterprise is dependent on the spatial relationship of land to key agricultural infrastructure and access between land and key agricultural infrastructure is required on a frequent basis (weekly)
Medium	Areas of land in which the enterprise is partially dependent on the spatial relationship of land to key agricultural infrastructure and access between land and key agricultural infrastructure is required on a reasonably frequent basis (monthly).
Low	Areas of land which the enterprise is not dependent on the spatial relationship of land to key agricultural infrastructure and access between land and key agricultural infrastructure is required on an infrequent basis (monthly or less frequent).
Very Low	Areas of land which are infrequently used on a non-commercial basis.

Recreational / leisure Users of the Canal Network and Tourists

20.5.33 **Table 20-7** identifies the sensitivity criteria that have been used to inform the assessment of impacts on commercial and recreational / leisure users of the canal network and tourism.

Table 20-7: Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	Effects could be felt by users of a type that are of high sensitivity either because they are identified as having a medium priority in policy and / or are largely dependent on the recreation / leisure or visitor resources which the area has to offer and have few alternative resources available locally.
Medium	Effects could be felt by users of a type that are of medium sensitivity either because they are deemed not highly dependent on the specific recreation / leisure or visitor resources which the area has to offer and have some alternative resources available locally.
Low	Low effects could be felt by those given no specific mention in policy, or by casual and/or local users with many alternative recreational / tourism resources available to them.
Very Low	Very low effects could be felt by casual and/or local users with abundant alternative recreational / tourism resources available to them.

PRoW and Canal Towpath

20.5.34 **Table 20-8** identifies the sensitivity criteria that have been used to inform the assessment of PRoWs, the National Cycle Network (NCN) and towpaths. As all sections of canal towpath have been assessed to be of high sensitivity, no criteria has been given for medium, low and very low sensitivity for the canal towpath.

Table 20-8: PRoW and Canal Towpath Impact Sensitivity Criteria

Sensitivity Level	Sensitivity Criteria
High	For PRoWs: PRoW is of high importance, such as a designated National Trails or National Cycle Network Route, with limited or no potential to substitute with other route options to access the wider network or community infrastructure. PRoW is very regularly used and valued for its character and / or quality. For canal towpath: The towpath is a unique unbroken long-distance route that plays an important role in hierarchy of local route options. There are therefore little to no potential for substitution, and all sections of the canal towpath are deemed to be of high sensitivity.
Medium	PRoW is of medium importance, such as named recreational walking or cycling routes, with good potential to substitute with

Sensitivity Level	Sensitivity Criteria
	other route options to access with the wider network or community infrastructure. PRoW is of high importance with alternative routes available; or PRoW is of low importance with limited potential to substitute with other route options to access with the wider network or community infrastructure. PRoW is moderately or semi-regularly used and valued for its character and / or quality.
Low	PRoW is of low importance , such as routes disused through past severance or routes that do not offer meaningful access to services or meaningful routes for recreation, with moderate potential to substitute with alternative route options of equivalent distance to access the wider network or community infrastructure; or PRoW is of very low importance with moderate potential to substitute with other route options to access with the wider network or community infrastructure. PRoW is sparingly or infrequently used and valued as it does not currently offer a meaningful route for recreational or commuting purposes.
Very Low	PRoW is of very low importance with little evidence of regular use which would not be met by use of easily available alternative routes.

Magnitude of Impacts

20.5.35 Different criteria have been used to assess the magnitude of impact based on type of effect. **Table 20-9** identifies the magnitude of impact criteria which have been used to inform the assessment on socio-economic receptors relating to project-wide impacts

Table 20-9: Project-wide Impact Magnitude Criteria

Magnitude	Magnitude Criteria
High	A considerable impact that will typically affect large numbers of businesses, workers or residents.
Medium	A noticeable impact that will typically affect a moderate number of businesses, workers or residents, and will lead to a noticeable 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 results in very little change from baseline conditions where the change is barely distinguishable.

20.5.36 **Table 20-10** identifies the magnitude of impact criteria which have been used to assess the Proposed Development's impacts on local and private

assets (waterway and non-waterway as defined in paragraph 20.5.5 to 20.5.7), recreational / leisure and commercial canal users, tourism and agricultural land holdings.

Table 20-10: Local and Private Assets, Recreational / leisure and Commercial Canal Users, Tourism and Agricultural Land Holdings Magnitude Criteria

Magnitude	Magnitude Criteria
High	An impact that substantially reduces the integrity and utility of a receptor; or an impact that considerably enhances the value and quality of a receptor.
Medium	An impact that somewhat negatively affects the integrity and utility of a receptor, or which somewhat improves key characteristics and features of the receptor.
Low	A slightly negative impact on the integrity and utility of a receptor; or an impact that has a slightly beneficial impact on the attributes of the receptor.
Very Low	An impact which is a very minor loss or benefit from baseline conditions where the change is barely distinguishable.

20.5.37 **Table 20-11** identifies the magnitude of impact criteria which have been used to assess the Proposed Development's effects on development land.

Table 20-11: Development Land Magnitude Criteria

Magnitude	Magnitude Criteria
High	An impact that permanently affects the integrity and use of a development land resource; or an impact that considerably enhances the quality of such a resource.
Medium	An impact that negatively affects the use of a development land resource; or an impact that improves key characteristics and features of such a resource.
Low	A slightly negative impact on the use of a development land resource; or a slightly beneficial impact on the attributes of such a resource.
Very Low	An impact which is a very minor loss or benefit from baseline conditions where the change is barely distinguishable.

20.5.38 **Table 20-12** identifies the magnitude of impact criteria which have been used to assess the Proposed Development's impacts on PRow.

Table 20-12: PRow and Canal Towpath Magnitude Criteria

Magnitude	Magnitude Criteria
High	Substantial increase / decrease in journey length and/or travel patterns and increased/ decreased opportunities for users to access the wider network and/or community infrastructure.
Medium	Noticeable increase / decrease in journey length and/or travel patterns and increased / decreased opportunities for users to access the wider network and/or community infrastructure.
Low	Slight increase / decrease in journey length and/or travel patterns and increased / decreased opportunities for users to access the wider network and/or community infrastructure.
Very Low	A negligible increase / decrease in journey length and/or travel patterns and no increase or decrease in opportunities for users to access the wider network and/or community infrastructure.

Significance of Effects

20.5.39 Socio-economic effects reflect the relationship between the sensitivity of the affected receptor and the magnitude of the impact, as set out in **Table 20-13** below. This significance matrix is consistent with that found in **Chapter 6: Environmental Impact Assessment Methodology** in PEI Report **Volume 2**.

Table 20-13: Impact Assessment and Significance

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

20.5.40 In accordance with best practice, the following criteria is applied:

- 'Moderate' or 'major' effects are classed as **'significant'**;
- 'Minor' effects are classed as **'not significant'** although they may be a matter of local concern; and
- 'Negligible' effects are classed as **'not significant'**.

Assumptions, Limitations and Uncertainties

20.5.41 This chapter forms a preliminary assessment which has been based on available information at the time of preparing the PEI Report. A final assessment will be undertaken as part of the EIA and will be reported in the ES that will be submitted with the Development Consent Order (DCO) application.

- 20.5.42 Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment.
- 20.5.43 The economic impact of the Proposed Development is considered relative to a 60-minute travel time (car) to the Proposed Development. This is considered a reasonable timeframe within which workers would commute to the Proposed Development and therefore represents the principal labour market catchment area.
- 20.5.44 Additionality, which refers to the net economic impact of the construction workforce, has been calculated by considering the overall impact of job gains to the area, considering the level of leakage, number of displaced jobs and multiplier effects (such as supply chain and worker spending-related jobs). These assumptions have been informed by the HCA Additionality Guidance (Ref. 7).
- 20.5.45 Moorings are located in or around Indicative Working Areas along the canal network in Parts 2 and 3. Work is ongoing to confirm the use of each mooring potentially impacted by the Proposed Development.
- 20.5.46 As reported in **Chapter 3: The Proposed Development** in PEI Report **Volume 2** it has been assumed that any PRoWs or sections of the canal towpath or NCN which lie within working areas will be able to remain open through provision of railed walkways, or in cases where this is not possible, a small diversion will be provided. It is unknown at this stage which of these will require diverting, with this to be confirmed and assessed ES stage. As a worst-case it has been assumed that all PRoWs and sections of canal towpath within the works areas will require a short, temporary, diversion.
- 20.5.47 A number of construction compounds required for the Part 2 works may be located on a number of publicly-accessible open spaces where partial land-take from these would be required. Where this occurs, it has been assumed for the purpose of the assessment that any area covered by a construction compound will be inaccessible to the public for the maximum expected length of works at each location, and that following this the land will be returned to its previous state and used as previously.
- 20.5.48 The canal network in Part 2 and 3 is used for recreation and leisure and commercial use throughout the year. The risk of disruption to all waterway users relates to all works being proposed (as described in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**). The exact construction programme is uncertain at this stage. Indicative timings are known which provide general idea of the time of year when works may take place with these being planned to occur in the off-season as much as possible coinciding with regular existing works to minimise disruption (outlined in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**). Where

applicable it has been assumed that disruption would occur for the maximum possible duration currently known. Exact durations of activities which might cause disruption will be confirmed at ES stage.

- 20.5.49 The potential for the Proposed Development to affect development land subject to planning application or planning permission is recognised. As the status of these could change and new developments could become relevant a comprehensive assessment of impacts on planning applications or planning permissions will be undertaken at the ES stage, when greater design certainty and the extent and status of applications and planning permissions is known.
- 20.5.50 The preliminary baseline in relation to agricultural land holdings has been assessed based on expected land use. A further assessment of baseline and assessment of likely effects will be reported in the ES.

20.6 Project-Wide Environmental Design, Standards and Management

- 20.6.1 This section outlines embedded environmental design, standards and/or management measures in relation to socio-economics that are relevant for the whole Proposed Development. Where embedded environmental design, standards and/or management measures are specific to a Proposed Development Part(s), these have been identified in the upcoming sections.
- 20.6.2 The delivery of these embedded mitigation and standard measures will be secured through the Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP) via Requirements in the DCO. A Construction Traffic Management Plan (CTMP) which sets out the routes that HGVs would adhere to when accessing proposed construction sites, will also be prepared. Outline versions of these Plans will be submitted with the DCO application.

Construction Phase

- 20.6.3 A CEMP will be prepared that will set out measures to reduce amenity impacts on sensitive receptors during the construction phase (such as noise, air quality, transport and landscape), which in turn will mitigate the effects on the local community and existing facilities from a socio-economics perspective. A Preliminary Outline CEMP is provided in **Appendix 24-PD-2** in PEI Report **Volume 4**. The measures that could be adopted as part of this may include:
- Implementation of proposed construction working hours to reduce disturbance to nearby receptors;
 - Ongoing community engagement through a designated point of contact for queries or concerns; and

- c. Clear communication with local stakeholders regarding the construction programme and timeline.

- 20.6.4 A CTMP will also be prepared, which will set out measures that are likely to reduce and mitigate any access impacts resulting from the construction of the Proposed Development, which in turn will mitigate any effects on the local community in regard to access to facilities or inability to access PRoWs and the canal towpath which are both considered within this chapter. An Outline CTMP will be included with the DCO application.
- 20.6.5 Further mitigation measures for effects on PRoWs and the canal towpath will be adopted and outlined within the Construction Public Rights of Way Management Plan.

Operational Phase

- 20.6.6 Operational environmental considerations will be detailed in an OEMP. An Outline OEMP will be submitted with the DCO application. Similar to the Outline CEMP, the Outline OEMP may include measures including proposed maintenance working hours, and clear communication with local stakeholders and communities in relation to maintenance timelines and schedules.

Project-wide

20.7 Project-wide

20.7.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant effects for impacts of the Proposed Development that are being considered at a project-wide level, which includes:

- a. Temporary direct and indirect employment generation;
- b. GVA generation; and
- c. Impacts on temporary accommodation facilities.

Baseline Conditions

20.7.2 This section describes the baseline environmental characteristics with specific reference to socio-economics and temporary accommodation facilities at a project-wide level. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

20.7.3 The existing socio-economic baseline presents a socio-economic profile of the 60-minute drive time study area, with the regions that the Proposed Development falls within used as comparators, as well as the English national average. This is followed by an assessment of the baseline capacity of temporary accommodation facilities within the same 60-minute drive time study area, accounting for seasonal occupancy rates.

Population

20.7.4 According to Office for National Statistics (ONS) Census data (Ref. 10) in 2021 the population of the study area was 19,110,207. Of this population, 18.3% were under 15 years old, which was a higher proportion than all regions that the study area falls within, as well as the national average. A further breakdown of age proportions is outlined in **Plate 20-1**.

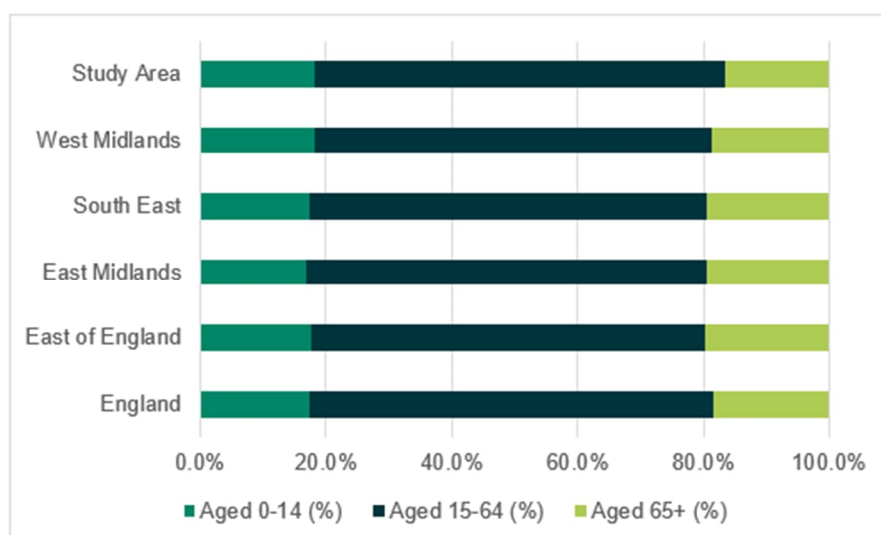


Plate 20-1: Project-Wide Age Profile

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment

- 20.7.5 According to the Census 2021 (Ref. 10), the unemployment rate among economically active over-16s residents in the study area was 6.1%, this is higher than all regional comparators apart from the West Midlands, at 6.5% and higher than recorded nationally. These economic activity and unemployment rates are shown in **Table 20-14**.

Table 20-14: Economic Activity

Geographical Area	Economic activity rate (aged 16+) (%)	Unemployment rate (aged 16+) (%)
Study area	62.2	6.1%
West Midlands	58.8	6.5%
East Midlands	64.4	5.1%
South-east	62.2	4.9%
East of England	64.4	4.8%
England	64.4	5.7%

[Source: ONS (2022); Census 2021 (Ref. 10)]

Skills and Qualifications

- 20.7.6 According to the Census 2021 (Ref. 10), the study area has a higher proportion of residents with no qualifications (18.4%) than the East of England (18.1%) and the South-east (15.4%), as well as the national average (18.1%).
- 20.7.7 In the study area, 35.4% of the over-16 population have a level 4 qualification or higher; greater than all regional comparators apart from the South-east (35.8%).

20.7.8 Of the over-16 population in the study area, 4.8% had an apprenticeship-level qualification, less than all relevant regions and the England average. Further details on qualification levels for the study area and other geographies can be seen in **Table 20-15**.

Table 20-15: Qualification levels

Geographical Area	No Qualifications (%)	Level 1 and entry level qualifications (%)	Level 2 qualifications (%)	Apprenticeship (%)	Level 3 qualifications (%)	Level 4 qualifications or above (%)	Other qualifications (%)
Study area	18.4	9.6	12.8	4.8	16.2	35.4	2.9
West Midlands	21.1	10.3	13.9	5.3	17.1	29.4	2.9
East Midlands	19.5	10.4	13.9	6	18.3	29.1	2.8
South-east	15.4	9.8	13.9	5.1	17.4	35.8	2.7
East of England	18.1	10.8	14.4	5.5	16.8	31.6	2.8
England	18.1	9.7	13.3	5.3	16.9	33.9	2.8

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment by Sector

20.7.9 Based on the most recently available Business Register and Employment Survey data published for 2023 on employment by broad industrial group (Ref. 11), the highest levels of employment in the study area were found in wholesale, retail trade and repair of motor vehicles and motorcycles (14.7%). This proportion is slightly lower than the proportion employed in all relevant regions, though higher than the national average (13.7%).

20.7.10 Specific to this assessment, 4.9% of the working population in the study area was employed within the construction sector, which is higher than all regional comparators except the East of England, at 6%. The proportion is also higher than England as a whole at 4.7%. Further details on employment by sector for all geographies is shown in **Table 20-16**.

Table 20-16: Employment by Industry

Industry (percentage of total employment)	Study area	East of England	East Midlands	South-East	West Midlands	England
A: Agriculture, forestry and fishing	0.1	0.8	0.7	0.7	0.7	0.5
B: Mining & Quarrying	0.1	0.1	0.2	0	0	0.1
C: Manufacturing	7.2	7.3	12.3	6	10.1	7.4
D: Electricity, gas, steam and air conditioning supply	0.4	0.2	0.5	0.3	0.5	0.3
E: Water supply; sewerage, waste management and remediation activities	0.6	0.8	0.7	0.8	0.9	0.7
F: Construction	4.9	6	4.3	4.8	4.4	4.7
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	14.7	15	15.2	15	15.3	13.7
H: Transportation and storage	6.3	6	7	4.6	6	5.1
I: Accommodation and food service activities	7.3	7.3	7	8.6	7.5	7.8
J: Information and communication	4.9	3.4	2.7	5.5	3	4.8
K: Financial and insurance	2.2	2	1.4	2.6	2.1	3.4
L: Real estate activities	2.2	2.1	1.7	1.7	1.7	1.9
M: Professional, scientific and technical activities	9.4	8.6	7.4	8.9	8.1	9.6
N: Administrative and support services	9.9	11.1	7.6	8	8.7	8.9
O: Public administration and defence; compulsory social security	3.7	3.5	4.1	3.5	4.2	4.4
P: Education	8.9	8.9	9	9.8	8.9	8.6
Q: Human health and social work activities	12.7	12.5	14.6	13.9	13.6	13.5
R: Arts, entertainment and recreation	2.4	2.4	2.5	3	2.4	2.6
S: Other services	2	2	1.3	2.2	2	2

[Source: ONS, (2024); Business Register and Employment Survey 2023 (Ref. 11)]

Gross Value Added

- 20.7.11 GVA data is provided at local authority level for 2023 by ONS (Ref. 12). Across the relevant local authorities, Birmingham had the largest GVA (£35,426 million), followed by Buckingham (£19,176 million), Milton Keynes (£16,674 million), and West Northamptonshire (£15,792 million).
- 20.7.12 The largest GVA in the construction sector alone was found in Birmingham, with £2,129 million in 2023. Nuneaton and Bedworth recorded the lowest at £169 million. Further details on GVA can be found in **Table 20-17**.

Table 20-17: Gross Value Added (GVA)

Geographical Area	Total GVA (£ million)	GVA in Construction Sector (£ million)
Birmingham	35,426	2,129
North Warwickshire	3,721	409
Nuneaton and Bedworth	2,668	169
Rugby	3,995	355
Coventry	11,804	398
West Northamptonshire	15,792	1,554
Buckinghamshire	19,176	1,554
Milton Keynes	16,674	682
Central Bedfordshire	1,359	599

[Source: ONS (2024); *Regional Gross Value Added (balanced) by Industry*. (Ref. 12)]

Accommodation facilities

- 20.7.13 During the construction phase, workers who live too far away to be based at home will need temporary accommodation during the week. It is expected that such construction workers will be housed primarily in nearby visitor accommodation establishments.
- 20.7.14 Data on the number of rooms available within the 60-minute drive time area in the hotel, bed and breakfast and inns accommodation sector has been sourced from CoStar, a property resource website (Ref. 14). As of 2025, there are approximately 142,493 rooms within the 60-minute Drive Time Area of the Proposed Development.
- 20.7.15 This is adjusted based on Visit England Seasonal Occupancy Survey Rates (Ref. 15) from 2024 to reflect how the capacity will vary throughout the year. As set out in **Table 20-18** the availability is lowest in July, where there are 21,374 rooms available after existing demand.

Table 20-18: Seasonally Adjusted Visitor Accommodation within 60-minutes' Drive Time of the Proposed Development

Month	Typical Room Occupancy (%)	Rooms Typically Available after Existing Demand
January	64	51,297
February	73	38,473
March	75	35,623
April	77	32,773
May	80	28,499
June	83	24,224
July	85	21,374
August	81	27,074
September	84	22,799
October	82	25,649
November	81	27,074
December	75	35,623

[Source: CoStar (2024), Visit England Seasonal Occupancy Survey (2025) (Ref. 14, Ref. 15)]

Future Baseline

- 20.7.16 As set out within **Chapter 6: Environmental Impact Assessment Methodology** in PEI Report **Volume 2** the future baseline is the year the Proposed Development is fully built and operational, which, as set out within **Chapter 3: The Proposed Development** in PEI Report **Volume 2**, is anticipated to be 2032.
- 20.7.17 Latest available ONS population projections project population growth from a base year of 2022. Of the local authorities that the Proposed Development falls within, the largest population growth by 2032 is projected to be in Central Bedfordshire, with a growth of 14.3%. The least growth in population is expected to be in Birmingham at 3.2%. Projections for all relevant local authorities is detailed in **Table 20-19**.

Table 20-19: Project-wide Population Projections by Local Authority

Area	2022 Population	2032 Population	Growth (%)
Birmingham	1,154,221	1,191,154	3.2%
Coventry	352,889	401,655	13.8%
West Northamptonshire	429,511	458,565	6.8%
Central Bedfordshire	301,820	345,063	14.3%

Area	2022 Population	2032 Population	Growth (%)
Buckinghamshire	560,688	596,751	6.4%
Milton Keynes	292,517	315,470	7.8%
North Warwickshire	65,947	71,349	8.2%
Nuneaton and Bedworth	135,499	144,798	6.9%
Rugby	116,461	130,712	12.2%

[Source: ONS Population Projections (2022) (Ref. 16)]

20.7.18 The ONS Population Projections are also broken down by age group. Across all local authorities, by 2032, there are expected to be a smaller proportion of 0-15 year-olds. Full age breakdown projections are outlined in **Table 20-20**.

Table 20-20: Project-wide Age Breakdown Projections

Area	Age	2022	2032
Birmingham	Aged 0 to 15 (%)	20.7	17.5
	Aged 16 to 64 (%)	66.2	68.2
	Aged 65+ (%)	13.1	14.3
Coventry	Aged 0 to 15 (%)	18.6	16.9
	Aged 16 to 64 (%)	67.0	68.9
	Aged 65+ (%)	14.4	14.2
West Northamptonshire	Aged 0 to 15 (%)	18.2	15.8
	Aged 16 to 64 (%)	64.5	64.5
	Aged 65+ (%)	17.3	19.7
Central Bedfordshire	Aged 0 to 15 (%)	18.5	17.0
	Aged 16 to 64 (%)	63.4	63.2
	Aged 65+ (%)	18.1	19.8
Buckinghamshire	Aged 0 to 15 (%)	18.7	16.5
	Aged 16 to 64 (%)	62.4	62.0
	Aged 65+ (%)	19.0	21.6
Milton Keynes	Aged 0 to 15 (%)	20.3	16.9
	Aged 16 to 64 (%)	65.6	66.4
	Aged 65+ (%)	14.1	16.7
North Warwickshire	Aged 0 to 15 (%)	16.3	15.3
	Aged 16 to 64 (%)	61.7	60.9
	Aged 65+ (%)	22.0	23.8

Area	Age	2022	2032
Nuneaton and Bedworth	Aged 0 to 15 (%)	18.0	16.3
	Aged 16 to 64 (%)	62.8	63.2
	Aged 65+ (%)	19.2	20.4
Rugby	Aged 0 to 15 (%)	18.4	16.7
	Aged 16 to 64 (%)	63.5	63.8
	Aged 65+ (%)	18.2	19.5

[Source: ONS Population Projections (2022) (Ref. 16)]

Assessment of Effects and Significance

20.7.19 This section provides the preliminary assessment of likely project-wide significant effects. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Temporary direct and indirect employment generation

20.7.20 Likely employment effects would be of a medium-term temporary nature and although these jobs are temporary, they represent a positive economic effect for a substantial period that can be estimated as the function of the scale and type of activities required to construct the Proposed Development.

20.7.21 The peak construction workforce is uncertain at this stage; however, estimates have been made for the majority of the Proposed Development and have been detailed in **Chapter 3: The Proposed Development** in PEI Report **Volume 3**. The estimates of these peaks can be summarised as the following:

- a. Part 1a: 60 Full-time equivalent (FTE) staff;
- b. Part 1b: 110 FTE staff⁶;
- c. Parts 2 and 3: 65 FTE staff;
- d. Part 4a: 50 FTE staff; and
- e. Part 4b: 110 FTE staff⁷.

⁶ Whilst PEI Report Chapter 3: The Proposed Development has calculated a peak of 108 FTE Staff, due to uncertainty at this stage, an indicative figure of 110 has been used in the socio-economic assessment.

⁷ Assumed to be the same employment as required for Part 1b.

- 20.7.22 Whilst no approximation of the required average gross direct FTE jobs has been made, it is possible to use ratios between average and peak FTE staff from similar water supply developments in the UK to calculate an estimate of the average FTE staff likely to be on-site at one time. Typically, the average workforce required for similar developments has been around 50% of the peak number. Applying this to the peak levels of employment it is estimated that there would be an average of 198 average gross direct FTE jobs on-site across the Proposed Development.

Leakage

- 20.7.23 Leakage effects are the benefits to those outside the study area, defined as a 60-minute travel area in any direction from all construction compounds for the Proposed Development. Given the extensive area that this covers (shown in **Figure 20-PD-1** in PEI Report **Volume 3**), it is estimated that 75% of construction staff could be sourced from within this radius. This would be subject to labour availability and take-up at the time of construction; however, it is considered to be a reasonable assumption on which to base this assessment, from professional experience and benchmarking against other comparable infrastructure projects. As such, 25% of staff would be likely to reside outside of this study area. This indicates that although a high proportion of employment opportunities would be retained in this area, a small number of jobs would be taken up by people living outside.
- 20.7.24 An adjustment of 75% has therefore been applied to the estimated average 198 gross direct construction jobs on-site during the construction phase to estimate the jobs created within the target area. On this basis, it is estimated that the Proposed Development would create 149 FTE jobs per annum for residents within the 60-minute drive-time area during the construction phase, and 49 FTE jobs per annum for residents outside this area.

Displacement

- 20.7.25 Displacement measures the extent to which the benefits of a development are offset by reductions in output or employment elsewhere. Any additional demand for labour cannot simply be treated as a net benefit since it has the potential to displace workers from other positions, and the net benefit is reduced to the extent that this occurs.
- 20.7.26 Construction workers typically move between construction projects when delays occur or to help the workforce meet construction deadlines. Due to the flexibility of the labour market, construction labour force displacement has been assumed to be low.
- 20.7.27 The HCA Additionality Guide (Ref. 7) provides standards (or 'ready reckoners') for displacement. Within the context of a construction project in

the study area, a displacement factor of 50% is considered appropriate according to the HCA Additionality Guide. This level of displacement reflects that there are expected to be some displacement effects given the generally low unemployment rates in the study area as well as nationally somewhat balanced by there being differing skills requirements required for the wide-range of construction works taking place which could be filled by available labour. Applying this level of displacement to the total gross direct average employment figure results in a total net direct employment figure of 99 FTE jobs per annum during the construction phase.

Multiplier Effect

- 20.7.28 In addition to the direct employment generated by the construction of the Proposed Development, there would be an increase in local employment arising from indirect and induced effects of the construction activity. Employment growth would arise locally through manufacturing services and suppliers to the construction process (indirect or supply linkage multipliers). Additionally, it is assumed that part of the income of the construction workers and suppliers would be spent in the study area, generating further employment (in terms of induced or income multipliers).
- 20.7.29 The effect of the multiplier depends on the size of the geographical area that is being considered, the local supply linkages and income leakage from the area. The HCA Additionality Guide provides 'ready reckoner' composite multipliers (the combined effect of indirect and induced multipliers) to account for this. The study area is likely to have 'average' supply linkages and induced effects, based on the scale of its economy compared to other locations. Therefore, a medium multiplier effect of 1.5 (which the HCA Guidance indicates will be appropriate for the majority of interventions) has been considered appropriate. Applying the 1.5 multiplier to the total net direct employment figure of 99 workers results in net indirect and induced employment of 49 jobs per annum during the construction phase.

Net Construction Employment

- 20.7.30 **Table 20-21** presents the temporary annual employment generated by the Proposed Development, accounting for leakage, displacement, and multiplier effects. The Proposed Development would support, on average, 148 total net jobs per annum during the construction phase. Of these, 111 jobs per annum would be expected to be taken up by residents within the study area.

Table 20-21: Average net additional construction employment

Employment	Study area	Outside of Study area	Total
Gross Direct Employment	149	49	198
Displacement	-74	-25	-99
Net Direct Employment	74	25	99
Indirect & Induced Employment	37	12	49
Total Net Employment	111	37	148

[Source: AECOM Calculations (2025)]

20.7.31 The sensitivity of the local workforce to employment changes has been assessed as medium, given unemployment rates in the area. The most recent available data shows the study area to have slightly higher unemployment than the England national average. The direct, indirect and induced employment created from the construction of the Proposed Development must be judged in the context of the labour pool of construction workers in the study area (approximately 467,000 according to the Business Register and Employment Survey (BRES) 2024 data (Ref. 11)). The employment requirements associated with the Proposed Development's construction are small compared to the labour pool of construction workers in the area yet representing a tangible increase in employment levels in the sector. Overall, the impact of construction employment generation in the study area has been assessed as temporary low beneficial.

20.7.32 Based on the above, there is potential for a direct, temporary, medium-term, beneficial effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

20.7.33 No additional mitigation, enhancement or monitoring is required.

Residual Effect

20.7.34 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Gross Value Added generation

20.7.35 Applying the average GVA per construction worker in the study area, defined here as the four regions that the Proposed Development falls within (West Midlands, East Midlands, East of England, and South-east) to the total number of construction workers generated from the Proposed

Development gives the total GVA arising from the construction phase. In the four regions, GVA per worker in 2023 in the construction sector was estimated to be £101,652 per head (Ref. 12, Ref. 11). Applying this figure to the total direct construction workers generated by the Proposed Development, it is estimated that construction would contribute approximately £20.1 million per annum to the national economy, of which £15.1 million per annum would likely be within the study area, as shown in **Table 20-22**.

Table 20-22: Gross Direct Value Added per annum from the Proposed Development during the construction phase

GVA	Study area	Outside of Study area	Total
GVA Generation (£ million)	15.1	5	20.1

[Source: AECOM Calculations (2025)]

20.7.36 The sensitivity of the economy within the study area has been assessed as medium, with GVA per head (Ref. 12) being slightly lower in the four regions compared to the nation. In the context of the size of the overall local economy, the magnitude of the impact of the construction phase of the Proposed Development on the study area's overall GVA is assessed to be low.

20.7.37 Based on the above, there is potential for a direct, temporary, medium-term, beneficial effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

20.7.38 No additional mitigation, enhancement or monitoring is required.

Residual Effect

20.7.39 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Promotion / provision of training and apprenticeship opportunities

20.7.40 Baseline data shows that the population of the study area is generally educated to a similar level to the national average, though has a slightly lower proportion of residents with an apprenticeship qualification than the national average. Sensitivity has therefore been assessed to be medium.

20.7.41 As outlined above, the Proposed Development will create a number of jobs. It is anticipated that an Outline Skills, Supply Chain and Employment Plan will be prepared for submission with the DCO application. This will set out the Applicants' strategy for providing local training and apprenticeship opportunities.

- 20.7.42 Further assessment of impacts on promotion / provision of training and apprenticeship opportunities during the construction phase of the Proposed Development will be undertaken and reported in the ES.

Impacts on temporary accommodation facilities

- 20.7.43 Analysis of accommodation facilities within the study area, defined as a 60-minute drive time in any direction from all construction compounds for the Proposed Development, has been undertaken to assess likely capacity against the demand from the potential peak construction workforce. This assessment considers the potential for adverse impacts to be felt in economic sectors with dependencies on the local accommodation sector, in particular the tourism sector, due to demand for accommodation exceeding supply during the construction phase.
- 20.7.44 The peak construction workforce is still uncertain at this stage, however, as described above, it has been estimated that across the Proposed Development the total peak construction workforce will be 391 FTE staff.
- 20.7.45 In line with the leakage assumption of 25%, it is assumed that 98 of the FTE staff would be sourced from outside the study area and would therefore require temporary accommodation. The analysis in **Table 20-23** demonstrates that at peak workforce employment and typical seasonal occupancy levels, 100% of the Proposed Development's non-local construction workers could be accommodated within the study area with a significant supply of rooms still available.

Table 20-23: Project-Wide Visitor Accommodation Capacity during Construction

Month	Typical Room Occupancy (%)	Rooms Available after Existing Demand	Peak construction workers from outside Study area	Remaining Rooms Available (availability as % of total)
January	64	51,297	98	51,198 (36)
February	73	38,473	98	38,375 (27)
March	75	35,623	98	35,524 (25)
April	77	32,773	98	32,674 (23)
May	80	28,499	98	28,401 (20)
June	83	24,224	98	24,126 (17)
July	85	21,374	98	21,276 (15)
August	81	27,074	98	26,976 (19)
September	84	22,799	98	22,701 (16)

Month	Typical Room Occupancy (%)	Rooms Available after Existing Demand	Peak construction workers from outside Study area	Remaining Rooms Available (availability as % of total)
October	82	25,649	98	25,551 (18)
November	81	27,074	98	26,976 (19)
December	75	35,623	98	35,524 (25)

[Source: AECOM Calculations (2025)]

20.7.46 Given the extensive accommodation available within the study area, along with further available uncounted accommodation in the private rental sector and Airbnb which could potentially be used by construction workers, sensitivity of the sector has been assessed to be very low.

20.7.47 Given the very small number of workers expected to be requiring rooms as a proportion of the expected capacity (accounting for seasonal availability), magnitude has been assessed to be very low.

20.7.48 Based on the above, there is potential for a temporary, short-term, negligible effect which is not significant.

Additional Mitigation, Enhancement and Monitoring

20.7.49 No additional mitigation, enhancement or monitoring is required.

Residual Effect

20.7.50 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Summary

20.7.51 **Table 20-24** summarises the residual project-wide socio-economics effects of the Proposed Development.

Table 20-24: Summary of Project-Wide Residual Effects

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Temporary direct and indirect employment generation	Medium	Beneficial, Medium-term, Regional	Low	Minor	None	Minor Beneficial (Not Significant)
GVA Generation	Medium	Beneficial, Medium-term, Regional	Low	Minor	None	Minor Beneficial (Not Significant)
Promotion / provision of training and apprenticeship opportunities	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES
Impacts on temporary accommodation facilities	Very Low	Adverse, Long-term, Regional	Very Low	Negligible	None	Negligible (Not Significant)

Part 1a: Minworth AWTP

20.8 Part 1a: Minworth AWTP

- 20.8.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 1a of the Proposed Development.

Baseline Conditions

- 20.8.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

- 20.8.3 The existing socio-economic baseline has been split into two sections – a socio-economic profile of the local area to provide context for the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio Economic Profile

- 20.8.4 The majority of the Part 1a Preliminary Order Limits is within the administrative area of Birmingham City Council, with the A4097 access road falling within North Warwickshire Borough Council / Warwickshire County Council. The area within Part 1a is comprised of the existing Minworth Wastewater Recycling Centre (WwRC) and redundant operational land.
- 20.8.5 The socio-economic profile of the local area relevant to Part 1a is described with reference to key indicators for the areas of Birmingham and North Warwickshire. Comparison is provided with those of the wider West Midlands region as well as the England national average.

Population

- 20.8.6 According to Office for National Statistics (ONS) Census data (Ref. 10) in 2021 the population of Birmingham was 1,144,919. The population of North Warwickshire was 65,035. **Plate 20-2** below shows the breakdown of total population by age groups for Birmingham, North Warwickshire, and the comparator areas of the West Midlands region and England, using 2021 Census data for age by single year.
- 20.8.7 Birmingham has a relatively youthful population, with 20.9% of residents aged between 0 and 14. This is higher than the proportion recorded in the West Midlands (18.1%) and England as a whole (17.4%). Conversely in North Warwickshire, 16.1% of the population is in this age group, a lower proportion than recorded in the comparator areas.

20.8.8 Working aged residents, defined as those aged between 15-64, account for a higher proportion of the population in Birmingham (65.8%), than the regional (63.1%) and national (64.2%) averages. North Warwickshire in contrast has a smaller proportion (62.0%) than the regional and national averages.

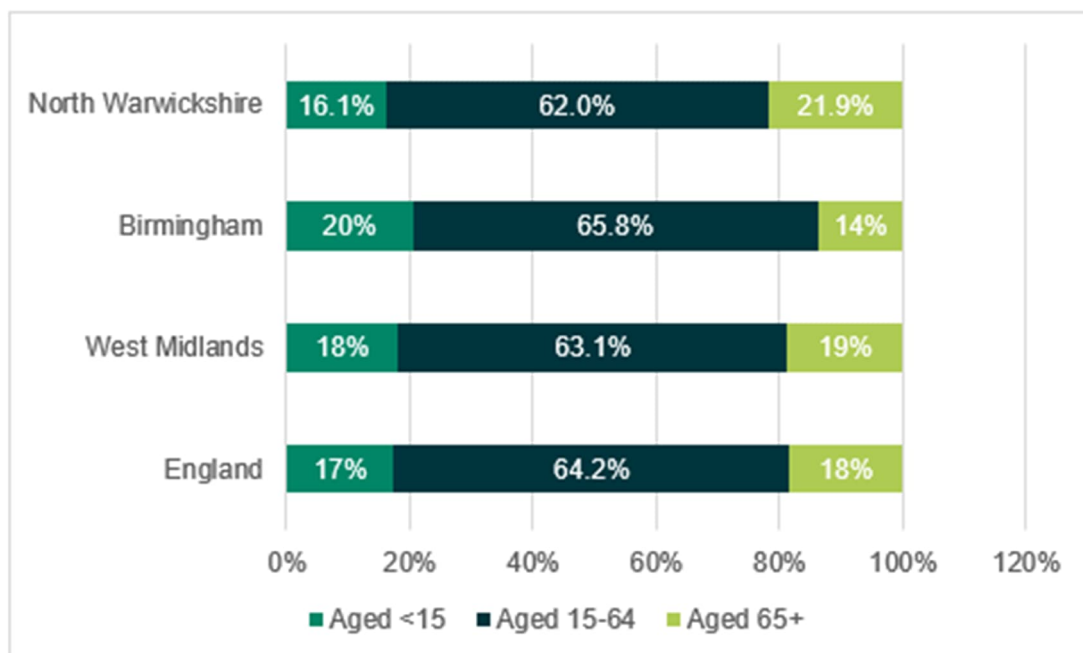


Plate 20-2: Part 1a - Age Profile

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment

20.8.9 According to the Census 2021 (Ref. 10), the unemployment rate among economically active over-16s residents in Birmingham was 10.6%, notably higher than the West Midlands (6.5%), and the England national average (5.7%). In contrast, the unemployment rate in North Warwickshire was 4.4% and therefore lower than in both comparator areas. These economic activity and unemployment rates are shown in Table 20-25.

Table 20-25: Part 1a - Economic Activity

Indicator	Birmingham	North Warwickshire	West Midlands	England
Economic activity rate (for residents aged 16+) (%)	55.6	61.6	58.8	60.9
Unemployment rate (for residents aged 16+) (%)	10.6	4.4	6.5	5.7

[Source: ONS (2022); Census 2021. (Ref. 10)]

Skills and Qualifications

- 20.8.10 According to the Census 2021 (Ref. 10), Birmingham has a higher proportion of residents with no qualifications (23.9%) than the West Midlands (21.1%) and the England national average (18.1%). The same is true for North Warwickshire where the proportion of residents with no qualifications is 22.2%.
- 20.8.11 In Birmingham, 29.9% of the over-16 population have a level 4 qualification or higher; slightly greater than recorded for the West Midlands (29.4%), but lower than recorded nationally (33.9%). In North Warwickshire the proportion (24.8%) is notably lower than both comparator areas.
- 20.8.12 In Birmingham, a lower proportion of the over-16 population had an apprenticeship-level qualification (3.6%) than the West Midlands and England national average (both 5.3%), whereas in North Warwickshire the proportion is higher (6.1%).
- 20.8.13 Further details on qualification levels for the study area and other geographies can be seen in **Table 20-26**.

Table 20-26: Part 1a Qualifications

Qualification Level (%)	Birmingham	North Warwickshire	West Midlands	England
No qualifications	23.9	22.2	21.1	18.1
Level 1 and entry level qualifications	10.1	11.5	10.3	9.7
Level 2 qualifications	12.5	15.3	13.9	13.3
Apprenticeship (%)	3.6	6.1	5.3	5.3
Level 3 qualifications	17.1	17.6	17.1	16.9
Level 4 qualifications or above	29.9	24.8	29.4	33.9
Other qualifications	2.9	2.4	2.9	2.8

[Source: ONS (2022) Census 2021. (Ref. 10)]

Deprivation

- 20.8.14 Based on the 2025 Indices of Multiple Deprivation (IMD) (Ref. 13), which is measured at local authority level, Birmingham is in the top three percent of the most deprived local authority areas in England, ranked 8th out of 297 (where 1 is the most deprived). In all, 42.8% of the Lower Super Output Areas (LSOAs) in Birmingham are ranked among the 10% most deprived nationally.

- 20.8.15 North Warwickshire is in the top 41% most deprived local authority areas in England, ranked 122nd out of 297. Some 2.6% of the LSOAs are within the 10% most deprived nationally.

Local Receptors

Local and private assets

Residential Properties

- 20.8.16 There are no residential properties within the Preliminary Order Limits. Properties within the following settlements or areas are within 500 m of the Preliminary Order Limits:

- a. Curdworth;
- b. Water Orton; and
- c. Kingsbury Road (south of Wiggins Hill).

Local Businesses

- 20.8.17 Other than Severn Trent's WwRC, there are no business premises within the Preliminary Order Limits, though there are a number of business premises within 500 m. This includes retail premises and public houses in the village centres of Water Orton and Curdworth and scattered industrial and warehousing estates.

Community Facilities and Open Space / Recreation

- 20.8.18 There are no community facilities or open spaces within the Preliminary Order Limits. There are various community and recreational facilities within 1 km of the Preliminary Order Limits. These are all located in the settlements of Curdworth, Water Orton, and Minworth and principally include primary schools, open spaces and churches.

Visitor Attractions

- 20.8.19 There are no visitor attractions or accommodation within the Preliminary Order Limits. There are a few visitor accommodation facilities within 500 m in Minworth and on Kingsbury Road.

Development Land

- 20.8.20 There are no development land designations within or directly adjacent to the Preliminary Order Limits.
- 20.8.21 Planning applications and permissions relevant to Part 1a will be identified and reported in the ES.

Public Rights of Way

- 20.8.22 The Preliminary Order Limits also crosses a total of three PRoW including three footpaths (PRoW 2357#1, PRoW 2357#2, and PRoW 2684) and no bridleways within the area (as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and shown in **Figure 21-P1A-2** in PEI Report **Volume 3**).

Future Baseline

- 20.8.23 The future baseline scenario is detailed in section 20.7, as well as the population projections relevant for Part 1a.
- 20.8.24 In terms of the local economy, it would be reasonable to expect that employment would increase, associated with the expected increase in population. It is expected that PRoWs will continue to be used.
- 20.8.25 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.
- 20.8.26 For the purposes of this assessment, unless specified, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

- 20.8.27 There are no further environmental design, standards and/or management measures in relation to socio-economics that are specific to Part 1a of the Proposed Development beyond those stated in section 20.6 for the project as a whole.

Assessment of Effects and Significance

- 20.8.28 This section provides the preliminary assessment of likely significant effects, for Part 1a (Minworth AWTP) of the Proposed Development. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions)

Direct Impacts

- 20.8.29 There are no local and private assets within the Part 1a Preliminary Order Limits and therefore no direct land use impacts or effects are expected.

Indirect Impacts

- 20.8.30 The assessment of indirect effects on the amenity of local and private assets has considered effects from outside of the Preliminary Order Limits in the following chapters in PEI Report **Volume 2**:
- a. **Chapter 8: Air Quality and Odour;**
 - b. **Chapter 16: Landscape and Visual;**
 - c. **Chapter 19: Noise and Vibration;** and
 - d. **Chapter 21: Traffic and Transport.**
- 20.8.31 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 1a which could impact on the amenity of residents, businesses and users of open space.
- 20.8.32 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Land use impacts on development land

- 20.8.33 There are no socio-economic designations or allocations within Part 1a Preliminary Order Limits, therefore there are no direct land use impacts.
- 20.8.34 Land use impacts on planning applications and permissions relevant to Part 1a will be assessed and reported in the ES.

Temporary disruption to PRow access

- 20.8.35 There are three PRowS that encroach into the Part 1a Preliminary Order Limits. Where possible, these PRowS will be kept open during the works, or short diversions will be provided. However, it is uncertain at this stage that all PRow can be kept open at all times during the works and it is possible that temporary PRow closures may be required in a worst-case scenario.

20.8.36 The PRoWs are footpaths and there are alternative similar recreational walking routes in the surrounding area such that there is a high possibility of using substitute routes for access, and therefore sensitivity of users to disruption has been assessed to be low. While measures to keep PRoWs open and provide short diversions will limit disruption, temporary diversions and changes in accessibility may still occur with the extent of changes to journeys unknown at this stage. The magnitude of impact is therefore assessed as medium due to potential short-term disruption to access and amenity.

20.8.37 Based on the above, there is potential for a direct, temporary, short-term adverse effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

20.8.38 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

20.8.39 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Summary

20.8.40 **Table 20-27** summarises the residual socio-economics effects of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-27: Summary of residual effects – Part 1a

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Land use impacts on development land – planning applications and permissions	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES
Temporary disruption to PRow access	Medium	Adverse, Short-term, Local	Low	Minor	None	Minor Adverse (Not Significant)

Part 1b: Minworth to Atherstone Pipeline

20.9 Part 1b: Minworth to Atherstone Pipeline

20.9.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 1b of the Proposed Development.

Baseline Conditions

20.9.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

20.9.3 The existing socio-economic baseline has been split into two sections, a socio-economic profile of the local area to provide context for the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio Economic Profile

20.9.4 Part 1b of the Proposed Development falls within the local authority of Birmingham City Council. Therefore, the socio-economic profile for Part 1b is the same as the profile of Birmingham City Council local authority reported for Part 1a. This provides context for the assessment.

Local Receptors

Local and private assets

Residential Properties

20.9.5 There are no residential receptors within the Preliminary Order Limits of Part 1b. There are a substantial number of residential receptors within 500 m of the Preliminary Order Limits, the settlements that contain these include:

- a. Curdworth;
- b. Lea Marston;
- c. North Foul End;
- d. Whitacre Heath;
- e. Hurley;
- f. Baxterley; and
- g. Atherstone.

- 20.9.6 There are also a number of rural, isolated houses within 500m of the Preliminary Order Limits.

Local Businesses

- 20.9.7 There are no business premises within the Preliminary Order Limits, there are a number located within 500 m of Preliminary Order Limits.
- 20.9.8 There are hospitality businesses in Curdworth and Lea Marston within 500 m of Part 1b, with the latter also home to a distribution centre, housing a number of industrial and commercial units.
- 20.9.9 There are a number of pubs and restaurants in Hurley, Whitacre Heath, and Baxterley within 500 m of Part 1b, with Baxterley also housing a care home.
- 20.9.10 In Atherstone, there are a number of small retail businesses on Coleshill Road which are within the Preliminary Order Limits at the eastern extent of Part 1b. There are several retail and hospitality businesses on Long Street, including pubs, restaurants, and shops. There is also a small industrial park nearby in Atherstone.

Community Facilities and Open Space / Recreation

- 20.9.11 There are no community facilities within the Preliminary Order Limits.
- 20.9.12 In Curdworth, there is a church, school and village hall with 1 km of Part 1b. To the east, near Lea Marston, there are similar facilities as well as recreational spaces.
- 20.9.13 There are a few more community facilities and recreational spaces in Whitacre Heath, Hurley, and Baxterley, primarily churches and village halls.
- 20.9.14 There are primary schools and a secondary school in Atherstone within 1 km of Part 1b as well as several churches, two General Practitioner (GP) surgeries, and a library. There is also a range of open and recreational spaces in Atherstone within 1 km of Part 1b including playgrounds, allotments, and parks.
- 20.9.15 There are two open spaces within the Part 1b Preliminary Order Limits, the first is Atherstone Golf Club. It is an 18-hole golf course taking bookings from non-members in addition to its membership. The Preliminary Order Limits run along the top of the golf course to meet the Coventry Canal at the eastern extent of Part 1b.
- 20.9.16 The second open space is at the Outlands, which is common land. Situated just north of the Atherstone Golf Club and is a green space with number of recreational paths. The Preliminary Order Limits intersect the Outlands between Coleshill Road and the canal.

Visitor Attractions

- 20.9.17 There are no visitor attractions or visitor accommodation facilities within the Part 1b Preliminary Order Limits.
- 20.9.18 There are a few visitor accommodation facilities within 500 m of Part 1b, specifically around Lea Marston and Atherstone.

Agricultural land holdings

- 20.9.19 The land within the Part 1b Preliminary Order Limits is mostly used for agricultural purposes, being characterised by large scale regular-shaped fields across multiple land holdings. Farming operations include both arable tillage and grazing of livestock.

Development Land

- 20.9.20 There are allocated mineral sites within, and within 500 m of, the Part 1b Preliminary Order Limits and mineral safeguarding areas (MSAs) are also intersected. More information on these is set out in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**.
- 20.9.21 There are no other development allocations within the Part 1b Preliminary Order Limits.
- 20.9.22 Planning applications and permissions relevant to Part 1b will be identified, assessed and reported in the ES.

Public Rights of Way

- 20.9.23 The Preliminary Order Limits crosses a total of 24 PRoW, including 21 footpaths and three bridleways as listed in **Appendix 21-PD-3** (PEI Report **Volume 4**) and also shown in **Figure 21-P1B-2** (PEI Report **Volume 3**).

Future Baseline

- 20.9.24 The future baseline scenario is detailed in section 20.7 including the population projections relevant for Part 1b.
- 20.9.25 In terms of the local economy, it would be reasonable to expect that employment and GVA would increase, associated with the expected increase in population. It is expected that PRoWs will continue to be used.
- 20.9.26 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against

current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.

- 20.9.27 For the purposes of this assessment, unless specified, the future baseline with respect to local receptors (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

Construction Phase

- 20.9.28 Efforts have been made to narrow down the Preliminary Order Limits associated with the pipeline corridor to avoid environmental constraints which could include local open space facilities.
- 20.9.29 Where possible, trenchless crossing techniques will be used where the pipeline is proposed to go through existing features such as A-roads, main rivers, and railways. This will allow minimal surface disruption along the pipeline route as this technique does not require earthworks directly above the proposed pipeline route.

Assessment of Effects and Significance

- 20.9.30 This section provides the preliminary assessment of likely significant effects for Part 1b of the Proposed Development. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions)

Direct Impacts

Atherstone Golf Club

- 20.9.31 The alignment of the pipeline corridor through the golf course has been the subject of ongoing engineering design and environmental assessment to minimise the potential impact on the operation of the golf club. Although the 8th hole lies within the Preliminary Order Limits, it is expected that the pipeline can be constructed with limited impact on the use of this hole, potentially requiring minor adjustment to the location of the tee. Engagement with the Golf Club is ongoing to explore more closely the timing, duration and method of construction in this location and elsewhere within the golf course grounds.

- 20.9.32 The remaining facilities of the Golf Club, including the other 17 holes, would be unaffected by the construction of Part 1b. However, given the work to further assess the pipeline routeing and construction method is ongoing, on a precautionary basis the magnitude of impact on the golf club is assessed to be medium. There are four other public golf courses within 20-minute drive of Atherstone Golf Club which patrons could potentially use as an alternative during the construction of Part 1b if necessary. The sensitivity of users of the golf course to disruption is assessed to be medium.
- 20.9.33 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on the Atherstone Golf Club which is considered to be moderate and potentially significant.

Additional Mitigation, Enhancement and Monitoring

- 20.9.34 The routeing of the pipeline through Atherstone Golf Club and the timing, duration and construction methods is the subject of ongoing assessment and engagement with the Golf Club. The outcomes of this ongoing work will be reported in the ES.

Residual Effect

- 20.9.35 As there is no additional mitigation, enhancement or monitoring confirmed at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

The Outlands

- 20.9.36 Immediately to the north of Atherstone Golf Club, the pipeline crosses the Outlands open space, an area of common land, to reach the Atherstone outfall structure. It is expected that this section of pipeline will be installed using open cut methods, which will render a sizeable portion of the Outlands inaccessible to the public. The Outlands are used for recreational purposes by the local community, this includes a number of pathways for walking and other recreational movement. Sensitivity has been assessed to be medium, recognising that this is designated as common land with associated community importance and that there are few open spaces in close proximity that the local community could use for similar recreational purposes, such as Mancetter Recreation Ground and Purley Park.
- 20.9.37 As with Atherstone Golf Club, the work to further assess the pipeline routeing and construction method is ongoing, and there is uncertainty surrounding the length of pipeline construction works in this area. At this stage, however, it is anticipated that a notable proportion of the open space will be inaccessible during the construction works, and a number of the pathways will also be inaccessible, therefore the magnitude of the impact on users of the Outlands has been assessed to be medium.

- 20.9.38 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on the Outlands common land which is considered to be moderate and potentially significant.

Additional Mitigation, Enhancement and Monitoring

- 20.9.39 The routing of the pipeline through this area and the timing, duration and construction methods is the subject of ongoing assessment. The outcomes of this ongoing work will be reported in the ES.

Residual Effect

- 20.9.40 As there is no additional mitigation, enhancement or monitoring confirmed at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Indirect Impacts

- 20.9.41 The assessment of indirect effects on the amenity of local and private assets has considered effects from following chapters in PEI Report **Volume 2**:
- a. **Chapter 8: Air Quality and Odour;**
 - b. **Chapter 16: Landscape and Visual;**
 - c. **Chapter 19: Noise and Vibration;** and
 - d. **Chapter 21: Traffic and Transport.**
- 20.9.42 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 1b which could impact on the amenity of residents, businesses and users of open space.
- 20.9.43 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Impacts on agricultural land holdings

- 20.9.44 Land use impacts on agricultural land holdings in Part 1b are likely to arise as a result of activities to lay the pipeline. Use of land within the pipeline construction working width would be temporarily lost for the duration of construction with the land expected to be able to be farmed as previously after this phase. It is also possible that some severance of use of holdings may arise where access to farm infrastructure is affected, again for the duration of the construction activities only and reversible after this.

- 20.9.45 The holdings within the Preliminary Order Limits are engaged in agricultural activities that require weekly or less frequent access (arable farming and grazing), indicating that their sensitivity to impacts is likely either medium or low.
- 20.9.46 There is uncertainty at this stage regarding the extent of land-take required from holdings and the duration of construction activities to fully assess the likely impact on individual farming operations. However, any impacts would be temporary in nature with the land above the pipeline being able to be returned to agricultural use after construction.
- 20.9.47 Significant effects could arise where severance occurs without mitigation on holdings where the spatial relationship of land to key agricultural infrastructure is stronger. Land use impacts on agricultural land holdings relevant to Part 1b will be further assessed and reported in the ES when more information regarding the susceptibility of holdings to severance and the extent and footprint of land-take within these is known.

Land use impacts on development land

- 20.9.48 Impacts on mineral sites and MSAs as resources are assessed in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**. There are no other designations or allocations within the Preliminary Order Limits and therefore no direct land use impacts are expected.
- 20.9.49 Land use impacts on planning applications and permissions relevant to Part 1b will be assessed and reported in the ES.

Temporary disruption to PRow

- 20.9.50 As outlined in paragraph 20.9.23, there are 24 PRowS that interface with the Part 1b Preliminary Order Limits. Where possible, these PRowS will be kept open during the works, or short diversions will be provided. It is possible that temporary PRow closures may be required. Any diversions are expected to be of equivalent nature, connectivity and length to the existing route.
- 20.9.51 Given the largely rural nature of Part 1b, it is expected that these PRowS are largely used for recreational purposes, rather than for business or commuting. Three of these are bridleways which offer different amenity value to the rest which are footpaths. There are some PRowS in the vicinity of Part 1b which could also be used for recreational purposes including bridleways. Therefore, sensitivity of users of these PRowS to temporary disruption has overall been assessed to be medium.
- 20.9.52 While measures to keep PRowS open and provide short diversions will limit disruption, temporary diversions and changes in accessibility may still occur with the extent of changes to journeys unknown at this stage. The

magnitude of impact is therefore assessed as medium due to potential short-term disruption to access and amenity.

- 20.9.53 Based on the above, there is potential for a direct, temporary, short-term adverse effect which is considered to be moderate and significant.

Additional Mitigation, Enhancement and Monitoring

- 20.9.54 Additional measures are necessary to ensure that construction does not significantly affect access to PRowS. These measures could take the form of minimising any diversions required during closures to minimise users' access to these PRowS. These are subject of ongoing design development, and any mitigation measures will be reported in the ES.

Residual Effect

- 20.9.55 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Summary

- 20.9.56 **Table 20-28** summarises the residual socio-economics effects of Part 1b of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-28: Summary of residual effects – Part 1b

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Impacts on local and private assets – Land-take at Atherstone Golf Club	Medium	Adverse, Short-Term, local	Low	Minor	To be reconfirmed in the ES.	Minor Adverse (Not Significant)
Impacts on local and private assets – Land-take at the Outlands	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Impacts on agricultural land holdings	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES
Land use impacts on development land – planning applications and permissions	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES
Temporary disruption to PRow access	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)

Part 2: Works to the Coventry, Oxford and Grand Union Canals

20.10 Part 2: Works to the Coventry, Oxford and Grand Union Canals

- 20.10.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 2 of the Proposed Development.

Baseline Conditions

- 20.10.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

- 20.10.3 The existing socio-economic baseline has been split into two sections – a socio-economic profile of the local area to provide context for the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio-economic Profile

- 20.10.4 The Part 2 Preliminary Order Limits cross the administrative boundaries of North Warwickshire Borough Council, Warwickshire County Council, Nuneaton and Bedworth Borough Council, Coventry City Council, Rugby Borough Council, West Northamptonshire Council, Milton Keynes City Council, and Buckinghamshire Council. The land use within Part 2 is generally rural in nature, although it also passes through the urban areas of Nuneaton, Coventry, Rugby, Daventry, and Milton Keynes.
- 20.10.5 The socio-economic profile of the local area relevant to Part 2 is described with reference to key indicators for the areas of North Warwickshire, Nuneaton and Bedworth, Coventry, Rugby, West Northamptonshire, Milton Keynes, and Buckinghamshire. Comparison is provided with those of the wider West Midlands, East Midlands, and south-east regions as well as the England national average.

Population

- 20.10.6 According to Census 2021 data (Ref. 10), the most populous of the local authorities that Part 2 is within was Buckinghamshire (553,100), whilst the least populous was Rugby (114,400), the populations of all authorities is outlined in **Table 20-29**.

Table 20-29: Part 2 Population

Geographical Area	Population
North Warwickshire	65,000
Nuneaton and Bedworth	134,200
Coventry	345,300
Rugby	114,400
West Midlands	5,950,800
West Northamptonshire	425,700
East Midlands	4,880,100
Milton Keynes	287,100
Buckinghamshire	553,100
South-East	9,278,100
England	56,490,000

[Source: ONS (2022) Census 2021. (Ref. 10)]

20.10.7 The local authority in Part 2 with the highest proportion of population between the ages of 0 and 15 was Milton Keynes, with 20.4%, whilst the lowest was North Warwickshire (16.1%). The England national average was between these two local authorities at 18.1%.

20.10.8 The local authority with the largest proportion of working age residents was Coventry (66.7%), whilst the smallest proportion was found in North Warwickshire (62%). In comparison, in England, 63.1% of the population is of working age. A full breakdown of age distributions for the local authorities, as well as regional and national comparators, can be seen in **Plate 20-3**.

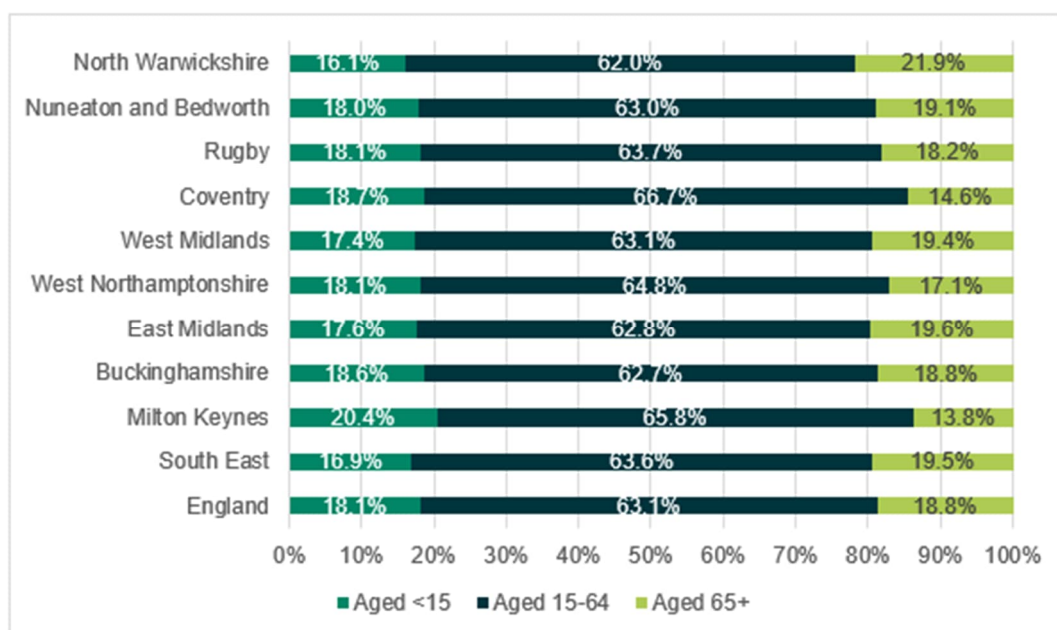


Plate 20-3: Part 2 Population Age Profile

[Source: ONS (2022) Census 2021. (Ref. 10)]

Economic Activity

20.10.9 According to the Census 2021, the local authority relevant to Part 2 with highest unemployment rate among economically active over-16s residents was Coventry, at 8.3%, which was considerably higher than the second highest (Milton Keynes, 5.5%). The lowest unemployment rate was found in Rugby (3.8%). In comparison, the England national average was 5.7%.

20.10.10 Of the local authorities, the highest over-16 economic activity rate was seen in North Warwickshire and Milton Keynes (both 67.5%), whilst the lowest was in West Northamptonshire (58.8%). The over-16 economic activity rate in England as a whole was 64.4%. Full economic activity and unemployment rates are shown in **Table 20-30**.

Table 20-30: Part 2 Economic Activity

Geographical Area	Economic activity rate (aged 16+) (%)	Unemployment rate (aged 16+) (%)
North Warwickshire	67.5%	4.4%
Nuneaton and Bedworth	61.3%	5.2%
Rugby	59.9%	3.8%
Coventry	64.4%	8.3%
West Midlands	58.8%	6.5%
West Northamptonshire	58.8%	4.6%
East Midlands	64.4%	5.1%
Buckinghamshire	64.4%	4.3%
Milton Keynes	67.5%	5.5%

Geographical Area	Economic activity rate (aged 16+) (%)	Unemployment rate (aged 16+) (%)
South-east	62.2%	4.9%
England	64.4%	5.7%

[Source: ONS (2022) Census 2021. (Ref. 10)]

20.10.11 According to the Census 2021 (Ref. 10), the local authority with the highest proportion of over-16s with no qualifications was Nuneaton and Bedworth (22.6%), whilst the local authority with the lowest proportion was Buckinghamshire (13.8%). Nationally, the proportion was 18.1%.

20.10.12 Buckinghamshire had the highest proportion of over-16s with a level 4 qualification or above, at 41%. Nuneaton and Bedworth had the lowest proportion (24.5%). In comparison, the proportion in England as a whole was 33.9%.

20.10.13 Regarding apprenticeships, Rugby had the highest proportion of over-16s who had attained one (6.4%), whilst Milton Keynes had the lowest (4.7%). Further details on other qualification levels, including apprenticeships, for the local authorities and comparators can be seen in **Table 20-31**.

Table 20-31: Part 2 Demographic Qualifications

Geographical Area	No Qualifications (%)	Level 1 and entry level qualifications (%)	Level 2 qualifications (%)	Apprenticeship (%)	Level 3 qualifications (%)	Level 4 qualifications or above (%)	Other qualifications (%)
North Warwickshire	22.2	11.5	15.3	6.1	17.6	24.8	2.4
Nuneaton and Bedworth	22.6	11.9	15	6.2	17	24.5	2.8
Rugby	15.7	9.7	14	6.4	16.4	34.9	2.9
Coventry	19.4	9.9	12.6	5.2	19	30.6	3.3
West Midlands	21.1	10.3	13.9	5.3	17.1	29.4	2.9
West Northamptonshire	17.4	10.9	14.3	5.8	16.9	31.8	3
East Midlands	19.5	10.4	13.9	6	18.3	29.1	2.8
Buckinghamshire	13.8	8.9	13.4	4.8	15.7	41	2.4
Milton Keynes	15.8	10.9	14.2	4.7	15.7	35.8	2.9
South-east	15.4	9.8	13.9	5.1	17.4	35.8	2.7
England	18.1	9.7	13.3	5.3	16.9	33.9	2.8

[Source: ONS (2022) Census 2021. (Ref. 10)]

Deprivation

- 20.10.14 Based on the 2025 Indices of Multiple Deprivation (IMD) (Ref. 13), which is measured at local authority level, out of the eight local authorities, Coventry is ranked as the most deprived, being in the top 21% of the most deprived local authority areas in England, ranked 61st out of 297 (where 1 is the most deprived). 17.7% of the Lower Super Output Areas (LSOAs) in Coventry are ranked among the 10% most deprived nationally.
- 20.10.15 The least deprived of the seven local authorities is Buckinghamshire, which is in the top 16% least deprived local authority areas in England, ranked 255th out of 297. There are no LSOAs in Buckinghamshire that are ranked among the 10% most deprived nationally.
- 20.10.16 **Table 20-32** shows a summary of relevant IMD domains across the study area.

Table 20-32: Part 2 IMD Rankings

Local Authority	IMD Rank (based on average LSOA Rank)	Proportion of LSOAs in Most Deprived 10% Nationally (%)
North Warwickshire	122	2.6
Nuneaton and Bedworth	88	8.3
Coventry	61	17.7
Rugby	216	0
West Northamptonshire	183	2.1
Milton Keynes	157	4.8
Buckinghamshire	250	0

[Source: MHCLG, (2025); Indices of Multiple Deprivation]

Local Receptors – Waterways*Moorings*

- 20.10.17 Along the course of the canal, there are a large number of moorings within the Part 2 Indicative Work Area. Some of these moorings will be engaged in commercial activities.

Commercial use

- 20.10.18 The canals are also well-used for commercial purposes, with waterway businesses, chandleries and operators offering services such as boat repairs, boat hiring, boat sales, and boating supplies at various locations, including within marinas and some with moorings attached. There are also businesses such as pubs, cafes and restaurants along the canal which derive trade from being at their location on the canal. Whilst many of these are situated within or near to Indicative Work Areas, it is expected

that receptors within the Indicative Non-Work Area will also rely on customers originating from sections of the canal within the Indicative Work Area.

Canal recreation and leisure use

- 20.10.19 The Grand Union Canal, Oxford Canal, and Coventry Canal are used extensively for leisure and recreational purposes. Boating is the most popular recreational use of the water space, with moorings, waterway businesses, marinas and customer service facilitates catering for boaters at various points along them. Other recreational and leisure uses encountered include angling and paddle sports such as canoeing, paddleboarding, and kayaking. The towpaths are extensively used by walkers, runners, cyclists and anglers.
- 20.10.20 Located directly along the canal are a number of marinas and at least one boat society. Other clubs and societies not based directly on the canal will also make use of the canal for recreational and leisure activities on a year-round and regular basis.

Public Rights of Way and Canal Towpath

- 20.10.21 The majority of the canal towpath is a permissive path, and provides a recreational route along the canal corridor within Part 2. For the majority of the length of the canal included within Part 2, the canal towpath only runs along one side of the canal.
- 20.10.22 Along the canal towpath, there are sections where rather than a permissive path, the canal towpath is designated as a Public Right of Way or National Cycle Network (NCN) Route. These instances are described in **Table 20-33**.

Table 20-33: Public Rights of Way and National Cycle Network Routes Overlapping with Towpath within Indicative Work Area

Path Name	Length of Overlap	Location
Grand Union Canal		
PRoW Bletchley FP 79	5.2 km	Water Eaton
PRoW Great Linford FP 15	4.4 km	Willen Park
PRoW Great Linford BW 6	250 m	Great Linford
PRoW Haversham / Little Linford FP 48	1.8 km	Stantonbury
PRoW Stantonbury FP 6	150 m	Stantonbury
PRoW New Bradwell NC FP 6	500 m	New Bradwell
PRoW New Bradwell NC FP 102	500 m	New Bradwell
PRoW New Bradwell NC FP 101	200 m	New Bradwell
PRoW Stantonbury FP 9	850 m	Stonebridge

Path Name	Length of Overlap	Location
PRoW Wolverton NC FP 99	350 m	Stonebridge
PRoW Wolverton NC FP 81	2.7 km	Stonebridge
Wolverton NC FP 68	750 m	Wolverton
PRoW FP RG/014	700 m	Cosgrove
PRoW FP KD/026	4 km	Bugbrooke
PRoW FP KS/015	1 km	Nether Hayford
PRoW FP FA/006	300 m	Long Buckby
Oxford Canal		
PRoW FP 156/R73h/1	300 m	Stretton under Fosse
PRoW FP 104/R31a/2	150 m	Ansty
PRoW FP 104/R29a/1	450 m	Ansty
Coventry Canal		
NCN Route 52	200 m	Hawkesbury
PRoW FP 331/B37/1	150 m	Hawkesbury
NCN Route 52 #2	6.5 km	Bedworth & Nuneaton
PRoW FP 222/AE215/1	350 m	Hartshill

20.10.23 In addition to those listed in above, the Part 2 Indicative Work Area also crosses a total of 62 PRoW that do not overlap the canal towpath, including 50 footpaths and 12 bridleways as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and are also shown in **Figure 21-P2-2** in PEI Report **Volume 3**.

Tourism

20.10.24 Waterways are rich with assets and infrastructure that generate economic benefit, with tourism being an important part of this. Notable activities include boaters travelling onto the network from outside to visit the canal and surrounding area, boat / paddle-hire by tourists, and visits to attractions along the canal such as museums and heritage features of the water infrastructure. Canal tourists also frequent retail and services businesses within villages and towns at stopping off places, helping to support employment within such locations. The visitor accommodation will in-turn be supported by stays from visitors related to canal-based tourism.

Local Receptors – non-waterways***Residential properties***

- 20.10.25 The northern extents of the Indicative Work Areas in Part 2 are located on the Coventry Canal in Atherstone, where some residential properties identified in relation Part 1b are also relevant to Part 2.
- 20.10.26 Heading south, there are sections of the Coventry Canal within the Indicative Work Area that run close to Mancetter and Hartshill before passing into Nuneaton. The Indicative Work Area then runs through a primarily residential area, to the west of Nuneaton town centre.
- 20.10.27 South of Nuneaton, there is an Indicative Work Area in Hawkesbury, where the Part 2 works transfer onto the Oxford Canal, which runs along the north of Coventry, where it passes close to the neighbourhoods of Alderman's Green and Wood End.
- 20.10.28 After this, there are several Indicative Work Areas between Coventry and Rugby, near the villages of Ansty, Brinklow, Stretton-under-Fosse, and Harborough Magna respectively. Through Rugby, there are Indicative Work Areas in proximity to the residential areas of Newbold-upon-Avon, Brownsover, and Hillmorton.
- 20.10.29 The Oxford Canal heads south of Rugby, with an Indicative Work Area located to the south of Braunston, which also signals the transfer of the Part 2 works from the Oxford Canal to the Grand Union Canal. An Indicative Work Area then runs along the northern extent of Daventry, close to residential areas near Daventry and Drayton Reservoirs.
- 20.10.30 The Grand Union Canal then flows south and an Indicative Work Area passes through the village of Long Buckby Wharf. This passes many rural, isolated houses and farms before passing through the village of Weedon Bec, and later Flore, Nether Heyford, and Bugbrooke. There is also an Indicative Work Area along the canal in and to the south of the village of Stoke Bruerne.
- 20.10.31 As the Grand Union Canal flows into Milton Keynes through Cosgrove, an Indicative Work Area starts and continues through the residential neighbourhoods of Wolverton, Stonebridge, Stantonbury and Great Linford. There is another Indicative Work Area located between Eaglestone and Woughton-on-the-Green.
- 20.10.32 The southernmost Part 2 Indicative Work Area is situated near the residential neighbourhoods of Fenny Stratford, Denbigh Westman and Caldecotte.

Local businesses

- 20.10.33 The majority of businesses near the Part 2 Indicative Work Area are located within the towns and neighbourhoods mentioned above.
- 20.10.34 In Atherstone, a number of the local businesses relevant to the Part 1b works are also within 500 m of the Part 2 Indicative Work Area, this includes a pub, an industrial estate, and a number of hospitality and retail businesses.
- 20.10.35 There are some hospitality businesses in Hartshill which are within 500 m of the Part 2 Indicative Work Area. Further south in Nuneaton there are a substantial number of businesses including restaurants, pubs, shops and hotels within 500 m of the Indicative Work Area.
- 20.10.36 Near the Indicative Work Area north of Coventry are several hospitality businesses in close proximity to the canal. Between Ansty and Rugby, business receptors near to the Oxford Canal are sparse, with only a few industrial units being in close proximity to the Indicative Work Area.
- 20.10.37 In Hillmorton and Brownsover, where there are Indicative Work Areas along the canal respectively, there are a few restaurants and pubs in proximity to these, as well as a number of industrial and retail units. Further south the Indicative Work Area in Braunston is situated close to a number of pubs and restaurants / cafés.
- 20.10.38 Continuing along the Grand Union Canal, industrial and retail businesses are in close proximity to the Indicative Work Area in between Long Buckby and Weedon Bec, the latter being also home to retail and hospitality businesses that are near to the canal. In Stoke Bruerne there are several canal-side pubs / restaurants in the vicinity of the Indicative Work Area.
- 20.10.39 Close to the Indicative Work Area in Cosgrove, there are two pubs and some industrial units. In proximity to the same Indicative Work Area in Milton Keynes, there are a substantial number of retail, hospitality, and industrial businesses. Towards the east of the city, there are a number of pubs and restaurants on the banks of the canal near to the Indicative Work Areas. A car park for the John Lewis Distribution Centre in Fenny Stratford lies within the Indicative Work Area here.

Community facilities and open spaces

- 20.10.40 Similar to the businesses, a large proportion of community facilities and open spaces near to the Part 2 works are situated in the named settlements mentioned above.
- 20.10.41 In Atherstone, similar community facilities and open spaces are relevant to the Part 2 Indicative Work Area as are relevant to Part 1b, such as schools, churches and a library. This Part 2 Indicative Work Area is also

adjacent to the Atherstone Golf Club, which is intersected by the Preliminary Order Limits in Part 1b.

- 20.10.42 In Nuneaton, the Tomkinson Road Recreation Ground lies partly within an Indicative Work Area. Through Hawkesbury and Ansty, an Indicative Work Area runs close to a church, cemetery and golf course. Near Ansty, part of the Sowe Common Sports Ground is within the Indicative Work Area.
- 20.10.43 In Newbold-upon-Avon, Brownsover, and Hillmorton, the Oxford Canal runs near various community facilities, including village halls and schools. There are a number of nearby open spaces, one of which, the Brownsover Picnic Site, is partly within the Indicative Work Area.
- 20.10.44 In Braunston, where the Oxford Canal becomes the Grand Union Canal, the Indicative Work Area is in close proximity to a cemetery, village hall, and church. Further east, in Daventry, Monksmoor Park and Waterside Park are partly within the Indicative Work Area.
- 20.10.45 Close to the Indicative Work Area near Weedon Bec, Flore, and Nether Hayford, are several churches and schools. The Indicative Work Area in the village of Stoke Bruerne is also near community receptors including a nature reserve, cricket club, school, and church.
- 20.10.46 Just south of Cosgrove, there are a range of community facilities and open spaces in close proximity to the Indicative Work Areas in Cosgrove and Milton Keynes. Two open spaces, Stanton Low Country Park and Great Linford Manor Park, are partly within the Indicative Work Area.

Visitor Attractions and Accommodation Facilities

- 20.10.47 Between Atherstone and Hawkesbury, there are several visitor accommodation facilities within 500m of the Part 2 Indicative Work Areas. There are also a number of visitor accommodation facilities near to the Indicative Work Areas along the Oxford Canal between Coventry and Rugby.
- 20.10.48 As the Part 2 works move south of Rugby into largely rural areas, visitor accommodation facilities and off-canal visitor attractions within 500m of the Indicative Work Areas are scarcer, though there are still a limited number, such as a few hotels, a campsite, and racetrack.
- 20.10.49 In Stoke Bruerne, there are a number of visitor attractions and facilities near to the canal and Indicative Work Area, including a museum, open farm, a bed & breakfast, and holiday cottages.
- 20.10.50 Further south, in Cosgrove and Milton Keynes, there are several visitor accommodation facilities nearby, including a Caravan Park and a few inns. There are also numerous visitor attractions nearby in Milton Keynes, such as a cathedral, theme park, and museum.

Development Land

- 20.10.51 The Part 2 works intersect two existing strategic mineral sites along the Preliminary Order Limits. More information on these is set out in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**.
- 20.10.52 There are no other development allocations within the Part 2 Preliminary Order Limits.
- 20.10.53 Planning applications and permissions relevant to Part 2 will be assessed and reported in the ES.

Future Baseline

- 20.10.54 The future baseline scenario assessed is detailed in section 20.7, which includes how the Part 2 socio-economic profile is projected to change.
- 20.10.55 In terms of the local economy, it would be reasonable to expect that employment would increase, associated with the expected increase in population. It is expected that PROWs and the canal towpath will continue to be used.
- 20.10.56 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.
- 20.10.57 For the purposes of this assessment, unless specified, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

- 20.10.58 This section outlines further embedded environmental design, standards and/or management in relation to socio-economics that are specific to Part 2 of the Proposed Development.

Construction Phase

- 20.10.59 All construction compound area details relevant to Part 2 will be carefully considered with respect to the canal corridor, canal towpaths and property boundaries, wherever possible.

- 20.10.60 Throughout Part 2 works, towpaths and Public Rights of Way (PRoW) will either be kept open where possible through the use of temporary railed floating walkways that are installed in the canal as works progress or through diversions. There may be some lengths of the canal, where this will not be possible and landside diversions or temporary closures will be required. Towpaths that will be affected by the construction will be reinstated.
- 20.10.61 **Chapter 3: The Proposed Development** in PEI Report **Volume 2** sets out Options for some works along the canal, such as bank raising, to be undertaken from work boats on the canal side of the bank are being explored. Transportation of materials and equipment via work boats will also be undertaken, where possible. This option would minimise impacts on PRoWs, the canal towpath and local and private assets. To minimise disruption to canal users during bank raising activities, no canal closures are expected during bank raising activities, however cofferdams may be installed where dry working conditions are required, which may require restrictions on canal traffic to allow for single boat passage. Bank raising activities will progress at a rate of approximately 50m per day, with the most substantial works requiring up to two months to complete.
- 20.10.62 To minimise disruption to canal users during the construction of up to four transfer locks, a phased approach to the required canal closures will be adopted. All closures are anticipated to be scheduled during the off-season, when on-canal activity is at its lowest, reducing the potential impact on navigation and leisure use. Closures for these locks may take place in the same off season or could be staggered, but in either case are anticipated to reopen for the main boating season each year. In addition, closures will be managed through the Canal & River Trust's standard notification system, providing advance notice to users and stakeholders. No works will take place over the Christmas period in line with the Trust's service commitments. Where practicable, closures for multiple transfer locks may be staggered to maintain through routes and ensure that there is always one open route for boaters to travel between the Midlands and London and further reduce disruption to canal-based recreation and tourism.

Operational Phase

- 20.10.63 Although as a result of the Proposed Development, additional water will be transferred into the canal network, the flow of water running through the canals will be managed so that it will not increase substantially. Water velocity through existing and proposed structures on the canals would be maintained at or below a maximum of 0.3 m/s and would only approach this maximum flow rates at certain points where the canal width is restricted (e.g. some bridges). The flow rates would be much lower than

0.3 m/s under most flow conditions in most areas of the canal. The 0.3 m/s maximum flow velocity is taken from the Code of Practice for Works Affecting the Canal & River Trust. By ensuring the continuation of stable and predictable flow conditions during operation of the Proposed Development, this measure mitigates risks to boating, angling, and other leisure activities through preserving amenity and safety for these users.

Assessment of Effects and Significance

- 20.10.64 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 2 of the Proposed Development.
- 20.10.65 The design, engineering and construction methodology is the subject of ongoing assessment and development. Owing to this the assessment of impacts on individual receptors from the Proposed Development is ongoing. The assessment has therefore been conducted in consideration of likely impacts on receptors by user type / grouping to identify whether there is the potential for likely significant effects on these during construction or operation. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified likely significant adverse effects on the environment. A full assessment will be reported in the ES.

Construction Phase

Impacts on local and private assets - waterways

Moorings

- 20.10.66 As outlined in the baseline assessment, there are a substantial number of moorings within Indicative Work Areas.
- 20.10.67 It is expected in the case that any of these moorings will be impacted by construction works (typically bank raising), temporary relocation will be provided, before the existing mooring is re-installed and potentially upgraded. If moorings require permanent relocation, alternative sites nearby will be identified.

Temporary relocations

- 20.10.68 For moorings that require temporary relocation, this will be to suitable sites nearby such that amenity derived from their location will be largely retained where practicable. Given the inherent uniqueness of the environment and location of each specific mooring, sensitivity to relocation has been assessed to be high.
- 20.10.69 The number and duration of temporary relocations is currently uncertain and will be confirmed at ES stage. The magnitude of impact on these moorings has therefore been assessed to be medium.

- 20.10.70 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on non-commercial moorings which require temporary relocation which is considered to be major and significant.

Additional Mitigation, Enhancement and Monitoring

- 20.10.71 The Applicants will continue to engage with affected parties and explore options for relocations which minimise disruption to these moorings.

Residual Effect

- 20.10.72 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Permanent relocations

- 20.10.73 For moorings that require permanent relocation, this will take place in advance of construction activities to suitable sites nearby such that amenity derived from their present location will be largely retained but any amenity value derived precisely from their existing location will be lost. The number of permanent relocations is currently unknown and will be confirmed at ES stage. Overall, the magnitude of impact on moorings requiring permanent location has been assessed to be high.

- 20.10.74 As stated in paragraph 20.10.70 above the sensitivity of these moorings to relocation is high.

- 20.10.75 Based on the above, there is potential for a direct, permanent, adverse effect on residential moorings which require permanent relocation which is considered to be major and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.76 The Applicants will continue to engage with affected parties and explore options for relocations which minimise disruption to these moorings.

Residual Effect

- 20.10.77 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effects remain the same as that reported for the pre-additional mitigation scenario.

- 20.10.78 There are a number of moorings that are also involved in commercial activities along the canal within the Part 2 Indicative Works Area. It is anticipated that moorings of this type that require temporary closure due to these works will be replaced with temporary sites and will be re-installed and potentially upgraded following works. For moorings which require permanent relocation, alternative sites for mooring will be provided. It is expected that some commercial users of the canal will have

some scope to relocate to nearby mooring sites along the canal without experiencing any substantial change in business and operational activity, but not all and, therefore, sensitivity of these types of moorings has been assessed overall to be medium.

Temporary Relocation

20.10.79 It is anticipated that most moorings that require relocation will be temporary, and where possible, nearby alternative sites will be provided and will be returned to their original positions following the construction works. The number and duration of temporary relocations is currently uncertain and will be confirmed at ES stage. The magnitude of impact on these moorings has therefore been assessed to be medium.

20.10.80 Based on the above there is potential for a direct, temporary, adverse effect on these moorings that will face temporary relocation which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

20.10.81 The Applicants will continue to engage with affected parties and explore options for relocations which minimise or avoid disruption to these moorings.

Residual Effect

20.10.82 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Permanent relocation

20.10.83 For permanent relocation of moorings, the number of these which would be required is still being assessed and will be reported in the ES. In such instances where this is unavoidable, alternative moorings would be provided, meaning commercial activities would not need to cease during the works, and would have some scope to continue operating during and after construction at a mooring. The magnitude of impact arising from permanent relocations of these moorings has been assessed to be medium.

20.10.84 Based on the above, there is potential for a direct, permanent adverse effect on these moorings that will be subject to permanent relocation which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.85 The Applicants will continue to engage with affected parties and explore options for relocations which minimise or avoid disruption to these moorings.

Residual Effect

- 20.10.86 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Commercial operators and businesses*Direct impacts*

- 20.10.87 There are a number of commercial businesses that either use the canal or are adjacent to the canal corridor providing canal-use related services. These have been identified in the baseline assessment, which also notes that this includes marinas and businesses that are located within and adjacent to these marinas. Sensitivity has been assessed to be medium for these commercial operators and businesses as it is expected that construction activity along the canal would result in some disruption in their ability to operate as businesses.
- 20.10.88 Canal closures are expected to accommodate the construction of up to four transfer locks. Whilst it is uncertain at this stage, it is possible that the closures caused by the construction of these transfers locks and as well as construction works related to bank raising, bypasses and weirs will inhibit the normal operation of these commercial operators and businesses. These works will be temporary in nature and as outlined in paragraph 20.10.62 and 20.10.62, have been designed to minimise disruption for canal users. Therefore, magnitude has been assessed to be medium for these commercial operators and businesses.
- 20.10.89 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on commercial operators and businesses which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.90 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

- 20.10.91 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Indirect impacts

- 20.10.92 As identified within the baseline assessment, there are a number of pubs, cafés, and restaurants along the banks of the canal corridor which may derive trade from their setting in the unique environment of the canal network. There is the potential for businesses such as these situated near the Indicative Work Area to lose some amenity during the construction phase from construction activities.
- 20.10.93 The assessment of indirect effects on the amenity of business receptors has considered effects from the following chapters in PEI Report **Volume 2**:
- a. **Chapter 16: Landscape and Visual**; and
 - b. **Chapter 19: Noise and Vibration**.
- 20.10.94 These assessments have not identified that particular businesses would experience significant effects in respect of both views and noise, although there are businesses that may experience significant effects in respect of views only. Whilst these businesses are anticipated to function normally and will still be able to serve customers during construction, this effect will be further assessed at ES stage when more information regarding the design of the Proposed Development is known.

Impacts on the use of the canal network as a recreational and leisure resource*Boating*

- 20.10.95 The canal network is used for leisure and recreation by a variety of users. The sensitivity of such users to disruption to use of the canal is assessed to be medium to high on the basis that its amenity value will vary by user. Additionally, water movement along the canal will not be affected, except in areas local to any closure. The presence of bank raising activities will not prevent through access, with boats expected to still be able to pass through the affected sections of canal (albeit with a temporary reduction in canal width).
- 20.10.96 Given that canal closures are proposed in the case of the construction of transfer locks, and the exact length of construction activities in relation to other works within Part 2, it is possible that temporarily, boaters may have a disrupted experience of the canal in some sections. The proportion of the canal network that would be subject to disruption for boaters, as well as the duration, is uncertain. The magnitude of the impact on the use of the canal network for boating has therefore been assessed to be medium.
- 20.10.97 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on use of the canal for boating activities which is

considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.98 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

- 20.10.99 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Canoeing, paddleboarding and kayaking

- 20.10.100 Canoeing, paddleboarding and kayaking activities take place along all locations of the canal. The sensitivity of such users to disruption to use of the canal is assessed to be medium on the basis that alternative entry and exit points are located along the canal and similar amenity could likely be derived from using alternative sections in the event of disruption.
- 20.10.101 The water flow of the canal is not expected to be noticeably altered by construction works such as to disrupt use by canoeists, paddleboarders and kayakers. Whilst some entry and exit points of the canal may be disrupted temporarily by bank raising and other works, it may be possible for these users to enter and exit the canal from the opposite side of the canal or very nearby on the same side, where works are not taking place.
- 20.10.102 As outlined in paragraph 20.10.96, temporary canal closures are expected to accommodate the construction of up to four transfer locks, and there is potential for disruption on these users of the canal network arising from other Part 2 construction activities. This will be revisited when further details around these activities and construction programme are made available. The magnitude of impact is assessed to be medium.
- 20.10.103 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on use of the canal for canoeing, paddleboarding and kayaking activities which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.104 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

- 20.10.105 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Angling

- 20.10.106 Bank raising activities may restrict access to the canal from the towpath. Angling takes place along the canal, mostly from the towpath. The sensitivity of such users to disruption to use of the canal is assessed to be medium on the basis that access to the canal is possible along the towpath, however, as angling is available through agreements with the Canal & River Trust, it is possible that some anglers may have limited alternative licensed options for angling. The groups potentially impacted by works activities will be identified at ES stage with the final Proposed Development design.
- 20.10.107 The water flow of the canal is not expected to be substantially altered by construction works such as to disrupt use by anglers. In cases where access to the canal towpath is restricted due to bank raising activities, access for angling would remain possible in alternative locations nearby outside of these areas (if licensing allows). The number of angling clubs that will have areas licensed for fishing disrupted is currently uncertain, as is the duration of the disruption for these clubs. This is also applicable in areas subject to canal closure, where there is some scope to relocate fishing activity subject to licensing agreements. Overall, the magnitude of impact on anglers is assessed to be medium.
- 20.10.108 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on use of the canal for angling activities which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.10.109 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

- 20.10.110 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Temporary disruption to PRow and canal towpath access

- 20.10.111 As outlined within the baseline section, the canal towpath is within the Indicative Work Areas of the Preliminary Order Limits. As well as this, there are also areas where the canal towpath is a designated PRow or

NCN route. There are also around 61 PRoW routes that do not run parallel and adjacent to the canal but intersect or interact with the Part 2 Indicative Work Area.

20.10.112 Sensitivity of users of the canal towpath to disruption has been assessed to be high, again including users of PRoW and NCN routes where such designations are present. This is based on the high importance of the towpath as an extensive and unique recreational route and the lack of similar alternatives in character and scenery / setting.

20.10.113 For any PRoW that intersects and encroaches into the Indicative Work Area but does not run parallel and adjacent to the canal, sensitivity has been assessed to be medium. This is due to the varying extent of alternative PRoWs and roads near the canal that are not within the Indicative Work Area which could be used as reasonable alternatives including in some locations the towpath itself.

20.10.114 Wherever possible, PRoWs and sections of canal towpath affected by the proposed construction of Part 2 will either be kept open during works through the use of (e.g.) temporary railed walkways, or a short diversion will be provided. Given that it is expected that even in a worst-case scenario, diversions created due to PRoW disruption will likely lead to insubstantial increases in journey length and will not majorly impact ability to use the towpath as a recreational route, magnitude of impact has been assessed to be low.

20.10.115 For sections of the canal towpath affected by the proposed construction of Part 2, there is potential for a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.

20.10.116 For PRoWs that intersect and encroaches into the Indicative Work Area but does not run parallel and adjacent to the canal, there is potential for a direct, temporary, short-term, adverse effect which is considered to be minor adverse and not significant.

Additional Mitigation, Enhancement and Monitoring

20.10.117 Additional measures are necessary to ensure that construction does not significantly affect access to the canal towpath. These measures could take the form of minimising any diversions required during closures to minimise users' access to the canal towpath. These are subject of ongoing design development, and any mitigation measures will be reported in the ES.

Residual Effect

20.10.118 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Impacts on the tourism sector

20.10.119 Construction activity within Part 2 of the Proposed Development has the potential to impact upon assets and infrastructure that are of value to tourism activity such as that set out in paragraph 20.10.24. The sensitivity of the tourism sector is assessed to be medium as whilst it is expected that the sector is driven primarily by visitors of the canal network, the wider tourism sector associated with the canal network will be considerably less affected in sections of the network that are not within or nearby any Indicative Work Areas.

20.10.120 The assessment of effects on recreational and leisure use of the canal during construction has identified that there are potential for significant effects on these arising from the Proposed Development. Tourists and visitors making use of boating facilities and hire services for boats and canoeing / paddleboarding / kayaking, or undertaking angling may be deterred from visiting and using the canal, including the areas where works would take place specifically. Whilst some of these users will continue using the canal network (where possible) anyway with little loss in amenity, it is possible a proportion of users may be deterred from using the canal network for these activities.

20.10.121 As outlined in paragraph 20.10.62 and 20.10.62, any disruption to the canal that could impact aspects of the tourism sector would be temporary in nature, and it is recognised that care should be taken to sensitively programme all works. The magnitude of impact on the tourism sector has been preliminarily assessed to be medium.

20.10.122 Based on the above there is potential for a direct, temporary, adverse effect on the tourism sector relevant to the canal which is considered to be moderate and significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

20.10.123 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

20.10.124 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Impacts on local and private assets – non-waterways***Open space / recreation***

20.10.125 As detailed within the baseline assessment, there are seven open spaces lying partly within the Part 2 Indicative Work Area. Tomkinson Recreation

Ground, Sowe Common Sports Ground, Brownsover Picnic Site, Monksmoor Park, and Waterside Park will be subject either to direct land-take for use as temporary construction compounds or existing paths being designated as temporary access tracks to the Indicative Work Areas for bank-raising. A temporary construction compound will also be required to construct the fourth transfer Lock (to mitigate impacts on Iron Trunk Aqueduct) and permanent Land-take will be required for the pumping station / control building associated with the lock. There are two options for this, both lying within open spaces; Option 1 within Stanton Low Country Park or Option 2 in Great Linford Manor Park.

Temporary Impacts

20.10.126 Tomkinson Recreation Ground and Sowe Common Sports Ground provide opportunity for organised sports with the other spaces offering a range of informal and formal recreational amenity. All of these resources are situated in or around urban areas, where alternative open spaces are available offering comparable amenity, including in the case of the two sports grounds. Therefore, sensitivity of users of these resources has been assessed to be low.

20.10.127 These open spaces will be subject either to direct land-take for use as temporary construction compounds or existing paths being designated as temporary access tracks to the Indicative Work Areas for bank-raising. In all instances where this would be required use of the resources for these activities will be limited to small sections of each of the open spaces during which time the areas would be inaccessible to the public. In each case, the remainder and majority area of the open space would be unaffected and able to remain fully accessible for recreational users as presently.

20.10.128 For Tomkinson Recreation Ground, Sowe Common Sports Ground, Brownsover Picnic Site, Monksmoor Park, and Waterside Park the disruption is anticipated to last for no longer than two months in duration. Following this temporary disruption, the land at these open spaces would be able to be returned to its previous use. At Stanton Low Country Park and Great Linford Manor Park, disruption would total one year (two six-month periods during consecutive winters) at one of the open spaces depending on the chosen location for the transfer lock, with a reduced area of land permanently lost (assessed below). Based on this, the magnitude of impact on users of these open spaces from disruption has been assessed to be medium.

20.10.129 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on use of all of the open spaces named in paragraph 20.10.125, which is considered to be minor adverse and not significant.

Additional Mitigation, Enhancement and Monitoring

20.10.130 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

20.10.131 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Permanent impacts

20.10.132 On the Grand Union Canal in the vicinity of Milton Keynes, if the alternative to modifications of the Iron Trunk Aqueduct is chosen, a temporary construction compound will be required to construct the fourth transfer lock and permanent Land-take will be required for the pumping station / control building associated with the lock. There are two options for this, both lying within open spaces; Option 1 within Stanton Low Country Park or Option 2 in Great Linford Manor Park.

20.10.133 In either instance, this would result in permanent loss of green open space within the park, with this loss, as a proportion of the Stanton Low Country Park's and Great Linford Manor Park's total area, being approximately 5% and 10%, respectively. For Stanton Low Country Park, it is understood that there are no specific features providing amenity within the proposed area for the permanent works that is different from other parts of the park. For Great Linford Manor Park, a sculpture named 'The Quarry', is within the area designated for the transfer lock. Whilst it is likely to be possible to relocate this to another area of the park in advance of works, meaning this amenity will still be accessible, arrangements for this are not known at this stage. In both cases, whilst the remainder and majority area of the open space would be unaffected and able to remain fully usable for recreational users, a noticeable proportion of the park would be rendered inaccessible to the public permanently. Overall, the magnitude of impact on users of either park has been assessed to be high.

20.10.134 As stated in paragraph 20.10.126 the sensitivity of users of these open spaces to disruption is assessed to be low.

20.10.135 Based on the above, there is potential for a direct, permanent, adverse effect on use of either of these open spaces if required, which is considered to be moderate adverse and significant.

Additional Mitigation, Enhancement and Monitoring

20.10.136 Mitigation options will be further investigated and incorporated wherever appropriate when further detail around the construction activities and programme becomes available and reported in the ES.

Residual Effect

20.10.137 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Businesses

20.10.138 A construction compound is expected to be required within the car park of the Milton Keynes John Lewis Distribution Centre. This effect will be assessed at ES Stage when more information regarding the design of the Proposed Development is known.

Indirect impacts

20.10.139 The assessment of indirect effects on the amenity of local and private assets has considered effects from the following chapters in PEI Report **Volume 2**:

- a. **Chapter 8: Air Quality and Odour;**
- b. **Chapter 16: Landscape and Visual;**
- c. **Chapter 19: Noise and Vibration;** and
- d. **Chapter 21: Traffic and Transport.**

20.10.140 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 2 which could impact on the amenity of residents, businesses and users of open space.

20.10.141 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Land use impacts on planned and proposed developments

20.10.142 Impacts on mineral sites and MSAs as resources are assessed in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**. There are no other designations or allocations within the Part 2 Preliminary Order Limits and therefore no direct land use impacts on these are expected.

20.10.143 Land use impacts on planning applications and permissions relevant to Part 2 will be assessed and reported in the ES.

Additional Mitigation, Enhancement and Monitoring

- 20.10.144 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.10.145 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Operational Phase

- 20.10.146 Impacts during the operation phase of the Proposed Development would be limited to potential changes to the use of the canal network by recreational and leisure users, commercial users and for tourism.

Impacts on the use of the canal network for commercial uses

- 20.10.147 As outlined above, operational and maintenance activities will be minimal and will not significantly deviate from the Canal & River Trust's current maintenance regime.
- 20.10.148 Water level and flow rate along the canal network are both not expected to be significantly different to the current conditions, and commercial users of the canal are not expected to be affected by this. The magnitude of impact is assessed to be very low.
- 20.10.149 Based on the above there is potential for a direct, temporary, adverse effect on commercial use of the canal network which is considered to be negligible and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.10.150 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.10.151 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Impacts on the use of the canal network as a recreational and leisure resource

- 20.10.152 It is anticipated that, during the operational phase of the Proposed Development, minimal maintenance will be required, with no permanent on-site staff. Intermittent maintenance would be required, but this would not be dissimilar to the Trust's current maintenance regime.

20.10.153 Whilst the expected change in water level and flow rate will be noticeable for users of the canal for recreation and leisure activities, it is not expected to substantially change these users' ability to carry out these activities as normal. The magnitude of impact is assessed to be low.

20.10.154 The sensitivity of such users to disruption to use of the canal is assessed to be medium in the case of boat users, canoeists, paddleboarders, kayakers, and anglers as set out in paragraph 20.10.95, 20.10.100 and 20.10.106.

20.10.155 Based on the above there is potential for a direct, temporary, adverse effect on recreational and leisure of the canal network which is considered to be minor and not significant. This assessment will be reconfirmed at the ES stage with the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

20.10.156 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

20.10.157 As there is no additional mitigation, enhancement or monitoring identified at this stage, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Impacts on the tourism sector

20.10.158 On the basis that there would be insubstantial changes in water level and flow rate along the canal network during operation of the Proposed Development and that no effect would be experienced by either recreational or leisure users, there would be no effect on the tourism sector during operation.

Summary

20.10.159 **Table 20-34** summarises the residual socio-economics effects of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-34: Summary of residual effects – Part 2

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Impacts on local and private assets - moorings – Temporary relocation	High	Adverse, short-term, local	Medium	Major (Significant)	The Applicants will continue to engage with affected parties and explore options for relocations which minimise disruption to residents.	Major Adverse (Significant)
Impacts on local and private assets – moorings – Permanent relocation	High	Adverse, permanent, local	High	Major (Significant)	The Applicants will continue to engage with affected parties and explore options for relocations which minimise disruption to residents.	Major Adverse (Significant)
Impacts on local and private assets – moorings (engaged in commercial activity) – Temporary relocation	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
Impacts on local and private assets – moorings (engaged in commercial activity)– Permanent relocation	Medium	Adverse, Permanent, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Impacts on local and private assets – commercial operators and businesses (including marinas) – Direct impacts	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Impacts on local and private assets – commercial operators and businesses (including marinas) – Indirect impacts	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	Potential for significant effects - to be assessed and reported in the ES
Impacts on the use of the canal network as a recreational and leisure resource – Boating	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Impacts on the use of the canal network as a recreational and leisure	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
resource – Canoeing, paddleboarding and kayaking						
Impacts on the use of the canal network as a recreational and leisure resource – Angling	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Temporary disruption to canal towpath	High	Adverse, Short-Term, Local	Low	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Temporary disruption to PRowers (excluding canal towpath)	Medium	Adverse, Short-Term, Local	Low	Minor	None – to be reconfirmed in the ES.	Minor Adverse (Not Significant)
Impacts on tourism sector	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)
Impacts on local and private assets – Open space and recreation – Temporary Land-take	Low	Adverse, Short-Term, Local	Medium	Minor	None – to be reconfirmed in the ES.	Minor Adverse (Not Significant)
Impacts on local and private assets – Open space and recreation – Permanent Land-take	Low	Adverse, Permanent, Local	High	Moderate (Significant)	To be reported in the ES.	Moderate Adverse (Significant)

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
Impacts on local and private assets – Businesses (non-waterway)	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES
Land use impacts on development land	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES
Operational Phase						
Impacts on the use of the canal network for commercial uses	Medium	Adverse, Permanent, Local	Very Low	Negligible	None	Negligible (Not Significant)
Impacts on the use of the canal network as a recreational and leisure resource	Medium	Adverse, Permanent, Local	Low	Minor	None	Minor Adverse (Not Significant)

Part 3: Works to Daventry and Drayton Reservoirs

20.11 Part 3: Works to Daventry and Drayton Reservoirs

- 20.11.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 3 of the Proposed Development.

Baseline Conditions

- 20.11.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

- 20.11.3 The existing socio-economic baseline has been split into two sections – a socio-economic profile of the local area which provides context to the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio Economic Profile

- 20.11.4 Part 3 falls within the administrative boundary of West Northamptonshire Council. The area within Part 3 is generally urban or suburban in nature, being situated in an around the town of Daventry and village of Braunston.
- 20.11.5 The socio-economic profile of the local area relevant to Part 3 is described with reference to key indicators for the area of West Northamptonshire. Comparison is provided with that of the wider East Midlands region (which West Northamptonshire is part of) as well as the England national average.

Population

- 20.11.6 According to Office for National Statistics (ONS) Census data (Ref. 10) in 2021 the population of West Northamptonshire was 425,725. **Plate 20-4** below shows the breakdown of total population by age groups for West Northamptonshire, the East Midlands, and the English national average using 2021 Census data for age by single year.
- 20.11.7 West Northamptonshire has a higher proportion of residents aged between 0 and 14 (18.1%) compared to the East Midlands (16.9%) and England (17.4%). West Northamptonshire has a higher proportion of working age residents, aged between 15-64 (64.8%), than the East of England (63.6%), but lower than the average across England (64.2%).

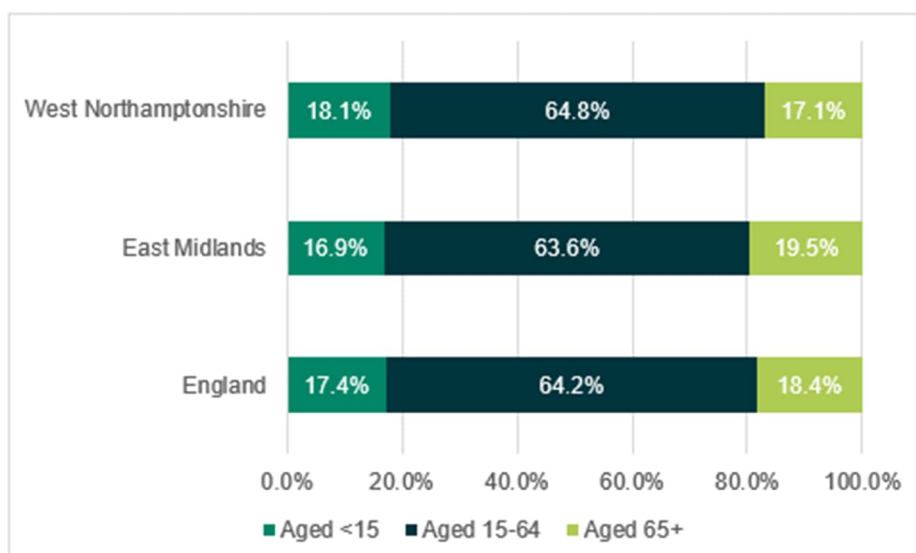


Plate 20-4: Part 3 Age Profile

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment

20.11.8 According to the Census 2021 (Ref. 10), the unemployment rate among economically active over-16s residents in West Northamptonshire was 4.0%, lower than the East Midlands at 4.8%, and the England national average at 5.7%. These economic activity and unemployment rates are shown in **Table 20-35**.

Table 20-35: Part 3 Economic Activity

Indicator	West Northamptonshire (%)	East Midlands (%)	England (%)
Economic activity rate (for residents aged 16+) (%)	65.9	59.9	60.9
Unemployment rate (for residents aged 16+) (%)	4.6	5.1	5.7

[Source: ONS (2022); Census 2021. (Ref. 10)]

Skills and Qualifications

20.11.9 According to the Census 2021 (Ref. 10), West Northamptonshire has a lower proportion of residents with no qualifications (17.4%) than the East Midlands (19.5%) and the England national average (18.1%).

20.11.10 In West Northamptonshire, 31.8% of the over-16 population have a level 4 qualification or higher; greater than recorded for the East Midlands (29.1%), but lower than the recorded for England (33.9%).

20.11.11 In West Northamptonshire, a slightly lower proportion of the over-16 population had an apprenticeship-level qualification (5.8%) than the East Midlands (6%), but higher than the England average (5.3%).

20.11.12 Further details on qualification levels for the study area and other geographies can be seen in **Table 20-36**.

Table 20-36: Part 3 Demographic Qualifications

Qualification Level	West Northamptonshire (%)	East Midlands (%)	England (%)
No qualifications	17.4	19.5	18.1
Level 1 and entry level qualifications	10.9	10.4	9.7
Level 2 qualifications	14.3	13.9	13.3
Apprenticeship (%)	5.8	6	5.3
Level 3 qualifications	16.9	18.3	16.9
Level 4 qualifications or above	31.8	29.1	33.9
Other qualifications	3	2.8	2.8

[Source: ONS (2022); Census 2021. (Ref. 10)]

Deprivation

20.11.13 According to the 2025 Indices of Multiple Deprivation (IMD) (Ref. 13), West Northamptonshire is within the top 52% of the most deprived local authorities, ranking 183rd out of 297. In all, 2.1% of LSOAs within West Northamptonshire rank within the top 10% most deprived nationally.

Local Receptors

Local and Private Assets

Residential Receptors

20.11.14 There are no residential receptors within the Part 3 Indicative Work Area. As Part 3 is situated within the town of Daventry and village of Braunston, there are a considerable number of residential receptors in both of these settlements within 500 m of the Part 3 Indicative Work Area.

Business Premises

20.11.15 The Daventry Country Park Visitor Centre and Café is the only business that falls within the Part 3 Indicative Work Area. It is located on the northern bank of the Reservoir and is accessible by foot from the Daventry Country Park Car Park.

- 20.11.16 Within 500 m of the Part 3 Indicative Work Area there are many business premises of varying function. This includes industrial estates and a small number of pubs and restaurants near to the Indicative Work Area.

Community Facilities and Open Space / Recreation

- 20.11.17 There are no community facilities within the Part 3 Indicative Work Area, with a number within 1 km. This includes primary and secondary schools, churches, and a town hall.
- 20.11.18 A proportion of the Daventry Reservoir Country Park falls within the Indicative Work Area, specifically the reservoir, a portion of the southwestern area of the park, and the reservoir spillway. Lang Farm Northern Valley Park also encroaches into the Indicative Work Area, specifically the northwestern section of the park, by Ashby Road.
- 20.11.19 There are a number of other open spaces within 1 km of the Indicative Work Area, including parks, golf clubs, and playing fields.
- 20.11.20 Both Daventry and Drayton Reservoir are adjacent to the Part 3 Indicative Work Area.
- 20.11.21 The primary recreational use of Drayton Reservoir is angling. There are individual fishing pegs, and much of the bank is surrounded by a wooden walkway, giving access around large stretches of the water. The Rugby and Daventry Sailing Club is located at the northeast corner of the Reservoir, with parking for the club provided along the bank-side slipway running parallel to the A361, which is within the Indicative Work Area.
- 20.11.22 Daventry Reservoir is centrally located within the Daventry Reservoir Country Park and is used for a variety of recreational activities. Fishing is permitted along designated sections of the reservoir bank. During Summer, non-motorised water sports including paddle boarding, canoeing, kayaking and model boating are permitted on the reservoir.

Visitor Attractions

- 20.11.23 There are no visitor attractions within the Indicative Work Area. There is a hotel and a campsite within 500 m of the Indicative Work Area, in Daventry and Braunston, respectively.

Reservoir recreation and leisure use

- 20.11.24 The primary recreational use of Drayton Reservoir is angling. There are 123 individual fishing pegs, and much of the bank is surrounded by a wooden walkway, giving access around large stretches of the water. As noted above, the Rugby and Daventry Sailing Club is also located at the northeast corner of the Reservoir. The Sailing Club has permission to use the entire reservoir for sailing 7 days a week.

- 20.11.25 At Daventry Reservoir, angling is permitted along designated sections of the reservoir bank. During Summer, non-motorised water sports including paddle boarding, canoeing, kayaking and model boating are also permitted. The Daventry Country Park Visitor Centre & Café is also located near the northern bank of the Reservoir.

Reservoir recreation and leisure use

- 20.11.26 The Daventry Country Park Visitor Centre & Café is situated near the canal, however, all trade activities undertaken by the business are on nearby land rather than on the reservoir. There are no further users of the reservoirs for trade or commercial use.

Development Land

- 20.11.27 Part 3 intersects into a sand and gravel safeguarding area, which spreads across large parts of the West Northamptonshire. More information on this is set out in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**.
- 20.11.28 There are no other development allocations within the Part 3 Indicative Work Area.
- 20.11.29 Planning applications and permissions relevant to Part 3 will be identified at ES stage.

Public Rights of Way

- 20.11.30 The Part 3 Indicative Work Area also crosses a total of two PRoW, both bridleways, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and are also shown in **Figure 21-P3-2** in PEI Report **Volume 3**.
- 20.11.31 Approximately 250 m of the National Cycle Network Route 50 also runs through the Indicative Work Area, encroaching to the west of Daventry Reservoir.

Future Baseline

- 20.11.32 The future baseline scenario is detailed in section 20.7, as well as the population projections relevant for Part 3.
- 20.11.33 In terms of the local economy, it would be reasonable to expect that employment would increase, associated with the expected increase in population. It is expected that PRoWs will continue to be used.
- 20.11.34 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.

- 20.11.35 For the purposes of this assessment, unless specified, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

- 20.11.36 There are no further embedded environmental design, standards and/or management in relation to socio-economics that are specific to Part 3 of the Proposed Development beyond those stated in section 20.6 for the project as a whole.

Assessment of Effects and Significance

- 20.11.37 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 3 (Daventry and Drayton Reservoirs) of the Proposed Development. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions)

Direct effects

- 20.11.38 A section of Lang Farm Northern Valley Park is within the Part 3 Indicative Work Area, and a construction compound is expected to be situated in the north-western corner of the open space, with construction work expected to take place along the western extent of the park. Sensitivity of the open space has been assessed to be low due to abundance of similar open spaces in close proximity, such as Monksmoor Park and Waterside Park (in Part 2). This is not expected to impact access to the park, and the majority of the park, including the car park, will still be usable as an open space, so magnitude of impact has been assessed to be low.
- 20.11.39 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on the open space which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.11.40 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.11.41 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.
- 20.11.42 Part of Daventry Country Park is within the Part 3 Indicative Work Area. Construction compounds would be expected to be situated in both the north-eastern and south-western corners of the park and the space within will be inaccessible for the duration of the works.
- 20.11.43 Sensitivity of the users of the open space has been assessed to be medium as whilst there are a number of other parks in Daventry, the Daventry Country Park is home to a number of unique amenities such as a visitor centre, reservoir, and a weekly parkrun. The construction work and compound locations will not affect access to the park and will not affect the recreational value of the vast majority of the park. Based on this the magnitude of impact has been assessed to be low.
- 20.11.44 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on the open space which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.11.45 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.11.46 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.
- 20.11.47 The Rugby and Daventry Sailing Club is situated at the northern extent of Drayton Reservoir and is only accessible via The Weir Road on the eastern bank of the reservoir, parallel to Ashby Road. This club uses the reservoir for recreational boating / sailing activities. Whilst Part 3 works are expected on a section of The Weir Road by the sailing club, no closure of the road is anticipated, and it will be possible for users of the club to still access the facility. The ability for the sailing club to use the reservoir as a recreational resource is assessed in paragraph 20.11.52.

- 20.11.48 The Daventry Country Park Visitor Centre and Café is located near to the northern bank of the Daventry Reservoir. The business is not within or adjacent to the Part 3 Indicative Work Area and is therefore not expected to be affected directly by the construction of Part 3.

Indirect effects

- 20.11.49 The assessment of indirect effects on the amenity of local and private assets has considered effects from following chapters in PEI Report **Volume 2**:
- a. **Chapter 8: Air Quality and Odour;**
 - b. **Chapter 16: Landscape and Visual;**
 - c. **Chapter 19: Noise and Vibration;** and
 - d. **Chapter 21: Traffic and Transport.**
- 20.11.50 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 3 which could impact on the amenity of residents, businesses and recreational users of open space.
- 20.11.51 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors (including Daventry Country Park Visitor Centre and Café that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Impacts on the use of the reservoirs as a recreational and leisure resource

- 20.11.52 As laid out in the baseline assessment, the reservoirs are used for canoeing, kayaking, paddleboarding and similar non-motorised water sports. Sailors also use the Drayton reservoir through the Daventry Sailing Club. Whilst these reservoirs offer large spaces for these recreational activities, there is some scope for users to use nearby water bodies for similar activities, such as Draycote Water, which offers sailing and water sports facilities, and Ravensthorpe Reservoir, which is used for angling. Therefore, sensitivity has been assessed to be medium.
- 20.11.53 Whilst the exact construction activities taking place around the reservoir is uncertain at this stage, it is expected that the construction will be limited to the areas near inlets and outlets as well as limited activities on some sections of embankment. It is anticipated that the majority of the reservoir would still be able to function as a recreational water body for these activities. The construction work would also be temporary in nature lasting

approximately 12 months. Therefore, magnitude has been assessed to be low.

- 20.11.54 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on recreational use of the reservoirs which is considered to be minor and not significant.

Impacts on the use of the reservoirs for commercial uses

- 20.11.55 The commercial use of the reservoirs is limited to business of the Daventry Country Park Visitor Centre and Café, which has been defined as a local and private asset given its location within the park (with no commercial activity on the water). The assessment conclusion is outlined in paragraph 20.11.48 and 20.11.51.

Land use impacts on planned and proposed developments

- 20.11.56 Impacts on mineral sites and MSAs as resources are assessed **Chapter 14: Ground Conditions** in PEI Report **Volume 2**. There are no other designations or allocations within the Part 3 Indicative Work Area and therefore no direct land use impacts on these are expected.
- 20.11.57 Land use impacts on planning applications and permissions relevant to Part 3 will be assessed at ES stage.

Additional Mitigation, Enhancement and Monitoring

- 20.11.58 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.11.59 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Temporary disruption to PRow

- 20.11.60 As outlined in the baseline assessment, there are two PRowS that encroach into the Indicative Work Area of Part 3 use of which could be disrupted during construction. These are both public bridleways and intersect the existing culvert between the Grand Union Canal and the reservoirs. The sensitivity of these bridleways has been assessed to be medium. This reflects that whilst there are a number of other recreational bridleways within the Braunston and Daventry area, these routes are still important for horse riders, who have more limited access to the wider PRow network.
- 20.11.61 The bridleways affected by the proposed construction of Part 3 will either be kept open during works through the use of temporary railed walkways

or a short diversion will be provided. Therefore, based on current assessment information, the magnitude of impact has been assessed to be low.

- 20.11.62 Based on the above, there is potential for a direct, temporary, short-term adverse effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.11.63 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.11.64 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Impacts on the tourism sector

- 20.11.65 As outlined in paragraph 20.10.119, the tourism sector has been assessed to be of medium sensitivity to disruption related to the construction of the Proposed Development. It has been assessed that at this stage, there may be minor adverse effects in relation to recreational use of reservoirs. Consequently, the magnitude of impact on the tourism sector has been assessed to be low.

- 20.11.66 Based on the above, there is potential for a direct, temporary, short-term adverse effect on the tourism sector as a result of the construction of Part 3 which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.11.67 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.11.68 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Operational Phase

- 20.11.69 Impacts during the operation phase of the Proposed Development would be limited to potential changes to the use of the reservoirs by recreational and leisure users, commercial users and for tourism.

Impacts on the use of the reservoirs as a recreational and leisure resource

- 20.11.70 On the basis that there would be no adverse change in water level or operation of the reservoirs as normal during operation of the Proposed Development, there would be no effect on commercial use during operation of Part 3.

Impacts on the use of the reservoirs for commercial uses

- 20.11.71 On the basis that there would be no adverse change in water level or operation of the reservoirs as normal during operation of the Proposed Development, there would be no effect on commercial use during operation of Part 3.

Impacts on the tourism sector

- 20.11.72 On the basis that there would be no adverse change in water level or operation of the reservoirs during operation of the Proposed Development and that no effect would be experienced by either recreational or leisure users, there would be no effect on the tourism sector during operation of Part 3.

Summary

- 20.11.73 **Table 20-37** summarises the residual socio-economics effects of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-37: Summary of residual effects – Part 3

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Impacts on local and private assets – Open spaces	Medium	Adverse, Short-Term, Local	Low	Minor	None	Minor Adverse (Not Significant)
Impacts on the use of the canal network as a recreational and leisure resource	Medium	Adverse, Short-Term, Local	Low	Minor	None	Minor Adverse (Not Significant)
Land use impacts on development land	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES	To be further assessed and reported in the ES
Temporary disruption to PRow access	Low	Adverse, Short-Term, Local	Medium	Minor	None	Minor Adverse (Not Significant)

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
Impacts on tourism	Medium	Adverse, Short-Term, Local	Low	Minor	None	Minor Adverse (Not Significant)

Part 4a: Abstraction, Storage and Treatment

20.12 Part 4a: Abstraction, Storage and Treatment

20.12.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 4a of the Proposed Development.

Baseline Conditions

20.12.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

20.12.3 The existing socio-economic baseline has been split into two sections – a socio-economic profile of the local area to provide context for the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio Economic Profile

20.12.1 The vast majority Part 4a Preliminary Order Limits falls within the local authority administrative boundary of Buckinghamshire (with a minimal portion with the local authority administrative boundary of Milton Keynes). The area within Part 4a is generally rural in nature and comprises several agricultural fields to the south of the A4146 Stoke Road and west of Galley Lane. There is also a small section of the canal to the south of Kristina Bridge within the 4a Preliminary Order Limits.

20.12.2 The socio-economic profile of the local area relevant to Part 4a is described with reference to key indicators for the area of Buckinghamshire. Comparison is provided with those of the wider South-east region as well as the England national average.

Population

20.12.3 According to Office for National Statistics (ONS) Census data (Ref. 10) in 2021 the population of Buckinghamshire was 553,078. **Plate 20-5** below shows the breakdown of total population by age groups for Buckinghamshire, Milton Keynes, and the comparator areas of the South-east region and England, using 2021 Census data for age by single year.

20.12.4 Buckinghamshire has a slightly higher proportion of residents aged between 0 and 14 (18.6%) compared to the South-east (17.4%) and England (17.4%). In Buckinghamshire, 62.7% of the population are classed as working aged residents, defined as those aged between 15-64. This

proportion is slightly lower than the South-east (63.1%) and England as a whole (64.2%).

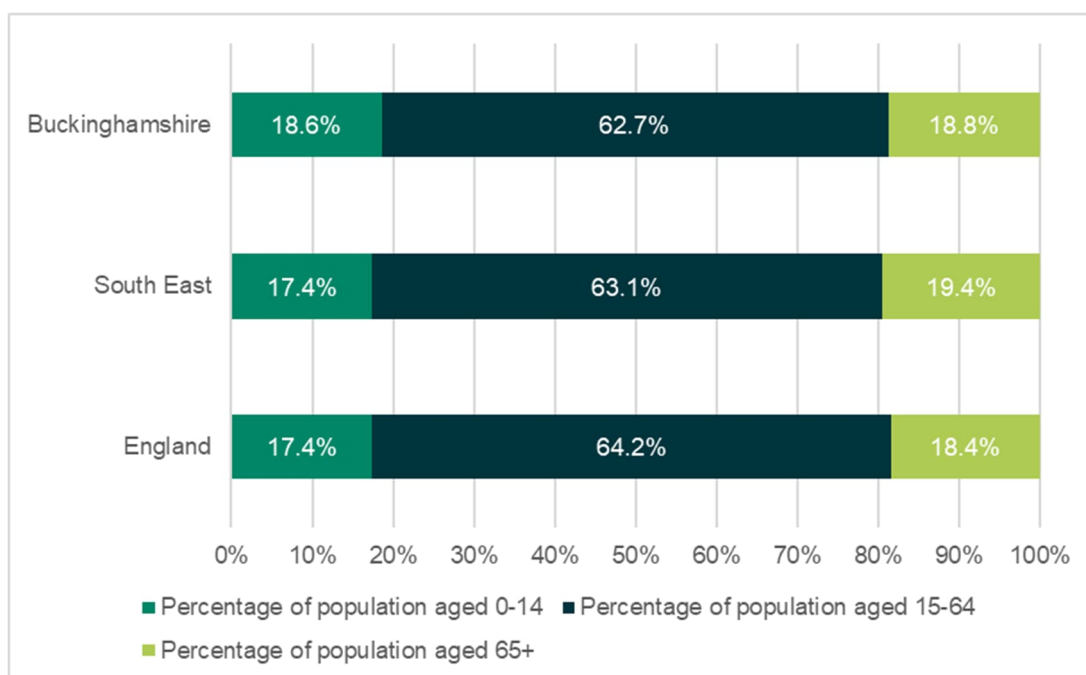


Plate 20-5: Part 4a Age Profile

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment

20.12.5 According to the Census 2021 (Ref. 10), the unemployment rate among economically active over-16s residents in Buckinghamshire was 4.3%, lower than the South-east (4.9%), and the England national average (5.7%). These economic activity and unemployment rates are shown in **Table 20-38**.

Table 20-38: Part 4a Economic Activity

Indicator	Buckinghamshire	South-East	England
Economic activity rate (for residents aged 16+) (%)	64.4	62.2	60.9
Unemployment rate (for residents aged 16+) (%)	4.3	4.9	5.7

[Source: ONS (2022); Census 2021. (Ref. 10)]

Skills and Qualifications

20.12.6 According to the Census 2021 (Ref. 10), Buckinghamshire has a lower proportion of residents with no qualifications (13.8%) than the South-east (15.4%) and the England national average (18.1%).

- 20.12.7 In Buckinghamshire, 41% of the over-16 population have a level 4 qualification or higher; greater than recorded for the South-east (35.8%) and the England national average (33.9%).
- 20.12.8 In Buckinghamshire, a lower proportion of the over 16 population had an apprenticeship-level qualification (4.8%) than the South-east and England national average (5.1% and 5.3%, respectively).
- 20.12.9 Further details on qualification levels for the study area and other geographies can be seen in **Table 20-39**.

Table 20-39: Part 4a Demographic Qualifications

Qualification Level	Buckinghamshire (%)	South-East (%)	England (%)
No qualifications	13.8	15.4	18.1
Level 1 and entry level qualifications	8.9	9.8	9.7
Level 2 qualifications	13.4	13.9	13.3
Apprenticeship (%)	4.8	5.1	5.3
Level 3 qualifications	15.7	17.4	16.9
Level 4 qualifications or above	41.0	35.8	33.9
Other qualifications	2.4	2.7	2.8

[Source: ONS (2022); Census 2021. (Ref. 10)]

Deprivation

- 20.12.10 Based on the 2025 Indices of Multiple Deprivation (IMD) (Ref. 13), which is measured at local authority level, Buckinghamshire is in the 84th percentile of the most deprived local authority areas in England, ranked 250th out of 297 (where 1 is the most deprived). None of the LSOAs in Buckinghamshire are ranked among the 10% most deprived nationally.

Local Receptors

Local and private assets

Residential Properties

- 20.12.11 There are no residential receptors within the Preliminary Order Limits of part 4a. There are a number of residential receptors within 500m of the Preliminary Order Limits in Water Eaton.

Local Businesses

- 20.12.12 There are no business premises within the Preliminary Order Limits, though there are a number of business premises within 500 m. There are clusters of workshops and maintenance garages in close proximity, as well as a couple of rural hospitality premises.

Community Facilities and Open Spaces / Recreation

- 20.12.13 There are no community facilities within the Preliminary Order Limits. There are a few community facilities located within 1 km including nurseries, schools and care homes. These are all located in Water Eaton. There are also a park and a limited number of play spaces within 1 km of Part 4a.

Visitor Attractions

- 20.12.14 There are no visitor attractions either inside or within 500 m of the Preliminary Order Limits.

Impacts on Agricultural land holdings

- 20.12.15 A sizeable portion of land within the Part 4a Preliminary Order Limits is used for agricultural purposes, understood to comprise two land holdings. This land is used for arable farming.

Development Land

- 20.12.16 There are no relevant development land allocations within or directly adjacent to the Preliminary Order Limits.
- 20.12.17 Planning applications and permissions relevant to Part 4a will be identified at ES stage.

Public Rights of Way

- 20.12.18 There is one public right of way (PRoW) within the Preliminary Order Limits, footpath SHA/5/1, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and are also shown in **Figure 21-P4A-2** in PEI Report **Volume 3**. This runs along the Grand Union Canal eastern towpath, approximately 75m of which runs through the Part 4a Preliminary Order Limits.

Future Baseline

- 20.12.19 The future baseline scenario is detailed in section 20.7, as well as the population projections relevant for Part 4a.
- 20.12.20 In terms of the local economy, it would be reasonable to expect that employment would increase, associated with the expected increase in population. It is expected that PRoWs will continue to be used.

- 20.12.21 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.
- 20.12.22 For the purposes of this assessment, unless specified, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

- 20.12.23 There are no further embedded environmental design, standards and/or management in relation to socio-economics that are specific to Part 4a of the Proposed Development beyond those stated in section 20.6 for the project as a whole.

Assessment of Effects and Significance

- 20.12.24 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 4a (Abstraction, Storage and Treatment) of the Proposed Development. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions)

Direct impacts

- 20.12.25 As part of Part 4a, a new water storage site will be constructed, located in the south-eastern portion of Part 4a. This storage site will include a publicly accessible walking route, providing additional informal open space for use by the community. Sensitivity of the local population to impacts on access to open space has been assessed to be medium as there are some similar open spaces nearby (including some that surround waterbodies, similar to the Galley WTW storage site), such as Caldecotte Lake, Woughton Park, and Ashland.

20.12.26 The publicly accessible open space provision will be a walking access route around the storage site, providing opportunity for light recreation such as dog-walking within an enclosed area surrounding the storage site, which will be between 7-11 ha in area. Based on these considerations, overall the magnitude of impact on provision of open space has been assessed to be low.

20.12.27 Based on the above, there is potential for a direct, permanent, beneficial effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

20.12.28 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required.

Residual Effect

20.12.29 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Indirect impacts

20.12.30 The assessment of indirect effects on the amenity of local and private assets has considered effects from following chapters in PEI Report **Volume 2**:

- a. **Chapter 8: Air Quality and Odour;**
- b. **Chapter 16: Landscape and Visual;**
- c. **Chapter 19: Noise and Vibration;** and
- d. **Chapter 21: Traffic and Transport.**

20.12.31 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 4a which could impact on the amenity of residents, businesses and users of open space.

20.12.32 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Impacts on agricultural land holdings

20.12.33 Land use impacts on agricultural land holdings in Part 4a would be expected to arise as a result of activities including construction of the WTW, storage site, and laying of the pipeline. Use of land within the boundaries of these activities would be temporarily lost for the duration of

construction with the land expected to be able to be farmed as previously after this phase. It is also possible that some severance of use of holdings may arise where access to farm infrastructure is affected, again for the duration of the construction activities only and reversible after this.

- 20.12.34 The operations are engaged in agricultural activities that require weekly or less frequent access (arable farming), indicating that their sensitivity to impacts is likely to be either medium or low.
- 20.12.35 There is uncertainty at this stage regarding the extent of land-take required from holdings and the duration of activities to understand the likely impact on farming operations. For the pipeline any impacts would be temporary in nature with the land above the pipeline being able to be returned to agricultural use after construction.
- 20.12.36 Temporary adverse significant effects could arise where severance occurs without mitigation on holdings where the spatial relationship of land to key agricultural infrastructure is stronger. Land use impacts on agricultural land holdings relevant to Part 4a will be assessed at ES stage when more information regarding the susceptibility of holdings to severance and the extent and layout of land-take within these is known.

Land use impacts on planned and proposed developments

- 20.12.37 There are no socio-economic designations or allocations within the Part 4a Preliminary Order Limits and therefore no direct land use impacts on these are expected.
- 20.12.38 Land use impacts on planning applications and permissions relevant to Part 4a will be assessed at ES stage.

Temporary disruption to PRow and canal towpath access

- 20.12.39 As outlined in paragraph 20.12.18, there is one PRow that overlaps with the Part 4a Preliminary Order Limits part of which lies on the Grand Union Canal Towpath. It is expected that this PRow will be able to remain open, or a short diversion will be provided.
- 20.12.40 Where there is only a towpath on one side of the canal, sensitivity of users to disruption has been assessed to be high. This is based on the high importance of the towpath as an extensive and unique recreational route and the lack of similar alternatives in character and scenery.
- 20.12.41 Given that it is likely that the PRow will remain open, and if a diversion is provided, it will be equivalent in nature, connectivity and length to the existing route, the impact magnitude is assessed to be very low.
- 20.12.42 Based on the above, there is potential for a direct, temporary, short-term adverse effect which is considered to be minor and not significant.

Additional Mitigation, Enhancement and Monitoring

- 20.12.43 The results of the preliminary assessment indicate that no additional mitigation, enhancement or monitoring is required, however, this will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.12.44 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Summary

- 20.12.45 **Table 20-40** summarises the residual socio-economics effects of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-40: Summary of residual effects – Part 4a

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Local and Private Assets – Galley WTW storage site	Medium	Beneficial, Permanent, Local	Low	Minor	None – to be confirmed in the ES	Minor Beneficial (Not Significant)
Impacts on agricultural land holdings	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES
Land use impacts on development land	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES
Temporary disruption to PRow access and canal towpath access	High	Adverse, Short-Term, Local	Very low	Minor	None – to be confirmed in the ES	Minor Adverse (Not Significant)

Part 4b: Pipeline to an Existing Underground Reservoir near Luton

20.13 Part 4b: Pipeline to an Existing Underground Reservoir near Luton

- 20.13.1 This section provides a focussed description of the environmental baseline, embedded environmental design, standards and management measures (if in addition to the aforementioned) and presents the preliminary assessment of likely significant socio-economic effects for Part 4b of the Proposed Development.

Baseline Conditions

- 20.13.2 This section describes the baseline environmental characteristics with specific reference to socio-economics. It has been prepared using existing desk-based knowledge and accessible evidence base to give an overview of the existing socio-economic baseline of the study area.

Existing Baseline

- 20.13.3 The existing socio-economic baseline has been split into two sections – a socio-economic profile of the local area to provide context for the assessment, and a study of local, physical receptors within the categories' respective study areas.

Socio Economic Profile

- 20.13.4 The vast majority of Part 4b Preliminary Order Limits falls within the local authority administrative boundary of Central Bedfordshire. The area within Part 4b is generally rural in nature, passing to the south of Dunstable towards the end of the route.
- 20.13.5 Towards the northern extent, Part 4b partially falls within the local authority administrative boundaries of Buckinghamshire and Milton Keynes and profiles of these local authorities are outlined in the baseline description of the Part 4a. The socio-economic profile of the local area relevant to Part 4b is therefore described with reference to key indicators for Central Bedfordshire only. Comparison is provided with those of the wider East of England region as well as the England national average.

Population

- 20.13.6 According to Office for National Statistics (ONS) Census data (Ref. 10) in 2021 the population of Central Bedfordshire was 294,252. **Plate 20-6** below shows the breakdown of total population by age groups for Central Bedfordshire, the East of England, and the English national average using 2021 Census data for age by single year.
- 20.13.7 Central Bedfordshire has a higher proportion of residents aged between 0 and 14 (18.4%) compared to the East of England (17.6%) and England (17.4%). Central Bedfordshire has a higher proportion of working age

residents, aged between 15-64 (63.6%), than the East of England (62.8%), but lower than the average across England (64.2%).

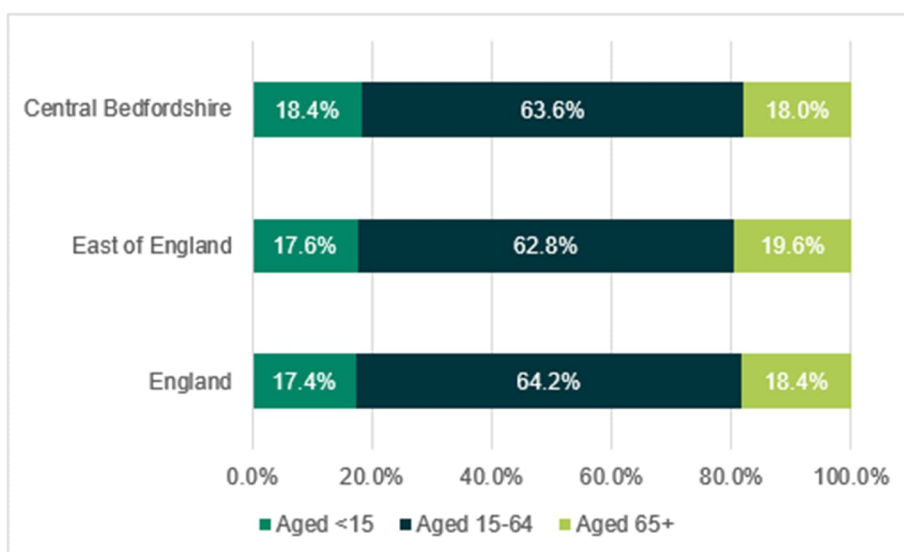


Plate 20-6: Part 4b Age Profile

[Source: ONS (2022); Census 2021. (Ref. 10)]

Employment

20.13.8 According to the Census 2021 (Ref. 10), the unemployment rate among economically active over-16s residents in Central Bedfordshire was 4.0%, lower than the East of England at 4.8%, and the England national average at 5.7%. These economic activity and unemployment rates are shown in **Table 20-41**.

Table 20-41: Part 4b Economic Activity

Indicator	Central Bedfordshire	East of England	England
Economic activity rate (for residents aged 16+) (%)	66.4	61.8	60.9
Unemployment rate (for residents aged 16+) (%)	4.0	4.8	5.7

[Source: ONS (2022); Census 2021. (Ref. 10)]

Skills and Qualifications

20.13.9 According to the Census 2021 (Ref. 10), Central Bedfordshire has a lower proportion of residents with no qualifications (15.0%) than the East of England (18.1%) and the England national average (18.1%).

20.13.10 In Central Bedfordshire, 33.2% of the over-16 population have a level 4 qualification or higher; slightly greater than recorded for the East of England (31.6%), but lower than the recorded for England (33.9%).

- 20.13.11 A higher proportion of the over-16 population in Central Bedfordshire had an apprenticeship-level qualification (5.9%) than both the East of England and England average (5.5% and 5.3%, respectively).
- 20.13.12 Further details on qualification levels for the study area and other geographies can be seen in **Table 20-42**.

Table 20-42: Part 4b Qualifications

Qualification Level (%)	Central Bedfordshire	East of England	England
No qualifications	15.0	18.1	18.1
Level 1 and entry level qualifications	10.4	10.8	9.7
Level 2 qualifications	14.7	14.4	13.3
Apprenticeship (%)	5.9	5.5	5.3
Level 3 qualifications	18.2	16.8	16.9
Level 4 qualifications or above	33.2	31.6	33.9
Other qualifications	2.4	2.8	2.8

[Source: ONS (2022); Census 2021. (Ref. 10)]

Deprivation

- 20.13.13 Based on the 2025 Indices of Multiple Deprivation (IMD) (Ref. 13), which is measured at local authority level, Central Bedfordshire is in the 77th percentile of the most deprived upper tier local authority areas in England, ranked 230th out of 297 (where 1 is the most deprived). None of the Lower Super Output Areas (LSOAs) in Central Bedfordshire are ranked among the 10% most deprived nationally.

Local Receptors

Local and private assets

Residential Properties

- 20.13.14 There are no residential receptors within the Preliminary Order Limits of part 4b. There are a substantial number of residential receptors within 500m of the Preliminary Order Limits, the settlements that contain these including:
- Little Brickhill;
 - Potsgrove;
 - Church End;
 - Eggington;

- e. Stanbridge;
- f. Lower End;
- g. Middle End;
- h. Eaton Bray; and
- i. Caddington.

20.13.15 There are also a number of rural, isolated houses within 500 m of the Preliminary Order Limits.

Local Businesses

20.13.16 There are no business premises within the Preliminary Order Limits, there are a substantial number within 500 m of Preliminary Order Limits primarily located in the settlements listed above.

20.13.17 In Little Brickhill, there are a small number of hospitality businesses, including pubs and cafes. Further south, there are a number of isolated buildings and farms that business are situated in, such as retail units and equestrian centres.

20.13.18 In Eggington, Stanbridge, and Eaton Bray, there are more pubs, restaurants, and cafes within 500 m of Part 4b. These settlements also host a number of workshops and industrial buildings. At the eastern extent of Part 4b, there are number of retail and industrial units on Dallow Road and Bilton Way.

Community Facilities and Open Spaces

20.13.19 There are no community facilities within the Preliminary Order Limits, though there is a substantial amount within 1 km. The vast majority of these are situated in the settlements listed above as well as a number of settlements that are between 500 m and 1 km from the Preliminary Order Limits, such as Stipers Hill, Edlesborough and Kensworth. These facilities include primarily schools, churches and village halls, as well as a scout group.

20.13.20 There are two open spaces that encroach into the Preliminary Order Limits. The south of Dunstable Downs Country Park, which is also common land, is intersected by the Preliminary Order Limits. The Dunstable Downs Golf Club is adjacent to the eastern border of the Country Park, separated by the B4541 Road; the southern extent of the Golf Club is within the Preliminary Order Limits. These are both also within the Chilterns National Landscape area .

20.13.21 There are a considerable number of open spaces within 1 km of the Preliminary Order Limits, including golf courses, playing fields, cemeteries, parks, allotments, and play spaces.

Visitor Attractions

- 20.13.22 A campsite and holiday home are located within 500 m of Part 4b, in Kensworth and Lower End, respectively.
- 20.13.23 Given Dunstable Downs' designation as a country park, as well as an open space, the park (including the visitor centre and car park) can also be classed as a visitor attraction.

Agricultural land holdings

- 20.13.24 The land within the Part 4b Preliminary Order Limits is mostly used for agricultural purposes, being characterised by large scale regular-shaped fields across multiple land holdings. Farming operations include both arable tillage and grazing of livestock.

Development Land

- 20.13.25 There are allocated mineral safeguarding areas (MSAs) within the Part 4b Preliminary Order Limits and also within 500 m of this. More information on these is set out in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**.
- 20.13.26 There are no other development allocations within the Part 4b Preliminary Order Limits.
- 20.13.27 Planning applications and permissions relevant to Part 4b will be identified at ES stage.

Public Rights of Way

- 20.13.28 The Part 4b Preliminary Order Limits crosses a total of 40 PRoW including 35 footpaths and five bridleways as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and show in **Figure 21-P4B-2** in PEI Report **Volume 3**.
- 20.13.29 There are also two National Cycle Network Routes that intersect the Preliminary Order Limits, NCN Route 6 and NCN Route 574.

Future Baseline

- 20.13.30 The future baseline scenario is detailed in section 20.7, as well as the population projections relevant for Part 4b.
- 20.13.31 In terms of the local economy, it would be reasonable to expect that employment and GVA would increase, associated with the expected increase in population. It is expected that PRoWs will continue to be used.
- 20.13.32 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). 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 Proposed Development should be assessed against current baseline conditions and policies. These changes are not considered to constitute significant changes to baseline.

- 20.13.33 For the purposes of this assessment, unless specified, the future baseline with respect to local land uses (including agricultural land, residential properties, local businesses, open space, community facilities, visitor attractions and development land) is expected to be in line with the existing baseline conditions as set out above.

Environmental Design, Standards and Management

Construction Phase

- 20.13.34 Similar to Part 1b, efforts have been made to narrow down the Preliminary Order Limits associated with the pipeline corridor to avoid environmental constraints which could include local open space facilities.
- 20.13.35 The installation process of the Part 4b pipeline is the same in approach to the Part 1b pipeline. The majority of the pipeline will be installed using open cut methods. Where possible, trenchless crossing techniques will be used where the pipeline is proposed to go through sensitive areas to mitigate any potential surface level disruption. This will allow minimal surface disruption along the pipeline route as this technique does not require earthworks directly above the proposed pipeline route.

Assessment of Effects and Significance

- 20.13.36 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 4b (Pipeline to Existing Underground Reservoir near Luton) of the Proposed Development. Where applicable, the requirement for additional mitigation measures and/or monitoring is identified to avoid, prevent, reduce, or if possible, offset, any identified significant adverse effects on the environment.

Construction Phase

Impacts on local and private assets (including residential properties, local businesses, community facilities, open space / recreation and visitor attractions)

Direct impacts

- 20.13.37 There are two open spaces within the Part 4b Preliminary Order Limits, both of which are within the Chilterns national Landscape; the Dunstable Downs Country Park and the Dunstable Downs Golf Club.

- 20.13.38 At Dunstable Downs Golf Club, as the pipeline in this location is anticipated installed via trenchless techniques that minimise surface level disturbance, the club will not be subject to any land-take that would disrupt the usage of the golf course. However, at this stage, the exact pipeline route is uncertain, and following further design updates, it is possible that the golf club will experience disruption that could impact the usability of the course. As such, this effect will be further assessed at ES Stage when more information regarding the design of the Proposed Development is known.
- 20.13.39 It is proposed that trenchless techniques are used throughout Dunstable Downs Country Park, meaning Land-take along the route of the pipeline will be limited to a micro-tunnelling pit within the park. Land-take will also be required for the access road to the pit. This Land-take will be small in nature and noticeable impacts are expected to be temporary in nature.
- 20.13.40 There are a few alternative parks of a similar size and offer nearby such as Totternhoe Nature Reserve and Blow's Downs Nature Reserve, therefore sensitivity of users of the open spaces to disruption has been assessed to be medium.
- 20.13.41 Whilst the techniques for construction of the pipeline through the country park are proposed, the exact route and extent of works and thus Land-take required within Dunstable Downs Country Park to construct the proposed pipeline is uncertain at this stage. The Applicants are consulting with the National Trust (operators and managers of the country park) to help define this. It is possible that the normal functioning and operation of the park may be disrupted, potentially affecting users' ability to access sections of the park for a period of time. If such disruption occurs other areas of the park would remain available for use for the duration of the works. Based on this the magnitude of impact on users is assessed to be medium.
- 20.13.42 Based on the above, there is potential for a direct, temporary, short-term, adverse effect on the Dunstable Downs Country Park that is expected to be moderate and significant. This will be assessed further at ES stage once further information is known on the final Proposed Development design.

Additional Mitigation, Enhancement and Monitoring

- 20.13.43 Consultation between the Applicants and the National Trust (operators and managers of the country park) is ongoing to inform a design of the pipeline route which minimises impacts on users of the park. This will be assessed further at ES stage once further information is known on the final Proposed Development design.

Residual Effect

- 20.13.44 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Indirect impacts

- 20.13.45 The assessment of indirect effects on the amenity of local and private assets has considered effects from following chapters in PEI Report **Volume 2**:
- a. **Chapter 8: Air Quality and Odour;**
 - b. **Chapter 16: Landscape and Visual;**
 - c. **Chapter 19: Noise and Vibration;** and
 - d. **Chapter 21: Traffic and Transport.**
- 20.13.46 There is potential for noise and vibration, air quality and visual effects arising from the construction of the Proposed Development in Part 4b which could impact on the amenity of residents, businesses and users of open space.
- 20.13.47 Considering the residual effect assessment results of the air quality, visual, noise and vibration, and traffic and transport assessments relating to the construction activities, there are no receptors that would experience a significant effect on their amenity during construction, and as such there would be no effect.

Impacts on agricultural land holdings

- 20.13.48 Land use impacts on agricultural land holdings in Part 4b would be expected to arise as a result of activities to lay the pipeline. Use of land within the pipeline boundary would be temporarily lost for the duration of construction with the land expected to be able to be farmed as previously after this phase. It is also possible that some severance of use of holdings may arise where access to farm infrastructure is affected, again for the duration of the construction activities only and reversible after this.
- 20.13.49 The operations are engaged in agricultural activities that require weekly or less frequent access (arable farming and grazing), indicating that their sensitivity to impacts is likely either medium or low.
- 20.13.50 There is uncertainty at this stage regarding the extent of land-take required from holdings and the duration of activities to understand the likely impact on farming operations. Any impacts would be temporary in nature with the land above the pipeline being able to be returned to agricultural use after construction.

- 20.13.51 Significant effects could arise where severance occurs without mitigation on holdings where the spatial relationship of land to key agricultural infrastructure is strong. Land use impacts on agricultural land holdings relevant to Part 4b will be assessed at ES stage when more information regarding the susceptibility of holdings to severance and the extent and layout of land-take within these is known.

Land use impacts on planned and proposed developments

- 20.13.52 Impacts on mineral sites and MSAs as resources are assessed in **Chapter 14: Ground Conditions** in PEI Report **Volume 2**. There are no other designations or allocations within the Part 4b Preliminary Order Limits and therefore no direct land use impacts on these are expected.
- 20.13.53 Land use impacts on planning applications and permissions relevant to Part 4b will be assessed at ES stage.

Temporary disruption to PRow and recreational routes

Public Rights of Way

- 20.13.54 As outlined in paragraph 20.13.28 there are 40 PRow within the Part 4b Preliminary Order Limits. Where possible, these PRow will be kept open during the works, or short diversions will be provided, however, due to uncertainty at this stage, it is possible that temporary PRow closures may be required. Any diversions are expected to be of a similar nature and connectivity and will not be significantly longer than the existing route.
- 20.13.55 While measures to keep PRow open and provide short diversions will limit disruption, temporary diversions and changes in accessibility may still occur with the extent of changes to journeys unknown at this stage. The magnitude of impact is therefore assessed as medium due to potential short-term disruption to access and amenity.
- 20.13.56 Given the largely rural nature of the surroundings of Part 4b, it is expected that these PRow are largely used for recreational purposes, rather than for business or commuting. Three of these are bridleways which offer different amenity value to the rest which are footpaths. There are other public footpaths in the vicinity of Part 4b which could also be used for recreational purposes. Sensitivity of users of footpaths to temporary disruption has overall been assessed to be low.
- 20.13.57 Based on the above, there is potential for a direct, temporary, short-term adverse effect on disruption to public footpaths which is considered to be minor and not significant.
- 20.13.58 The sensitivity of users of bridleways that intersect the Preliminary Order Limits has been assessed to be medium. This reflects their specific use as bridleways, which accommodate multiple user groups including walkers,

cyclists, and equestrians as well as the less common nature of bridleways in the surrounding area compared to footpaths.

- 20.13.59 Based on the above, there is potential for a direct, temporary, short-term adverse effect on disruption to public bridleways which is considered to be moderate and significant.

Additional Mitigation, Enhancement and Monitoring

- 20.13.60 No additional mitigation, enhancement or monitoring has been identified. This will be reconfirmed at the ES stage with the final Proposed Development design.

Residual Effect

- 20.13.61 As there is no additional mitigation, enhancement or monitoring required / identified, the residual effects remain the same as that reported for the pre-additional mitigation scenario.

National Cycle Network

- 20.13.62 An on-road section of NCN Route 6 is located along Mill Road which is intersected by the Preliminary Order Limits. No temporary road closures are proposed and as such cyclists using the route would not experience disruption. There would therefore be no effect on the use of NCN Route 6.
- 20.13.63 A 4.7 km long off-road section of NCN Route 574 runs north-south along the Icknield Way Trail within Dunstable Country Park, terminating within the park. This would be intersected by the Preliminary Order Limits and the location of a micro-tunnelling pit required for trenchless installation of the pipeline. As referred to in paragraph 20.13.50, the extent of works, duration, and land-take required to construct the pipeline within this resource is uncertain at this stage, with consultation ongoing between the Applicants and the National Trust to design the Proposed Development in a way which minimises impacts on park users including cyclists.
- 20.13.64 The sensitivity of users of the route to disruption is assessed to be medium on the basis that this is a nationally designated route which provides moderate amenity value within a country park though is relatively short at 4.7km in length and does not provide onward connectivity to the NCN. Based on a worst-case that use of the route is disrupted, for an uncertain duration, the magnitude of impact on users is assessed to be medium.
- 20.13.65 Based on the above, there is potential for a direct, temporary, short-term adverse effect on disruption to use of NCN Route 574 which is considered to be moderate and significant.

Additional Mitigation, Enhancement and Monitoring

- 20.13.66 No additional mitigation, enhancement or monitoring has been identified. This will be assessed further at ES stage once further information is known on the final Proposed Development design.

Residual Effect

- 20.13.67 As there is no additional mitigation, enhancement or monitoring identified, the residual effect remains the same as that reported for the pre-additional mitigation scenario.

Summary

- 20.13.68 **Table 20-43** summarises the residual socio-economics effects of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

Table 20-43: Summary of residual effects – Part 4b

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
<i>Construction Phase</i>						
Impacts on local and private assets – Dunstable Downs Golf Club	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	Potential for significant effects - to be assessed and reported in the ES
Impacts on local and private assets – Dunstable Downs Country Park	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be assessed and reported in the ES	Moderate Adverse (Significant)
Impacts on agricultural land holdings	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES
Land use impacts on development land	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and	To be assessed and reported in the ES	To be assessed and reported in the ES	To be assessed and reported in the ES

Description of effect	Sensitivity of receptor	Nature of effect / geographic scale	Magnitude of impact	Initial classification of effect (with embedded control)	Additional mitigation, enhancement and/or monitoring	Residual effect significance
			reported in the ES			
Temporary disruption to PRow access – public footpaths	Low	Adverse, Short-Term, Local	Medium	Minor	To be confirmed in the ES	Minor Adverse (Not Significant)
Temporary disruption to PRow access – public bridleways	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be confirmed in the ES	Moderate Adverse (Significant)
Temporary disruption to recreational route access – NCN Route 574	Medium	Adverse, Short-Term, Local	Medium	Moderate (Significant)	To be confirmed in the ES	Moderate Adverse (Significant)

20.14 Combined Effects between Proposed Development Parts

- 20.14.1 This section provides a review of the above findings of the individual Parts of the Proposed Development, to understand and interpret the potential combined effects on a shared receptor(s) that may be of greater significance when compared to individual effects arising from one of the six Parts of the Proposed Development. Where combined effects are identified, these are considered additively and qualitatively using professional judgement.
- 20.14.2 As further explained in **Chapter 6: Environmental Impact Assessment Methodology** in PEI Report **Volume 2**, the approach undertaken for this assessment is summarised in the following steps:
- a. **Step 1:** Review and identification of shared receptors from assessments undertaken for each technical chapter for interfacing Parts of the Proposed Development.
 - b. **Step 2:** Assessment of combined effects for any shared receptors identified under Step 1.

Part 1a and Part 1b Cumulative Effects

- 20.14.3 At this stage, no shared receptors have been identified between Parts 1a and 1b that may experience combined effects.

Part 1b and Part 2 Cumulative Effects

Step 1: Screening, review and identification of shared receptors

- 20.14.4 **Table 20-44** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 1b and 2 of the Proposed Development.

Table 20-44: Potential for combined effects between Parts 1b and 2

Receptor groups	Potential for combined effects
PRoWs	Construction for both Part 1b and 2 of the Proposed Development have the potential to disrupt PRoW 110/AE88/1, which crosses Clay Pits Bridge. There is therefore a theoretical pathway between Parts 1b and 2 of the Proposed Development sources of impact that could potentially result in combined effect on this PRoW

Step 2: Source-pathway-receptors identification

20.14.5 The assessment of combined effects described in this section considers the embedded, control and management measures, and mitigation measures identified earlier within this PEI Report chapter.

Summary of potential combined effects on Part 1b and Part 2

20.14.6 **Table 20-45** provides a summary of the potential combined effects review for Parts 1b and 2 of the Proposed Development.

Table 20-45: Summary of potential combined effects between Parts 1b and 2

Receptor groups	Potential combined effect?	Significance of combined effects
PRoWs and canal towpaths	Yes	Through combined effects on the identified PRoW and canal towpath, significance of effect are likely to be greater than individual reported for each Part of the Proposed Development; resulting in a Moderate Adverse (Significant) effect. However, the provision of measures such as keeping PRoWs and sections of canal towpath open during works (where possible) using temporary railed walkways or short diversions will help reduce to reduce construction effects to Minor Adverse (Not Significant).

Part 2 and Part 3 Cumulative Effects**Step 1: Screening, review and identification of shared receptors**

20.14.7 **Table 20-46** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 2 and 3 of the Proposed Development.

Table 20-46: Potential for combined effects between Parts 2 and 3

Receptor groups	Potential for combined effects
PRoWs	Construction for both Part 2 and 3 of the Proposed Development have the potential to disrupt public bridleway VB/9. There is therefore a theoretical pathway between Parts 2 and 3 of the Proposed Development sources of impact that could potentially result in combined effect on this PRoW.

Step 2: Source-pathway-receptors identification

20.14.8 The assessment of combined effects described in this section considers the embedded, control and management measures, and mitigation measures identified earlier within this PEI Report chapter.

Summary of potential combined effects on Part 2 and Part 3

20.14.9 **Table 20-47** provides a summary of the potential combined effects review for Parts 2 and 3 of the Proposed Development.

Table 20-47: Summary of potential combined effects between Parts 2 and 3

Receptor groups	Potential combined effect?	Significance of combined effects
PRoWs	Yes	Through combined effects on the identified PRoW, significance of effect are likely to be greater than, individual reported for each Part of the Proposed Development; resulting in a Moderate Adverse (Significant) effect. However, by providing measures such as the PRoW being kept open during works using (e.g.) temporary railed walkways or a short diversion, will help reduce the construction effects to Minor Adverse (Not Significant).

Part 2 and Part 4a Cumulative Effects

20.14.10 At this stage, no shared receptors have been identified between Parts 2 and 4a that may experience combined effects.

Part 4a and Part 4b Cumulative Effects

20.14.11 At this stage, no shared receptors have been identified between Parts 4a and 4b that may experience combined effects.

20.15 Summary and Next Steps

20.15.1 The preliminary assessment of effects has identified that the majority of the socio-economic effects during construction will be either Negligible or Minor Adverse. This will be reconfirmed at the ES stage with the final Proposed Development design.

- 20.15.2 At a project-wide level, no significant effects have been identified; however, some minor beneficial effects have been noted, including temporary direct and indirect employment generation and GVA during construction.
- 20.15.3 For Parts 1a, 3, and 4a, no significant effects during construction have been identified. However, for Part 1b, 2 and 4b, significant effects have been identified.
- 20.15.4 In Part 1b, there is potential for a moderate adverse effect on users of the Outlands open space, and a moderate adverse effect on users of PRoWs owing to temporary disruption to access.
- 20.15.5 For Part 2 during construction, the temporary relocation of moorings has been assessed to be a major adverse effect, with permanent relocations of these also assessed to be a major adverse effect. The temporary and permanent relocations of moorings that engage in commercial activity have each been assessed as a moderate adverse effect. Direct effects on commercial operators and businesses (including marinas) are assessed as moderate adverse, with the potential for significant adverse effects on some receptors from indirect effects. Impacts on the use of the canal network as a recreational and leisure resource for all uses (boating, canoeing, paddleboarding and kayaking and angling) are assessed as having potential for a moderate adverse effect. Temporary disruption to PRoWs and the canal towpath has the potential to result in moderate adverse effects for users and impacts on tourism may also have the potential for moderate adverse. There is potential for a moderate adverse effect on open space users related to construction of the potential fourth transfer lock. These assessments will be confirmed based on the final design for the Proposed Development for this section.
- 20.15.6 For Part 4b, the anticipated disruption to users of Dunstable Downs Country Park during construction has been assessed to be a moderate adverse effect. There is also the potential for a significant effect on users of Dunstable Downs Golf Club from disruption to use. Temporary disruption to PRoWs may result in users of bridleways and the NCN experiencing moderate adverse effects. No significant effects have been identified during the operation of the Proposed Development.
- 20.15.7 The information provided in this PEI Report is preliminary and is based on early-stage information, with the final assessment of significant effects to be reported in the ES.
- 20.15.8 Where comprehensive detail is not available, conservative assumptions have been made on a precautionary basis. This has the potential to lead to the overestimation of effects. As the design and programme of the Proposed Development is progressed, these findings will be refined and investigated further where appropriate.

- 20.15.9 Further work to be undertaken to support the assessments presented in the ES includes; identification of the extent and duration of diversions of PRow, canal towpath or NCN; further investigation into the potential effects on individual agricultural land holdings through consideration of severance and land-take; an assessment into the likely effects on planned and proposed developments; confirmation of the use of moorings along the canal network to confirm the exact number of residential and commercial sites potentially impacted and how these would be impacted; and exact durations of works activities on the canal network, including bank-raising and closures

20.16 References

- Ref. 1 Department for Environment, Food & Rural Affairs (Defra). (2025). National Policy Statement for Water Resources Infrastructure. Available at: https://assets.publishing.service.gov.uk/media/6874ca77c831dea2b152cfe9/E03400114_National_Policy_Statement_for_Water_Resources_Web_Accessible.pdf [Accessed 09/12/2025].
- Ref. 2 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government (MHCLG). (2018 to 2021). and Department for Levelling Up, Housing and Communities (DLUHC). (2025). National Planning Policy Framework – Last updated 7th February 2025. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf> [Accessed 09/12/2025].
- Ref. 3 Water Industry Act 1991. Available at: <https://www.legislation.gov.uk/ukpga/1991/56/contents> [Accessed 14/01/25]
- Ref. 4 Countryside Rights of Way Act 2000. Available at: <https://www.legislation.gov.uk/ukpga/2000/37/contents> [Accessed 14/01/25]
- Ref. 5 MHCLG. (2018 to 2021). and DLUHC. (2024). Planning Policy Framework (NPPF) Planning Practice Guidance. Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 09/12/2025].
- Ref. 6 National Highways. (2022). Design Manual for Roads and Bridges, LA 112 Population and Human Health. Available at: [1e13d6ac-755e-4d60-9735-f976bf64580a](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf) [Accessed 09/12/2025]
- Ref. 7 Homes and Communities Agency. (2014). Additionality Guide. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/additionality_guide_2014_full.pdf [Accessed 09/12/2025].

- Ref. 8 UK Government. (2022). The Green Book 2022. Available at: <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020> [Accessed 09/12/2025].
- Ref. 9 Institute of Sustainability and Environmental Professionals (ISEP). (2025). Social Impact Assessment in Environmental Impact Assessment in the UK and Ireland. Available at: <https://www.isepglobal.org/resources/blogs/2025/october/isep-launches-new-guide-on-social-impact-assessment/> [Accessed 14/01/25]
- Ref. 10 Office for National Statistics (ONS) (2022). Census 2021. Available at: Nomis - Official Census and Labour Market Statistics - Nomis - Official Census and Labour Market Statistics. Available at: <http://www.nomisweb.co.uk> [Accessed 09/12/2025].
- Ref. 11 ONS (2024). Business Register and Employment Survey 2023. Available at: Nomis - Official Census and Labour Market Statistics - Nomis - Official Census and Labour Market Statistics (<http://www.nomisweb.co.uk>) [Accessed 09/12/2025].
- Ref. 12 ONS (2024). Regional Gross Value Added (balanced) by Industry: local authorities by ITL1 Region. Available at: <https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region> [Accessed 09/12/2025].
- Ref. 13 MHCLG. (2025). Indices of Multiple Deprivation. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2025> [Accessed 09/12/2025].
- Ref. 14 CoStar. (2025). CoStar. Available at: <https://www.costar.com/> [Accessed: 28/10/25].
- Ref. 15 VisitEngland. (2025). Seasonal Occupancy Survey. Available at: <https://www.visitbritain.org/research-insights/england-hotel-occupancy-latest> [Accessed 28/10/25].
- Ref. 16 ONS (2022). Subnational population projections for England: 2022-based. Available at: <https://www.nomisweb.co.uk>
- Ref. 17 Warwickshire County Council. (2022). Mineral Local Plan 2018 – 2032. Available at: <https://www.warwickshire.gov.uk/mineral-waste-plans/minerals-development-framework> [Accessed 09/12/2025].
- Ref. 18 West Northamptonshire Council. (2017). Adopted Minerals and Waste Local Plan. Available at: <https://www.westnorthants.gov.uk/minerals-and->

[waste-planning-policy/adopted-minerals-and-waste-local-plan](#) [Accessed 09/12/2025].