

## **Chapter 21: Traffic and Transport**

## Table of Contents

|       |                                                                        |     |
|-------|------------------------------------------------------------------------|-----|
| 21.   | Traffic and Transport.....                                             | 1   |
| 21.1  | Introduction.....                                                      | 1   |
| 21.2  | Legislation, Policy and Guidance.....                                  | 3   |
| 21.3  | Consultation.....                                                      | 4   |
| 21.4  | Scope of Assessment .....                                              | 5   |
| 21.5  | Assessment Methodology.....                                            | 12  |
| 21.6  | Project-Wide Environmental Design, Standards and Management .....      | 26  |
| 21.7  | Part 1a: Minworth AWTP.....                                            | 29  |
| 21.8  | Part 1b: Minworth to Atherstone Pipeline.....                          | 37  |
| 21.9  | Part 2: Works to the Coventry, Oxford and Grand Union Canals .....     | 54  |
| 21.10 | Part 3: Works to Daventry and Drayton Reservoirs .....                 | 72  |
| 21.11 | Part 4a: Abstraction, Storage and Treatment.....                       | 80  |
| 21.12 | Part 4b: Pipeline to an Existing Underground Reservoir near Luton..... | 88  |
| 21.13 | Combined Effects between Proposed Development Parts .....              | 101 |
| 21.14 | Summary and Next Steps.....                                            | 108 |
| 21.15 | References .....                                                       | 109 |

## Tables

|                                                                                                                                                                                                     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Table 21-1: Supporting documentation .....                                                                                                                                                          | 1   |
| Table 21-2: Summary of traffic and transport assessment scope .....                                                                                                                                 | 9   |
| Table 21-3: Summary of baseline traffic and transport studies and surveys ..                                                                                                                        | 14  |
| Table 21-4: Sensitivity Criteria of Affected Parties / Receptors (Severance of Communities, NMU Delay including pedestrian delay, NMU Amenity, and Fear and Intimidation on and by road users)..... | 17  |
| Table 21-5: Sensitivity Criteria of Affected Parties / Receptors (Road Vehicle Driver and Passenger Delay).....                                                                                     | 19  |
| Table 21-6: Sensitivity Criteria of Affected Parties / Receptors (Road User and Pedestrian Safety, and Hazardous / Large Loads) .....                                                               | 19  |
| Table 21-7: Fear and Intimidation (Degree of Hazard).....                                                                                                                                           | 21  |
| Table 21-8: Magnitude of Impact of Affected Parties / Receptors .....                                                                                                                               | 22  |
| Table 21-9: Classification of effects .....                                                                                                                                                         | 24  |
| Table 21-10: Definition of effects.....                                                                                                                                                             | 24  |
| Table 21-11: Summary of residual effects – Part 1a .....                                                                                                                                            | 34  |
| Table 21-12: Summary of residual effects – Part 1b .....                                                                                                                                            | 44  |
| Table 21-13: Summary of residual effects – Part 2 .....                                                                                                                                             | 61  |
| Table 21-14: Summary of residual effects – Part 3 .....                                                                                                                                             | 77  |
| Table 21-15: Summary of residual effects – Part 4a .....                                                                                                                                            | 85  |
| Table 21-16: Summary of residual effects – Part 4b .....                                                                                                                                            | 94  |
| Table 21-17: Potential for combined effects between Parts 1a and 1b .....                                                                                                                           | 101 |
| Table 21-18: Summary of potential combined effects between Parts 1a and 1b .....                                                                                                                    | 102 |

|                                                                                    |     |
|------------------------------------------------------------------------------------|-----|
| Table 21-19: Potential for combined effects between Parts 1b and 2 .....           | 102 |
| Table 21-20: Summary of potential combined effects between Parts 1b and 2 .....    | 103 |
| Table 21-21: Potential for combined effects between Parts 2 and 3 .....            | 104 |
| Table 21-22: Summary of potential combined effects between Parts 2 and 3 .....     | 105 |
| Table 21-23: Potential for combined effects between Parts 2 and 4 .....            | 105 |
| Table 21-24: Summary of potential combined effects between Parts 2, 4a and 4b..... | 106 |
| Table 21-25: Potential for combined effects between Parts 4a and 4b .....          | 107 |
| Table 21-26: Summary of potential combined effects between Parts 4a and 4b .....   | 107 |

## 21. Traffic and Transport

### 21.1 Introduction

- 21.1.1 This Preliminary Environmental Information (PEI) Report chapter presents the preliminary assessment of likely significant environmental effects arising from the Proposed Development in relation to traffic and transport. This preliminary assessment follows the methodology outlined within the Environmental Impact Assessment (EIA) Scoping Report and 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 traffic and transport effects will be undertaken at the ES stage and assessed if required.
- 21.1.2 The traffic and transport assessment presented in this PEI Report chapter covers the likely environmental impacts to sensitive receptors during the construction and operational phases of the Proposed Development.
- 21.1.3 Supporting information, including figures and appendices, is listed in **Table 21-1**.

**Table 21-1: Supporting documentation**

| Reference                                               | Title                                                             |
|---------------------------------------------------------|-------------------------------------------------------------------|
| <b><i>Figures (provided in PEI Report Volume 3)</i></b> |                                                                   |
| <b>Figure 21-P1A-1</b>                                  | Part 1a Roads Affected by the Proposed Development                |
| <b>Figure 21-P1A-2</b>                                  | Part 1a Public Rights of Way Affected by the Proposed Development |
| <b>Figure 21-P1B-1</b>                                  | Part 1b Roads Affected by the Proposed Development                |
| <b>Figure 21-P1B-2</b>                                  | Part 1b Public Rights of Way Affected by the Proposed Development |
| <b>Figure 21-P2-1</b>                                   | Part 2 Roads Affected by the Proposed Development                 |
| <b>Figure 21-P2-2</b>                                   | Part 2 Public Rights of Way Affected by the Proposed Development  |
| <b>Figure 21-P3-1</b>                                   | Part 3 Roads Affected by the Proposed Development                 |
| <b>Figure 21-P3-2</b>                                   | Part 3 Public Rights of Way Affected by the Proposed Development  |
| <b>Figure 21-P4A-1</b>                                  | Part 4a Roads Affected by the Proposed Development                |
| <b>Figure 21-P4A-2</b>                                  | Part 4a Public Rights of Way Affected by the Proposed Development |

| Reference                                                  | Title                                                             |
|------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Figure 21-P4B-1</b>                                     | Part 4b Roads Affected by the Proposed Development                |
| <b>Figure 21-P4B-2</b>                                     | Part 4b Public Rights of Way Affected by the Proposed Development |
| <b><i>Appendices (provided in PEI Report Volume 4)</i></b> |                                                                   |
| <b>Appendix 3-PD-1</b>                                     | Assessment Assumptions                                            |
| <b>Appendix 21-PD-1</b>                                    | Consultation                                                      |
| <b>Appendix 21-PD-2</b>                                    | Roads Affected by the Proposed Development                        |
| <b>Appendix 21-PD-3</b>                                    | Public Rights of Way Affected by the Proposed Development         |

21.1.4 **Appendix 3-PD-1** in PEI Report **Volume 4** presents indicative information regarding the Proposed Development

21.1.5 There are interrelationships between the potential effects on traffic and transport and other environmental topics. Therefore, the following should be read in conjunction with this chapter:

- a. **Chapter 8: Air Quality and Odour** in PEI Report **Volume 2** considers the likely significant effects arising from the Proposed Development in relation to air quality and odour, including dust released from vehicles transporting construction materials and waste impacting on nearby receptors;
- b. **Chapter 10: Climate** in PEI Report **Volume 2** considers the likely significant effects arising from the Proposed Development in relation to climate change, including sources of vehicle emissions;
- c. **Chapter 13: Ecology – Terrestrial** in PEI Report **Volume 2** considers the likely significant effects of the Proposed Development in relation to ecological receptors, including consideration of vehicle emissions and dust arising from the Affected Road Network (ARN) on nearby ecological receptors;
- d. **Chapter 17: Major Accidents and Disasters** in PEI Report **Volume 2** considers the likely significant effects arising from the Proposed Development in relation to major accidents and disasters, including boating incidents on the canal network or reservoirs;
- e. **Chapter 19: Noise and Vibration** in PEI Report **Volume 2** considers the likely noise and vibration impacts of changes in traffic flows on those road links utilised by traffic generated by the Proposed Development; and

- f. **Chapter 20: Socio-economics** in PEI Report **Volume 2** considers the likely socio-economic impacts of changes in traffic flow on road links and canals utilised by traffic generated by the Proposed Development, particularly during the construction phase.

## 21.2 Legislation, Policy and Guidance

21.2.1 Legislation, policy<sup>1</sup>, and standards and guidance relating to traffic and transport and pertinent to the Proposed Development comprises of the documents listed below.

### Legislative Framework

21.2.1 Relevant legislation considered includes:

- a. Highways Act 1980 (Ref. 1); and
- b. Traffic Management Act 2004 (Ref. 2).

### National Policy

21.2.2 National policy considered includes:

- a. National Policy Statement for Water Resources Infrastructure (NPSWRI) (April 2023) (Ref. 3); and
- b. National Planning Policy Framework (NPPF) (December 2024) (Ref. 4).

### Local Policy

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

---

<sup>1</sup> For 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.

## National Guidance

21.2.4 National guidance considered includes the Planning Practice Guidance (PPG): Travel Plans, Transport Assessments and Statements (Ref. 5).

## Other Guidance

21.2.5 Other guidance considered includes:

- a. Strategic road network and the delivery of sustainable development (DfT Circular 01/2022) (Ref. 6); and
- b. Institute of Sustainability and Environmental Professionals'<sup>2</sup> (ISEP) Guidelines: Environmental Assessment of Traffic and Movement 2023 (the '2023 Guidelines') (Ref. 7).

## 21.3 Consultation

21.3.1 This section provides an overview of consultation undertaken to date in relation to traffic and transport. Full details of consultation undertaken to date is provided in **Appendix 21-PD-1** in PEI Report **Volume 4**.

### Phase One Public Consultation

21.3.2 Below is a summary of key topics raised from Phase One Public Consultation undertaken between 11 September 2024 to 25 October 2024 with regards to traffic and transport is provided below:

- a. Impact on local residents during construction in relation to maintaining access, parking, and road and Public Rights of Way (PRoW) closures and associated diversion routes;
- b. Potential benefits of using the canal network for transporting construction materials to reduce vehicles (including Heavy Goods Vehicles [HGV]) movements on roads; and
- c. Impact on the canal and its users during construction.

21.3.3 These topics have been taken into consideration for the Proposed Development and EIA<sup>3</sup>.

---

<sup>2</sup> Formerly the Institute of Environmental Management and Assessment (IEMA).

<sup>3</sup> A Phase One Public Consultation Report has been made available at Phase Two Public Consultation, which sets out activities undertaken to deliver the consultation and provides a summary of the key themes and issues raised, and how the project has considered these.

## EIA Scoping

- 21.3.4 **Appendix 21-PD-1** in PEI Report **Volume 4** provides a summary of the key comments raised in the EIA Scoping Opinion (provided in **Appendix 5-PD-2** of PEI Report **Volume 4**), such as amending the original scope or request for further justification/evidence to agree the EIA scope. It also outlines how and where these issues have been addressed within the PEI Report or will be later addressed within the Environmental Statement (ES) to ensure they are taken account of as part of the ongoing traffic and transport assessment.
- 21.3.5 Where the EIA Scoping Opinion has resulted in amendment to the scope of the traffic and transport assessment (or where further justification or evidence is required to confirm an effect can remain scoped out), this has been presented in section 21.4.
- 21.3.6 The scope of the traffic and transport assessment is presented in **Table 21-2**.

### Other consultation

- 21.3.7 No other consultation relating to the traffic and transport assessment has so far taken place outside the EIA Scoping process for the traffic and transport assessment.
- 21.3.8 The requirement for further consultation with relevant bodies such as Local Highway Authorities, National Highways and the Planning Inspectorate (PINS) will be established as the project progresses; particularly when further details regarding road closures, more refined construction traffic numbers and construction routeing strategies have been defined for the entire route. These further consultations will likely be held prior to ES stage to inform the scope of required surveys and final impact assessment.

## 21.4 Scope of Assessment

- 21.4.1 This section identifies the scope of the traffic and transport assessment following EIA Scoping and subsequent consultation, design refinement, surveys/studies and assessment.

### Amendments to Scope Following EIA Scoping

#### *Matters Scoped Out*

- 21.4.2 The following potential effects for all Parts of the Proposed Development were proposed to be scoped out of the EIA in the EIA Scoping Report (see **Appendix 5-PD-1** in PEI Report **Volume 4**):
- Construction impact on hazardous/large loads;
  - Operational impact on severance of communities;

- c. Operational impact on NMU amenity; and
- d. Operational impact on hazardous/large loads.

21.4.3 However, following comments received in the EIA Scoping Opinion (see **Appendix 5-PD-2** in PEI Report **Volume 4**), further evidence has been requested to demonstrate that these are not likely to be significant.

*Construction on hazardous/large loads*

21.4.4 In the EIA Scoping Opinion (see **Appendix 5-PD-2** in PEI Report **Volume 4**), Central Bedfordshire Council, National Highways and PINS confirmed impacts arising from hazardous/large loads during construction could be scoped out. However, PINS notes that changes in available landfill capacity have been scoped in as the types and quantities of waste during construction is unknown at the time of the EIA Scoping process.

21.4.5 This matter is proposed to be scoped out on the basis that the Proposed Development is not expected to generate significant hazardous / large loads during the construction stage. This is in line with the initial estimates for construction traffic (as presented in **Appendix 3-PD-1** in PEI Report **Volume 4**) which is expected to be very low and will have negligible impact.

21.4.6 On this basis, the Proposed Development will not result in any likely significant impacts on hazardous / large loads during construction; and therefore further assessment is not required. However, this will be re-reviewed at the ES stage with the final estimated traffic flow numbers.

*Operational impact on severance of communities*

21.4.7 As stated in **Chapter 3: The Proposed Development** in PEI Report **Volume 2**, the fully built and operational Proposed Development will revert affected existing PRoW and footways to their original states.

21.4.8 Furthermore, new and affected existing canal infrastructure (e.g. pumping stations) will be sensitively designed/altered with consideration of the Canalside Design Principles document (included in the adopted draft Overarching Design Principles document<sup>4</sup>).

21.4.9 On this basis, the Proposed Development will not result in any likely significant impacts on severance to communities or NMU amenity during operation.

21.4.10 As presented during the EIA Scoping process, potential impacts relating to the rivers, canals and its associated users are considered in **Chapter 17: Major Accidents and Disasters** in PEI Report **Volume 2** (including

---

<sup>4</sup> Presented in a stand-alone document, forming part of the Phase Two Public Consultation material.

navigation risks and breach/failure of canal infrastructure), **Chapter 19: Noise and Vibration** in PEI Report **Volume 2** (with regards to traffic noise) and **Chapter 20: Socio-economics** in PEI Report **Volume 2** (with regards to leisure and recreational users of the canal).

*Operational impact on road users and pedestrian safety*

21.4.11 Although this likely effect was not identified at the EIA Scoping stage; however, for completeness the following justification has been provided to scope this out of the EIA.

21.4.12 The initial estimates for construction traffic (as presented in **Appendix 3-PD-1** in PEI Report **Volume 4**) are expected to be very low and will have negligible impact on road safety. Furthermore, the fully built and operational Proposed Development will revert affected existing PRow and footways to their original states, and any new or affected existing infrastructure (e.g. access / egress points on / off roads) will be appropriately designed to the relevant safety standards.

21.4.13 On this basis, the Proposed Development will not result in any likely significant impacts on road users or pedestrian safety during operation.

*Operational impact on hazardous / large loads*

21.4.14 This matter is proposed to be scoped out on the basis that the Proposed Development is not expected to generate significant hazardous / large loads during the operational phase.

21.4.15 In addition, the primary operational traffic will mostly comprise of maintenance visits during operation of the Proposed Development. On this basis, the Proposed Development will not result in any likely significant impacts on hazardous / large loads during operation; therefore, further assessment is not required. However, this will be re-reviewed at the ES stage with the final estimated traffic flow numbers.

**Matters Scoped In**

21.4.16 Following the EIA Scoping process, the below effects are now considered as having the potential to be significant, resulting in the effects being scoped in to the traffic and transport assessment, and the evidence to support this conclusion is outlined below.

*Construction impact on road user and pedestrian safety*

21.4.17 This likely effect was not identified at the EIA Scoping stage; however, this has been included due to the potential for likely significant effects to arise during the construction phase of the Proposed Development.

### *Construction Impact on PRow and Canal Towpaths*

21.4.18 Multiple local authorities and parish councils as well as PINS raised concerns regarding the potential construction impacts on PRow and canal towpaths<sup>5</sup> (as identified in **Appendix 21-PD-3** in PEI Report **Volume 4**). As much as practicable, PRow impacted by the construction of the Proposed Development will either be kept open during construction through the use of (e.g.) temporary railed walkways, or a short diversion will be provided. These affected PRow will then be reverted to its original state once construction has been completed.

21.4.19 Therefore, construction impacts on PRow and canal towpaths are scoped into the EIA and a preliminary assessment has been (and will be) provided in this PEI Report (and ES) chapter.

### **Scope of Assessment**

21.4.20 **Table 21-2** provides a summary of all matters scoped in and out of the traffic and transport assessment on the basis of whether they were considered to have the potential to result in significant effects during the EIA Scoping process.

- 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.
- 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.

---

<sup>5</sup> Where canal towpaths are not designated as PRow, they are designated as a 'Permissive Path' (i.e. a route on private land that a landowner [in this case, the Canal & River Trust] allows the public to use).

**Table 21-2: Summary of traffic and transport assessment scope**

| Likely significant impact                                         | Receptor(s)                                                                                                                                                                                            | Proposed Development Parts |    |    |    |    |    |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----|----|----|----|----|
|                                                                   |                                                                                                                                                                                                        | 1a                         | 1b | 2  | 3  | 4a | 4b |
| <b>Construction Phase</b>                                         |                                                                                                                                                                                                        |                            |    |    |    |    |    |
| Construction impact on severance of communities                   | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | In                         | In | In | In | In | In |
| Construction impact on NMU delay including pedestrian delay       | Existing sensitive receptors within the locality and the surrounding area, including receptors such pedestrians, canal towpath and PRow users.                                                         | In                         | In | In | In | In | In |
| Construction impact on NMU amenity                                | Existing sensitive receptors within the locality and the surrounding area, including receptors such as users of public spaces, pedestrians, canal towpath and PRow users.                              | In                         | In | In | In | In | In |
| Construction impact on fear and intimidation on and by road users | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | In                         | In | In | In | In | In |
| Construction impact on road vehicle driver and passenger delay    | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers and passengers.                                                                 | In                         | In | In | In | In | In |

| Likely significant impact                                  | Receptor(s)                                                                                                                                                                                            | Proposed Development Parts |     |     |     |     |     |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|
|                                                            |                                                                                                                                                                                                        | 1a                         | 1b  | 2   | 3   | 4a  | 4b  |
| Construction impact on road user and pedestrian safety     | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | In                         | In  | In  | In  | In  | In  |
| Construction impact on hazardous / large loads             | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | Out                        | Out | Out | Out | Out | Out |
| <b>Operational Phase</b>                                   |                                                                                                                                                                                                        |                            |     |     |     |     |     |
| Operational impact on severance of communities             | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | Out                        | Out | Out | Out | Out | Out |
| Operational impact on NMU delay including pedestrian delay | Existing sensitive receptors within the locality and the surrounding area, including receptors such as pedestrians, canal towpath and PRow users.                                                      | Out                        | Out | Out | Out | Out | Out |
| Operational impact on NMU amenity                          | Existing sensitive receptors within the locality and the surrounding area, including receptors such as users of public spaces, pedestrians, canal towpath and PRow users.                              | Out                        | Out | Out | Out | Out | Out |

| Likely significant impact                                        | Receptor(s)                                                                                                                                                                                            | Proposed Development Parts |     |     |     |     |     |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|
|                                                                  |                                                                                                                                                                                                        | 1a                         | 1b  | 2   | 3   | 4a  | 4b  |
| Operational impact on fear and intimidation on and by road users | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | Out                        | Out | Out | Out | Out | Out |
| Operational impact on road vehicle driver and passenger delay    | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers and passengers.                                                                 | Out                        | Out | Out | Out | Out | Out |
| Operational impact on road users and pedestrian safety           | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | Out                        | Out | Out | Out | Out | Out |
| Operational impact on hazardous / large loads                    | Existing sensitive receptors within the locality and the surrounding area, including receptors such as vehicle drivers, passengers, users of public spaces, pedestrians, canal towpath and PRow users. | Out                        | Out | Out | Out | Out | Out |

## 21.5 Assessment Methodology

21.5.1 This section presents the methodology used to assess the potential effects on traffic and transport during the construction and operational phases of the Proposed Development.

### Defining the Study Area

21.5.2 This section sets out the study areas adopted for each element of the Proposed Development.

21.5.3 The study area encompasses any roads (e.g. motorways, A-Road, B-Roads, local roads and country lanes) and PRow, footpaths, bridleways and canal towpaths interfaced by the Preliminary Order Limits as well as site access / egress routes in proximity to such intersection as shown in the figures attributed to **Chapter 3: The Proposed Development** in PEI Report **Volume 2**.

21.5.4 The extent of the study area is dependent on the type of construction proposed. If temporary road closures are necessary, then a larger study area is required due to potential route diversions.

21.5.5 In addition, the study area is established by determining the most probable routes for construction traffic for both the movement of (e.g.) waste, materials, equipment and employees.

21.5.6 The latter two will be reviewed at the ES stage with the final design and vehicle routing of the Proposed Development.

### Determining Baseline Conditions

21.5.7 This section sets out how baseline conditions were determined for the Proposed Development.

21.5.8 The traffic and transport baseline conditions have been assessed and informed by a review of the following data sources:

- a. Publicly available mapping, and aerial imagery from Google Maps;
- b. Publicly available online information such as Council Definitive Maps, and Rowmaps for PRow (Ref. 8);
- c. Road safety data from the Crashmap website; and
- d. Traffic information data provided by the design team in relation to both construction and operation of the Proposed Development.

21.5.9 Where deemed necessary, traffic surveys will be conducted on roads and/or junctions which are likely to have significant traffic impact associated with construction of the Proposed Development.

21.5.10 The assessment methodology for traffic and transport is based on the 2023 Guidelines (Ref. 7).

21.5.11 **Table 21-3** provides an overview of the baseline studies and surveys undertaken to inform the traffic and transport assessment. The table uses the following coding:

- a. ✓ = Completed.
- b. O = To be completed for the ES.
- c. n/a = Baseline study / survey is not applicable for that Part of the Proposed Development.

**Table 21-3: Summary of baseline traffic and transport studies and surveys**

| Study / survey                         | Overview                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Date completed  | Proposed Development Part |    |   |   |    |    |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------------|----|---|---|----|----|
|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 | 1a                        | 1b | 2 | 3 | 4a | 4b |
| Desktop review of sensitive receptors* | A desktop review was undertaken to identify potential existing sensitive receptors, as well as roads and PRow intersected by the Proposed Development to inform the study area.<br><br>The desktop review also includes high level detail of the existing baseline of the roads, canal towpaths and PRow intersected by the Proposed Development.                                                                                                                                                     | September 2025  | ✓                         | ✓  | ✓ | ✓ | ✓  | ✓  |
| Traffic surveys (if required)          | The requirement for traffic surveys is to be established (and if required, undertaken) for relevant roads and junctions once the effect of road closures have been derived from the final design of the Proposed Development.<br><br>The requirement for these traffic surveys and their specific locations will be dependent on the level of anticipated construction phase impacts.                                                                                                                 | To be confirmed | O                         | O  | O | O | O  | O  |
| Road safety (if required)              | Similarly to traffic surveys, the requirement for road safety study is to be established (and if required, undertaken) for relevant roads and junctions where traffic impact is likely to be significant from the final design of the Proposed Development. This is a desktop based study based on information contained within the Crashmap website.<br><br>The requirement for the road safety study and its specific locations will be dependent on the level of anticipated construction impacts. | To be confirmed | O                         | O  | O | O | O  | O  |

\* To be refreshed at the ES stage.

## Assessment of Effects

- 21.5.12 This section sets out how the scoped in effects are assessed.
- 21.5.13 In accordance with the 2023 Guidelines (Ref. 7), the following criteria will be considered in the assessment of the construction phase:
- a. Severance of communities;
  - b. NMU delay including pedestrian delay;
  - c. NMU amenity;
  - d. Fear and Intimidation on and by road users;
  - e. Road vehicle driver and passenger delay;
  - f. Road user and pedestrian safety; and
  - g. Hazardous / large loads.
- 21.5.14 The impacts of worker and HGV traffic increases associated with the proposed development and any required temporary road closures and/or delays are fundamental to determining the likely effects in the above categories.
- 21.5.15 The receptors which may be impacted will be identified based on the likely locations in which traffic may come to and from the Preliminary Order Limits (i.e. the forecast increase in vehicle movements associated with the construction of the Proposed Development).
- 21.5.16 The following receptors / user groups are to be considered:
- a. NMU (e.g. pedestrians and cyclists);
  - b. PRoW and canal towpath users (including horse riders);
  - c. Motorists and freight vehicles;
  - d. Public transport (e.g. bus); and
  - e. Emergency services.
- 21.5.17 When assessing the traffic impacts, there are a range of particular groups and locations which may be sensitive to changes in traffic conditions compliant with the criteria previously outlined. These are outlined in the 2023 Guidelines as 'Affected Parties / Sensitive Receptors', as follows:
- a. People at home;
  - b. People at work;
  - c. Sensitive and/or vulnerable groups (including young age, older age, income, health status, social disadvantage and access and geographic factors);

- d. Locations with concentrations of vulnerable users (e.g. hospitals, places of worship and schools);
  - e. Retail areas;
  - f. Recreational areas;
  - g. Tourist attractions;
  - h. Collisions clusters and routes with road safety concerns; and
  - i. Junctions and highway links at (or over) capacity.
- 21.5.18 The 2023 Guidelines set out two rules in identifying potential links for analysis. *“Rule 1: include highway links where traffic flows will increase by more than 30% (or the number of heavy good vehicles will increase by more than 30%); and Rule 2: include highway links of high sensitivity where traffic flows have increased by 10% or more”.*
- 21.5.19 Under Rule 1, the guidance indicates that: *“...the day-to-day variation of traffic on a road is frequently at least + or -10%. At a basic level, it should therefore be assumed that projected changes in traffic of less than 10% create no discernible environmental impact”.*
- 21.5.20 Furthermore, a negligible magnitude of change will be assigned where traffic flow (or HGV) increase is less than 30 % per hour during each of the development peak hours due to the construction of the Proposed Development in line with Rule 1.
- 21.5.21 A negligible magnitude of change will be assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the construction of the Proposed Development (except for the assessment of hazardous / large loads), irrespective of the proportional increase in traffic flows. This is designed to avoid over-reporting impacts in areas where baseline traffic flows are very low and is in line with the 2023 Guidelines which states that caution should be observed when applying thresholds to very low baseline flows given that these are unlikely to experience impacts even with high percentage changes in traffic.
- 21.5.22 The vehicle routing and movements associated with the construction of the Proposed Development (including abnormal loads) will be identified within the Transport Assessment at the ES stage. This will include a review of the suitability of the proposed routes for abnormal loads and the respective owning authorities of these routes and structures will be notified.
- 21.5.23 The forecast changes to baseline (magnitude of change), the relative value / sensitivity / importance of the affected receptor and the scale, nature and significance of the effect (consequence) has been considered. In addition,

the anticipated effect should be classified as short-term, medium-term or long-term, as well as permanent or temporary.

- 21.5.24 Assessments will be undertaken at the anticipated peak construction period as this will be the 'worst-case' scenario. The traffic associated with the construction of the Proposed Development will be distributed onto the surrounding highway network or where the Proposed Development crosses the highway network, footways / cycleways, PRow and canal towpaths.
- 21.5.25 Baseline traffic flows will be factored up to the future year scenario by adopting growth factors derived from TEMPro utilising the latest National Trip End Model (NTEM) datasets for the relevant areas potentially impacted by the construction of the Proposed Development.
- 21.5.26 Definitions of magnitude of impact, sensitivity or importance of the receptor and significance of effect that will be used as part of the EIA are reported in the following sections.

### ***Sensitivity of Receptors***

- 21.5.27 The general criteria for defining the importance or sensitivity of receptors are set out in **Table 21-4**, which applies to the assessment of Severance of Communities, NMU Delay including pedestrian delay, NMU Amenity, and Fear and Intimidation on and by road users. Key factors influencing this include:
- The value of the receptor or resource based upon empirical and/or intrinsic factors, for example considering any legal or policy protection afforded which is indicative of the receptor or resources' value internationally, nationally or locally; and
  - The sensitivity of the receptor or resource to change, for example is the receptor likely to acclimatise to the change. This will consider legal and policy thresholds which are indicative of the ability of the resources to absorb change.

**Table 21-4: Sensitivity Criteria of Affected Parties / Receptors  
(Severance of Communities, NMU Delay including pedestrian delay,  
NMU Amenity, and Fear and Intimidation on and by road users)**

| <b>Sensitivity</b> | <b>Receptors</b>                                                                                                                                                                                                                                                                                                           |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High               | Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident blackspots, retirement homes, urban / residential roads without footways that are used by pedestrians. Walk / cycle links including PRow and canal towpaths: heavily trafficked highway with on-road pedestrian / cycle route. |
| Medium             | Traffic flow sensitive receptors including congested junctions,                                                                                                                                                                                                                                                            |

| Sensitivity | Receptors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>doctor's surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, un-segregated cycleways, community centres, parks, recreation facilities.</p> <p>Walk/cycle links including PRow and canal towpaths: lightly trafficked highway with on-road pedestrian / cycle route.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Low         | <p>Road links and junctions (at least one of the following):</p> <ul style="list-style-type: none"> <li>• One sensitive user present (e.g. schools, play areas, care / retirement homes, residential streets with properties on both sides of the carriageway, hospitals, places of worship, historic buildings);</li> <li>• Many residential properties with direct frontage to highway link being used as construction route;</li> <li>• Pedestrians using footways, PRow, canal towpaths and/or crossings on highway link; and</li> <li>• Cyclists using on-road designated cycle routes along highway link.</li> </ul> <p>Walk / cycle links including PRow and canal towpaths: heavily trafficked highway with off-road pedestrian / cycle route.</p> |
| Negligible  | <p>Road links and junctions: No sensitive users or receptors along link, or at least one of the following:</p> <ul style="list-style-type: none"> <li>• Few residential properties with direct frontage to the highway link being used as a construction traffic route;</li> <li>• Workplaces with direct frontage to highway link being used as construction route; and</li> <li>• Cyclists using off-road designated cycle routes along highway link.</li> </ul> <p>Walk / cycle links including PRow and canal towpaths: pedestrian / cycle route not running alongside highway, or lightly trafficked highway with off-road pedestrian / cycle route.</p>                                                                                              |

21.5.28 The general criteria for defining the importance or sensitivity of receptors for the assessment of Road Vehicle Driver and Passenger Delay are set out in **Table 21-5**.

**Table 21-5: Sensitivity Criteria of Affected Parties / Receptors (Road Vehicle Driver and Passenger Delay)**

| Sensitivity | Receptors                                                                                                                                                                                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High        | Road links: key local route <sup>6</sup> which forms part of a public transport corridor within a built-up area.<br>Road junctions: Roundabout or signalised junction (at least four arms) within a built-up area or a junction with high queuing expected.                                |
| Medium      | Road links: key local route within a built-up area.<br>Road junctions: roundabout or signalised junction (at least four arms) within a built-up area or a junction with moderate / high queuing expected.                                                                                  |
| Low         | Road links: strategic route within a built-up area OR a local route outside of a built-up area.<br>Road junctions: roundabout or signalised junction (fewer than four arms) outside of a built-up area OR a priority junction within a built-up area with low / moderate queuing expected. |
| Negligible  | Road links: strategic route outside of a built-up area OR a minor / local no-through route.<br>Road junctions: priority junction outside of a built-up area with no / low queuing expected.                                                                                                |

21.5.29 The criteria for defining the importance or sensitivity of receptors for the assessment of Road User and Pedestrian Safety and Hazardous/Large Loads are set out in **Table 21-6**. The collision rate for road links has also been calculated and compared with national road safety statistics provided within Road Casualties for Great Britain (Ref. 9) to determine an appropriate receptor sensitivity level.

**Table 21-6: Sensitivity Criteria of Affected Parties / Receptors (Road User and Pedestrian Safety, and Hazardous / Large Loads)**

| Sensitivity | Road Safety                                                                                                  | Hazardous / Large Loads                                                                                                |
|-------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| High        | 10+ collisions in five years, or more than three serious collisions and/or one fatal collision in five years | 5+ serious / fatal collisions (or more than one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years |

---

<sup>6</sup> Key local route is defined as a road which serves as a main route for through-traffic connecting one area to another.

| Sensitivity | Road Safety                                                                                           | Hazardous / Large Loads                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Medium      | 5-9 collisions (with up to three serious collisions and/or one fatal collision) in five years         | 3-4 serious / fatal collisions (with up to one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years |
| Low         | 3-4 collisions in five years (with up to one serious collision and no fatal collisions) in five years | 1-2 serious collisions (with no fatal collisions) involving a good vehicle (>3.5 tonnes) in five years                |
| Negligible  | Fewer than three collisions (with no serious or fatal collisions) in five years                       | No serious or fatal collisions involving a goods vehicle (>3.5 tonnes) in five years                                  |

### ***Magnitude of Impacts***

- 21.5.30 As identified within the 2023 Guidelines (Ref. 7), the magnitude of each impact represents the level of change from the baseline conditions.
- 21.5.31 This assessment will consider the potential effects that could be experienced during construction. The operational phase of the development will result in negligible to zero traffic and as such is scoped out of the assessment. This section identifies how magnitude will be considered for each type of effect.
- 21.5.32 Severance is defined in the 2023 Guidelines as the “...*perceived division that can occur within a community when it becomes separated by major traffic infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure*”. The 2023 Guidelines states that changes in traffic flow of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively. However, caution should be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes in traffic.
- 21.5.33 Driver Delay relates to incremental increases in traffic (as outlined in **Table 21-8**). However, traffic delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the network.
- 21.5.34 NMU Delay including pedestrian delay is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective impacts on the ability of pedestrians to cross roads. The assessment of pedestrian delay serves as a proxy for the delay that other modes of NMUs may experience when crossing roads. In general,

increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay.

21.5.35 NMU Amenity is broadly defined as “...*the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width / separation from traffic*”. The guidance suggests that a “...*tentative threshold for judging the significance of changes in non-motorised user amenity would be where the traffic flow (or HGV component) is halved or doubled*”.

21.5.36 Fear and Intimidation occurs through a combination of volume of traffic flow, heavy vehicle composition, vehicle speeds, and the proximity of traffic to people. These indicators are often heightened by a perceived lack of protection or buffers from the highway or through narrow or non-existent footways. The assessment considers each road on a case-by-case basis, however there are thresholds provided in the 2023 Guidelines which are presented in **Table 21-7**.

21.5.37 Details relating to Fear and Intimidation, in terms of calculating magnitude of impact based on Table 3.1 of 2023 Guidelines, are replicated in **Table 21-7**.

**Table 21-7: Fear and Intimidation (Degree of Hazard)**

| Average Traffic Flow over 18-hour day – all vehicles / hour 2-way (a) | Total 18-hour heavy vehicle flow (b) | Average vehicle speed (mph) (c) | Degree of hazard score |
|-----------------------------------------------------------------------|--------------------------------------|---------------------------------|------------------------|
| +1,800                                                                | +3,000                               | >40                             | 30                     |
| 1,200 – 1,800                                                         | 2,000 – 3,000                        | 30 – 40                         | 20                     |
| 600 – 1,200                                                           | 1,000 – 2,000                        | 20 – 30                         | 10                     |
| <600                                                                  | <,1000                               | <20                             | 0                      |

21.5.38 The 2023 Guidelines states that “...*the total score from all three elements is combined to provide a ‘level’ of fear and intimidation for all three elements*”. The following provides the levels of fear and intimidation scoring following the combined scores of the three elements above (a) + (b) + (c), as extracted from Table 3.2. of the 2023 Guidelines:

- a. Small: Total hazard score of 0- 20;
- b. Moderate: Total hazard score of 21- 40;
- c. Great: Total hazard score of 41- 70; and
- d. Extreme: Total hazard score of 71+.

21.5.39 With regards to hazardous large loads, the 2023 Guidelines states that “...*it is best practice to include transport related hazard and accident*

*assessment in a wider environmental assessment that contains a project-wide accident and disaster assessment".* On the basis that the Proposed Development is not expected to generate significant hazardous / large loads during construction and operational phase, this matter has been scoped out.

21.5.40 As for large loads, the 2023 Guidelines states that *"If frequent abnormal load movements are anticipated (e.g. heavy plant movements), the traffic and transport expert should consider if other traffic impacts could be induced (e.g. fear and intimidation, driver delay, etc.)"*. Therefore, the magnitude of impact relating to large loads will be embedded with the assessment of other criteria (e.g. fear and intimidation, driver delay).

21.5.41 **Table 21-8** sets out the proposed magnitude thresholds for the respective environmental effects, contextualising the impact to the baseline scenario.

**Table 21-8: Magnitude of Impact of Affected Parties / Receptors**

| Impact                                  | Negligible                                                                            | Low                                                                             | Medium                                                                          | High                                                           |
|-----------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------|
| Severance of communities                | Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%). | Increase in total traffic flows of 30-59% (or increase in HGV flows of 10-39%). | Increase in total traffic flows of 60-89% (or increase in HGV flows of 40-89%). | Increase in total traffic flows or HGV flows of 90% and above. |
| Road Vehicle Driver and Passenger Delay | Increase in total traffic flows of below 30%.                                         | Increase in total traffic flows of 30-59%.                                      | Increase in total traffic flows of 60-89%.                                      | Increase in total traffic flows of 90% and above.              |
| NMU Delay including pedestrian delay    | Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%). | Increase in total traffic flows of 30-59% (or increase in HGV flows of 10-39%). | Increase in total traffic flows of 60-89% (or increase in HGV flows of 40-89%). | Increase in total traffic flows or HGV flows of 90% and above. |
| NMU Amenity                             | Increase in total traffic flows of below 50%.                                         | Increase in total traffic flows of 50-69%.                                      | Increase in total traffic flows of 70-99%.                                      | Increase in total traffic flows of 100% or above.              |

| Impact                                     | Negligible                                                                                                          | Low                                                                                                                                   | Medium                                                                                                                                                                     | High                                                                                                                                                            |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fear and Intimidation on and by road users | No change in degree of hazard level for daily traffic flows, HGV flows and vehicle speeds (see <b>Table 21-7</b> ). | One step change in degree of hazard level (see <b>Table 21-7</b> ), but with <400 daily vehicle increases or <500 daily HGV increase. | One step change in degree of hazard level (see <b>Table 21-7</b> ), but with >400 daily vehicle increases or >500 daily HGV increase.                                      | Two step changes in degree of hazard level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see <b>Table 21-7</b> ). |
| Road User and Pedestrian Safety            | Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).                               |                                                                                                                                       | All links estimated to experience increases in total traffic flows of at least 30% or increases in HGV flows of at least 10% are analysed further on a case-by-case basis. |                                                                                                                                                                 |

21.5.42 Road User and Pedestrian Safety considers Personal Injury Collision (PIC) data obtained for the most recent five-year period available at junctions and links along the proposed construction traffic routes. The sensitivity of discrete areas of the highway network can then be determined following a detailed review of the baseline characteristics including the collision rate and any collision clusters.

21.5.43 **Table 21-7** and **Table 21-8** summarise the criteria that will be used to assess the magnitude of effect (based on increases i.e. 'adverse' effects), along with the thresholds that will be used to determine whether effects are considered high, medium, low or negligible. Depending on the baseline information available, the various thresholds identified for the proportional increases in traffic flow relate to peak hour flows and daily flows (whichever is highest). Within these tables, neither the sensitivity of receptors, nor the duration of effects, is taken into consideration.

### ***Significance of Effects***

21.5.44 The classification of effects is determined through the consideration of two elements; the magnitude of the impact and the sensitivity of the receptor as outlined above. **Table 21-9** shows the matrix that will be used to determine the effect category. Effects which are classified as major or moderate are considered to be 'significant' whilst effects classified as minor or negligible are considered to be 'not significant'.

**Table 21-9: Classification of effects**

| Magnitude         | Value and sensitivity of receptor |            |          |          |
|-------------------|-----------------------------------|------------|----------|----------|
|                   | Negligible                        | Low        | Medium   | High     |
| <b>Negligible</b> | Negligible                        | Negligible | Minor    | Minor    |
| <b>Low</b>        | Negligible                        | Minor      | Minor    | Moderate |
| <b>Medium</b>     | Minor                             | Minor      | Moderate | Major    |
| <b>High</b>       | Minor                             | Moderate   | Major    | Major    |

21.5.45 **Table 21-10** provides a qualitative definition of the classification of effects. This is important as it is a key step in the classification effect to critically consider whether the quantitative conclusion resulting from the methodology above, meets the qualitative definition of the effect. Professional judgment and reasoning need to be applied in instances where this is not the case, and the categorisation of the effect altered. Clear justification is necessary in such instances to enable decisions based on professional judgment to be evaluated.

**Table 21-10: Definition of effects**

| Effect            | Description                                                                                                                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Major</b>      | Effects, both adverse and beneficial, which are likely to be important considerations at a national to regional level because they contribute to achieving national / regional objectives, or which are likely to result in exceedance of statutory objectives and/or breaches of legislation. |
| <b>Moderate</b>   | Effects that are likely to be important considerations at a regional and local level.                                                                                                                                                                                                          |
| <b>Minor</b>      | Effects that could be important considerations at a local level.                                                                                                                                                                                                                               |
| <b>Negligible</b> | An effect that is likely to have a negligible or neutral influence, irrespective of other effects.                                                                                                                                                                                             |

## Assumptions, Limitations and Uncertainties

21.5.46 The following outlines the assumptions, limitations and uncertainties identified at this stage of the assessment.

### *Construction phase*

21.5.47 Further to **Chapter 3: The Proposed Development** in PEI Report **Volume 2**, additional preliminary details of the Proposed Development in relation to construction phase vehicle flows and access / egress points have been reviewed for each Part where available at this stage. The assessment of effects in this chapter has been based off these details. Further detail will

arise and this will be taken into consideration for the assessment of effects in the ES.

- 21.5.48 As a general approach, towpaths and PRoW are proposed to be kept open during the construction phase through the use of (e.g.) temporary railed and, if required, floating walkways that are installed in the canal as works progresses, or by providing a short temporary diversion to maintain accessibility although there may be some lengths of canal where this will not be possible. This is a standard method of working that is used by the Canal & River Trust (the 'Trust') where it is practical to do so.
- 21.5.49 Where construction routeing is not yet determined, particularly for Parts 2, 3, 4a and 4b, the general assumption is that it is to be on the most suitable routes where there are generally fewer sensitive receptors and less requirement for upgrading the existing roads to ensure minimal traffic and transport impact. This will be established, agreed with the relevant highway authority and confirmed at the ES stage. Where the construction routeing is not yet determined, it has not been possible to assess it within this preliminary assessment.
- 21.5.50 The indicative construction traffic numbers at this stage (presented in **Appendix 3-PD-1** in PEI Report **Volume 4**) are currently only available for Parts 1a and 1b which are based on initial estimates including an additional 20% uplift for contingency provided by the design team, based on the current stage of design. In addition, office based staff are still to be confirmed at this stage and are therefore currently not included in this preliminary assessment. Construction traffic numbers for Part 2, 3, 4a and 4b, including for office based staff will be confirmed at ES stage, and where applicable, suitable form of assessments will be conducted and mitigation identified.
- 21.5.51 It is anticipated that there will be no requirement for the use of Abnormal Indivisible Loads (AIL) vehicles required for construction. In addition, the Proposed Development is not expected to generate significant hazardous / large loads during construction and as well as operational phase.
- 21.5.52 Alternatives for transporting construction materials are being examined, such as using canal boats. This will help reduce the number of construction vehicle trips on the road network. However, at this stage, this assumption has not been used to inform the assessment.
- 21.5.53 As part of the assessment limitations, some of the specific details such as detailed construction traffic numbers and associated programme, particularly on some parts of the Proposed Development, are still being finalised and therefore may be subject to change as the project progresses. This therefore means that some Parts of the Proposed Development may contain more details than the other Parts.

### ***Operational phase***

- 21.5.54 During the operational phase, it is expected that the traffic and transport impacts will be negligible particularly where no infrastructure is proposed other than pipelines or the utilisation of existing rivers / canals.

## **21.6 Project-Wide Environmental Design, Standards and Management**

- 21.6.1 This section outlines embedded environmental design, standards and/or management measures in relation to traffic and transport 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.
- 21.6.2 The delivery of these embedded mitigation measures will be identified in the Outline Construction Environmental Management Plan (Outline CEMP) and Outline Operational Environmental Management Plan (Outline OEMP), which will be submitted with the DCO application. A Preliminary Outline CEMP is provided in **Appendix 24-PD-2** in PEI Report **Volume 4**.
- 21.6.3 An Outline Construction Traffic Management Plan (Outline CTMP) and Outline Public Rights of Way Management Plan (PRoWMP) will also be prepared for the DCO application, which sets out the routes that HGVs would adhere to when accessing the Proposed Development and measures to improve the sustainability of construction staff travel, along with other measures to minimise transport effects from construction traffic.
- 21.6.4 The management plan documents would contain the required embedded mitigation for each phase, which may include:
- a. A Detailed CTMP will be in place during construction phase to ensure the safe management of traffic in each working area;
  - b. In support of the Transport Assessment (TA) and ES, should traffic and transport have significant effects, classified traffic count surveys will be carried out;
  - c. Suitable access points have been identified to enable movement of vehicles into the construction works areas, where appropriate;
  - d. All access / egress points that require the creation of a junction bellmouth would be designed based on the relevant standards and in consultation with the relevant highway authority; thereby negating any potential safety impact associated with construction activity;
  - e. HGVs will be routed in accordance with the findings of the routing review for large vehicles – to be set out in the Outline CTMP, which will be produced alongside the ES;

- f. Utilising internal (haul) routes within the construction works areas to avoid using the existing road network where practicable; and
- g. Managing the areas where traffic may have to use the road network, by implementing traffic management (e.g. advanced signage to advise other users of the works, as well as manned controls at each crossing point [marshals / banksmen]), with a default priority that construction traffic will give-way to other users. This will also apply where construction traffic and PRow may intersect.

21.6.5 A Construction Workforce Travel Plan identifying measures to reduce the impact of the Project's construction workforce on the road network as a result of travel to and from worksites will be prepared and is likely to include the following measures

- a. Construction staff will be directed to take the most direct route to the proposed development using 'higher' order roads, such as A and B classified roads or the Strategic Road Network (SRN);
- b. Encouraging local construction workers to car share to reduce single occupancy car trips. This will promote the benefits of car sharing, such as reduced fuel costs. A car share system will be implemented where practicable to match potential sharers and to help staff identify any colleagues who could potentially be collected along their route to / from the proposed development. Other site-specific sustainable transport measures will be considered as appropriate; and
- c. Providing limited (but sufficient) on-site car and cycle parking to accommodate the expected parking demand of workers for the Proposed Development.

---

## Part 1a: Minworth AWTP

---

## 21.7 Part 1a: Minworth AWTP

- 21.7.1 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 in relation to traffic and transport for Part 1a (Minworth AWTP) of the Proposed Development.
- 21.7.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.7.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.7.4 The Part 1a Preliminary Order Limits crosses the administrative area of Birmingham City Council and North Warwickshire Borough Council / Warwickshire County Council. The area within Part 1a is comprised of agricultural land and elements of the existing Minworth Wastewater Recycling Centre (WwRC).
- 21.7.5 The Preliminary Order Limits interfaces with the Local Road Network (LRN) at A4097 Kingsbury Road, Water Orton Lane, and Minworth Parkway. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-2** in PEI Report **Volume 4** and are also shown in **Figure 21-P1A-1** in PEI Report **Volume 3**. No section of the SRN is crossed by the Part 1a Preliminary Order Limits.
- 21.7.6 The Preliminary Order Limits also crosses a total of three PRoW including three footpaths and no bridleways within the area (as listed in **Appendix 21-PD-3** in PEI Report **Volume 3** and shown in **Figure 21-P1A-2** in PEI Report **Volume 3**).

### Future Baseline

- 21.7.7 Where traffic flows are required, future baseline flows will be generated using local growth factors derived from the latest version of the Trip End Model Presentation Program (TEMPro).

### Environmental Design, Standards and Management

- 21.7.8 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 1a

Minworth AWTP of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## Assessment of Effects and Significance

- 21.7.9 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, 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

#### ***Construction impact on severance of communities***

- 21.7.10 Currently, there are no proposed temporary road closures and/or diversions as part of the construction of Part 1a (Minworth AWTP), resulting in no effect to severance of communities during construction.

#### *Additional Mitigation, Enhancement and Monitoring*

- 21.7.11 No additional mitigation / enhancement / monitoring is necessary as there is no effect.

#### *Residual Effect*

- 21.7.12 There is no effect.

#### ***Construction impact on NMU delay including pedestrian delay***

- 21.7.13 As much as practicable, PRow affected by the proposed construction will either be kept open during the works through the use of (e.g.) temporary railed walkways, or a short diversion will be provided to ensure that NMUs including pedestrians and cyclists can be accommodated. However, as a precautionary approach, it is uncertain at this stage that all PRow can be kept open at all times during the works.

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

#### *Additional Mitigation, Enhancement and Monitoring*

- 21.7.15 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

#### *Residual Effect*

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

***Construction impact on NMU amenity***

- 21.7.17 Similarly to the construction impact on NMU including pedestrian delay, the construction traffic impact on NMU amenity and its users is considered minimal. This is due to ensuring PRow and footways remain accessible throughout construction phase, as well as having negligible increase in traffic as a result of construction. However, as a precautionary approach, it is uncertain at this stage that all PRow can be kept open at all times during the works.
- 21.7.18 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.7.19 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

***Residual Effect***

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

***Construction impact on fear and intimidation on and by road users***

- 21.7.21 The construction of the Minworth AWTP is estimated to generate up to four two-way HGV trips (two arrivals and two departures) per hour and up to 18 construction staff trips. The HGV trips increase to six two-way trips (three arrivals and three departures) during the peak month of construction.
- 21.7.22 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible as it is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. Furthermore, it is likely to fall within the typical daily traffic variation level and therefore, does not require further consideration.
- 21.7.23 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.7.24 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

- 21.7.26 On average, the construction of the Minworth AWTP is estimated to generate up to four two-way HGV trips (two arrivals and two departures) per hour and up to 18 construction staff trips. The HGV trips increase to six two-way trips (three arrivals and three departures) during the peak month of construction. This level of construction traffic impact to receptors such as vehicle drivers and passengers, is therefore considered negligible as it is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. Furthermore, this is likely to fall within the typical daily traffic variation level and therefore does not require further consideration.
- 21.7.27 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.7.28 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road user and pedestrian safety***

- 21.7.30 As indicated above, the level of construction traffic to affect receptors such as vehicle drivers, passengers and NMUs is considered negligible and is likely to fall within the typical daily traffic variation level threshold.
- 21.7.31 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.7.32 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Summary**

- 21.7.34 **Table 21-11** summarises the residual traffic and transport effects of Part 1a of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-11: Summary of residual effects – Part 1a**

| <b>Description of impact</b>                                           | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| <b><i>Construction Phase</i></b>                                       |                                         |                                |                                            |                            |                                                                 |                                                             |                                     |
| Severance of communities due to temporary road closures and diversions | Vehicle drivers, passengers, and NMUs   | None                           | None                                       | None                       | No effect                                                       | None                                                        | No effect                           |
| NMU delay including pedestrian delay as a result of construction       | NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Low                        | Minor                                                           | None                                                        | Minor (Not Significant)             |
| NMU amenity delay as a result of construction                          | NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Low                        | Minor                                                           | None                                                        | Minor (Not Significant)             |

| <b>Description of impact</b>                                           | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Fear and intimidation on and by road users as a result of construction | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Road vehicle driver and passenger delay as a result of construction    | Vehicle drivers and passengers                                           | Low                            | Adverse, Short-term, Local                 | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Road user and pedestrian safety as a result of construction            | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

---

## Part 1b: Minworth to Atherstone Pipeline

---

## 21.8 Part 1b: Minworth to Atherstone Pipeline

- 21.8.1 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 effects in relation to traffic and transport for Part 1b (Minworth to Atherstone Pipeline) of the Proposed Development.
- 21.8.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.8.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.8.4 The Part 1b Preliminary Order Limits crosses the administrative area of North Warwickshire Borough Council / Warwickshire County Council. The area within Part 1b is generally rural in nature but does include the villages of Hurley, Lea Marston, Foul End, Baxterley and Atherstone.
- 21.8.5 The Preliminary Order Limits of the Proposed Development within the Part 1b (Minworth to Atherstone Pipeline) interfaces with several key roads, including the M42, M6 Toll, A446 Lichfield Road and the A446 Stonebridge; along with 40 local roads and country lanes. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and are also shown in **Figure 21-P1B-1** in PEI Report **Volume 3**.
- 21.8.6 The Preliminary Order Limits also crosses a total of 24 PRoW, including 21 footpaths and three bridleways as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and also shown in **Figure 21-P1B-2** in PEI Report **Volume 3**.

### Future Baseline

- 21.8.7 The North Warwickshire Local Plan (Adopted 2021) (Ref. 10) sets out growth between 2014 and 2033. The total emerging housing requirement for North Warwickshire is 9,598 homes between 2011-2033, of which 4,952 are outstanding as of April 2024. A minimum of 100 hectares (ha) of employment land is also expected to be provided between 2011-2033. A review of the Local Plan has also identified that there is no residential site allocated on Part 1b (Minworth to Atherstone Pipeline). An employment allocation is proposed in the vicinity of the A446 and Faraday Avenue, where there is also an existing employment site. The route also crosses over land that is

safeguarded for the construction of High Speed Rail Phase 2 (HS2). These are all anticipated to contribute to increased traffic flows in the future baseline.

- 21.8.8 Where traffic flows are required, future baseline flows will be generated using local growth factors derived from the latest version of TEMPro.

## **Environmental Design, Standards and Management**

- 21.8.9 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 1b of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## **Assessment of Effects and Significance**

- 21.8.10 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 1b (Minworth to Atherstone Pipeline) 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**

#### ***Construction impact on severance of communities***

- 21.8.11 There is a proposed temporary road closure with corresponding diversion routes along sections of Coleshill Road, south of Atherstone, as part of the construction of Part 1b.
- 21.8.12 The proposed temporary road closure and the corresponding diversion route is in proximity to Atherstone residential area and Atherstone Golf Club which is classed as highly sensitive receptor. However, full details of this closure, such as duration and timings, are still to be determined.
- 21.8.13 Due to the duration of the proposed temporary road closure and diversions being unknown at this stage, the construction impact on severance of communities will be assessed at ES stage.
- 21.8.14 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to have the potential to be major and significant.

#### ***Additional Mitigation, Enhancement and Monitoring***

- 21.8.15 At this stage, there are no identified mitigation measures for the closure of Coleshill Road. However, where practicable, additional measures for the

temporary road closure and diversion would be devised at the ES stage and through consultation with the local highway authority.

*Residual Effect*

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

***Construction impact on NMU delay including pedestrian delay***

- 21.8.17 As much as practicable, PRow affected by the proposed construction will either be kept open during the works through the use of (e.g.) temporary railed walkways; or a short diversion will be provided to ensure that NMUs including pedestrians, cyclists and equestrians can be accommodated. However, this will be reconfirmed at the ES stage with the final Proposed Development design.
- 21.8.18 For areas with highly sensitive receptors such as those near the Atherstone residential areas as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.
- 21.8.19 For areas with medium sensitivity receptors such as those near the villages of Hurley and Baxterley, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.
- 21.8.20 For areas with low / negligible sensitivity receptors such as those in rural locations, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor / negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.8.21 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas do not result in significant effects on NMU delay by minimising the distance of any PRow / footway diversions as well as duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

*Residual Effect*

- 21.8.22 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

***Construction impact on NMU amenity***

- 21.8.23 Similarly to the construction traffic impact on NMU including pedestrian delay, the construction traffic impact on NMU amenity and its users is considered minimal. This is due to ensuring PRow and footways remain accessible throughout the construction phase, as well as having negligible increase in traffic as a result of the construction works.
- 21.8.24 For areas with highly sensitive receptors such as those near the Atherstone residential areas as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.
- 21.8.25 For areas with medium sensitivity receptors such as those near the villages of Hurley and Baxterley, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.
- 21.8.26 For areas with low / negligible sensitivity receptors such as those in rural locations, as listed in **Appendix 21-PD-3** (PEI Report **Volume 4**), there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor / negligible and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.8.27 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas does not result in significant effects on NMU amenity by minimising the distance of any PRow / footway diversions as well as duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

***Residual Effect***

- 21.8.28 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

***Construction impact on fear and intimidation on and by road users***

- 21.8.29 As indicated under construction impact on road vehicle driver and passenger delay, the construction of Part 1b is estimated to generate up to six two-way HGV trips (three arrivals and three departures) per hour and up to 25 construction staff trips. The HGV trips increase to 14 two-way HGV trips (seven arrivals and seven departures) per hour during the peak month (one month) of construction.
- 21.8.30 It should be noted that majority of the construction works will be completed on a 'rolling' basis rather than simultaneously. Therefore, given the long geographic extent of Part 1b, these trips will be dispersed over a wide area.

- 21.8.31 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, and is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.
- 21.8.32 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.
- 21.8.33 However, as indicated above, there is a proposed temporary road closure and corresponding diversion route in proximity to Atherstone residential area and Atherstone Golf Club which is classed as highly sensitive receptor. Full details of this closure such as duration and timings are still to be determined.
- 21.8.34 Due to the duration of the proposed road closure and diversions being unknown at this stage, the construction impact on fear and intimidation on and by road users will be reassessed at ES stage.
- 21.8.35 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.8.36 No additional mitigation / enhancement / monitoring is necessary as a result of construction traffic.
- 21.8.37 Potential mitigation measures for the closure of Coleshill Road are still being investigated. However, where practicable, additional measures for the temporary road closure and diversion would be devised at the ES stage.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

- 21.8.39 On average, the construction of Part 1b is estimated to generate up to six two-way HGV trips (three arrivals and three departures) per hour and up to 25 construction staff trips. The HGV trips increase to 14 two-way HGV trips (seven arrivals and seven departures) per hour during the peak month (one month) of construction.
- 21.8.40 It should be noted that majority of the works will be completed on a 'rolling' basis rather than simultaneously. Therefore, given the long geographic extent of Part 1b, these trips will be dispersed over a wide area.

- 21.8.41 This level of construction traffic impact to receptors such as vehicle drivers and passengers, is therefore considered negligible, and is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.
- 21.8.42 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.
- 21.8.43 However, as indicated above, there is a proposed temporary road closure and corresponding diversion route in proximity to Atherstone residential area and Atherstone Golf Club which is classed as highly sensitive receptor. Full details of this closure such as duration and timings are still to be determined.
- 21.8.44 Due to the duration of the proposed road closure and diversions being unknown at this stage, the construction impact on road vehicle driver and passenger delay will be assessed at ES stage.
- 21.8.45 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be major and significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.8.46 No additional mitigation / enhancement / monitoring is necessary as a result of construction traffic.
- 21.8.47 At this stage, there are no identified mitigation measures for the closure of Coleshill Road. However, where practicable, additional measures for the temporary road closure and diversion would be devised at the ES stage.

*Residual Effect*

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

***Construction impact on road user and pedestrian safety***

- 21.8.49 As indicated above, the level of construction traffic to affect receptors such as vehicle drivers, passengers and NMUs is considered negligible and is likely to fall within the typical daily traffic variation level.
- 21.8.50 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.8.51 No additional mitigation / enhancement / monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Summary**

- 21.8.53 **Table 21-12** summarises the residual traffic and transport effects of Part 1b of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-12: Summary of residual effects – Part 1b**

| <b>Description of impact</b>                                                                                      | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b>                      | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b>                            |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------|
| <b><i>Construction Phase</i></b>                                                                                  |                                         |                                |                                            |                                                 |                                                                 |                                                             |                                                                |
| Severance of communities due to temporary road closures and diversions along Coleshill Road (south of Atherstone) | Vehicle drivers, passengers, and NMUs   | High                           | Temporary Adverse Short-term, Local        | To be confirmed at ES stage (likely to be High) | To be confirmed at ES stage (likely to be Major)                | To be confirmed at ES stage (likely to be Yes)              | To be confirmed at ES stage (likely to be Major [Significant]) |
| NMU delay including pedestrian delay as a result of construction near                                             | NMUs including pedestrians and cyclists | High                           | Temporary Adverse, Short-term, Local       | Low                                             | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)                                |

| <b>Description of impact</b>                                                                                                                                                              | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Atherstone residential area.                                                                                                                                                              |                                         |                                |                                            |                            |                                                                 |                                                             |                                     |
| NMU delay including pedestrian delay as a result of construction near the villages of Hurley and Baxterley, access to Atherstone Golf Club and minor residential roads within Atherstone. | NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| NMU delay including                                                                                                                                                                       | NMUs including                          | Negligible                     | Temporary Adverse,                         | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                         | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|--------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| pedestrian delay as a result of construction near rural areas with minimal receptors | pedestrians and cyclists                |                                | Short-term, Local                          |                            |                                                                 |                                                             |                                     |
| NMU amenity delay as a result of construction near Atherstone residential area       | NMUs including pedestrians and cyclists | High                           | Temporary Adverse, Short-term, Local       | Low                        | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)     |
| NMU amenity delay as a result of construction near the villages of                   | NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                       | <b>Receptor</b>                                 | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Hurley and Baxterley, access to Atherstone Golf Club and minor residential roads within Atherstone |                                                 |                                |                                            |                            |                                                                 |                                                             |                                     |
| NMU amenity delay as a result of construction near rural areas with minimal receptors              | NMUs including pedestrians and cyclists         | Negligible                     | Temporary Adverse, Short-term, Local       | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Fear and intimidation on and by road users as a result of                                          | Vehicle drivers, passengers, and NMUs including | High                           | Temporary Adverse, Short-term, Local       | High                       | Major                                                           | To be confirmed at ES stage                                 | Major Adverse (Significant)         |

| <b>Description of impact</b>                                                                                     | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| construction near Atherstone residential area, access to Atherstone Golf Club                                    | pedestrians and cyclists                                                 |                                |                                            |                            |                                                                 |                                                             |                                     |
| Fear and intimidation on and by road users as a result of construction near the villages of Hurley and Baxterley | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| Fear and intimidation on and by road users as a result of                                                        | Vehicle drivers, passengers, and NMUs including                          | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                                                                            | <b>Receptor</b>                | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b>                      | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b>                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|--------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------|
| construction near rural areas with minimal receptors                                                                                    | pedestrians and cyclists       |                                |                                            |                                                 |                                                                 |                                                             |                                                                        |
| Road vehicle driver and passenger delay as a result of construction near Atherstone residential area and access to Atherstone Golf Club | Vehicle drivers and passengers | High                           | Temporary Adverse, Short-term, Local       | To be confirmed at ES stage (likely to be High) | To be confirmed at ES stage (likely to be Major)                | To be confirmed at ES stage (likely to be Yes)              | To be confirmed at ES stage (likely to be Major Adverse [Significant]) |
| Road vehicle driver and passenger delay as a                                                                                            | Vehicle drivers and passengers | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                                      | Minor                                                           | None                                                        | Minor Adverse (Not Significant)                                        |

| <b>Description of impact</b>                                                                                | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| result of construction near the villages of Hurley and Baxterley                                            |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road vehicle driver and passenger delay as a result of construction near rural areas with minimal receptors | Vehicle drivers and passengers                                           | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |
| Road user and pedestrian safety as a result of construction                                                 | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | High                           | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | Yes                                                         | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                                                                                        | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| near Atherstone residential area                                                                                                                                                    |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road user and pedestrian safety as a result of construction near the villages of Hurley and Baxterley, access to Atherstone Golf Club and minor residential roads within Atherstone | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                        | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Road user and pedestrian safety as a result of construction near rural areas with minimal receptors | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

---

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

---

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

- 21.9.1 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 effects in relation to traffic and transport for Part 2 (Works to the Coventry, Oxford and Grand Union canals) of the Proposed Development.
- 21.9.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.9.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.9.4 The Part 2 Preliminary Order Limits crosses the administrative areas of North Warwickshire Borough Council, Warwickshire County Council, Nuneaton and Bedworth Borough Council, Coventry City Council, Rugby Borough Council, West Northamptonshire Council, and Milton Keynes City Council. The area within Part 2 is generally rural in nature, although it also passes through the urban areas of Nuneaton, Coventry, Rugby, Daventry, and Milton Keynes.
- 21.9.5 The Part 2 Preliminary Order Limits interfaces with key roads, including the M69, M6, A426 Leicester Road, A45, A361 Ashby Road, A5, and A508 Northampton Road; as well as 88 local roads and country lanes. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-2** in PEI Report **Volume 4** and are also shown in **Figure 21-P2-1** in PEI Report **Volume 3**.
- 21.9.6 The Preliminary Order Limits also crosses a total of 81 PRow, including 69 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**.

### Future Baseline

- 21.9.7 The North Warwickshire Local Plan (Adopted 2021) (Ref. 10) sets out growth between 2014 and 2033. The total emerging housing requirement for North Warwickshire is 9,598 homes between 2011-2033, of which 4,952 are outstanding as of April 2024. A minimum of 100 ha of employment land is

also expected to be provided between 2011-2033. A review of the Local Plan has also identified that there are no residential or employment site allocations within the Part 2 Preliminary Order Limits.

- 21.9.8 The Nuneaton and Bedworth Borough Plan Review (submitted in 2024) (Ref. 11) sets out growth between 2021 and 2039. The total emerging housing requirement for Nuneaton and Bedworth is 10,963 homes between 2021-2039, of which 8,202 are outstanding as of April 2024. A target of 87.85 ha of land for employment uses is expected to be provided between 2021-2039. Policy SHA3 is located to the east of Judkins Quarry at a proposed compound site, which is proposing a development of up to 400 dwellings.
- 21.9.9 The Coventry City Local Plan (Adopted 2017) (Ref. 12) sets out growth to 2041. The total emerging housing requirement for Coventry City is 30,913 homes between 2021-2041, of which 22,941 are outstanding as of August 2025. A minimum of 60 ha of employment land is also expected to be provided up to 2041. A review of the Local Plan has also identified that there are no residential or employment site allocations within the Part 2 Preliminary Order Limits.
- 21.9.10 The Rugby Borough Local Plan (Ref. 13) is currently being updated and sets out growth between 2024 and 2045. The total emerging housing requirement for Rugby is 3,358 homes between 2024-2045. A total of 94.5 ha of employment land is also expected to be provided up to 2045. A review of the Local Plan has also identified that there are no residential or employment site allocations within the Part 2 Preliminary Order Limits.
- 21.9.11 The West Northamptonshire Local Plan (Ref. 14) is currently being updated and sets out growth up to 2043. The total emerging housing requirement for West Northamptonshire is 39,150 homes up to between 2023-2041. A total of 38,450 new jobs and 168 ha of employment land is also expected to be provided up to 2041. A review of the Local Plan has identified that the 'Micklewell Park' residential development is currently under construction within the Part 2 Preliminary Order Limits.
- 21.9.12 The Milton Keynes City Council emerging Local Plan (Ref. 15) sets out growth to 2050. The total emerging housing requirement for Milton Keynes is 26,500 homes up to 2050. A total of 132 ha of employment land is also expected to be provided up to 2050. A review of the existing Local Plan (Ref. 16) has also identified that there are no residential or employment site allocations within the Part 2 Preliminary Order Limits.
- 21.9.13 Overall, across the authorities, a total of approximately 100,000 homes and 650 ha of employment land are proposed within the Local Plans. These are all anticipated to contribute to increased traffic flows in the future baseline.

- 21.9.14 Where traffic flows are required, future baseline flows will be generated using local growth factors derived from the latest version of TEMPro.

## **Environmental Design, Standards and Management**

- 21.9.15 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 2 of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## **Assessment of Effects and Significance**

- 21.9.16 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 2 (Works to the Coventry, Oxford and Grand Union canals) 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**

#### ***Construction impact on severance of communities***

- 21.9.17 At this stage, there are no proposed temporary road closures and/or diversions as part of the construction of Part 2, resulting in no effect to severance of communities during construction.

#### ***Additional Mitigation, Enhancement and Monitoring***

- 21.9.18 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

#### ***Residual Effect***

- 21.9.19 There is no effect.

#### ***Construction impact on NMU delay including pedestrian delay***

- 21.9.20 As much as practicable, PRoW and canal towpaths affected by the proposed construction of Part 2 will either be kept open during works through the use of (e.g.) temporary railed and, if required, floating walkways, or a short diversion will be provided to ensure that NMUs including pedestrians and cyclists can be accommodated. However, as a precautionary approach, it is uncertain at this stage that all PRoW can be kept open at all times during the works.
- 21.9.21 For areas with highly sensitive receptors such as those near the residential built up areas of Atherstone, Nuneaton, Weedon Bec High Street, Daventry,

Stoke Bruerne and Milton Keynes as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.

21.9.22 For areas with medium sensitive receptors such as the outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

21.9.23 For areas with low/negligible sensitive receptors such as those in rural locations, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor/negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.9.24 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas does not result in significant effects on NMU delay by minimising the distance of any PRow, footway or canal towpath diversions as well duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

*Residual Effect*

21.9.25 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

**Construction impact on NMU amenity**

21.9.26 Similarly to the construction impact on NMU including pedestrian delay, the construction traffic impact on NMU amenity and its users is considered minimal. This is due to ensuring PRow and footways remain accessible throughout construction phase, as well as having negligible increase in traffic as a result of construction.

21.9.27 For areas with highly sensitive receptors such as those near the residential built up areas of Atherstone, Nuneaton, Weedon Bec High Street, Daventry, Stoke Bruerne and Milton Keynes as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.

21.9.28 For areas with medium sensitive receptors such as the outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

- 21.9.29 For areas with low/negligible sensitive receptors such as those in rural locations, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor/negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.9.30 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas does not result in significant effects on NMU delay by minimising the distance of any PRow, footway and canal towpath diversions as well duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

*Residual Effect*

- 21.9.31 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

***Construction impact on fear and intimidation on and by road users***

- 21.9.32 As indicated under construction impact on road vehicle driver and passenger delay, the construction of Part 2 is estimated to generate up to five HGV trips per day (ten movements) and up to 20 construction staff trips at any one Indicative Working Area.

- 21.9.33 Therefore, given the long geographic extent of the Part 2 works, these trips will be dispersed over a wide area.

- 21.9.34 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

- 21.9.35 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.9.36 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

- 21.9.38 On average, the construction of Part 2 is estimated to generate up to five HGV trips per day (ten movements) and up to 20 construction staff trips at any one Indicative Working Area. Similarly to the assumptions made for Part 1b, the majority of the works will be completed on a 'rolling' basis rather than simultaneously.
- 21.9.39 Therefore, given the long geographic extent of the Part 2 works, these trips will be dispersed over a wide area. However, as a precautionary approach, the vehicle trips will be revisited once further details on the Proposed Development are known.
- 21.9.40 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. Again, this is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.
- 21.9.41 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.9.42 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

***Residual Effect***

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

***Construction impact on road user and pedestrian safety***

- 21.9.44 As indicated above, the level of construction traffic to affect receptors such as vehicle drivers, passengers and NMUs, is considered negligible and is likely to fall within the typical daily traffic variation level.
- 21.9.45 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.9.46 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

- 21.9.47 As there is no additional mitigation, enhancement or monitoring required/identified at this stage, the residual effect remains the same as stated for the pre-mitigation scenario.

**Summary**

- 21.9.48 **Table 21-13** summarises the residual traffic and transport effects of Part 2 of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-13: Summary of residual effects – Part 2**

| <b>Description of impact</b>                                                                                                              | <b>Receptor</b>                         | <b>Sensitivity of receptor</b>                  | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b>                     | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b>                                |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------|--------------------------------------------|------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------|
| <b><i>Construction Phase</i></b>                                                                                                          |                                         |                                                 |                                            |                                                |                                                                 |                                                             |                                                                    |
| Severance of communities due to temporary road closures and diversions                                                                    | Vehicle drivers, passengers, and NMUs   | To be confirmed at ES stage (likely to be High) | Adverse Short-term, Local                  | To be confirmed at ES stage (likely to be Low) | To be confirmed at ES stage (likely to be Moderate)             | To be confirmed at ES stage (likely to be Yes)              | To be confirmed at ES stage (likely to be Minor [Not Significant]) |
| NMU delay including pedestrian delay as a result of construction near central Atherstone, Nuneaton, Weedon Bec High Street, Stoke Bruerne | NMUs including pedestrians and cyclists | High                                            | Adverse, Short-term, Local                 | Low                                            | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)                                    |

| <b>Description of impact</b>                                                                                                                                     | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| and Milton Keynes                                                                                                                                                |                                         |                                |                                            |                            |                                                                 |                                                             |                                     |
| NMU delay including pedestrian delay as a result of construction near the outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston. | NMUs including pedestrians and cyclists | Medium                         | Adverse, Short-term, Local                 | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| NMU delay including pedestrian delay as a result of                                                                                                              | NMUs including pedestrians and cyclists | Negligible                     | Adverse, Short-term, Local                 | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                                                                             | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| construction near rural areas with minimal receptors                                                                                     |                                         |                                |                                            |                            |                                                                 |                                                             |                                     |
| NMU amenity delay as a result of construction near central Atherstone, Nuneaton, Weedon Bec High Street, Stoke Bruerne and Milton Keynes | NMUs including pedestrians and cyclists | High                           | Adverse, Short-term, Local                 | Low                        | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)     |
| NMU amenity delay as a result of construction near the                                                                                   | NMUs including pedestrians and cyclists | Medium                         | Adverse, Short-term, Local                 | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                           | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston. |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| NMU amenity delay as a result of construction near rural areas with minimal receptors  | NMUs including pedestrians and cyclists                                  | Negligible                     | Adverse, Short-term, Local                 | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Fear and intimidation on and by road users as a result of construction                 | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | High                           | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                                                     | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| near central Atherstone, Nuneaton, Weedon Bec High Street, Stoke Bruerne and Milton Keynes                                                       |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Fear and intimidation on and by road users as a result of construction near the outskirts of Atherstone and minor residential roads in Nuneaton, | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                      | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Rugby, and Braunston.                                                                                             |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Fear and intimidation on and by road users as a result of construction near rural areas with minimal receptors    | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |
| Road vehicle driver and passenger delay as a result of construction near central Atherstone, Nuneaton, Weedon Bec | Vehicle drivers and passengers                                           | High                           | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                                                                        | <b>Receptor</b>                | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| High Street, Stoke Bruerne and Milton Keynes                                                                                                                        |                                |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road vehicle driver and passenger delay as a result of construction near the outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston. | Vehicle drivers and passengers | Medium                         | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| Road vehicle driver and passenger                                                                                                                                   | Vehicle drivers and passengers | Low                            | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                                                                                           | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| delay as a result of construction near rural areas with minimal receptors                                                                              |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road user and pedestrian safety as a result of construction near central Atherstone, Nuneaton, Weedon Bec High Street, Stoke Bruerne and Milton Keynes | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | High                           | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                                                                | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Road user and pedestrian safety as a result of construction near the outskirts of Atherstone and minor residential roads in Nuneaton, Rugby, and Braunston. | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not significant)     |
| Road user and pedestrian safety as a result of construction near rural areas with                                                                           | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Adverse, Short-term, Local                 | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b> | <b>Receptor</b> | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------|-----------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| minimal receptors            |                 |                                |                                            |                            |                                                                 |                                                             |                                     |

---

## Part 3: Works to Daventry and Drayton Reservoirs

---

## 21.10 Part 3: Works to Daventry and Drayton Reservoirs

- 21.10.1 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 effects in relation to traffic and transport for Part 3 (Works to Daventry and Drayton Reservoirs) of the Proposed Development.
- 21.10.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.10.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.10.4 The Part 3 Preliminary Order Limits crosses the administrative area of West Northamptonshire Council. The general area within Part 3 is within the urban area of Daventry and Drayton.
- 21.10.5 The Part 3 Preliminary Order Limits interfaces with several key roads which includes the A361 Drayton Way, A361 Ashby Road, and the A425 Northern Road; along with seven local roads and country lanes. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-2** in PEI Report **Volume 4** and are also shown in **Figure 21-P3-1** in PEI Report **Volume 3**.
- 21.10.6 The Preliminary Order Limits also crosses a total of three PRow, including one footpath and two bridleways as listed in **Appendix 21-PD-3** in PEI Report **Volume 4** and are also shown in **Figure 21-P3-2** (PEI Report **Volume 3**).

### Future Baseline

- 21.10.7 The West Northamptonshire Local Plan (Ref. 14) is currently being updated and sets out growth up to 2043. The total emerging housing requirement for West Northamptonshire is 39,150 homes between 2023-2041. A total of 38,450 new jobs and 168 ha of employment land is also expected to be provided up to 2041. A review of the Local Plan has identified allocation D7 (allocated for employment uses) and allocation D4 (housing allocation of 120 dwellings) are located in proximity to the preliminary order limits of Part 3 (Daventry and Drayton Reservoirs). The Daventry North East SUE (Sustainable Urban Extension) is allocated as D3 in the West Northamptonshire Joint Core Strategy (WNJCS) and is located in proximity

to the preliminary order limits. This SUE will cater for the provision of a total of 3,400 dwellings. An outline planning application has been submitted for the whole site, although this is yet to be determined. It is expected that part of the site will be built after the plan period. It is expected that planning permission will be granted on this site before the plan is adopted and therefore will not need to be re-allocated. However, this area may need to be included as an allocation if the permission is not issued prior to submission.

- 21.10.8 Where traffic flows are required, future base line flows will be generated using local growth factors derived from the latest version of TEMPro.

## **Environmental Design, Standards and Management**

- 21.10.9 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 3 of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## **Assessment of Effects and Significance**

- 21.10.10 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 3 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**

#### ***Construction impact on severance of communities***

- 21.10.11 At this stage, there are no proposed temporary road closures and/or diversions as part of the construction of Part 3, resulting in no effect to severance of communities during construction.

#### ***Additional Mitigation, Enhancement and Monitoring***

- 21.10.12 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

#### ***Residual Effect***

- 21.10.13 There is no effect.

#### ***Construction impact on NMU delay including pedestrian delay***

- 21.10.14 As much as possible, PRow 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 to ensure that NMUs including pedestrians and cyclists can be accommodated. However, as a precautionary approach, it is uncertain at this stage that all PRow can be kept open at all times during the works.

- 21.10.15 Based on the above, there is likely to be short-term, adverse effect which is considered to be minor and not significant.

*Additional Mitigation, Enhancement and Monitoring*

- 21.10.16 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Construction impact on NMU amenity**

- 21.10.18 Similarly to the construction impact on NMU including pedestrian delay, the construction traffic impact on NMU amenity is considered minimal. This is due to ensuring PRow and footways remain accessible throughout construction phase, as well as having negligible increase in traffic as a result of construction.

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

*Additional Mitigation, Enhancement and Monitoring*

- 21.10.20 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Construction impact on fear and intimidation on and by road users**

- 21.10.22 The construction of Part 3 is estimated to generate very low construction traffic.

- 21.10.23 This level of construction traffic is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

21.10.24 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.10.25 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

21.10.27 The construction of Part 3 is estimated to generate very low construction traffic.

21.10.28 This level of construction traffic is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

21.10.29 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.10.30 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road user and pedestrian safety***

21.10.32 As indicated above, the level of construction traffic to affect road user and pedestrian safety is considered negligible and is likely to fall within the typical daily traffic variation level.

21.10.33 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.10.34 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact of hazardous/large loads***

21.10.36 It is anticipated that there will be no AIL vehicles and minimal HGV requirements for the construction of Part 3. However, specific details regarding hazardous loads are still to be confirmed.

*Additional Mitigation, Enhancement and Monitoring*

21.10.37 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Summary**

21.10.39 **Table 21-14** summarises the residual traffic and transport effects of Part 3 of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-14: Summary of residual effects – Part 3**

| <b>Description of impact</b>                                                   | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|--------------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| <b><i>Construction Phase</i></b>                                               |                                |                                            |                            |                                                                 |                                                             |                                     |
| Severance of communities due to temporary road closures and diversions         | None                           | None                                       | No Effect                  | None                                                            | No Effect                                                   | No Effect                           |
| NMU delay including pedestrian delay as a result of construction traffic       | Low                            | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor (Not Significant)             |
| NMU amenity delay as a result of construction traffic                          | Low                            | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor (Not Significant)             |
| Fear and intimidation on and by road users as a result of construction traffic | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Road vehicle driver and passenger delay as a result of construction traffic    | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                        | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b>    | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|---------------------------------------------------------------------|--------------------------------|-----------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Road user and pedestrian safety as a result of construction traffic | Low                            | Temporary<br>Adverse,<br>Short-term,<br>Local | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

---

## Part 4a: Abstraction, Storage and Treatment

---

## 21.11 Part 4a: Abstraction, Storage and Treatment

- 21.11.1 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 effects in relation to traffic and transport for Part 4a (Abstraction, Storage and Treatment) of the Proposed Development.
- 21.11.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.11.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.11.4 The Part 4a Preliminary Order Limits crosses the administrative area of Buckinghamshire Council. However, the north-western access point to Part 4a on A4146, attributed with the abstraction element, is located within the local authority area of Milton Keynes City Council. 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.
- 21.11.5 The Part 4a Preliminary Order Limits interfaces with the A4146 Stoke Road and Galley Lane. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-2** in PEI Report **Volume 4** and are also shown in **Figure 21-P4A-1** in PEI Report **Volume 3**.
- 21.11.6 The Preliminary Order Limits also cross one canal towpath, which is a PRow footpath, and no bridleways 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**.

### Future Baseline

- 21.11.7 The Boundary of Buckinghamshire Council Local Plan (Ref. 17), this area has no developments allocated within the area.
- 21.11.8 However, where traffic flows are required, future base line flows will be generated using local growth factors derived from the latest version of TEMPro.

## Environmental Design, Standards and Management

- 21.11.9 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 4a of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## Assessment of Effects and Significance

- 21.11.10 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 4a 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

#### *Construction impact on severance of communities*

- 21.11.11 At this stage, there are no proposed temporary road closures as part of the construction of Part 4a, resulting in no effect to severance of communities during construction. This will be reconfirmed at the ES stage with the final Proposed Development design.

#### *Additional Mitigation, Enhancement and Monitoring*

- 21.11.12 No additional mitigation/enhancement/monitoring is necessary as there is no effect.

#### *Residual Effect*

- 21.11.13 There is no effect.

#### *Construction impact on NMU delay including pedestrian delay*

- 21.11.14 As much as possible, PRow affected by the proposed Part 4a construction will either be kept open during works through the use of (e.g.) temporary railed walkways or a short diversion will be provided to ensure that NMUs including pedestrians and cyclists can be accommodated. However, as a precautionary approach, it is uncertain at this stage that all PRow can be kept open at all times during the works.

- 21.11.15 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

#### *Additional Mitigation, Enhancement and Monitoring*

- 21.11.16 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on NMU amenity***

21.11.18 Similarly to the construction impact on NMUs including pedestrian delay, the construction traffic impact on NMU amenity and its users is considered minimal. This is due to ensuring PRow and footways remain accessible throughout construction phase, as well as having negligible increase in traffic as a result of construction.

21.11.19 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.11.20 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on fear and intimidation on and by road users***

21.11.22 The construction of Part 4a is estimated to generate up to 5,100 HGV movements throughout the duration of construction. This equates to less than two two-way HGV trips (one arrival and one departure) per hour and a small amount of construction staff trips (i.e. less than 30 two-way trips per hour).

21.11.23 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

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

*Additional Mitigation, Enhancement and Monitoring*

21.11.25 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

21.11.27 On average, the construction of Part 4a is estimated to generate up to 5,100 HGV movements throughout the duration of construction. This equates to less than two two-way HGV trips (one arrival and one departure) per hour and a small amount of construction staff trips (less than 30 two-way trips per hour).

21.11.28 This level of construction traffic impact to receptors such as vehicle drivers and passengers, is therefore considered negligible, is expected to be less than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

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

*Additional Mitigation, Enhancement and Monitoring*

21.11.30 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road user and pedestrian safety***

21.11.32 As indicated above, the level of construction traffic to affect receptors such as vehicle drivers, passengers and NMUs is considered negligible and is likely to fall within the typical daily traffic variation level.

21.11.33 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.11.34 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

**Summary**

21.11.36 **Table 21-15** summarises the residual traffic and transport effects of Part 4a of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-15: Summary of residual effects – Part 4a**

| <b>Description of impact</b>                                                   | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| <b><i>Construction Phase</i></b>                                               |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Severance of communities due to temporary road closures and diversions         | Vehicle drivers, passengers, and NMUs                                    | None                           | None                                       | None                       | No Effect                                                       | None                                                        | No Effect                           |
| NMU delay including pedestrian delay as a result of construction traffic       | NMUs including pedestrians and cyclists                                  | Negligible                     | Temporary Adverse, Short-term, Local       | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| NMU amenity delay as a result of construction traffic                          | NMUs including pedestrians and cyclists                                  | Negligible                     | Temporary Adverse, Short-term, Local       | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Fear and intimidation on and by road users as a result of construction traffic | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Negligible                     | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Road vehicle driver and passenger delay as a result of construction traffic | Vehicle drivers and passengers                                           | Negligible                     | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| Road user and pedestrian safety as a result of construction traffic         | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Negligible                     | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

---

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

---

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

- 21.12.1 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 effects in relation to traffic and transport for Part 4b (Pipeline to an Existing Underground Reservoir near Luton) of the Proposed Development.
- 21.12.2 Further indicative information of the Proposed Development (such as vehicle traffic numbers, access / egress, construction programme) is presented in **Appendix 3-PD-1** (PEI Report **Volume 4**) which has provided assumptions for this preliminary assessment to be based on.

### Baseline Conditions

- 21.12.3 This section describes the baseline environmental characteristics with specific reference to traffic and transport.

### Existing Baseline

- 21.12.4 The Part 4b Preliminary Order Limits crosses the administrative area of Milton Keynes City Council, Buckinghamshire Council, and Central Bedfordshire Council. The area within Part 4b is generally rural in nature, passing to the south of Dunstable towards the end of the route.
- 21.12.5 The Part 4b Preliminary Order Limits interfaces with several key roads which includes the A5, A4012 Leighton Road, A505 and A5183 Watling Street; along with 25 local roads and country lanes. Detailed descriptions of these roads along with its corresponding 'Link Sensitivity' are listed in **Appendix 21-PD-2** in PEI Report **Volume 4** and are also shown in **Figure 21-P4B-1** in PEI Report **Volume 3**.
- 21.12.6 The Preliminary Order Limits also 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 are also shown in **Figure 21-P4B-2** in PEI Report **Volume 3**.

### Future Baseline

- 21.12.7 The Milton Keynes City Council emerging Local Plan (Ref. 15) sets out growth to 2050. The total emerging housing requirement for Milton Keynes is 26,500 homes up to 2050. A total of 132 ha of employment land is also expected to be provided up to 2050. A review of the Local Plan (Ref. 16) has also identified that there are no residential or employment site allocations within the Part 4b (Pipeline to Underground Reservoir near Luton) works area.

- 21.12.8 The Buckinghamshire draft Local Plan (Ref. 17) sets out growth to 2045. The total emerging housing requirements for Buckinghamshire is approximately 95,000 homes up to 2045. A total of 49.5 ha of employment land is also expected to be provided up to 2045. A review of the draft Local Plan indicates that allocated sites are not yet determined, and therefore the existing Local Plan has been reviewed and has identified that there are no residential or employment site allocations within the Part 4b works area.
- 21.12.9 The Central Bedfordshire Local Plan (Ref. 18) sets out growth to 2035, with a new Local Plan currently being developed. However, the housing and employment growth and allocations are not yet available for the new Local Plan. The existing Local Plan (Ref. 19) sets out that the total emerging housing requirement for 39,950 homes up to 2035. A total of 118 ha of employment land is also expected to be provided up to 2035. A review of the Local Plan has also identified that there are no residential or employment site allocations within the Part 4b works area.
- 21.12.10 Across the three authorities, a total of approximately 161,450 homes and 299.5 ha of employment land are proposed within the Local Plans. These are all anticipated to contribute to increased traffic flows in the future baseline.
- 21.12.11 Where traffic flows are required, future baseline flows will be generated using local growth factors derived from the latest version of TEMPro.

## **Environmental Design, Standards and Management**

- 21.12.12 There are no further embedded environmental design, standards and/or management in relation to traffic and transport that are specific to Part 4b of the Proposed Development beyond those stated in section 21.6 for the project as a whole.

## **Assessment of Effects and Significance**

- 21.12.13 This section provides the preliminary assessment of likely significant effects, including determining the level of significance, for Part 4b 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**

### ***Construction impact on severance of communities***

- 21.12.14 At this stage, there are no proposed temporary road closures and/or diversions as part of the construction of Part 4b, resulting in no effect to severance of communities during construction.

21.12.15 However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Additional Mitigation, Enhancement and Monitoring*

21.12.16 No additional mitigation/enhancement/monitoring is necessary as there is no effect.

*Residual Effect*

21.12.17 There is no effect.

***Construction impact on NMU delay including pedestrian delay***

21.12.18 As much as practicable, PRow affected by the proposed construction of Part 4b will either be kept open during works through the use of (e.g.) temporary railed walkways or a short diversion will be provided to ensure that NMUs including pedestrians and cyclists can be accommodated.

21.12.19 However, this will be reconfirmed at the ES stage with the final Proposed Development design.

21.12.20 For areas with highly sensitive receptors such as those near Manshead Academy in Caddington as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.

21.12.21 For areas with medium sensitive receptors such as near the Little Brickhill village as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.

21.12.22 For areas with low/negligible sensitive receptors such as those in rural locations, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor/negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.12.23 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas does not result in significant effects on NMU delay by minimising the distance of any PRow/footway diversions as well duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

*Residual Effect*

21.12.24 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

***Construction impact on NMU amenity***

- 21.12.25 Similarly to the construction impact on NMU including pedestrian delay, the construction traffic impact on NMU amenity and its users is considered minimal. This is due to ensuring PRow and footways remain accessible throughout construction phase, as well as having negligible increase in traffic as a result of construction.
- 21.12.26 For areas with highly sensitive receptors such as those near Manshead Academy in Caddington as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be moderate and significant.
- 21.12.27 For areas with medium sensitive receptors such as near the Little Brickhill village as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor and not significant.
- 21.12.28 For areas with low/negligible sensitive receptors such as those in rural locations, as listed in **Appendix 21-PD-3** in PEI Report **Volume 4**, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be minor/negligible and not significant.

***Additional Mitigation, Enhancement and Monitoring***

- 21.12.29 Additional measures are necessary to ensure that the construction effects on highly sensitive receptor areas does not result in significant effects on NMU delay by minimising the distance of any PRow/footway diversions as well duration of the disruption as much as possible and/or introducing management measures. This may include ensuring NMU access remains open or a very short diversion is provided.

***Residual Effect***

- 21.12.30 With the above potential mitigation measures in place, there is likely to be a direct, temporary short-term, adverse residual effect which is considered to be minor and not significant.

***Construction impact on fear and intimidation on and by road users***

- 21.12.31 As indicated under construction impact on road vehicle driver and passenger delay, the construction of Part 4b is estimated to generate up to two two-way HGV trips per day (less than one HGV trip per hour) and up to five construction staff trips per construction area/compound. Given the long geographic extent of the Part 4b works, these trips will be dispersed over a wide area.
- 21.12.32 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the

development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

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

*Additional Mitigation, Enhancement and Monitoring*

- 21.12.34 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road vehicle driver and passenger delay***

- 21.12.36 On average, the construction of Part 4b is estimated to generate up to two two-way HGV trips (one arrival and one departure) per day (less than one HGV trips per hour) and up to five construction staff trips per construction area/compound. Given the long geographic extent of the Part 4b works, these trips will be dispersed over a wide area.

- 21.12.37 This level of construction traffic impact to receptors such as vehicle drivers, passengers and NMUs, is therefore considered negligible, is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours. This is likely to fall within the typical daily traffic variation level, and therefore does not require further consideration.

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

*Additional Mitigation, Enhancement and Monitoring*

- 21.12.39 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

***Construction impact on road user and pedestrian safety***

- 21.12.41 As indicated above, the level of construction traffic to affect receptors such as vehicle drivers, passengers and NMUs is considered negligible and is likely to fall within the typical daily traffic variation level.

21.12.42 Based on the above, there is likely to be a direct, temporary, short-term, adverse effect which is considered to be negligible and not significant.

*Additional Mitigation, Enhancement and Monitoring*

21.12.43 No additional mitigation/enhancement/monitoring is necessary. However, this will be reconfirmed at the ES stage with the final Proposed Development design.

*Residual Effect*

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

## Summary

21.12.45 **Table 21-16** summarises the residual traffic and transport effects of Part 4b of the Proposed Development, following the implementation of any identified additional mitigation, enhancement and/or monitoring.

**Table 21-16: Summary of residual effects – Part 4b**

| <b>Description of impact</b>                                                                                     | <b>Receptor</b>                         | <b>Sensitivity of receptor</b>                  | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b>                       | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b>                                        |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------|--------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|
| <b><i>Construction Phase</i></b>                                                                                 |                                         |                                                 |                                            |                                                  |                                                                 |                                                             |                                                                            |
| Severance of communities due to temporary road closures and diversions                                           | Vehicle drivers, passengers, and NMUs   | To be confirmed at ES stage (Likely to be High) | Temporary Adverse Short-term, Local        | To be confirmed at ES stage (likely to be Minor) | To be confirmed at ES stage (likely to be Moderate)             | To be confirmed at ES stage (likely to be Yes)              | To be confirmed at ES stage (likely to be Minor Adverse [Not Significant]) |
| NMU delay including pedestrian delay as a result of construction traffic near the Manshead Academy in Caddington | NMUs including pedestrians and cyclists | High                                            | Temporary Adverse, Short-term, Local       | Low                                              | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)                                            |

| <b>Description of impact</b>                                                                                     | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| NMU delay including pedestrian delay as a result of construction traffic near the village of Little Brickhill    | NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| NMU delay including pedestrian delay as a result of construction traffic near rural areas with minimal receptors | NMUs including pedestrians and cyclists | Negligible                     | Temporary Adverse, Short-term, Local       | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |
| NMU amenity delay as a result of                                                                                 | NMUs including                          | High                           | Temporary Adverse,                         | Low                        | Moderate                                                        | Yes                                                         | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                  | <b>Receptor</b>                         | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-----------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| construction traffic near the Manshead Academy in Caddington                                  | pedestrians and cyclists                |                                | Short-term, Local                          |                            |                                                                 |                                                             |                                     |
| NMU amenity delay as a result of construction traffic near the village of Little Brickhill    | NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Low                        | Minor                                                           | None                                                        | Minor Adverse (Not significant)     |
| NMU amenity delay as a result of construction traffic near rural areas with minimal receptors | NMUs including pedestrians and cyclists | Negligible                     | Temporary Adverse, Short-term, Local       | Low                        | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                                                           | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Fear and intimidation on and by road users as a result of construction traffic near the Manshead Academy in Caddington | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | High                           | Temporary Adverse, Short-term, Local       | Negligible                 | Moderate                                                        | None                                                        | Minor Adverse (Not Significant)     |
| Fear and intimidation on and by road users as a result of construction traffic near the village of Little Brickhill    | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| Fear and intimidation on and by road                                                                                   | Vehicle drivers, passengers, and NMUs                                    | Low                            | Temporary Adverse,                         | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |

| <b>Description of impact</b>                                                                                        | <b>Receptor</b>                    | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| users as a result of construction traffic near rural areas with minimal receptors                                   | including pedestrians and cyclists |                                | Short-term, Local                          |                            |                                                                 |                                                             |                                     |
| Road vehicle driver and passenger delay as a result of construction traffic near the Manshead Academy in Caddington | Vehicle drivers and passengers     | High                           | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| Road vehicle driver and passenger delay as a result of                                                              | Vehicle drivers and passengers     | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                        | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| construction traffic near the village of Little Brickhill                                                           |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road vehicle driver and passenger delay as a result of construction traffic near rural areas with minimal receptors | Vehicle drivers and passengers                                           | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Negligible (Not Significant)        |
| Road user and pedestrian safety as a result of construction traffic near the Manshead                               | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | High                           | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |

| <b>Description of impact</b>                                                                                | <b>Receptor</b>                                                          | <b>Sensitivity of receptor</b> | <b>Nature of impact / geographic scale</b> | <b>Magnitude of impact</b> | <b>Initial classification of effect (with embedded control)</b> | <b>Additional mitigation, enhancement and/or monitoring</b> | <b>Residual effect significance</b> |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|--------------------------------------------|----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------|
| Academy in Caddington                                                                                       |                                                                          |                                |                                            |                            |                                                                 |                                                             |                                     |
| Road user and pedestrian safety as a result of construction traffic near the village of Little Brickhill    | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Medium                         | Temporary Adverse, Short-term, Local       | Negligible                 | Minor                                                           | None                                                        | Minor Adverse (Not Significant)     |
| Road user and pedestrian safety as a result of construction traffic near rural areas with minimal receptors | Vehicle drivers, passengers, and NMUs including pedestrians and cyclists | Low                            | Temporary Adverse, Short-term, Local       | Negligible                 | Negligible                                                      | None                                                        | Negligible (Not Significant)        |

## 21.13 Combined Effects between Proposed Development Parts

21.13.1 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.

21.13.2 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 one: Review and identification of shared receptors from assessments undertaken for each technical chapter for interfacing Parts of the Proposed Development; and
- b. Step two: Assessment of combined effects for any shared receptors identified under Step one.

### Part 1a and Part 1b Cumulative Effects

#### *Step 1: Screening, review and identification of shared receptors*

21.13.3 **Table 21-17** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 1a and 1b of the Proposed Development.

**Table 21-17: Potential for combined effects between Parts 1a and 1b**

| Receptor groups                                                           | Potential for combined effects                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents) | Construction for both Part 1a and 1b of the Proposed Development have the potential to interface at Marsh Lane. There is therefore a theoretical pathway between Parts 1a and 1b of the Proposed Development sources of impact that could potentially result in combined effect on receptors within this receptor group.             |
| Road vehicle drivers and passengers at M42 Junction 9                     | Construction traffic for both Part 1a and 1b of the Proposed Development have the potential to interface at M42 Junction 9. There is therefore a theoretical pathway between Parts 1a and 1b of the Proposed Development sources of impact that could potentially result in combined effect on receptors within this receptor group. |

**Step 2: Source-pathway-receptors identification**

21.13.4 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 1a and Part 1b**

21.13.5 **Table 21-18** provides a summary of the potential combined effects review for Parts 1a and 1b of the Proposed Development.

**Table 21-18: Summary of potential combined effects between Parts 1a and 1b**

| Receptor groups                                                           | Potential combined effect? | Significance of combined effects                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents) | Yes                        | Significance of effect is no worse than those individually reported for each Part of the Proposed Development. This conclusion is based on the assumption that there will be minimal cumulative impact on the affected PRow and footways between the two parts of the Proposed Development. As well as keeping all PRow and footway to remain accessible as much as possible. |
| Road vehicle drivers and passengers at M42 Junction 9                     | Yes                        | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on the minimal level of construction traffic generated by the Proposed Development as well as the rolling basis construction programme.                                                                                                 |

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

21.13.6 **Table 21-19** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 1a and 1b of the Proposed Development.

**Table 21-19: Potential for combined effects between Parts 1b and 2**

| Receptor groups                        | Potential for combined effects                                                                                                                |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, | Construction traffic for both Part 1b and 2 of the Proposed Development have the potential to interface at Coleshill Road and the surrounding |

| Receptor groups                                                                                                         | Potential for combined effects                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| amenity users and usual residents)                                                                                      | residential streets within Atherstone area. This also includes the potential effects of the proposed temporary road closure at Coleshill Road and its corresponding diversion. 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 receptors within this receptor group.            |
| Road vehicle drivers and passengers along Coleshill Road and the surrounding residential streets within Atherstone area | Construction traffic for both Part 1b and 2 of the Proposed Development have the potential to interface at Coleshill Road and the surrounding residential streets within Atherstone area. 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 receptors within this receptor group. |

### ***Step 2: Source-pathway-receptors identification***

21.13.7 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***

21.13.8 **Table 21-20** provides a summary of the potential combined effects review for Parts 1b and 2 of the Proposed Development.

**Table 21-20: Summary of potential combined effects between Parts 1b and 2**

| Receptor groups                                                           | Potential combined effect? | Significance of combined effects                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents) | Yes                        | Significance of effect is likely to be greater than those individual reported for each Part of the Proposed Development; resulting in a Moderate Adverse (Significant) effect. However, by providing measures such as PRow and footways being kept open during works through the use of (e.g.) temporary railed walkways or a short diversion, will help reduce the |

| Receptor groups                                                                                                         | Potential combined effect? | Significance of combined effects                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                         |                            | construction effects to Minor Adverse (Not Significant).                                                                                                                                                                                                                                                                                                                                            |
| Road vehicle drivers and passengers along Coleshill Road and the surrounding residential streets within Atherstone area | Yes                        | Significance of effect is likely to be the same as individually reported for each Part of the Proposed Development; resulting in a Major Adverse (Significant) effect. At this stage, there are no identified mitigation measures for the closure of Coleshill Road. However, where practicable, additional measures for the temporary road closure and diversion would be devised at the ES stage. |

## Part 2 and Part 3 Cumulative Effects

### *Step 1: Screening, review and identification of shared receptors*

21.13.9 **Table 21-21** 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 21-21: Potential for combined effects between Parts 2 and 3**

| Receptor groups                                                                                             | Potential for combined effects                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents)                                   | Construction for both Part 2 and 3 of the Proposed Development have the potential to interface along the A361, particularly at the A361 / Farnborough Drive roundabout. 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 receptors within this receptor group.         |
| Road vehicle drivers and passengers along the A361, particularly at the A361 / Farnborough Drive roundabout | Construction traffic for both Part 2 and 3 of the Proposed Development have the potential to interface along the A361, particularly at the A361 / Farnborough Drive roundabout. 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 receptors within this receptor group. |

**Step 2: Source-pathway-receptors identification**

21.13.10 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**

21.13.11 **Table 21-22** provides a summary of the potential combined effects review for Parts 2 and 3 of the Proposed Development.

**Table 21-22: Summary of potential combined effects between Parts 2 and 3**

| Receptor groups                                                                                             | Potential combined effect? | Significance of combined effects                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents)                                   | Yes                        | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on the assumption that there will be minimal cumulative impact on the affected PRow and footways between the two parts of the Proposed Development. As well as, keeping all PRow and footway to remain accessible as much as possible. |
| Road vehicle drivers and passengers along the A361, particularly at the A361 / Farnborough Drive roundabout | Yes                        | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on the minimal level of construction traffic generated by the Proposed Development as well as the rolling basis construction programme.                                                                                                |

**Part 2 and Part 4 Cumulative Effects****Step 1: Screening, review and identification of shared receptors**

21.13.12 **Table 21-23** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 2 and 4 (combining Parts 4a and 4b) of the Proposed Development.

**Table 21-23: Potential for combined effects between Parts 2 and 4**

| Receptor groups                        | Potential for combined effects                                                                                       |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, | The Part 2 interface with Parts 4 is a non-works area. There is therefore no potential for Parts 2 to interface with |

| Receptor groups                     | Potential for combined effects                                                                                                                                                                                                                                                                                |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| amenity users and usual residents)  | Part 4 of the Proposed Development to result in a combined effect beyond those already identified for these Parts in isolation as no potential pathway for combined effects exists.                                                                                                                           |
| Road vehicle drivers and passengers | The Part 2 interface with Part 4 is a non-works area. There is therefore no potential for Part 2 to interface with either Part 4 of the Proposed Development to result in a combined effect beyond those already identified for these Parts in isolation as no potential pathway for combined effects exists. |

### ***Step 2: Source-pathway-receptors identification***

21.13.13 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 4***

21.13.14 **Table 21-24** provides a summary of the potential combined effects review for Parts 2, 4a and 4b of the Proposed Development.

**Table 21-24: Summary of potential combined effects between Parts 2, 4a and 4b**

| Receptor groups                                                           | Potential combined effect? | Significance of combined effects                                                                                                                                                                                           |
|---------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents) | No                         | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on Part 2 interface with Part 4 is a non-works area, therefore no cumulative effect. |
| Road vehicle drivers and passengers                                       | No                         | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on Part 2 interface with Part 4 is a non-works area, therefore no cumulative effect. |

## Part 4a and Part 4b Cumulative Effects

### *Step 1: Screening, review and identification of shared receptors*

21.13.15 **Table 21-25** reviews the relevant receptor groups to consider the potential for a combined effect to occur across Parts 4a and 4b of the Proposed Development.

**Table 21-25: Potential for combined effects between Parts 4a and 4b**

| Receptor groups                                                                                           | Potential for combined effects                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and usual residents)                                 | Construction for both Part 4a and 4b of the Proposed Development have the potential to interface at Galley Lane. There is therefore a theoretical pathway between Parts 4a and 4b of the Proposed Development sources of impact that could potentially result in combined effect on receptors within this receptor group.                                                                |
| Road vehicle drivers and passengers along Galley Lane, particularly at the A4146 / Galley Lane roundabout | Construction traffic for both Part 4a and 4b of the Proposed Development have the potential to interface at Galley Lane and particularly at the A4146 / Galley Lane roundabout. There is therefore a theoretical pathway between Parts 4a and 4b of the Proposed Development sources of impact that could potentially result in combined effect on receptors within this receptor group. |

### *Step 2: Source-pathway-receptors identification*

21.13.16 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 4a and Part 4b*

21.13.17 **Table 21-26** provides a summary of the potential combined effects review for Parts 1a and 1b of the Proposed Development.

**Table 21-26: Summary of potential combined effects between Parts 4a and 4b**

| Receptor groups                                          | Potential combined effect? | Significance of combined effects                                                                                  |
|----------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------|
| NMUs (including pedestrians, cyclists, amenity users and | Yes                        | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This |

| Receptor groups                                                                                           | Potential combined effect? | Significance of combined effects                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| usual residents) along Galley Lane                                                                        |                            | conclusion is based on the assumption that there will be minimal cumulative impact on the affected PRow and footways between the two parts of the Proposed Development. As well as, keeping all PRow and footway to remain accessible as much as possible.                    |
| Road vehicle drivers and passengers along Galley Lane, particularly at the A4146 / Galley Lane roundabout | Yes                        | Significance of effect is no worse than those individual reported for each Part of the Proposed Development. This conclusion is based on the minimal level of construction traffic generated by the Proposed Development as well as the rolling basis construction programme. |

## 21.14 Summary and Next Steps

- 21.14.1 The preliminary assessment of effects has identified that majority of the traffic and transport effects during construction will be either Negligible or Minor Adverse. This is due to the initial estimates indicating that the construction traffic generated by the Proposed Development are expected to be very low. Furthermore, PRow affected by the proposed construction will either be kept open during construction through the use of temporary railed walkways or a short diversion will be provided. This then minimises the construction traffic and transport impact in general. This will be reconfirmed at the ES stage with the final Proposed Development design.
- 21.14.2 However, a likely **Major Adverse (Significant)** effect for severance on community, and road vehicle driver and passenger delay as a result of construction in Part 1b (Minworth to Atherstone Pipeline) near Atherstone residential area has been identified. The current construction traffic has been identified as very low within this area; however, due to the highly sensitive receptor and the proposed road closure and diversion, it is anticipated that there will be **Major Adverse (Significant)** effect. At this stage, there are no identified mitigation measures for the closure of Coleshill Road. However, where practicable, additional measures for the temporary road closure and diversion would be devised at the ES stage. This will be assessed further at ES stage once further information is known on the final Proposed Development design.
- 21.14.3 At this stage, only Part 1b (Minworth to Atherstone Pipeline) has identified the need for a potential road closure and diversion for sections of Coleshill

Road as part of the construction of the Proposed Development near Atherstone area. It is still unknown whether other parts of the Proposed Development will also require road closures and diversions. This will be reconfirmed at the ES stage with the final Proposed Development design.

- 21.14.4 The preliminary assessment of effects has also identified that there will be a negligible impact during the operational stage on all parts of the Proposed Development.
- 21.14.5 The combined effects between the Proposed Development parts identified that there is potentially a **Major Adverse (Significant)** effect between the interface of Parts 1b and 2 due to the proposed road closure and diversion. At this stage, there are no identified mitigation measures for the closure of Coleshill Road. However, where practicable, additional measures for the temporary road closure and diversion would be devised at the ES stage. This will be assessed further at ES stage once further information is known on the final Proposed Development design.
- 21.14.6 The combined project-wide effects between the multiple Part interfaces is not anticipated to result in any worsening of the significance of effect than those individually reported for each Part of the Proposed Development. However, this will all be reassessed at ES stage once further information is available, particularly when the requirements for road closures, diversions and construction routeing have been fully identified.
- 21.14.7 The information provided in this PEI Report is preliminary, with the final assessment of likely significant effects to be reported in the ES.
- 21.14.8 Further work to be undertaken to support the assessments presented in the ES will include the Transport Assessment and (if required) traffic surveys to inform baseline if ES stage traffic flows are above the relevant criteria/thresholds.

## 21.15 References

- Ref. 1 Highways Act 1980. Available at:  
<https://www.legislation.gov.uk/ukpga/1980/66> [Accessed 24/10/2025].
- Ref. 2 Traffic Management Act 2004. Available at:  
<https://www.legislation.gov.uk/ukpga/2004/18/contents> [Accessed 24/10/2025].
- Ref. 3 Department for Environment, Food & Rural Affairs (Defra). (2023). National Policy Statement for Water Resources Infrastructure. Available at:  
[https://assets.publishing.service.gov.uk/media/6437e3a2f4d420000cd4a1a7/E02879931\\_National\\_Policy\\_Statement\\_for\\_Water\\_Resources.pdf](https://assets.publishing.service.gov.uk/media/6437e3a2f4d420000cd4a1a7/E02879931_National_Policy_Statement_for_Water_Resources.pdf)  
[Accessed 24/10/2025].

- Ref. 4 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 24/10/2025].
- Ref. 5 Ministry of Housing, Communities and Local Government, Ministry of Housing, Communities & Local Government. (2018 to 2021). and Department for Levelling Up, Housing and Communities. (2025). Planning Practice Guidance - Last updated February 2024. Available at: <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 24/10/2025].
- Ref. 6 Department for Transport (DfT) and National Highways (NH). (2013). Strategic road network and the delivery of sustainable development (DfT Circular 01/2022) – Last updated 23 December 2022. Available at: <https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development> [Accessed 24/10/2025].
- Ref. 7 Institute of Sustainability & Environmental Professionals, formerly known as Institute of Environmental Management and Assessment. (2023). Environmental Assessment of Traffic and Movement. (July 2023). Available at: <https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf> [Accessed 24/10/2025].
- Ref. 8 Rowmaps. (2025). Public Rights of Way Map. Available at: <https://www.rowmaps.com/> [Accessed 24/10/2025].
- Ref. 9 Department for Transport (DfT). (2025), Reported road casualties Great Britain, annual report: 2024. Available at: <https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-provisional-results-2024/reported-road-casualties-in-great-britain-provisional-estimates-2024> [Accessed 24/10/2025].
- Ref. 10 North Warwickshire. (2021). Local Plan for North Warwickshire. Available at: <https://www.northwarks.gov.uk/forward-planning/local-plan-north-warwickshire> [Accessed 24/10/2025].
- Ref. 11 Nuneaton and Bedworth Borough Council. (2022). Borough Plan Review (2021-2039). Available at: <https://www.nuneatonandbedworth.gov.uk/adopted-borough-plan/borough-plan-1> [Accessed 24/10/2025].

- Ref. 12 Coventry City Council (2017) Coventry Local Plan 2011-2031. Available at: <https://www.coventry.gov.uk/planning-policy/coventry-local-plan-2011-2031> [Accessed 24/10/2025].
- Ref. 13 Rugby Borough Council. (2019). Rugby Borough Local Plan 2011-2031. Available at: <https://www.rugby.gov.uk/w/local-plan-2011-2031> [Accessed 24/10/2025].
- Ref. 14 West Northamptonshire Council (2024) West Northamptonshire Local Plan – 2041 (Regulation 18) Consultation Draft April 2024. Available at: <https://www.westnorthants.gov.uk/planning-policy/new-local-plan-west-northamptonshire> [Accessed 24/10/2025].
- Ref. 15 Milton Keynes City Council. (2025). MK City Plan 2050. Available at: <https://www.milton-keynes.gov.uk/planning-and-building/planning-policy/mk-city-plan-2050/mk-city-plan-2050> [Accessed 24/10/2025].
- Ref. 16 Milton Keynes City Council. (2019). Plan: MK 2016-2031. Available at: <https://www.milton-keynes.gov.uk/planning-and-building/developingmk/planmk> [Accessed 24/10/2025].
- Ref. 17 Buckinghamshire Council. (2025). The Draft Local Plan for Buckinghamshire. Available at: <https://yourvoicebucks.citizenspace.com/planning/local-plan/> [Accessed 24/10/2025]
- Ref. 18 Central Bedfordshire Council. (2025). Central Bedfordshire Local Plan 2050. Available at: [https://www.centralbedfordshire.gov.uk/info/313/creating\\_great\\_places\\_to\\_live\\_-\\_new\\_local\\_plan](https://www.centralbedfordshire.gov.uk/info/313/creating_great_places_to_live_-_new_local_plan) [Accessed 24/10/2025].
- Ref. 19 Central Bedfordshire Council. (2021). Central Bedfordshire Local Plan 2015 – 2035. Available at: [https://www.centralbedfordshire.gov.uk/info/153/central\\_bedfordshire\\_local\\_plan\\_2015\\_to\\_2035/1034/adopted\\_local\\_plan](https://www.centralbedfordshire.gov.uk/info/153/central_bedfordshire_local_plan_2015_to_2035/1034/adopted_local_plan) [Accessed 24/10/2025].