

12 TRANSPORT AND ACCESS

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APPENDICES

Presented in Volume 3 of this Environmental Statement:

Appendix 12.1 Traffic assessment

Appendix 12.2 Link reference points

12.1 Introduction

- 12.1.1 This chapter of the Environmental Statement (ES) has been prepared to address the likely significant effects of the Proposed Development on transport and access during both the construction and operational phases.
- 12.1.2 It describes the methods used to assess the effects; the baseline conditions; any mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after these measures have been adopted.
- 12.1.3 This chapter is supported by the Transport Assessment which provided in **Appendix 12.1**.

12.2 Statutory and planning context

- 12.2.1 A summary of the statutory and planning policy context relevant to Transport and Access is provided in **Table 12.1** below.

Table 12.1 Legislation and guidance relevant to Transport and Access

Document	Summary
Legislation	
No legislation has been used in the assessments within this chapter.	
Development Plan Policy	
Future Wales: The National Plan 2040	<p><i>Future Wales: The National Plan 2040</i> sets out the direction for development in Wales up to 2040. It provides an overarching development plan with a strategy for addressing key national priorities through the planning system including sustaining and developing a vibrant economy, achieving decarbonisation and climate-resilience, developing strong ecosystems and improving the health and well-being of our communities. Planning decisions at every level of the planning system in Wales must be taken in accordance with the development plan as a whole.</p> <p>In relation to transport, the document states on page 51 that “<i>Significant investment in public transport, including Metro schemes and active travel infrastructure, including the walking and cycling routes being developed as a result of the Active Travel Act, provide an opportunity to re-think how our places work. Growth should be shaped around sustainable forms of transport and places that make us and the environment healthier. The National Cycle Network is an important part of our national infrastructure and its planned improvements are supported</i>”.</p> <p><i>Future Wales: The National Plan 2040</i> establishes 11 outcomes the Welsh Government wants to achieve over the next 20 years. Outcome 7 states that “<i>Sustainable transport infrastructure will be embedded within development to enable easy and convenient access from one place to another for commuting, business, tourism and leisure purposes. Development will focus on active travel and public transport, allied with a reduced reliance on private vehicles</i>”.</p>

Document	Summary
	<p>On page 174, it is noted that <i>“the Welsh Government wishes to see development built in sustainable locations that are supported by the active travel and public transport infrastructure and services needed to enable people to live active and healthy lives.”</i> In relation to Policy 36, the document goes on to state that <i>“The overall aim is to reduce the need to travel, particularly by private vehicles, and support a modal shift to walking, cycling and public transport”</i>.</p> <p>Policy 11 relates to National Connectivity which the Welsh Government is committed to improve. Their priorities are to encourage longer-distance trips to be made by public transport, while also making longer journeys possible by electric vehicles.</p>
<p>Neath Port Talbot Council Local Development Plan (2011-2026)</p>	<p>Neath Port Talbot Council's (NPTC's) Local Development Plan covers the period from 2011 to 2026 and guides future development, providing a clear vision setting out where, when and how much new development can take place. The document provides a set of objectives setting out the direction for the implementation of the vision and outlines a number of policies to guide development to achieve the vision.</p> <p>The Local Development Plan identifies the following Transport and Access policies:</p> <p>Policy SP 20 relates to the transport system and infrastructure which will be developed in a safe, efficient and sustainable manner through the following measures:</p> <ol style="list-style-type: none"> <i>1. Implementing key transport projects and supporting schemes identified in the Joint Transport Plan;</i> <i>2. Promoting connectivity and access to public transport through improving bus and rail facilities;</i> <i>3. Supporting enhancements to the walking and cycling network;</i> <i>4. Promoting park and share schemes along key highway routes;</i> <i>5. Promoting efficient use and links to the transport network through the identification of a road hierarchy;</i> <i>6. Restricting development which would have an unacceptable impact on highway safety;</i> <i>7. Requiring development proposals to be designed to provide safe and efficient access and promote sustainable transport;</i> <i>8. Requiring appropriate parking provision;</i> <i>9. Facilitating movement of freight by means other than road.</i> <p>Policy TR1 identifies key transport schemes including an integrated transport hub at Port Talbot. The policy states that <i>“Any scheme that would prevent, or have an adverse impact on the implementation of the schemes will be resisted”</i>.</p>

Document	Summary
	<p>Policy TR2 relates to new development and states that <i>“Development proposals will only be permitted where all of the following criteria, where relevant, are satisfied:</i></p> <ol style="list-style-type: none"> <i>1. The development does not compromise the safe, effective and efficient use of the highway network and does not have an adverse impact on highway safety or create unacceptable levels of traffic generation;</i> <i>2. Appropriate levels of parking and cycling facilities are provided and the access arrangements for the site allow for the safe manoeuvring of any service vehicles associated with the planned use;</i> <i>3. The development is accessible by a range of travel means, including public transport and safe cycle and pedestrian routes;</i> <i>4. Transport Assessments and Travel Plans are provided for developments that are likely to create significant traffic generation.”.</i> <p>Policy TR3 relates to safeguarding of disused railway infrastructure and states that development will be resisted under this policy where it would inhibit the re-opening or the re-use of disused railway infrastructure for transport purposes.</p> <p>Policy TR4 identifies key facilities to be safeguarded for the transportation of freight, including Port Talbot Docks and Port Talbot Tidal Harbour. Policy TR4 states that any scheme that would inhibit the use of such facilities for transport purposes will be resisted.</p>
Material Considerations	
Planning Policy Wales Edition 12 (PPW)	<p>PPW Edition 12 was published in February 2024 by the Welsh Government and sets out a framework for the Welsh planning authorities to prepare their development plans. Its primary objective is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales.</p> <p>At paragraph 4.1.1, PPW states that <i>“The planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:</i></p> <ul style="list-style-type: none"> <i>• Bringing services to people to reduce the need to travel. This is not about preventing travel altogether, it is about planning ahead for better physical and digital connectivity to support access to more local services, and more home and remote working. If more people can walk and cycle for</i>

Document	Summary
	<p>everyday trips, we will reduce our dependency on cars.</p> <ul style="list-style-type: none"> • <i>Allowing people and goods to move easily from door to door by accessible, sustainable and efficient transport. To achieve this, we will need to invest in reliable, efficient and affordable transport services that people want to use, can use and do use. We also need the transport infrastructure to support those services. We will make sure our transport infrastructure is safe, accessible, well maintained and future proofed, to adapt to climate change.</i> • <i>Where we need new transport infrastructure, we will use the sustainable transport hierarchy to give priority to meeting the demand for travel by walking, cycling and public transport ahead of private motor vehicles.</i> • <i>Encouraging people to make the change to more sustainable transport. If we are going to meet our climate change targets, we also need people to travel differently. Which means making it easier to do the right thing. We will do this by making low carbon sustainable transport more attractive and more affordable, and by adopting innovations.</i> <p>In relation to sustainable transport, PPW confirms in paragraph 4.1.8 that <i>“The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport”</i>.</p> <p>It goes on to state in paragraph 4.1.10 that <i>“The planning system has a key role to play in reducing the need to travel, particularly by private car, and supporting sustainable transport, by facilitating developments which:</i></p> <ul style="list-style-type: none"> • <i>are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;</i> • <i>are designed in a way which integrates them with existing land uses and neighbourhoods; and</i> • <i>make it possible for all short journeys within and beyond the development to be easily made by walking and cycling”</i>. <p>PPW also refers to a Sustainable Transport Hierarchy which prioritises walking, cycling and public transport ahead of private motor vehicles. In relation to the Sustainable Transport Hierarchy, paragraph 4.1.13 states that it <i>“should be used to reduce the need to travel, prevent car-dependent developments in unsustainable locations, and support the delivery of schemes located, designed and supported by infrastructure which prioritises access and movement by active and sustainable transport”</i>.</p> <p>In reference to supporting documentation with planning applications, paragraph 4.156 of PPW states that <i>“Transport Assessments are an important mechanism for setting out the scale of anticipated impacts a proposed development, or redevelopment, is likely to have. They assist in helping to anticipate the impacts of development</i></p>

Document	Summary
	<i>so that they can be understood and catered for appropriately".</i>

12.3 Consultation undertaken

- 12.3.1 Following preliminary informal scoping discussions with NPTC and the submission of an informal transport scoping consultation note (provided in **Appendix 4.1**), the scope of the Transport Assessment, including the scenarios to be assessed, study area, base traffic flow data and committed developments etc. has been agreed informally with NPTC. Subsequent correspondence also took place with the Welsh Government highways officers who confirmed they would not issue a direction/objection in respect to a future planning application.
- 12.3.2 The Proposed Development will result in a significant reduction in traffic movements, as detailed later, resulting in a significant overall betterment from a highway perspective during the operational phase of the development. Therefore, it has been agreed with NPTC that detailed capacity assessments of the impact of the development during the operational phase is not required in the Transport Assessment. It should be noted that there will also be a reduction in traffic movements during the construction phase when compared to the established baseline, as detailed later, although the Transport Assessment reports the traffic impact of the construction phase on the highway network.

12.4 Approach to the assessment

The Study Area

- 12.4.1 The Study Area for the Transport Assessment and the assessment presented within this chapter of the ES has been agreed informally with NPTC during scoping discussions and comprises the following junctions:
- M4 Junction 41 (A48 Heilbronn Way, A48 Pentyla-Baglan Road, B4286 Heilbronn Way, Car Park Access);
 - A48 Heilbronn Way, Car Park Access, A4241, Water Street;
 - A4241, Industrial Unit Access, Harbourside Road, Industrial Unit Access (West);
 - A4241, A4241 Harbour Way, North Bank Road;
 - A4241 Harbour Way, Oakwood Road, Llewellyn's Road;
 - A4241 Harbour Way, Port Talbot Steelworks West Gate Access;
 - A4241 Harbour Way, Port Talbot Steelworks Main Gate Access;
 - A4241 Harbour Way, A48 Margam Road, Access Road; and
 - M4 Junction 38.

Baseline surveys and established and Interim Baseline scenarios

- 12.4.2 Traffic flow survey data for all the above junctions within the Study Area has been taken from the Transport Assessment submitted with the Sustainable Aviation Fuel Production Facility planning application (ref. P2023/0858) at the Crown Wharf Port Talbot Docks. The traffic surveys were undertaken on Thursday 30th June 2022, in a neutral traffic

month when the Port Talbot Steelworks was fully operational, which represents the established baseline position. The surveys were validated with an automatic traffic count survey and accepted for use by NPTC during informal scoping discussions.

- 12.4.3 Due to the end-of-life stage of much of the heavy end at the steelworks, and in anticipation of the Proposed Development coming forward, the coke ovens have recently (March 2024) been turned off and the two blast furnaces are proposed to be switched off prior to construction of the Proposed Development. The reduction in staff and vehicle movements associated with this shut down is quantified later in this chapter.
- 12.4.4 Although scrap metal will be delivered to the Site post construction, it is intended that it will be delivered to and from the Site by rail. Delivery by road would no longer be viable and would not support the Applicant's plan to reduce its carbon footprint. On this basis and having regard to the reduction in staff as well as coal deliveries from the network, it is confirmed that the proposed construction and operational phase of the development will result in a significant reduction in traffic movements when compared to the established baseline position.
- 12.4.5 Whilst it is acknowledged that coal and scrap deliveries by road will halt prior to construction of the Proposed Development and the majority of staff reductions will have also taken place, which represents the 'interim baseline position', the traffic movements associated with these processes and staff have been established for many years. The 'interim baseline' is a period of several years during EAF construction where neither the heavy end, nor the EAF are operational and there is therefore a large short-term reduction in traffic during this period. The 'interim baseline' is not the primary basis for the assessment because of its temporary nature and from a planning perspective, the full Site with operating coke ovens and blast furnaces represents the established use of the Site, against which the impact of the development should be assessed, which has been agreed with the highway officers at NPTC.

Method of assessment

- 12.4.6 This chapter has been prepared with reference to the following:
- Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023); and
 - Design Manual for Roads and Bridges, Volume 11, Environmental Assessment (DMRB) [Superseded as detailed below].
- 12.4.7 To assess the likely significant effects of the Proposed Development and its traffic, the initial stages are:
- to determine the established and future year traffic levels and characteristics (established baseline);
 - to determine the time periods and year for assessment;
 - to identify the geographical boundaries of assessment (i.e. the Study Area); and
 - once this information is established, the predicted impacts are assessed, along with any measures to mitigate any negative impact.
- 12.4.8 As referenced above, the operational phase of the Proposed Development will result in a significant overall betterment provided from a highway perspective and therefore, it has been agreed with NPTC that detailed capacity assessments of the impact of the

development during the operational phase is not required in the Transport Assessment. Furthermore, there will also be a significant reduction in traffic movements during the construction phase when compared to the established baseline, although the Transport Assessment reports the traffic impact of the construction phase on the highway network.

- 12.4.9 Construction is anticipated to commence in July/August 2025 and run for circa 30 months with the facility operational by early 2028. The construction traffic generation estimates for the Proposed Development have been derived from the worst case 12-month average. The worst case 12-month period is that of December 2025 to November 2026 and as a result, this ES has adopted a 2026 future assessment year for the construction phase and a 2028 future assessment year for the operation phase. The 2026 future assessment year for the construction phase reflects the last 11 months of the most traffic intensive 12-month period of construction, and was agreed with NPTC.
- 12.4.10 The Transport Assessment reports the impact of the Proposed Development on the highway network during the AM and PM peak hours when the construction traffic associated with the Proposed Development is anticipated to be at its most intensive.
- 12.4.11 This ES also examines likely effects based on Annual Average Daily Traffic (AADT) flows.
- 12.4.12 The baseline AADT flows have been calculated from the peak period traffic data at established (2022) and future year (2026 – Construction and 2028 – Operation) levels using factors derived from local automatic traffic count data.

Magnitude of impact

- 12.4.13 To assess the overall significance of an effect it is necessary to establish the magnitude of the impact occurring, the changes to the baseline conditions as a result of the Proposed Development, and the sensitivity or importance of the receiving environment or receptor.
- 12.4.14 The magnitude of potential impacts (either beneficial or adverse) on environmental baseline conditions has been identified through the detailed consideration of the Proposed Development taking into account the following:
- Relevant legislation, policy or guidelines;
 - The degree to which the environment is potentially impacted for example, whether the quality is enhanced or impaired;
 - The scale or degree of change from baseline conditions as a result of the Proposed Development;
 - The duration of the impact for example, whether it is temporary or permanent and whether it is short, medium or long term; and
 - The reversibility of the impact.
- 12.4.15 The magnitude of impact is assessed for both the construction and operation phases using the criteria given in **Table 12.2**, which have been established with reference to the various guidance noted above and through professional experience and judgement.

Table 12.2 Magnitude of impact scoring criteria

Magnitude of impact score	Impact on receptor	Criteria
Large	Driver delay	Over 4 minute increase, averaged over all arms at a junction.

Magnitude of impact score	Impact on receptor	Criteria
	Public transport users	Over 4 minute increase in delay along bus routes in Study Area.
	Pedestrian delay	Over 4 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Doubling of traffic flow where the footway width is sub-standard (versus current design standards).
	Fear and intimidation	Change in degree of hazard from moderate to extreme.
	Severance	Over 90% increase in traffic flows on relevant links
	Accidents and road safety	Over 50% increase in traffic flows at locations with existing adverse accident record (blackspot).
Medium	Driver delay	Between 3 – 4 minute increase in delay, averaged over all arms at a junction.
	Public transport users	Between 3 – 4 minute increase in delay along bus route in Study Area.
	Pedestrian delay	Between 3 - 4 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Between 50%-100% increase in traffic flow where the footway width is sub-standard.
	Fear and intimidation	Change in degree of hazard from great to extreme.
	Severance	Between 60%-90% increase in traffic flows on relevant links.
	Accidents and road safety	30%-50% increase in traffic flows at location with accident rate above DMRB default for junction type.
Small	Driver delay	Between 2 - 3 minute increase in delay, averaged over all arms at junction.
	Public transport users	Between 2 - 3 minute increase in delay along bus route in Study Area.
	Pedestrian delay	Between 2 - 3 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Doubling of traffic flow where the footway width is satisfactory or up to 50% increase where the footway width is sub-standard.
	Fear and intimidation	Change in degree of hazard from moderate to great.
	Severance	Between 30%-60% increase in traffic flows on relevant links.
	Accidents and road safety	10%-30% increase in traffic flows at location with accident rate above DMRB default for junction type.
Negligible	Driver delay	Less than 2 minute increase in delay, averaged over all arms at a junction.
	Public transport users	Less than 2 minute increase in delay along bus route in Study Area.
	Pedestrian delay	Less than 2 minute increase in delay for pedestrians at crossing point.
	Pedestrian amenity	Less than doubling of traffic flow where the footway width is satisfactory.
	Fear and intimidation	No change in degree of hazard.
	Severance	Less than 30% increase in traffic flows on relevant links.
	Accidents and road safety	Less than 10% increase in traffic flows at location with accident rate above DMRB default for junction type.

- 12.4.16 This criteria refers to adverse impacts only and where beneficial effects are identified, their magnitude is based on the corresponding positive effect for the same quantum, for example over a 4-minute decrease in delay would be beneficial with a high level of magnitude.

Sensitivity of receptors

- 12.4.17 Receptors comprise drivers, pedestrians, cyclists and public transport users within the Study Area affected by increased traffic levels resulting from the Proposed Development.
- 12.4.18 The sensitivity of receptors, based on professional judgment and experience, is as follows in **Table 12.3**:

Table 12.3 Sensitivity of receptors

Value	Description
High	Junctions which experience significant pedestrian movements and are outside schools – None in Study Area.
Medium	M4 junctions and junctions in Port Talbot given high usage
Low	Main junctions on Harbour Way
Negligible	Minor junctions which experience low volumes of traffic and are not critical to the operation of local highway network.

Duration of Effect

- 12.4.19 The duration of effects have been assessed based on the following criteria in **Table 12.4**.

Table 12.4 Duration of effect

Timescale	Definition
Short term	Construction or decommissioning phase; includes reversible effects
Medium term	Effects that may persist until additional mitigation measures become effective
Long term	The operational phase; includes effects that are permanent (irreversible) or may decline over longer timescales.

Significance of effect

- 12.4.20 The following matrix shown in **Table 12.5** will be used to assess the significance of effects in which the shaded cells indicate effects that are considered to be significant subject to the points made at **Paragraph 12.4.22** and **12.4.23**.

Table 12.5 Significance of effect assessment criteria

Sensitivity	Magnitude			
	Large	Medium	Small	Negligible
High	Major	Major	Moderate	Negligible/minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Negligible/minor	Negligible	Negligible	Negligible

- 12.4.21 A minor effect (or above) on road safety will be considered significant in terms of the EIA.
- 12.4.22 Effects on pedestrian and cycle delay and amenity, fear and intimidation and severance that are moderate will be considered to be significant in terms of the EIA.

Inter-project cumulative effects

- 12.4.23 The traffic generated by committed developments in the area, as agreed with NPTC, has been included within both the established baseline and construction and operation assessment scenarios.

Proposed mitigation and residual effects

- 12.4.24 This section of the ES chapter sets out the means by which any likely significant environmental effects identified in the preceding assessment of construction and operation phase impacts is to be mitigated. The purpose of the mitigation measure(s) will be to prevent, reduce or offset any likely significant environmental effects.
- 12.4.25 Consideration is also given to the provision of any measures of environmental enhancement over and above required mitigation.
- 12.4.26 This final stage of assessment identifies any residual environmental effects and their significance taking account of the application of the mitigation measures outlined above based on the significance matrix.

Limitations of the assessment

- 12.4.27 The assessments of effects are based on projections based on various sources of information, which are considered appropriate based on professional experience:
- 12.4.28 Information on existing staff data and the proposed reduction in job numbers have been provided by the Applicant whilst the construction timeline, construction worker shift patterns and estimated construction traffic movements have been provided by the Applicant and potential contractors. The traffic movements have been provided based on worst-case assumptions;
- Of the existing staff who will lose their jobs, the number of staff that travel by car has been estimated based on Census travel to work data;
 - The distribution (direction by proportion) of light vehicles has been derived using a 60-minute drivetime gravity model, as detailed in the Transport Assessment;
 - Future year traffic growth has been calculated using locally adjusted TEMPRO figures; and
 - This methodology has been discussed and agreed with NPTC.

Design basis and assumptions

- 12.4.29 As detailed earlier, there will be a significant reduction in vehicle movements post construction due to reductions in staff movements, the removal of the delivery of coal and increased use of rail. Notwithstanding this, a Travel Plan will be provided which will include various measures to encourage existing and new staff to travel via sustainable modes, which contributes to achieving the aims of the transport policies detailed earlier.
- 12.4.30 The traffic impact assessment work presented within the Transport Assessment provided in **Appendix 12.1** demonstrates that the impact of the construction traffic associated with the Proposed Development will not have a material impact on the operation of the local highway network and, through the reduction in vehicle movements, will therefore provide an overall betterment.

- 12.4.31 Having regard to the above, physical mitigation measures are not considered to be necessary or appropriate. Notwithstanding this, in order to minimise any construction traffic impacts in Port Talbot it is proposed that a package of management measures will be provided, primarily aimed at influencing vehicles to route south along the A4241 Harbour Way to Junction 38 of the M4, given that this route has greater levels of capacity. The following transport mitigation measures are embedded into the project design.
- 12.4.32 Heavy goods vehicles (HGVs) will be required to route via the M4 Junction 38, and therefore avoid Port Talbot, through the implementation of a Construction Traffic Management and Routing Plan. The permitted routes to the M4 will be communicated to all construction contractors, displayed on-site and route plans passed to all drivers at site inductions. Drivers will be informed that they will face disciplinary action if caught contravening; and
- 12.4.33 Signage will be introduced on exit from the Site with repeater signage located just before the roundabout to advise all construction workers when travelling to the M4 to route south to avoid congestion in Port Talbot. It is proposed that the signs will be provided on land under the control of the Applicant (outside of the adopted highway) on the approach to the Main Gate Access junction, for the full duration of the construction period. A plan showing the proposed sign locations is shown on drawing number SCP/210634/D01 Rev A, presented in **Appendix 12.1**, however, the wording etc. is a matter of detail to be agreed with NPTC. Notwithstanding this, the wording will be kept to a minimum and an example of potential wording on the signs would be 'ALL CONSTRUCTION TRAFFIC TURN RIGHT FOR M4 NORTH AND SOUTH' which would be displayed in Welsh and English.

12.5 Established, interim and future environmental baseline

- 12.5.1 A detailed description of the local highway network, agreed Study Area and existing infrastructure is provided within the submitted Transport Assessment.

Established baseline

- 12.5.2 As detailed earlier, 2022 traffic flow surveys of the established baseline have been obtained and the resulting 2022 AADT Traffic Flows are shown in **Table 12.6** below for the links within the Study Area, with the link reference points provided in **Appendix 12.2**.

Table 12.6 2022 established baseline (AADT and daily HGVs)

Reference Point	Road Name	2022 AADT	2022 HGV
1	A48 Pentyla-Baglan Road	17954	698
2	B4286 Heilbronn Way	17187	462
3	Car Park Access (North)	15	0
4	A48 Heilbronn Way (North)	16991	698
5	Car Park Access (South)	1155	354
6	A48 Heilbronn Way (East)	10002	403
7	Water Street	14420	585
8	A4241 (North 1)	5490	231
9	Industrial Unit Access (East)	438	74
10	Industrial Unit Access (West)	21	0

Reference Point	Road Name	2022 AADT	2022 HGV
11	Harbourside Road	634	0
12	A4241 (North 2)	5362	251
13	A4241 (West)	7775	310
14	North Bank Road	732	113
15	A4241 Harbour Way (West)	12273	467
16	Oakwood Road	762	20
17	Llewellyn's Road	949	88
18	A4241 Harbour Way (North)	11609	487
19	West Gate Site Access	3072	260
20	Access Road 1	49	10
21	A4241 Harbour Way (South 1)	10641	570
22	Access Road 2	152	0
23	Main Gate Site Access	4286	334
24	A4241 Harbour Way (South 2)	9152	600
25	Access Road 3	197	88
26	A48 Margam Road (North)	7299	305
27	A48 Margam Road (South)	14470	890
28	M4 Southbound Off-slip	3495	147
29	A48 (East)	9230	378
30	M4 Southbound On-slip	3406	334
31	M4 Northbound Off-slip	4345	378
32	Heolcae'r-Bont	772	103

- 12.5.3 The established baseline, with fully operating coke ovens and blast furnaces, represents the established use of the Site and is therefore the primary baseline reference against which the impact of the Proposed Development is assessed. Assessment of the Proposed Development against the established baseline has been agreed with NPTC.

Interim baseline

- 12.5.4 As detailed earlier, the reduction in staff vehicle and HGV movements associated with the shutdown of the heavy end at the steelworks represents the interim baseline position. This reduction has been quantified as AADT and daily HGVs in **Table 12.7** below for the links within the Study Area, with the link reference points presented in **Appendix 12.2**.

Table 12.7 Interim baseline (AADT and daily HGVs)

Reference Point	Road Name	AADT	Daily HGV	AADT % Change
1	A48 Pentyla-Baglan Road	-689	-94	-3.8%
2	B4286 Heilbronn Way	-121	0	-0.7%
3	Car Park Access (North)	0	0	0.0%
4	A48 Heilbronn Way (North)	-810	-94	-4.8%
5	Car Park Access (South)	0	0	0.0%
6	A48 Heilbronn Way (East)	-97	0	-1.0%
7	Water Street	0	0	0.0%
8	A4241 (North 1)	-907	-94	-16.5%

Reference Point	Road Name	AADT	Daily HGV	AADT % Change
9	Industrial Unit Access (East)	0	0	0.0%
10	Industrial Unit Access (West)	0	0	0.0%
11	Harbourside Road	0	0	0.0%
12	A4241 (North 2)	-907	-94	-16.9%
13	A4241 (West)	-388	0	-5.0%
14	North Bank Road	0	0	0.0%
15	A4241 Harbour Way (West)	-1295	-94	-10.6%
16	Oakwood Road	0	0	0.0%
17	Llewellyn's Road	0	0	0.0%
18	A4241 Harbour Way (North)	-1295	-94	-11.2%
19	West Gate Site Access	0	0	0.0%
20	Access Road 1	0	0	0.0%
21	A4241 Harbour Way (South 1)	-1295	-94	-12.2%
22	Access Road 2	0	0	0.0%
23	Main Gate Site Access	-2195	-190	-51.2%
24	A4241 Harbour Way (South 2)	-900	-96	-9.8%
25	Access Road 3	0	0	0.0%
26	A48 Margam Road (North)	-74	0	-1.0%
27	A48 Margam Road (South)	-826	-96	-5.7%
28	M4 Southbound Off-slip	0	0	0.0%
29	A48 (East)	-98	0	-1.1%
30	M4 Southbound On-slip	-347	-32	-10.2%
31	M4 Northbound Off-slip	-381	-65	-8.8%
32	Heolcae'r-Bont	0	0	0.0%

12.5.5 Notwithstanding this, and as detailed above, the full Site with operating coke ovens and blast furnaces represents the established use of the Site, and is therefore the primary baseline reference point against which the impact of the Proposed Development is assessed.

Future baseline

12.5.6 The 2026 and 2028 Baseline flows have also been determined in order to inform the potential for likely significant effects at the construction and operational stage respectively. The 2026 and 2028 Baseline flows include background traffic growth and the local committed developments agreed with NPTC but exclude traffic flows from the Proposed Development.

12.5.7 It should be noted that the Sustainable Aviation Fuel (SAF) production facility committed development (ref. P2023/0858) is anticipated to be constructed and operational by mid-late 2026. On this basis, the construction of the SAF facility will overlap with the Proposed Development construction activity and therefore, the construction and operation phase have been assessed against a 2026 and 2028 established baseline with the SAF facility construction traffic and operation traffic respectively.

12.5.8 The resulting 2026 and 2028 AADT traffic flows are shown in **Table 12.8** below for the links within the Study Area.

Table 12.8: 2026 construction and 2028 operation baseline (AADT and daily HGVs)

Reference Point	Road Name	Construction		Operation	
		2026 AADT	2026 HGV	2028 AADT	2028 HGV
1	A48 Pentyla-Baglan Road	18666	719	18787	732
2	B4286 Heilbronn Way	17746	476	17950	482
3	Car Park Access (North)	15	0	15	0
4	A48 Heilbronn Way (North)	17721	719	17805	732
5	Car Park Access (South)	1189	364	1205	369
6	A48 Heilbronn Way (East)	10333	415	10446	420
7	Water Street	14852	602	15044	610
8	A4241 (North 1)	5914	238	5827	245
9	Industrial Unit Access (East)	452	76	457	77
10	Industrial Unit Access (West)	21	0	22	0
11	Harbourside Road	653	0	661	0
12	A4241 (North 2)	5783	258	5693	266
13	A4241 (West)	8261	319	8288	323
14	North Bank Road	754	116	764	118
15	A4241 Harbour Way (West)	13153	481	13079	491
16	Oakwood Road	785	20	795	21
17	Llewellyn's Road	977	91	990	92
18	A4241 Harbour Way (North)	12469	501	12386	512
19	West Gate Site Access	3727	508	3372	286
20	Access Road 1	51	10	51	10
21	A4241 Harbour Way (South 1)	11361	827	11343	605
22	Access Road 2	157	0	159	0
23	Main Gate Site Access	4414	344	4471	349
24	A4241 Harbour Way (South 2)	9827	858	9790	635
25	Access Road 3	1584	111	1586	112
26	A48 Margam Road (North)	7984	351	8066	318
27	A48 Margam Road (South)	15862	1139	15911	958
28	M4 Southbound Off-slip	3908	187	3955	154
29	A48 (East)	9532	390	9636	395
30	M4 Southbound On-slip	3842	437	3825	363
31	M4 Northbound Off-slip	4765	485	4760	410
32	Heolcae'r-Bont	795	106	805	108

Accidents and safety

- 12.5.9 An assessment of personal injury road traffic accident records for the most recent five year period available at junctions and links within the Study Area has been undertaken in the submitted Transport Assessment, which is summarised in **Table 12.9** below.

Table 12.9 Personal injury accident data summary

Junction / Link	Fatal	Serious	Slight	Total
M4 Junction 41 Junction	0	0	2	2
A48 Heilbronn Way, Car Park Access, A4241, Water Street Junction	0	0	3	3
A4241, Industrial Unit Access, Harbourside Road, Industrial Unit Access (West) Junction	0	0	0	0
A4241, A4241 Harbour Way, North Bank Road Junction	0	0	2	2
A4241 Harbour Way, Oakwood Road, Llewellyn's Road Junction	0	1	1	2
A4241 Harbour Way link between the A4241 Harbour Way, Oakwood Road, Llewellyn's Road Junction and the A4241 Harbour Way, West Gate Access Junction	0	1	0	1
A4241 Harbour Way, West Gate Access Junction	0	0	0	0
A4241 Harbour Way link between the A4241 Harbour Way, West Gate Access Junction and the A4241 Harbour Way, Main Gate Access Junction	0	0	1	1
A4241 Harbour Way, Main Gate Access Junction	0	0	3	3
A4241 Harbour Way link between the A4241 Harbour Way, Main Gate Access Junction and the A4241 Harbour Way, A48 Margam Road, Access Road Junction	0	2	0	2
A4241 Harbour Way, A48 Margam Road, Access Road Junction	0	0	2	2
A48 Margam Road link between the A4241 Harbour Way, A48 Margam Road, Access Road Junction and the M4 Junction 38	0	0	1	1
M4 Junction 38	1	2	6	9

- 12.5.10 A study of the recorded personal injury accidents (PIA) in the latest five-year period has been undertaken and concluded that there is no inherent PIA issues associated with the local highway network. This is detailed further in the Transport Assessment.

12.6 Project characteristics and embedded mitigation

12.6.1 As detailed earlier, a number of embedded mitigation measures have been agreed as summarised below:

- A Travel Plan will be provided which will include various measures to encourage existing and new staff to travel via sustainable modes;
- HGVs will be required to route via the M4 Junction 38, and therefore avoid Port Talbot, through the implementation of a Construction Traffic Management and Routing Plan; and
- Signage will be introduced on exit from the Site with repeater signage located just before the roundabout to advise all construction workers when travelling to the M4 to route south to avoid congestion in Port Talbot. It is proposed that the signs will be provided on land under the control of the Applicant (outside of the adopted highway) on the approach to the Main Gate Access junction, for the full duration of the construction period.

12.7 Assessment of potential effects

Cumulative effects

12.7.1 The baseline scenarios assessed in the following paragraphs include baseline traffic flows, background traffic growth and the traffic flows generated by the agreed committed developments in the local area, whilst the assessment scenarios include the baseline traffic flows, background traffic growth, the traffic flows generated by the committed developments and the traffic flows generated by the Proposed Development, including the reduction in traffic associated with the closure of the heavy end of the Steelworks.

Construction effects

Predicted construction effects

12.7.2 The AADT and daily HGVs predicted during the proposed construction phase are summarised in **Table 12.10** below for the links within the Study Area.

Table 12.10 Construction traffic (AADT and daily HGVs)

Reference Point	Road Name	AADT	Daily HGV
1	A48 Pentyla-Baglan Road	230	0
2	B4286 Heilbronn Way	47	0
3	Car Park Access (North)	0	0
4	A48 Heilbronn Way (North)	277	0
5	Car Park Access (South)	0	0
6	A48 Heilbronn Way (East)	37	0
7	Water Street	0	0
8	A4241 (North 1)	314	0
9	Industrial Unit Access (East)	0	0
10	Industrial Unit Access (West)	0	0
11	Harbourside Road	0	0
12	A4241 (North 2)	314	0

Reference Point	Road Name	AADT	Daily HGV
13	A4241 (West)	150	0
14	North Bank Road	0	0
15	A4241 Harbour Way (West)	464	0
16	Oakwood Road	0	0
17	Llewellyn's Road	0	0
18	A4241 Harbour Way (North)	464	0
19	West Gate Site Access	0	0
20	Access Road 1	0	0
21	A4241 Harbour Way (South 1)	464	0
22	Access Road 2	0	0
23	Main Gate Site Access	906	131
24	A4241 Harbour Way (South 2)	441	131
25	Access Road 3	0	0
26	A48 Margam Road (North)	72	44
27	A48 Margam Road (South)	369	87
28	M4 Southbound Off-slip	21	21
29	A48 (East)	38	0
30	M4 Southbound On-slip	144	22
31	M4 Northbound Off-slip	167	45
32	Heolcae'r-Bont	0	0

- 12.7.3 As detailed above, the Proposed Development will also result in a reduction in staff vehicle and HGV movements during the construction phase when compared to the established baseline, when considering the shutdown of the majority of the heavy end and staff reductions, which has been quantified as AADT and daily HGVs in **Table 12.11** below for the links within the Study Area.

Table 12.11 Estimated traffic reduction (construction period compared with established baseline) (AADT and daily HGVs)

Reference Point	Road Name	AADT	Daily HGV
1	A48 Pentyla-Baglan Road	-689	-94
2	B4286 Heilbronn Way	-121	0
3	Car Park Access (North)	0	0
4	A48 Heilbronn Way (North)	-810	-94
5	Car Park Access (South)	0	0
6	A48 Heilbronn Way (East)	-97	0
7	Water Street	0	0
8	A4241 (North 1)	-907	-94
9	Industrial Unit Access (East)	0	0
10	Industrial Unit Access (West)	0	0
11	Harbourside Road	0	0
12	A4241 (North 2)	-907	-94
13	A4241 (West)	-388	0
14	North Bank Road	0	0
15	A4241 Harbour Way (West)	-1295	-94

Reference Point	Road Name	AADT	Daily HGV
16	Oakwood Road	0	0
17	Llewellyn's Road	0	0
18	A4241 Harbour Way (North)	-1295	-94
19	West Gate Site Access	0	0
20	Access Road 1	0	0
21	A4241 Harbour Way (South 1)	-1295	-94
22	Access Road 2	0	0
23	Main Gate Site Access	-2195	-190
24	A4241 Harbour Way (South 2)	-900	-96
25	Access Road 3	0	0
26	A48 Margam Road (North)	-74	0
27	A48 Margam Road (South)	-826	-96
28	M4 Southbound Off-slip	0	0
29	A48 (East)	-98	0
30	M4 Southbound On-slip	-347	-32
31	M4 Northbound Off-slip	-381	-65
32	Heolcae'r-Bont	0	0

- 12.7.4 The 2026 traffic flows including the addition of traffic generated by the construction phase of the Proposed Development and the reductions summarised above are provided in **Table 12.12**, together with the percentage change in flows relative to the 2026 baseline traffic flows. These percentage changes have been used to assess the various transport effects.

Table 12.12 Proposed 2026 traffic flow impact

Reference Point	Road Name	2026 Established Baseline	2026 Proposed	% Impact
1	A48 Pentyla-Baglan Road	18666	18207	-2%
2	B4286 Heilbronn Way	17746	17672	0%
3	Car Park Access (North)	15	15	0%
4	A48 Heilbronn Way (North)	17721	17188	-3%
5	Car Park Access (South)	1189	1189	0%
6	A48 Heilbronn Way (East)	10333	10273	-1%
7	Water Street	14852	14852	0%
8	A4241 (North 1)	5914	5321	-10%
9	Industrial Unit Access (East)	452	452	0%
10	Industrial Unit Access (West)	21	21	0%
11	Harbourside Road	653	653	0%
12	A4241 (North 2)	5783	5190	-10%
13	A4241 (West)	8261	8023	-3%
14	North Bank Road	754	754	0%
15	A4241 Harbour Way (West)	13153	12322	-6%
16	Oakwood Road	785	785	0%
17	Llewellyn's Road	977	977	0%

Reference Point	Road Name	2026 Established Baseline	2026 Proposed	% Impact
18	A4241 Harbour Way (North)	12469	11638	-7%
19	West Gate Site Access	3727	3727	0%
20	Access Road 1	51	51	0%
21	A4241 Harbour Way (South 1)	11361	10530	-7%
22	Access Road 2	157	157	0%
23	Main Gate Site Access	4414	3125	-29%
24	A4241 Harbour Way (South 2)	9827	9368	-5%
25	Access Road 3	1584	1584	0%
26	A48 Margam Road (North)	7984	7982	0%
27	A48 Margam Road (South)	15862	15405	-3%
28	M4 Southbound Off-slip	3908	3929	1%
29	A48 (East)	9532	9472	-1%
30	M4 Southbound On-slip	3842	3639	-5%
31	M4 Northbound Off-slip	4765	4551	-4%
32	Heolcae'r-Bont	795	795	0%

- 12.7.5 The Guidelines for the Environmental Assessment of Road Traffic note that highway links should be assessed where total traffic flows or the number of HGVs increase by more than 30%, or 10% in specifically sensitive areas.
- 12.7.6 Having regard to the above guidance and given that the Proposed Development will not result in any increase in traffic during the construction phase, further assessments are not required of the construction phase in accordance with the Guidelines for the Environmental Assessment of Road Traffic. Notwithstanding this, a summary assessment of effects has been carried out below.

Driver delay and public transport users

- 12.7.7 As detailed earlier, the Proposed Development will result in a reduction in vehicle movements in the construction phase and therefore, detailed capacity assessments of the impact of the development during the construction phase have not been undertaken in the Transport Assessment. However, the reduction in traffic will result in at least a negligible beneficial significance of effect on driver delay and public transport users.

Pedestrian delay

- 12.7.0 The origins and destinations for the majority of pedestrian trips are likely to be Port Talbot town centre, including the public transport interchange, as well as the bus stops in Margam and therefore the assessment of pedestrian based effects focusses on the routes to these destinations.
- 12.7.1 Pedestrian delay to cross a link is calculated using peak hour traffic flows on the link as presented in the Transport Assessment and Figure 1 of the now superseded DMRB Volume 11 Section 3 Part 8. Whilst it is acknowledged this guidance has been superseded by DMRB LA 112 Population and Human Health, the new guidance does not relate directly to transport and DMRB Volume 11 Section 3 Part 8 is considered the most

applicable/relevant guidance for pedestrian delay. When having regard to the estimated reduction in vehicle movements, the reduction in pedestrian delay will be negligible resulting in a negligible beneficial significance of effect.

Pedestrian amenity

- 12.7.0 Amenity is defined in the DMRB as the relative pleasantness of a journey for pedestrians and others. This is mainly influenced by the volume and type of traffic on an adjacent link. Other key contributory factors are the standard and width of footways and cycleways, the street furniture provided, planting and landscape etc.
- 12.7.1 A shared footway and cycleway is provided on the western side of the Main Gate Site Access connecting to a shared footway and cycleway on the A4241 Harbour Way, on the primary route between the Site and the town centre and public transport facilities. The Main Gate Site Access is subject to a 30 mph speed limit and the A4241 Harbour Way is subject to a 40 mph speed limit in this location. The sensitivity is therefore considered to be medium.
- 12.7.2 The reduction in flows (see **Table 12.12** earlier) is less than -50% on all links which equates to a small magnitude of effect where the footway is substandard and a negligible magnitude of effect where the footway width is satisfactory.

Therefore, the significance of effect would be minor beneficial or negligible beneficial.

Fear and intimidation

- 12.7.0 A further effect that traffic may have on pedestrians and cyclists is described as 'fear and intimidation'. This is influenced by the volume of traffic, HGV content and, in the case of pedestrians, the width of the footpath. Again, the Guidelines for the Environmental Assessment of Road Traffic recognise that there are no commonly agreed thresholds for the measurement of fear and intimidation, but suggest thresholds based on total traffic flows, number of HGV's and traffic speeds as set out in **Table 12.13** below.

Table 12.13 Degree of hazard

Degree of Hazard	Average Traffic Flow over 18 hour day (vehicles / hour)	Total 18 hour heavy goods vehicle flow	Average speed over 18 hour day (mph)
Extreme	1800+	3000+	20+
Great	1200 – 1800	2000 – 3000	15-20
Moderate	600 - 1200	1000 - 2000	10-15

- 12.7.1 None of the links within the Study Area have HGV flows of over 2,000 or traffic flows of over 1,200 and therefore the existing degree of hazard would be less than moderate. Whilst the level of traffic will reduce in the construction phase, the degree of hazard would not change as a result of the Proposed Development. The magnitude of effect is therefore considered to be negligible.
- 12.7.2 The significance of effect would therefore be minor beneficial or negligible beneficial at all links within the Transport Assessment Study Area.

Severance

- 12.7.3 The origins and destinations for the majority of pedestrian trips are likely to be Port Talbot town centre, including the public transport interchange, as well as the bus stops in Margam and therefore the assessment of pedestrian based effects focusses on the routes to these destinations.
- 12.7.4 A number of factors are identified in the Guidelines for the Environmental Assessment of Road Traffic to assess new severance relating to new routes, including road width, traffic speeds, crossing facilities, and existing crossing provision. Three main indicators for the assessment of separation have been formulated from studies of changes in traffic flow on observed links and are discussed in the Guidelines for Environmental Assessment of Road Traffic. It should be noted that these are intended as guidelines only and are highly dependent upon ambient traffic levels. The following indicators are set out in the Guidelines:
- <30% flow increase – negligible separation effects;
 - 30% - 60% flow increase – minor separation effects;
 - 60%-90% flow increase – moderate separation effects; and
 - 90% flow increase – high separation effects.
- 12.7.5 As the Proposed Development will result in either no change or a reduction in vehicle movements on all links within the Study Area during the construction phase, the significance of effect would be at least negligible beneficial in EIA terms.

Accidents and Road Safety

- 12.7.0 A detailed review of the accident records within the Study Area for the most recent five-year period available is included within the Transport Assessment and does not identify any material concerns with regard to the Proposed Development.
- 12.7.1 All of the junctions within the Study Area experienced three or less accidents during the five-year study period except the M4 Junction 38. A total of 9 accidents were recorded at M4 Junction 38 during the five-year period which is lower than that identified as being typical in DMRB TD16.
- 12.7.2 Given that the proposed construction phase will result in a reduction in vehicle movements at all junctions, the significance of effect would therefore be negligible beneficial at all junctions within the Transport Assessment Study Area.

Proposed additional mitigation

- 12.7.3 Given that the construction traffic associated with the Proposed Development will result in a reduction in traffic, no additional mitigation is proposed over and above the embedded mitigation detailed earlier and taken into account in the above assessment.

Residual construction effects

- 12.7.4 Effects on transport during the construction phase of the Proposed Development are below the level requiring assessment, although the assessment has been undertaken with the short term residual effects resulting from construction vehicles summarised below:

- Driver delay – **negligible beneficial (not significant)**;
- Public transport users – **negligible beneficial (not significant)**;
- Pedestrian delay – **negligible beneficial (not significant)**;
- Pedestrian amenity – **minor beneficial or negligible beneficial (not significant)**;
- Fear and intimidation – **minor beneficial or negligible beneficial (not significant)**;
- Severance – **negligible beneficial (not significant)**; and
- Accidents and road safety – **negligible beneficial (not significant)**.

Operational effects

Predicted operational effects

- 12.7.5 As detailed earlier, the operational phase of the Proposed Development will result a reduction in staff vehicle and HGV movements when compared to the established baseline which has been quantified as AADT and daily HGVs in **Table 12.14** below for the links within the Study Area.

Table 12.14 Operational phase traffic (AADT and daily HGVs)

Reference Point	Road Name	AADT	Daily HGV
1	A48 Pentyla-Baglan Road	-689	-94
2	B4286 Heilbronn Way	-121	0
3	Car Park Access (North)	0	0
4	A48 Heilbronn Way (North)	-810	-94
5	Car Park Access (South)	0	0
6	A48 Heilbronn Way (East)	-97	0
7	Water Street	0	0
8	A4241 (North 1)	-907	-94
9	Industrial Unit Access (East)	0	0
10	Industrial Unit Access (West)	0	0
11	Harbourside Road	0	0
12	A4241 (North 2)	-907	-94
13	A4241 (West)	-388	0
14	North Bank Road	0	0
15	A4241 Harbour Way (West)	-1295	-94
16	Oakwood Road	0	0
17	Llewellyn's Road	0	0
18	A4241 Harbour Way (North)	-1295	-94
19	West Gate Site Access	0	0
20	Access Road 1	0	0
21	A4241 Harbour Way (South 1)	-1295	-94
22	Access Road 2	0	0
23	Main Gate Site Access	-2195	-190

Reference Point	Road Name	AADT	Daily HGV
24	A4241 Harbour Way (South 2)	-900	-96
25	Access Road 3	0	0
26	A48 Margam Road (Norh)	-74	0
27	A48 Margam Road (South)	-826	-96
28	M4 Southbound Off-slip	0	0
29	A48 (East)	-98	0
30	M4 Southbound On-slip	-347	-32
31	M4 Northbound Off-slip	-381	-65
32	Heolcae'r-Bont	0	0

- 12.7.6 The Guidelines for the Environmental Assessment of Road Traffic note that highway links should be assessed where total traffic flows or the number of HGVs increase by more than 30%, or 10% in specifically sensitive areas.
- 12.7.7 Having regard to the above guidance and given that the Proposed Development will not result in any increase in traffic when compared to the established baseline, assessments are not required of the operation phase in accordance with the Guidelines for the Environmental Assessment of Road Traffic. Notwithstanding this, a summary assessment of effects has been carried out below.

Driver delay and public transport users

- 12.7.8 As detailed earlier, the Proposed Development will result in a reduction in vehicle movements in the operation phase and it has been agreed with NPTC that detailed capacity assessments of the impact of the development during the operational phase is not required in the Transport Assessment. However, the reduction in traffic will result in at least a negligible beneficial effect on driver delay and public transport users.

Pedestrian delay and pedestrian amenity

- 12.7.9 Similarly to the construction phase, the origins and destinations for the majority of pedestrian trips are likely to be Port Talbot town centre, including the public transport interchange, as well as the bus stops in Margam and therefore the assessment of pedestrian based effects focusses on the routes to these destinations.
- 12.7.10 Pedestrian delay to cross a link is calculated using peak hour traffic flows on the link and Figure 1 of the now superseded DMRB Volume 11 Section 3 Part 8. When having regard to the estimated reduction in vehicle movements, the reduction in pedestrian delay will be negligible resulting in a negligible beneficial effect in EIA terms.
- 12.7.11 The reduction in flows (see **Table 12.14** earlier) is less than -50% on all links which equates to a small magnitude of effect where the footway is substandard and a negligible magnitude of effect where the footway width is satisfactory.
- 12.7.12 Therefore, the significance of effect would be minor beneficial or negligible beneficial in EIA terms.

Fear and intimidation

- 12.7.13 As detailed earlier, 'fear and intimidation' is influenced by the volume of traffic, HGV content and, in the case of pedestrians, the width of the footpath. Again, the Guidelines for the Environmental Assessment of Road Traffic recognise that there are no commonly

agreed thresholds for the measurement of fear and intimidation, but suggests thresholds based on total traffic flows, number of HGV's and traffic speeds as set out in **Table 12.13** earlier.

- 12.7.14 In the operational baseline, none of the links within the Study Area have HGV flows of over 2,000 or traffic flows of over 1,200 and therefore the degree of hazard would be less than moderate. Whilst the level of traffic will reduce in the operational phase, the degree of hazard would not change as a result of the Proposed Development. The magnitude of effect is therefore considered to be negligible.
- 12.7.15 The significance of effect would therefore be minor beneficial or negligible beneficial at all links within the Transport Assessment Study Area.

Severance

- 12.7.16 As detailed earlier, the concept of severance is a perceived division that occurs when a traffic link separates part of an existing community which can be measured based on percentage change in traffic flows.
- 12.7.17 As the Proposed Development will result in either no change or a reduction in vehicle movements on all links within the Study Area during the operational phase, the significance of effect would be at least negligible beneficial in EIA terms.

Accidents and road safety

- 12.7.18 As detailed earlier, all of the junctions within the Study Area experienced three or less accidents during the five-year study period except the M4 Junction 38. A total of 9 accidents were recorded at M4 Junction 38 during the five-year period which is lower than that identified as being typical in DMRB TD16.
- 12.7.19 It is therefore considered that all junctions within the Transport Assessment Study Area would have a negligible magnitude of effect.
- 12.7.20 Given that the proposed operational phase will result in a reduction in vehicle movements at all junctions, the significance of effect would therefore be negligible beneficial at all junctions within the Transport Assessment Study Area.

Proposed additional mitigation

- 12.7.21 Given that the operational phase of the Proposed Development will result in a reduction in traffic, no additional mitigation is proposed over and above the embedded mitigation detailed earlier.

Residual operational effects

- 12.7.22 Effects on transport during the operational phase of the Proposed Development are below the level requiring assessment, although an assessment has been undertaken with the long term residual effects resulting from the development summarised below:
- Driver delay – **negligible beneficial (not significant);**
 - Public transport users – **negligible beneficial (not significant);**
 - Pedestrian delay – **negligible beneficial (not significant);**
 - Pedestrian amenity – **minor beneficial or negligible beneficial (not significant);**

- Fear and intimidation – **minor beneficial or negligible beneficial(not significant)**;
- Severance – **negligible beneficial (not significant)**; and
- Accidents and road safety – **negligible beneficial (not significant)**.

12.8 Further survey and monitoring requirements

12.8.1 No further surveys or monitoring is considered to be required.

12.9 Opportunities for enhancement

12.9.1 Given that the traffic associated with the construction and operational phase of the Proposed Development will result in a minor/negligible adverse and minor/negligible beneficial effects respectively, no additional enhancement measures are considered necessary.

12.10 Cumulative effects

12.10.1 The Baseline scenarios assessed earlier include baseline traffic flows, background traffic growth and the traffic flows generated by the agreed committed developments in the local area, whilst the assessment scenarios include the baseline traffic flows, background traffic growth, the traffic flows generated by the committed developments and the traffic flows generated by the Proposed Development.

12.11 Summary of effects

12.11.1 **Table 12.15** summarises the potential impacts and effects on receptors, additional mitigation proposed, and concludes the significance residual effects reported in this ES chapter. Overall, no significant road traffic related environment effects have been identified during the construction or operation phase of the Proposed Development.

Table 12.15 Summary of residual significant effects

Receptor	Impact	Potential effect	Additional mitigation proposed	Residual effect
Construction phase				
Drivers	Driver delay	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Public transport users	Public transport users	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Pedestrians, Public transport users	Pedestrian delay	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Pedestrians, cyclists	Pedestrian amenity	Minor beneficial or negligible beneficial	No additional mitigation is proposed	Minor beneficial or negligible beneficial (not- significant)

Receptor	Impact	Potential effect	Additional mitigation proposed	Residual effect
Pedestrians	Fear and intimidation	Minor beneficial or negligible beneficial	No additional mitigation is proposed	Minor beneficial or negligible beneficial (not- significant)
Pedestrians, public transport users	Severance	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Drivers, pedestrians, cyclists and public transport users	Accidents and road safety	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Operational phase				
Drivers	Driver delay	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Public transport users	Public transport users	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Pedestrians, Public transport users	Pedestrian delay	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Pedestrians, cyclists	Pedestrian amenity	Minor beneficial or negligible beneficial	No additional mitigation is proposed	Minor beneficial or negligible beneficial (not- significant)
Pedestrians	Fear and intimidation	Minor beneficial or negligible beneficial	No additional mitigation is proposed	Minor beneficial or negligible beneficial (not- significant)
Pedestrians, public transport users	Severance	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)
Drivers, pedestrians, cyclists and public transport users	Accidents and road safety	Negligible beneficial	No additional mitigation is proposed	Negligible beneficial (not-significant)

12.12 References

Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023);

Design Manual for Roads and Bridges, Volume 6, Section 2, Part 3, TD 16/07, Geometric Design of Roundabouts;

Design Manual for Roads and Bridges, Volume 11, Section 3, Part 8, Pedestrians, Cyclists, Equestrians and Community Effects [Superseded]; and,

Design Manual for Roads and Bridges, Volume 11, Environmental Assessment.