

Appendix I: Tetra Tech TTN10 – Response to NH comments on Scope

Northern Gateway

Transport Technical Note 10:

Response to National Highways Transport Assessment Scoping Note Review dated November 2024 [NH Comments on the Transport Assessment Scoping Note Update (TASNU) and the TASNU Addendum]

Project Number:	784-B048805	Office:	Manchester
Date:	28/01/2025	Prepared by:	M. Thompson
Status:	For Submission	Checked by:	M. Thompson / P. Blair
Revision:	01	Approved by:	P. Blair

1.0 Introduction

- 1.1 This Transport Technical Note 10 (TTN10) has been prepared to respond to National Highways and to apprise the Local Planning Authorities (LPA) and the Local Highway Authorities (LHA) of the current position of the JV in respect of traffic modelling, following comments received from National Highways. It is requested that this response is provided to National Highways.
- 1.2 The Tetra Tech document “Transport Assessment Scoping Note Update” (TASNU) document relating to JPA 1.1 was issued to the stakeholders, i.e., Bury Council (BC), Rochdale Council (RC), and National Highways (NH) on 2nd August 2024. It substantially adopted details from a Preliminary Transport Assessment Scoping Note (PTASN) which was circulated by Focus Transport Planning (FTP) for comment in 2022.
- 1.3 The TASNU was then also discussed in detail at a meeting with NH, BC and RC on 6th August 2024.
- 1.4 Comments were requested by the 23rd August 2024. This date was set, as the strategic modelling of the “With Development” Scenarios, was due to commence during September 2024.
- 1.5 On the 4th September 2024, Tetra Tech issued the TASNU Addendum.
- 1.6 At the time of drafting the TASNU Addendum, no queries nor requests to alter the content of the TASNU had been received. In the absence of comments, the JV has been progressing the TA and EIA on the basis that the TASNU is agreed by all parties.
- 1.7 Since the TASNU and TASNU Addendum were submitted, a significant amount of work has been progressing, in accordance with those documents. This includes the strategic modelling of the “Do Something” Scenarios, which did indeed commence in “September 2024”
- 1.8 On 12th December 2024, the National Highways comments on the TASNU and TASNU Addendum were provided to the JV. Those comments were provided in the document “National Highways -

NORTHERN GATEWAY - Transport Assessment Scoping Note Review – Ref: NW 068-001”, prepared by their consultants, WSP, and dated November 2024.

1.9 The NH comments can be categorised as:

- Agreements to the proposed approach;
- Additional details requested on specific parameters of the TASNU & Addendum
- Suggested amendments on specifics within the TASNU & Addendum approach;
- Additional items to be considered, which were not included in the TASNU or the Addendum.

1.10 This TTN10 sets out the agreements and then provides responses to the NH suggested amendments and additional items to be considered.

1.11 It is noted that NH state that their TA Scoping Note Review is to be read in conjunction with the following National Highways and WSP responses relating to the Northern Gateway site:

- Northern Gateway EIA Scoping Review (Nov 2024).
- Northern Gateway Transport Model LMVR Review (Nov 2024).
- Northern Gateway Case for Early Development Review (Nov 2024).

2.0 Agreements to the Scope of Assessment and Approach

National Highways License

2.1 The JV welcome the NH confirmation that the TA (and other supporting transport information) being prepared to support the Northern Gateway site enables National Highways to meet the conditions of its license.

Policy

2.2 The JV welcome the NH agreement that the TA should include Policies identified within the TASNU and policy and guidance which may emerge during the application preparation period.

Vision

2.3 The JV welcome the NH agreement *“that the proposals are led by a vision for long term sustainable development, reflecting the direction of DfT Circular 01/2022.”*

Treatment of South Heywood Approval

2.4 The JV welcome the NH confirmation that including the South Heywood approval within the “Do Minimum” is a reasonable approach.

Assessing the Full Remainder of the Allocation

2.5 The JV note the NH view that including an assessment of the full remainder of the allocation is a reasonable approach. That acknowledges that the assessed quantum is greater than the quantum within the forthcoming outline planning application.

- 2.6 Whilst NH welcome the assessment approach, as it allows for the understanding of the predicted impact of the full Northern Gateway JPA1.1 development quantum, which will inform the understanding of the highway infrastructure (mitigation) required at the SRN, it is the Vision Led assessment which should take primacy in considerations of impact and determining mitigation. That position is endorsed by Planning Policy (NPPF & National Highways Policy), TfGM and the Districts.

Study Area

- 2.7 The JV welcome the NH agreement with the junctions that have been identified in the study area in relation to assessing the impacts of the Northern Gateway development at the SRN.

Policy Off Trip Rates for SRN Assessment

- 2.8 The NH comments state:

“it is noted that the vehicle trip rates that are not adjusted for any further up take in Active Travel will be used to assess the strategic highway network. This is a suitable approach to assess the SRN”

- 2.9 The Tetra Tech assessments test a range of Policy On and Policy Off scenarios, all of which inform considerations of likely impact. It is the Vision Led (Policy On) assessment which should take primacy in considerations of impact and determining mitigation. That position is endorsed by Planning Policy (NPPF & National Highways Policy) and TfGM.

Advanced Manufacturing Trip Rates

- 2.10 The JV welcome the NH confirmation that the use of the proposed proxy site to derive Advanced Manufacturing trip rates is a suitable approach.

Construction Traffic Management

- 2.11 The JV welcome the NH confirmation that the approach of proposing a Construction Traffic Management Plan is reasonable.

3.0 Response to NH requests for additional details on specific parameters of the TASNU & Addendum

Use of Strategic Model traffic volumes in Junction Capacity Assessment

- 3.1 The NH comments state:

“if turning movements are to be used from a strategic model, the model will need to calibrate well (by turning movements) to ensure there is confidence in the forecast results. It is acknowledged that strategic models are not generally subject to this level of detail.”

- 3.2 It is noted the NH have provided a Local Model Validation Report (LMVR) Review. JV Comments on the NH review of the LMVR will be provided separately.
- 3.3 The strategic model has been prepared under the guidance of the Transport Steering Group, who have met 10 times over the last 2 years to evolve and agree the model. **The strategic model has been accepted by TfGM and is considered to be an appropriate tool for the assessment of the Northern Gateway proposals.**

12 Hour Trip Generation

- 3.4 NH have requested that the 12-hour traffic generation profile is provided. **This request has been actioned and the 12-hour traffic generation profile based on “Policy Off” trip rates is set out in Appendix TTN10-1.**

Advanced Manufacturing Trip Rates

- 3.5 Whilst NH have accepted that using a proxy site to derive Advanced Manufacturing trip rates is a suitable approach, they have requested “*further narrative within the TA as to how this site is reflective of the development proposals and site*”. **Narrative will be provided within the TA.**

Trip Distribution

- 3.6 The proposed approach for trip distribution as set out in the TASNU was to use donor zones, from nearby similar uses. The trip distribution for those donor zones is informed by Mobile Network Data.
- 3.7 Within their December 2024 response, NH have stated:

“More information is required to confirm whether this approach would yield an acceptable distribution as at this time it is not known what samples would be associated with the mobile data. Notwithstanding, the approach is considered a reasonable way forward at this stage.

WSP would further comment whether additional survey data could be collected from nearby similar developments (such as Heywood Distribution) as a secondary distribution check. ”

- 3.8 Tetra Tech was aware that NH may query the distribution. At the meeting on 4th September 2024, NH suggested that the TASNU approach was suitable but that it should be validated against Census Data.
- 3.9 The initial trip distribution (based on donor zones) did not seem realistic, as there were very few trips to and from the east on the M62. Tetra Tech & WSP therefore sought to validate the donor zone distribution against Census Data. Adjustments were carried out on an iterative basis until the distribution validated.

4.0 Suggested amendments on specifics within the TASNU & Addendum approach

Potential new Access near Birch Services and NH position

- 4.1 The NH comments state:
- “the description in the TASNU is not National Highways (PCF Study) position as it is understood that the study team are still considering a range of options at M66 Junction 3 and M62 Junction 19 which can be taken forwards under a PCF Stage 0B Study. This is yet to be scoped.”*
- 4.2 In the process of allocating JPA 1.1 it was noted that a strategic junction intervention would be needed at M66 J3 or alternatively from M62. NH were party to the Examination in Public.
- 4.3 The JV acknowledge and are encouraged that NH are investigating such strategic motorway junction solutions. The timescales for submitting an application for Northern Gateway necessitate that modelling is advanced. Consequently the scenarios which are being tested all include a M66 J3

improvement which has evolved through work undertaken by WSP, Pell Frischmann and the Districts.

- 4.4 That is acknowledged to be the optimum solution which can reasonably be delivered, but it is not a major junction intervention. The assessment scenarios therefore also include a new strategic junction onto the M62. Some scenarios exclude that mitigation and some include it, so as to allow the effect of such a feature to be gauged. The purpose of the assessment scenarios is to determine the likely impacts both with and without a M62 access solution, and through varying the scale of development proposed across the different scenarios, to identify likely phasing and timescales when such major works may become necessary. In the absence of PCF findings and with the requirement to bring forward economic growth, this is an appropriate approach.

Assessment of the Application Quantum and any Phasing Requirements

- 4.5 The NH comments state that: “*National Highways require an assessment in the TA that accords with the DfT Circular and that provides an understanding of the:*
- a) *Total highway infrastructure (mitigation) required at the SRN to support the Full Northern Gateway JPA 1.1 Allocation.*
 - b) *Total highway infrastructure (mitigation) required at the SRN to support the full ‘JV Current Application’ and any phasing requirements”.*
- 4.6 Item a) will be provided within the assessments, as set out in the TASNU & Addendum Assessment Scenarios.
- 4.7 Item b) requires an assessment of the Application Quantum. **This scenario was not included in the TASNU, but the comment is accepted, and a test for the Application Quantum will be provided within the TA, subject to timeframes.** Should the timeframes of the application not allow this test to be included within the initial TA, it will be provided during the determination period.
- 4.8 The application quantum is 600,000sqm and the trip generation is set out in **Appendix TTN10-2.**
- 4.9 The TA will therefore test three delivery scenarios:
- 395,000sqm by 2032.
 - 600,000sqm (i.e., the application) by 2039.
 - 1,025,000sqm (i.e., the allocation) in 2039.
- 4.10 Some of the assessment scenarios also provide Cumulative assessments which incorporate the additional traffic from allocation JPA1.2.

Opening Year Assessment

- 4.11 The NH suggestion is to use the 2032 Scenario as the ‘proxy’ opening year test. **This approach is accepted but it should be noted that the 2032 With Development assessment only includes 395,000sqm of floorspace.**

Local Models for Strategic Junctions: M62 Junction 19, M66 Junction 3 and M66 Junction 2

- 4.12 The NH response recommends that microsimulation modelling is carried out at these junctions, rather than a LinSig Model. NH view is that this will provide a more detailed insight into the operation of the network within these areas.
- 4.13 TT have been in correspondence with NH to establish the availability of microsimulation models.
- 4.14 For the M66 Junction 3, TT will commission WSP (Microsimulation Team) to carry out updated modelling within their VISSIM (Microsimulation model). The updated VISSIM modelling results will be included within the TA.
- 4.15 In late 2024, TT requested access to the NH wider VISSIM model, which is understood to cover M62 Junction 19 and M66 Junction 18. At the time of preparing this response, access to the model is awaited.
- 4.16 For the M62 Junction 19 & M66 Junction 2, TRANSYT models have been prepared by TT. Whilst TRANSYT is macrosimulation rather than microsimulation, TRANSYT models provide a more detailed insight than a LinSig model. Furthermore, TRANSYT is a tool which is widely accepted by NH for assessing junctions across the country.

Sifting Criteria

- 4.17 The TASNU suggested two sifting criteria for identifying which junctions need not be subject to further detailed assessment.
- 4.18 NH have suggested that operational assessments of the SRN in the study area are required and therefore should not be sifted based on sifting criteria. For the JPA1.1 TA, NH have requested junction assessments of the following junctions:
- M62 Junction 19
 - M62 Junction 3
 - M62 Junction 2
 - M62 Junction 18 (Simister Island)
- 4.19 It is assumed that this list is meant to read:
- M62 Junction 19
 - M66 Junction 3
 - M66 Junction 2
 - M62 Junction 18 (Simister Island)
- 4.20 As set out in the previous sub-section “local models for strategic junctions”,
- the M62 junction 19 will be assessed in TRANSYT, and possibly micro-simulation (subject to NH providing access to the model),
 - the M66 Junction 3 will be assessed in VISSIM (microsim)
 - the M66 Junction 2 will be assessed in TRANSYT

4.21 For the M62 Junction 18 (Simister Island), assessment is not proposed. NH are promoting a junction improvement there, the assessments for which include PfE allocated development. The JV can provide forecast traffic volumes to allow NH to update the assessments before the DCO Inquiry, should they wish.

4.22 NH have requested that a third sifting criteria be applied to local highway authority junctions, which is:

For instances where the first two criteria are not met, but where a junction experiences a shift from being within capacity in the Do Minimum to at/overcapacity in the Do Something in terms of volume/capacity.

4.23 On a point of principle, that request is not accepted. Local Highway Authority junctions are matters for the Local Highway Authority and they have not requested this amendment. In any event, cases precedent regularly find that local junction operation over capacity is acceptable. If a material impact was likely, it would be identified by the original sifting process. That said, the third sifting test will be adopted as requested. NH have requested confirmation of the final list of proposed junctions within the study area once the development traffic assignment has been explored. **This request is accepted, and the sifting / final study area will be provided. NB the junctions on the list were selected from the full allocation cumulative impact scenarios. Fewer junctions would be selected if just the application quantum was being assessed. Put simply, the list of junctions to be assessed is robust.**

B8 Trip Rates

4.24 NH (WSP) have carried out an independent trip rate exercise for the B8 land use which identified higher rates than the TASNU. NH recommend that the B8 trip rates are revisited, given the difference identified from WSP's independent checks. They state, "Given the range of uses within B8, a sensitivity test using the trip rate derived by WSP may be the appropriate methodology to address this point to ensure the forecast traffic generation for this land use appropriate."

4.25 Tetra Tech have reviewed the B8 trip rates from the TASNU, see **Appendix TTN10-2**. The finding of that review is that the TASNU rates are appropriate and given this, **the request for a sensitivity test using WSP B8 trip rates is not accepted.**

4.26 Additionally, the B8 trip rates were previously justified in Section 3 of the PTASN (FTP – 2022).

Approach to Mitigation

4.27 The NH response states:

Whilst it is recognised that National Highways (Network Planning Division) are engaged in study work (PCF Stage 0) on the SRN that will be affected by the Northern Gateway site, the approach to mitigation at the SRN in the TASNU as Secondary Mitigation which is infrastructure being provided (funded) by others remains a fundamental concern to National Highways (Spatial Planning Team) at this stage given policy, as set out in the DfT Circular 01/2022 at Paragraph 29:

New connections and capacity enhancements to the SRN which are necessary to deliver strategic growth should be identified as part of the plan-making process, as this provides the best opportunity

to consider the cumulative impacts of development (including planned growth in adjoining authorities) and to identify appropriate mechanisms for the delivery of strategic highway infrastructure. However, there cannot be any presumption that such infrastructure will be funded through a future RIS. The company will therefore work with local authorities in their strategic policy-making functions in identifying realistic alternative funding mechanisms, to include other public funding programmes and developer contribution strategies to be secured by a policy in a local plan or spatial development strategy.

Given this, it is imperative that the Northern Gateway TA identifies what highway infrastructure (mitigation) at the SRN is needed, when the mitigation is needed (phasing) and how it will be delivered.

- 4.28 The TA will identify if and when highway infrastructure at the SRN is needed. The potential need for those measures was indeed identified in the Plan Making Process in which NH participated.

5.0 Additional items to be considered, which were not included in the TASNU or the Addendum

Giga-scale land use / Employer

- 5.1 The NH comments request that a land use scenario reflecting a potential ‘giga-scale’ employer should be considered within the TA.
- 5.2 A review of existing Giga-scale employers in the UK has been carried out to identify trip generation rates for this type of occupier. This exercise is attached as **Appendix TTN10-3** and demonstrates that a ‘giga-scale’ occupier, (apparently by reason of its scale and shift working patterns) has lower peak hour vehicle trip generation rates per sqm than any of the 4 industrial land uses which have been assessed within the NGTM. Therefore, should a ‘giga-scale’ occupier come forward, the peak hour traffic generation of the site would be lower.
- 5.3 It is not proposed to undertake further assessment scenarios to reflect the potential inclusion of a lower traffic generating Giga-scale employer. Having undertaken the analyses of trip rates, it is pertinent to note that a Giga-scale occupier will result in lower peak hour trip impact than has been assessed.

6.0 Additional Details Relevant to NH

LMVR Review

- 6.1 It is noted the NH have provided a Local Model Validation Report (LMVR) Review. Comments on that review will be provided separately.

7.0 Conclusions

- 7.1 The assessment of the Northern Gateway proposals is well advanced. The JV thank NH for their agreements and have provided additional information within this report in response to NH requests

and queries. If, following consideration of this response, comments still remain, assessments can be undertaken to address such points in the determination period.

Appendices

Appendix TTN10-1: Policy Off, 12hr Trip Rates and Traffic Generation for:

395,000sqm industrial (early delivery)

600,000 sqm industrial (application quantum)

1,0250,000 sqm industrial + 200 residential dwellings (remainder of allocation)

12 Hour Vehicle Trip Rates and Traffic Generation - Policy Off

Trip Rates: Using the same data sources as the TASNU

Advanced Manufacturing

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00	- 08:00	0.431	0.046	0.476	0.022	0.002	0.024	0.047	0.006	0.053	0.362	0.038	0.400
08:00	- 09:00	0.456	0.049	0.505	0.023	0.002	0.025	0.034	0.007	0.041	0.399	0.039	0.438
09:00	- 10:00	0.249	0.089	0.338	0.012	0.004	0.017	0.020	0.011	0.031	0.216	0.073	0.289
10:00	- 11:00	0.196	0.152	0.348	0.010	0.008	0.017	0.026	0.013	0.039	0.160	0.131	0.292
11:00	- 12:00	0.140	0.215	0.355	0.007	0.011	0.018	0.013	0.026	0.039	0.120	0.178	0.298
12:00	- 13:00	0.186	0.318	0.503	0.009	0.016	0.025	0.036	0.039	0.074	0.141	0.263	0.404
13:00	- 14:00	0.152	0.333	0.485	0.008	0.017	0.024	0.030	0.023	0.053	0.114	0.294	0.408
14:00	- 15:00	0.083	0.229	0.312	0.004	0.011	0.016	0.013	0.020	0.033	0.066	0.197	0.263
15:00	- 16:00	0.073	0.277	0.350	0.004	0.014	0.018	0.016	0.037	0.053	0.054	0.226	0.280
16:00	- 17:00	0.047	0.269	0.316	0.002	0.013	0.016	0.007	0.017	0.024	0.038	0.238	0.276
17:00	- 18:00	0.024	0.189	0.213	0.001	0.009	0.011	0.003	0.004	0.007	0.020	0.175	0.195
18:00	- 19:00	0.007	0.087	0.094	0.000	0.004	0.005	0.001	0.004	0.006	0.005	0.079	0.084

B1(C)

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00	- 08:00	0.367	0.096	0.463	0.015	0.008	0.023	0.094	0.047	0.141	0.258	0.041	0.299
08:00	- 09:00	0.405	0.197	0.602	0.022	0.028	0.050	0.089	0.102	0.191	0.294	0.067	0.361
09:00	- 10:00	0.293	0.207	0.500	0.025	0.020	0.045	0.081	0.091	0.172	0.187	0.096	0.283
10:00	- 11:00	0.266	0.239	0.505	0.023	0.024	0.047	0.083	0.098	0.181	0.160	0.117	0.277
11:00	- 12:00	0.233	0.215	0.448	0.018	0.015	0.033	0.084	0.077	0.161	0.131	0.123	0.254
12:00	- 13:00	0.256	0.291	0.547	0.024	0.020	0.044	0.070	0.079	0.149	0.162	0.192	0.354
13:00	- 14:00	0.261	0.258	0.519	0.026	0.017	0.043	0.080	0.071	0.151	0.155	0.170	0.325
14:00	- 15:00	0.233	0.266	0.499	0.015	0.020	0.035	0.082	0.070	0.152	0.136	0.176	0.312
15:00	- 16:00	0.180	0.276	0.456	0.012	0.015	0.027	0.069	0.066	0.135	0.099	0.195	0.294
16:00	- 17:00	0.253	0.389	0.642	0.009	0.014	0.023	0.058	0.061	0.119	0.186	0.314	0.500
17:00	- 18:00	0.169	0.413	0.582	0.006	0.011	0.017	0.025	0.051	0.076	0.138	0.351	0.489
18:00	- 19:00	0.081	0.153	0.234	0.003	0.004	0.007	0.008	0.015	0.023	0.070	0.134	0.204

B2

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV***			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00	- 08:00	0.235	0.068	0.303	0.025	0.020	0.045	0.021	0.017	0.039	0.189	0.031	0.219
08:00	- 09:00	0.259	0.059	0.318	0.027	0.029	0.056	0.047	0.027	0.074	0.185	0.003	0.188
09:00	- 10:00	0.153	0.075	0.228	0.036	0.020	0.056	0.026	0.025	0.051	0.091	0.030	0.121
10:00	- 11:00	0.085	0.069	0.154	0.028	0.023	0.051	0.025	0.026	0.051	0.032	0.020	0.052
11:00	- 12:00	0.081	0.082	0.163	0.028	0.024	0.052	0.020	0.030	0.050	0.033	0.028	0.061
12:00	- 13:00	0.093	0.116	0.209	0.028	0.023	0.051	0.032	0.032	0.064	0.033	0.061	0.094
13:00	- 14:00	0.147	0.112	0.259	0.027	0.022	0.049	0.021	0.021	0.042	0.099	0.069	0.168
14:00	- 15:00	0.118	0.165	0.283	0.027	0.022	0.049	0.011	0.012	0.024	0.080	0.131	0.210
15:00	- 16:00	0.102	0.163	0.265	0.025	0.019	0.044	0.022	0.022	0.044	0.055	0.122	0.177
16:00	- 17:00	0.058	0.246	0.304	0.016	0.018	0.034	0.014	0.024	0.038	0.028	0.204	0.232
17:00	- 18:00	0.048	0.358	0.406	0.008	0.012	0.020	0.006	0.023	0.029	0.034	0.323	0.357
18:00	- 19:00	0.039	0.115	0.154	0.006	0.012	0.018	0.008	0.009	0.016	0.025	0.094	0.120

B8

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00	- 08:00	0.106	0.052	0.158	0.021	0.017	0.038	0.011	0.012	0.022	0.074	0.023	0.098
08:00	- 09:00	0.092	0.041	0.133	0.023	0.018	0.041	0.014	0.009	0.023	0.055	0.014	0.069
09:00	- 10:00	0.085	0.051	0.136	0.029	0.023	0.052	0.019	0.012	0.031	0.037	0.016	0.053
10:00	- 11:00	0.058	0.052	0.110	0.027	0.023	0.050	0.008	0.010	0.018	0.023	0.019	0.042
11:00	- 12:00	0.052	0.056	0.108	0.021	0.025	0.046	0.009	0.011	0.020	0.022	0.021	0.042
12:00	- 13:00	0.055	0.062	0.117	0.019	0.023	0.042	0.007	0.007	0.014	0.029	0.032	0.061
13:00	- 14:00	0.100	0.083	0.183	0.019	0.022	0.041	0.011	0.010	0.021	0.070	0.051	0.121
14:00	- 15:00	0.070	0.093	0.163	0.016	0.020	0.036	0.007	0.008	0.014	0.047	0.065	0.113
15:00	- 16:00	0.061	0.087	0.148	0.020	0.017	0.037	0.008	0.009	0.017	0.033	0.061	0.094
16:00	- 17:00	0.051	0.092	0.143	0.019	0.013	0.032	0.006	0.007	0.013	0.026	0.072	0.098
17:00	- 18:00	0.027	0.085	0.112	0.012	0.013	0.025	0.003	0.007	0.010	0.012	0.065	0.077
18:00	- 19:00	0.023	0.062	0.085	0.009	0.013	0.022	0.002	0.004	0.006	0.012	0.045	0.057

Residential

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00	- 08:00	0.073	0.363	0.436	0.001	0.001	0.002	0.010	0.034	0.045	0.062	0.328	0.389
08:00	- 09:00	0.151	0.449	0.600	0.001	0.000	0.001	0.016	0.030	0.047	0.134	0.419	0.552
09:00	- 10:00	0.131	0.157	0.288	0.001	0.001	0.002	0.017	0.016	0.033	0.113	0.140	0.253
10:00	- 11:00	0.111	0.124	0.235	0.000	0.000	0.000	0.016	0.016	0.031	0.095	0.108	0.204
11:00	- 12:00	0.119	0.127	0.246	0.000	0.000	0.000	0.017	0.017	0.034	0.102	0.110	0.212
12:00	- 13:00	0.153	0.135	0.288	0.000	0.000	0.000	0.019	0.017	0.035	0.134	0.118	0.253
13:00	- 14:00	0.132	0.140	0.272	0.003	0.002	0.005	0.016	0.020	0.036	0.113	0.118	0.231
14:00	- 15:00	0.135	0.174	0.309	0.000	0.001	0.001	0.014	0.016	0.030	0.121	0.157	0.278
15:00	- 16:00	0.254	0.154	0.408	0.001	0.002	0.003	0.018	0.016	0.034	0.235	0.136	0.371
16:00	- 17:00	0.270	0.142	0.412	0.001	0.000	0.001	0.024	0.013	0.038	0.245	0.129	0.373
17:00	- 18:00	0.398	0.358	0.556	0.000	0.001	0.001	0.034	0.012	0.046	0.364	0.145	0.509
18:00	- 19:00	0.344	0.142	0.486	0.000	0.000	0.000	0.021	0.010	0.031	0.323	0.132	0.455

12 Hour Vehicle Trip Rates and Traffic Generation - Policy Off

Trip Generation : Early Delivery - 395,000sqm

Land Use	B2	B8	B1(c)	AM	Total
Floorspace	31,632	315,921	10,280	37,167	395,000sqm
%	8.01%	79.98%	2.60%	9.41%	100.00%

Advanced Manufacturing

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	160	17	177	8	1	9	18	2	20	134	14	149
08:00 - 09:00	170	18	188	8	1	9	13	3	15	148	15	163
09:00 - 10:00	92	33	125	5	2	6	7	4	12	80	27	107
10:00 - 11:00	73	56	129	4	3	6	10	5	14	60	49	108
11:00 - 12:00	52	80	132	3	4	7	5	10	14	45	66	111
12:00 - 13:00	69	118	187	3	6	9	13	14	28	52	98	150
13:00 - 14:00	56	124	180	3	6	9	11	9	20	42	109	152
14:00 - 15:00	31	85	116	2	4	6	5	7	12	25	73	98
15:00 - 16:00	27	103	130	1	5	7	6	14	20	20	84	104
16:00 - 17:00	18	100	117	1	5	6	3	6	9	14	89	103
17:00 - 18:00	9	70	79	0	4	4	1	2	3	8	65	73
18:00 - 19:00	3	32	35	0	2	2	1	2	2	2	29	31
12hr Total	760	837	1596	38	42	80	91	77	169	630	718	1348

B1(C)

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	38	10	48	2	1	2	10	5	14	27	4	31
08:00 - 09:00	42	20	62	2	3	5	9	10	20	30	7	37
09:00 - 10:00	30	21	51	3	2	5	8	9	18	19	10	29
10:00 - 11:00	27	25	52	2	2	5	9	10	19	16	12	28
11:00 - 12:00	24	22	46	2	2	3	9	8	17	13	13	26
12:00 - 13:00	26	30	56	2	2	5	7	8	15	17	20	36
13:00 - 14:00	27	27	53	3	2	4	8	7	16	16	17	33
14:00 - 15:00	24	27	51	2	2	4	8	7	16	14	18	32
15:00 - 16:00	19	28	47	1	2	3	7	7	14	10	20	30
16:00 - 17:00	26	40	66	1	1	2	6	6	12	19	32	51
17:00 - 18:00	17	42	60	1	1	2	3	5	8	14	36	50
18:00 - 19:00	8	16	24	0	0	1	1	2	2	7	14	21
12hr Total	308	308	616	20	20	41	85	85	170	203	203	406

B2

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV***			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	74	22	96	8	6	14	7	6	12	60	10	69
08:00 - 09:00	82	19	101	9	9	18	15	9	23	59	1	59
09:00 - 10:00	48	24	72	11	6	18	8	8	16	29	9	38
10:00 - 11:00	27	22	49	9	7	16	8	8	16	10	6	16
11:00 - 12:00	26	26	52	9	8	16	6	9	16	10	9	19
12:00 - 13:00	29	37	66	9	7	16	10	10	20	10	19	30
13:00 - 14:00	46	35	82	9	7	15	7	7	13	31	22	53
14:00 - 15:00	37	52	90	9	7	15	4	4	7	25	41	67
15:00 - 16:00	32	52	84	8	6	14	7	7	14	18	39	56
16:00 - 17:00	18	78	96	5	6	11	5	7	12	9	65	73
17:00 - 18:00	15	113	128	3	4	6	2	7	9	11	102	113
18:00 - 19:00	12	36	49	2	4	6	2	3	5	8	30	38
12hr Total	449	515	964	89	77	166	80	85	165	280	353	632

B8

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	335	164	499	66	54	120	34	37	71	234	74	308
08:00 - 09:00	291	130	420	73	57	130	45	28	74	173	45	217
09:00 - 10:00	269	161	430	92	73	164	60	37	97	117	51	169
10:00 - 11:00	183	164	348	85	73	158	26	31	57	72	61	133
11:00 - 12:00	164	177	341	66	79	145	29	33	62	69	65	134
12:00 - 13:00	174	196	370	60	73	133	22	22	44	92	101	193
13:00 - 14:00	316	262	578	60	70	130	36	32	68	220	161	381
14:00 - 15:00	221	294	515	51	63	114	21	24	45	149	207	356
15:00 - 16:00	193	275	468	63	54	117	25	30	55	105	191	296
16:00 - 17:00	161	291	452	60	41	101	19	21	41	82	228	310
17:00 - 18:00	85	269	354	38	41	79	9	21	30	38	206	245
18:00 - 19:00	73	196	269	28	41	70	5	13	18	39	142	181
12hr Total	2464	2578	5042	742	717	1460	332	329	661	1390	1532	2921

Residential

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00												
08:00 - 09:00												
09:00 - 10:00												
10:00 - 11:00												
11:00 - 12:00												
12:00 - 13:00												
13:00 - 14:00												
14:00 - 15:00												
15:00 - 16:00												
16:00 - 17:00												
17:00 - 18:00												
18:00 - 19:00												
12hr Total	0	0	0	0	0	0	0	0	0	0	0	0

Site Total

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	607	213	820	84	62	145	68	49	117	455	102	557
08:00 - 09:00	584	187	770	92	70	162	82	50	132	410	67	476
09:00 - 10:00	440	239	679	110	83	193	84	59	142	246	98	343
10:00 - 11:00	310	267	577	100	85	185	52	54	106	158	128	286
11:00 - 12:00	266	305	571	80	92	172	49	60	109	137	153	290
12:00 - 13:00	299	380	679	75	88	163	52	55	107	171	238	409
13:00 - 14:00	446	448	894	74	84	158	62	54	116	309	309	619
14:00 - 15:00	313	458	772	62	76	139	38	43	81	213	339	552
15:00 - 16:00	271	458	729	74	66	140	45	57	102	152	334	486
16:00 - 17:00	223	508	731	67	53	120	32	41	74	124	414	537
17:00 - 18:00	127	494	621	42	50	91	15	35	50	71	410	480
18:00 - 19:00	96	280	376	31	47	78	9	19	27	57	215	271
12hr Total	3980	4238	8218	890	856	1746	588	577	1164	2503	2805	5308

12 Hour Vehicle Trip Rates and Traffic Generation - Policy Off

Trip Generation : Planning Application - 600,000sqm

Land Use	B2	B8	B1(c)	AM	Total
Floorspace	75,896	420,000	15,560	88,545	600,000sqm
%	12.65%	70.00%	2.59%	14.76%	100.00%

Advanced Manufacturing

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	381	41	422	19	2	21	42	5	47	320	33	354
08:00 - 09:00	404	43	447	20	2	22	30	6	37	353	35	388
09:00 - 10:00	220	79	299	11	4	15	18	10	28	192	64	256
10:00 - 11:00	174	134	308	9	7	15	23	11	34	142	116	258
11:00 - 12:00	124	190	314	6	9	16	11	23	34	107	158	264
12:00 - 13:00	165	281	446	8	14	22	32	34	66	125	233	358
13:00 - 14:00	134	295	429	7	15	21	27	20	47	101	260	361
14:00 - 15:00	73	203	276	4	10	14	11	18	29	58	175	233
15:00 - 16:00	65	246	310	3	12	16	14	33	47	47	200	248
16:00 - 17:00	42	238	280	2	12	14	6	15	22	33	211	244
17:00 - 18:00	22	167	189	1	8	9	3	4	6	18	155	173
18:00 - 19:00	6	77	84	0	4	4	1	4	5	5	70	74
12hr Total	1810	1993	3803	90	100	190	218	184	401	1501	1710	3212

B1(C)

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	57	15	72	2	1	4	15	7	22	40	6	47
08:00 - 09:00	63	31	94	3	4	8	14	16	30	46	10	56
09:00 - 10:00	46	32	78	4	3	7	13	14	27	29	15	44
10:00 - 11:00	41	37	79	4	4	7	13	15	28	25	18	43
11:00 - 12:00	36	33	70	3	2	5	13	12	25	20	19	40
12:00 - 13:00	40	45	85	4	3	7	11	12	23	25	30	55
13:00 - 14:00	41	40	81	4	3	7	12	11	23	24	26	51
14:00 - 15:00	36	41	78	2	3	5	13	11	24	21	27	49
15:00 - 16:00	28	43	71	2	2	4	11	10	21	15	30	46
16:00 - 17:00	39	61	100	1	2	4	9	9	19	29	49	78
17:00 - 18:00	26	64	91	1	2	3	4	12	21	21	55	76
18:00 - 19:00	13	24	36	0	1	1	1	2	4	11	21	32
12hr Total	466	467	933	31	30	61	128	129	257	307	307	615

B2

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV***			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	178	52	230	19	15	34	16	13	29	143	23	166
08:00 - 09:00	197	45	241	20	22	43	35	21	56	141	2	143
09:00 - 10:00	116	57	173	27	15	43	20	19	39	69	23	92
10:00 - 11:00	65	52	117	21	17	39	19	20	39	24	15	40
11:00 - 12:00	61	62	124	21	18	39	15	23	38	25	21	46
12:00 - 13:00	71	88	159	21	17	39	24	24	49	25	46	71
13:00 - 14:00	112	85	197	20	17	37	16	16	32	75	52	127
14:00 - 15:00	90	125	215	20	17	37	9	9	18	60	99	160
15:00 - 16:00	77	124	201	19	14	33	16	17	33	42	92	134
16:00 - 17:00	44	187	231	12	14	26	11	18	29	21	155	176
17:00 - 18:00	36	272	308	6	9	15	4	18	22	26	245	271
18:00 - 19:00	30	87	117	5	9	14	6	6	12	19	72	91
12hr Total	1076	1236	2312	213	185	398	192	204	396	671	846	1517

B8

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	445	218	664	88	71	160	45	49	94	312	98	410
08:00 - 09:00	386	172	559	97	76	172	60	37	98	229	59	289
09:00 - 10:00	357	214	571	122	97	218	79	49	129	156	68	224
10:00 - 11:00	244	218	462	113	97	210	35	41	76	95	81	176
11:00 - 12:00	218	235	454	88	105	193	39	44	83	92	86	178
12:00 - 13:00	231	260	491	80	97	176	29	30	59	122	134	256
13:00 - 14:00	420	349	769	80	92	172	48	42	90	292	214	506
14:00 - 15:00	294	391	685	67	84	151	28	32	60	198	275	473
15:00 - 16:00	256	365	622	84	71	155	33	40	73	139	254	394
16:00 - 17:00	214	386	601	80	55	134	26	28	54	109	304	412
17:00 - 18:00	113	357	470	50	55	105	12	28	40	51	274	325
18:00 - 19:00	97	260	357	38	55	92	6	17	24	52	188	241
12hr Total	3276	3427	6703	987	953	1940	441	438	879	1848	2036	3884

Residential

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00												
08:00 - 09:00												
09:00 - 10:00												
10:00 - 11:00												
11:00 - 12:00												
12:00 - 13:00												
13:00 - 14:00												
14:00 - 15:00												
15:00 - 16:00												
16:00 - 17:00												
17:00 - 18:00												
18:00 - 19:00												
12hr Total	0	0	0	0	0	0	0	0	0	0	0	0

Site Total

Hour Period	Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00	1062	325	1387	129	90	218	118	74	192	815	162	977
08:00 - 09:00	1050	291	1341	141	104	245	140	80	221	769	106	875
09:00 - 10:00	739	382	1121	164	119	283	129	93	222	446	170	616
10:00 - 11:00	523	442	965	147	125	271	89	87	177	287	230	517
11:00 - 12:00	440	521	961	118	135	254	78	102	180	243	284	528
12:00 - 13:00	506	675	1181	113	131	244	96	101	196	297	443	740
13:00 - 14:00	706	769	1475	111	126	238	103	90	193	492	553	1045
14:00 - 15:00	493	760	1253	94	114	208	61	70	131	338	576	914
15:00 - 16:00	426	778	1204	108	100	209	74	100	174	244	578	822
16:00 - 17:00	339	872	1211	95	82	178	52	71	123	192	718	911
17:00 - 18:00	198	860	1058	58	74	132	23	57	80	116	729	845
18:00 - 19:00	145	449	594	43	68	111	15	30	45	87	351	438
12hr Total	6628	7123	13751	1322	1269	2590	979	954	1933	4328	4900	9228

12 Hour Vehicle Trip Rates and Traffic Generation - Policy Off

Trip Generation : Full Allocation [Less SH Approval] - 1,025,000sqm + 200 Dwellings

Land Use	B2	B8	B1(c)	AM	Resi	Total
Floorspace	129,655	717,500	26,582	151,264	200	1,025,000 sqm + 200 resi
%	12.65%	70.00%	2.59%	14.76%		100%

Advanced Manufacturing

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		651	69	720	33	3	36	71	9	80	547	57	604
08:00 - 09:00		690	74	764	35	4	38	52	11	63	604	59	663
09:00 - 10:00		376	134	511	19	7	26	30	17	48	327	110	437
10:00 - 11:00		296	229	526	15	11	26	39	19	58	243	198	441
11:00 - 12:00		212	325	537	11	16	27	19	39	58	182	269	451
12:00 - 13:00		281	480	762	14	24	38	54	58	113	213	398	611
13:00 - 14:00		229	504	733	11	25	37	45	35	80	172	444	617
14:00 - 15:00		125	346	472	6	17	24	19	30	50	100	299	398
15:00 - 16:00		110	420	530	6	21	27	24	56	80	81	342	424
16:00 - 17:00		71	407	478	4	20	24	11	26	37	57	360	417
17:00 - 18:00		37	286	322	2	14	16	4	6	11	31	265	296
18:00 - 19:00		11	132	143	1	7	7	2	6	9	8	119	127
12hr Total		3092	3405	6497	155	170	325	372	314	686	2565	2921	5486

B1(C)

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		98	26	123	4	2	6	25	12	37	69	11	79
08:00 - 09:00		108	52	160	6	7	13	24	27	51	78	18	96
09:00 - 10:00		78	55	133	7	5	12	22	24	46	50	26	75
10:00 - 11:00		71	64	134	6	6	12	22	26	48	43	31	74
11:00 - 12:00		62	57	119	5	4	9	22	20	43	35	33	68
12:00 - 13:00		68	77	145	6	5	12	19	21	40	43	51	94
13:00 - 14:00		69	69	138	7	5	11	21	19	40	41	45	86
14:00 - 15:00		62	71	133	4	5	9	22	19	40	36	47	83
15:00 - 16:00		48	73	121	3	4	7	18	18	36	26	52	78
16:00 - 17:00		67	103	171	2	4	6	15	16	32	49	83	133
17:00 - 18:00		45	110	155	2	3	5	7	14	20	37	93	130
18:00 - 19:00		22	41	62	1	1	2	2	4	6	19	36	54
12hr Total		797	797	1594	53	52	105	219	220	439	525	525	1051

B2

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV***			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		305	88	393	32	26	58	28	23	50	244	40	284
08:00 - 09:00		336	76	412	35	38	73	61	35	96	240	3	244
09:00 - 10:00		198	97	296	47	26	73	34	32	66	118	39	157
10:00 - 11:00		110	89	200	36	30	66	32	34	66	42	26	68
11:00 - 12:00		105	106	211	36	31	67	26	39	65	42	37	79
12:00 - 13:00		121	150	271	36	30	66	42	42	83	43	79	121
13:00 - 14:00		191	145	336	35	29	64	27	28	55	129	89	218
14:00 - 15:00		153	214	367	35	29	64	15	16	31	103	169	273
15:00 - 16:00		132	211	344	32	25	57	28	29	57	72	158	230
16:00 - 17:00		75	319	394	21	23	44	18	31	49	36	265	301
17:00 - 18:00		62	464	526	10	16	26	7	30	37	44	419	463
18:00 - 19:00		51	149	200	8	16	23	10	11	21	33	122	155
12hr Total		1839	2111	3949	364	316	681	328	349	677	1146	1446	2592

B8

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		761	373	1134	151	122	273	78	83	161	532	168	700
08:00 - 09:00		660	294	954	165	129	294	103	64	167	392	101	493
09:00 - 10:00		610	366	976	208	165	373	136	84	220	266	116	383
10:00 - 11:00		416	373	789	194	165	359	59	70	129	163	138	301
11:00 - 12:00		373	402	775	151	179	330	66	75	141	157	147	304
12:00 - 13:00		395	445	839	136	165	301	49	51	100	209	229	438
13:00 - 14:00		718	596	1313	136	158	294	82	72	154	499	365	865
14:00 - 15:00		502	667	1170	115	144	258	49	54	103	339	469	808
15:00 - 16:00		438	624	1062	144	122	265	56	67	124	238	435	672
16:00 - 17:00		366	660	1026	136	93	230	44	48	92	186	519	704
17:00 - 18:00		194	610	804	86	93	179	21	48	69	87	468	555
18:00 - 19:00		165	445	610	65	93	158	11	30	41	89	322	411
12hr Total		5597	5855	11451	1686	1629	3315	754	748	1501	3157	3478	6635

Residential

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		15	73	87	0	0	0	2	7	9	12	66	78
08:00 - 09:00		30	90	120	0	0	0	3	6	9	27	84	110
09:00 - 10:00		26	31	58	0	0	0	3	3	7	23	28	51
10:00 - 11:00		22	25	47	0	0	0	3	3	6	19	22	41
11:00 - 12:00		24	25	49	0	0	0	3	3	7	20	22	42
12:00 - 13:00		31	27	58	0	0	0	4	3	7	27	24	51
13:00 - 14:00		26	28	54	1	0	1	3	4	7	23	24	46
14:00 - 15:00		27	35	62	0	0	0	3	3	6	24	31	56
15:00 - 16:00		51	31	82	0	0	1	4	3	7	47	27	74
16:00 - 17:00		54	28	82	0	0	0	5	3	8	49	26	75
17:00 - 18:00		80	32	111	0	0	0	7	2	9	73	29	102
18:00 - 19:00		69	28	97	0	0	0	4	2	6	65	26	91
12hr Total		454	453	907	2	2	3	45	43	88	408	408	816

Site Total

Hour Period		Vehicles (HGV+LGV+CAR)			HGV			LGV*			Car		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
07:00 - 08:00		1829	629	2457	220	154	374	204	134	337	1405	341	1746
08:00 - 09:00		1824	586	2410	241	178	418	243	143	386	1341	265	1606
09:00 - 10:00		1289	684	1973	280	203	484	225	162	386	784	319	1103
10:00 - 11:00		916	780	1696	251	213	464	156	152	308	509	415	924
11:00 - 12:00		776	915	1691	202	231	433	137	177	314	436	508	944
12:00 - 13:00		895	1180	2075	193	224	417	167	175	343	535	780	1315
13:00 - 14:00		1233	1341	2575	190	216	407	179	157	336	864	968	1832
14:00 - 15:00		870	1333	2203	160	195	355	107	123	230	602	1016	1618
15:00 - 16:00		779	1359	2138	185	172	357	130	173	304	464	1014	1478
16:00 - 17:00		634	1518	2151	163	141	304	94	124	217	377	1253	1630
17:00 - 18:00		417	1501	1918	100	126	226	46	101	146	272	1274	1546
18:00 - 19:00		317	795	1112	74	116	190	29	53	83	214	625	839
12hr Total		11778	12621	24399	2259	2169	4428	1717	1674	3391	7801	8779	16580

Appendix TTN10-2: B8 Trip Rate Review

Manchester Northern Gateway | B8 Trip Rate Review

Overview

1. In late 2024 National Highways offered alternative trip rates for the B8 Land Use. The National Highways trip rates are significantly higher than the trip rates included in the Focus Transport Planning, “Preliminary Transport Assessment Scoping Note – 2022” (which were subsequently adopted in the Tetra Tech Transport Assessment Scoping Note Update – 2024).
2. The B8 trip rates as presented in the PTASN & the TASNU, have been circulated for comment since July 2022.
3. On receipt of the NH comment that a sensitivity test should be carried out, using the National Highways B8 Trip Rates, the B8 rates have been reviewed.
4. The rates from the PTASN & TASNU have been compared against:
 - Tetra Tech analysis of TRICS in 2025.
 - Tetra Tech analysis of a proxy B8 site, which has provided B8 trip rates that National Highways midlands have accepted for a proposed B8 scheme.
 - The National Highways trip rates.

Tetra Tech rates from TRICS in 2025

5. The filters have been set in TRICS to cover the following:
 - England (Excluding London and the South)
 - Suburban area & Edge of Town only
 - 5000 to 105335 sqm.
 - Last 10 years of data available (19/10/13 to 19/10/23)
6. The TRICS output is attached.

Tetra Tech – Proxy B8 Site

7. Tetra Tech have engaged with National Highways in relation to the Wellesbourne Airfield re-development in Warwickshire. Details can be found on the Stratford-on-Avon District Council Planning Portal under planning reference : 24/02333/OUT
8. The B8 Trip Rates which were accepted at Wellesbourne, were themselves identified using a proxy site, namely Wellesbourne Distribution Park. The methodology was discussed at length with National Highways and the trip rates have been accepted. The trip rates have been extracted from the TA on the planning portal.

Comparative Review of B8 Trip Rates

9. The B8 Trip Rate comparison is provided in **Table 1** below.

Table 1: B8 Trip Rate Comparative Review

Source	Trip rates per 100sqm		
	Arr	Dep	Tot
AM Peak Hour (0800-0900)			
PTASN / TASNU – Rates used in Policy Off modelling	0.092	0.041	0.133
Tetra Tech: 2025 TRICS	0.050	0.046	0.096
Tetra Tech: Wellesbourne Proxy Site	0.098	0.052	0.151
National Highways	0.187	0.126	0.313
PM Peak Hour (1700-1800)			
PTASN / TASNU – Rates used in Policy Off modelling	0.027	0.085	0.112
Tetra Tech: 2025 TRICS	0.060	0.055	0.115
Tetra Tech: Wellesbourne Proxy Site	0.020	0.101	0.121
National Highways	0.135	0.222	0.357

10. **Table 1** demonstrates that the Policy Off trip rates used within the modelling are appropriate. The NH rates are 2 to 3 times higher than NH have accepted elsewhere. There should be no requirement for additional sensitivity tests with higher B8 rates.

Attached – TRICS Output

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NN NORTH NORTHAMPTONSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	BD BRADFORD	1 days
	DR DONCASTER	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Tetra Tech Quay West Manchester

Licence No: 705118

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 7000 to 105335 (units: sqm)
 Range Selected by User: 5000 to 105335 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 19/10/13 to 19/10/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Wednesday	2 days
Thursday	2 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	5

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	5
Development Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	2 days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:**Use Class:**

B8	6 days
----	--------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	4 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	6 days
-----------------	--------

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	BD-02-F-01 STAITHGATE LANE BRADFORD NEWHALL Edge of Town Industrial Zone Total Gross floor area: 10446 sqm Survey date: THURSDAY 14/03/19	DISTRIBUTION COMPANY BRADFORD	Survey Type: MANUAL
2	DR-02-F-01 MIDDLE BANK DONCASTER Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 80100 sqm Survey date: TUESDAY 21/09/21	TESCO DISTRIBUTION CENTRE DONCASTER	Survey Type: MANUAL
3	DS-02-F-01 PARK ROAD HOLMEWOOD Edge of Town Industrial Zone Total Gross floor area: 7000 sqm Survey date: WEDNESDAY 04/10/23	LOGISTICS DEPOT DERBYSHIRE	Survey Type: MANUAL
4	NN-02-F-01 HALLEY ROAD CORBY Edge of Town Industrial Zone Total Gross floor area: 18790 sqm Survey date: THURSDAY 19/10/23	WAREHOUSING & DISTRIBUTION CENTRE NORTH NORTHAMPTONSHIRE	Survey Type: MANUAL
5	NT-02-F-01 NOOK FLATT ROAD NEAR WORKSOP BLYTH Edge of Town Development Zone Total Gross floor area: 105335 sqm Survey date: WEDNESDAY 18/10/23	LOGISTICS WAREHOUSING PARK NOTTINGHAMSHIRE	Survey Type: MANUAL
6	TW-02-F-01 MANDARIN WAY WASHINGTON PATTISON IND. ESTATE Edge of Town Industrial Zone Total Gross floor area: 31000 sqm Survey date: FRIDAY 13/11/15	ASDA DISTRIBUTION CENTRE TYNE & WEAR	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	5	44334	0.078	5	44334	0.029	5	44334	0.107
06:00 - 07:00	5	44334	0.059	5	44334	0.066	5	44334	0.125
07:00 - 08:00	6	42112	0.073	6	42112	0.046	6	42112	0.119
08:00 - 09:00	6	42112	0.050	6	42112	0.046	6	42112	0.096
09:00 - 10:00	6	42112	0.049	6	42112	0.043	6	42112	0.092
10:00 - 11:00	6	42112	0.047	6	42112	0.051	6	42112	0.098
11:00 - 12:00	6	42112	0.047	6	42112	0.040	6	42112	0.087
12:00 - 13:00	6	42112	0.046	6	42112	0.054	6	42112	0.100
13:00 - 14:00	6	42112	0.054	6	42112	0.045	6	42112	0.099
14:00 - 15:00	6	42112	0.045	6	42112	0.070	6	42112	0.115
15:00 - 16:00	6	42112	0.050	6	42112	0.052	6	42112	0.102
16:00 - 17:00	6	42112	0.045	6	42112	0.066	6	42112	0.111
17:00 - 18:00	6	42112	0.060	6	42112	0.055	6	42112	0.115
18:00 - 19:00	5	49134	0.031	5	49134	0.049	5	49134	0.080
19:00 - 20:00	4	53668	0.027	4	53668	0.034	4	53668	0.061
20:00 - 21:00	4	53668	0.024	4	53668	0.027	4	53668	0.051
21:00 - 22:00	1	18790	0.016	1	18790	0.059	1	18790	0.075
22:00 - 23:00	1	18790	0.005	1	18790	0.043	1	18790	0.048
23:00 - 24:00	1	18790	0.005	1	18790	0.005	1	18790	0.010
Total Rates:			0.811			0.880			1.691

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	7000 - 105335 (units: sqm)
Survey date range:	19/10/13 - 19/10/23
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	5	44334	0.008	5	44334	0.011	5	44334	0.019
06:00 - 07:00	5	44334	0.010	5	44334	0.013	5	44334	0.023
07:00 - 08:00	6	42112	0.019	6	42112	0.027	6	42112	0.046
08:00 - 09:00	6	42112	0.021	6	42112	0.031	6	42112	0.052
09:00 - 10:00	6	42112	0.021	6	42112	0.023	6	42112	0.044
10:00 - 11:00	6	42112	0.025	6	42112	0.029	6	42112	0.054
11:00 - 12:00	6	42112	0.022	6	42112	0.015	6	42112	0.037
12:00 - 13:00	6	42112	0.022	6	42112	0.020	6	42112	0.042
13:00 - 14:00	6	42112	0.019	6	42112	0.019	6	42112	0.038
14:00 - 15:00	6	42112	0.021	6	42112	0.019	6	42112	0.040
15:00 - 16:00	6	42112	0.026	6	42112	0.022	6	42112	0.048
16:00 - 17:00	6	42112	0.026	6	42112	0.017	6	42112	0.043
17:00 - 18:00	6	42112	0.036	6	42112	0.016	6	42112	0.052
18:00 - 19:00	5	49134	0.016	5	49134	0.018	5	49134	0.034
19:00 - 20:00	4	53668	0.007	4	53668	0.014	4	53668	0.021
20:00 - 21:00	4	53668	0.008	4	53668	0.014	4	53668	0.022
21:00 - 22:00	1	18790	0.000	1	18790	0.000	1	18790	0.000
22:00 - 23:00	1	18790	0.000	1	18790	0.000	1	18790	0.000
23:00 - 24:00	1	18790	0.000	1	18790	0.000	1	18790	0.000
Total Rates:			0.307			0.308			0.615

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Appendix TTN10-3 – Giga Scale Occupier

Manchester Northern Gateway | Giga-scale Employment /Factory Trip Rates

Overview

1. National Highways have commented that the scale of development at JPA1.1 has not been adequately reflected in the trip rates in the transport modelling work undertaken to support the Transport Assessment (TA).
2. Specifically, as the Supplementary Planning Document (SPD) references development at the “Giga-Scale”, National Highways want to be reassured that the modelling reflects a commensurate level of development and intensity of land use.
3. In this regard, this note seeks to provide further information in relation to giga-scale employment/factory development. and the implications for traffic volumes if such a use was located on the site.

Comparative Giga-Factories

4. Giga-Factories are being built across the globe but as yet, are few and far between in the UK. The number of sites which have received planning permission, and which have supporting TAs, is limited.
5. A new giga-factory adjacent to the Nissan manufacturing plant in Sunderland (AESC UK Plant 3) has been identified, and has been used to determine potential trip rates for a similar development within the Northern Gateway allocation (Planning Ref: 24/00723/FU4)
6. The TA for the giga-factory was produced by consultants SYSTRA in February 2024.
7. National Highways were consultees on the application.
8. The proposal and its supporting TA are considered to be relevant and comparable to the potential “giga-scale” development at Northern Gateway, and details of its operations and trips rates are provided below.

Operations

9. The giga-factory will be a major employer in the north-east and complement the existing Nissan manufacturing plant located on an adjacent site in Sunderland. In total some 1,991 employees are set to be based at the new giga-factory, see Figure 1.

Figure 1: Employees and Associated Shift Patterns

	Dayshift (Office Staff)	Continental Shifts	3 Shift	2 Shift	Total
UK HQ Office	193				193
Gigafactory	23	752			775
Packaging & Warehouse		751	118	74	943
					1911

10. The shift start and end times per shift pattern is illustrated in **Figure 2**.

Figure 2: Shift Pattern – Start and End Times

	Shift Start	Shift End
Office Day Staff	07:45hrs +/- 1 hr	16:30hrs +/- 1 hr
2-Shift	Days: 06:50hrs	Days: 15:08hrs
	Lates: 15:25hrs	Lates: 00:43hrs
3-Shift	Days: 06:50hrs	Days: 15:25hrs
	Lates: 15:20hrs	Lates: 23:10hrs
	Nights: 23:05hrs	Nights: 06:55hrs
Continental	Days: 06:50hrs	Days: 19:03hrs
	Lates: 18:50hrs	Lates: 07:03hrs

11. Given the shift timings, and number of employees associated with each, the profile of staff arrivals and departures across the day has been forecast and is illustrated in **Table 1** below.

Table 1: Total Staff Arrivals and Departures at AESC UK Plant 3, Sunderland

		Arrivals				Departures			
Shift Pattern		UK HQ Office	Giga-factory	Packaging	Total	UK HQ Office	Giga-factory	Packaging	Total
Day shift		193	23		216	193	23		216
Continental			752	751	1,503		752	751	1,503
3-shift				118	118			118	118
2-shift				74	74			74	74
Total		193	775	943	1,911	193	775	943	1,911

6:00 AM	7:00 AM		376	452	828				
7:00 AM	8:00 AM	48	6		54		376	415	791
8:00 AM	9:00 AM	145	17		162				
9:00 AM	10:00 AM								
10:00 AM	11:00 AM								
11:00 AM	12:00 PM								
12:00 PM	1:00 PM								
1:00 PM	2:00 PM								
2:00 PM	3:00 PM								
3:00 PM	4:00 PM			76	76			76	76
4:00 PM	5:00 PM					97	12		108
5:00 PM	6:00 PM					97	12		108
6:00 PM	7:00 PM		376	376	752				
7:00 PM	8:00 PM						376	376	752
8:00 PM	9:00 PM								
9:00 PM	10:00 PM								
10:00 PM	11:00 PM			39	39				
11:00 PM	12:00 AM							39	39
12:00 AM	1:00 AM							37	37
	Total	193	775	943	1,911	193	775	943	1,911

12. As part of the TA, it was assumed that 85% of all employees would travel by car, a figure which could reduce to 65% if the target contained in the supporting Travel Plan is met.
13. The total floorspace of the site is 194,783sqm. Based upon this, alternative potential trip rates were devised per 100sqm, and are illustrated in **Table 2**.

Table 2: Trip Rates (total trips, and with 85% and 65% travelling by car respectively) per 100sqm (AESC UK Plant 3, Sunderland)

		Total People			85% Vehicles			65.5% Vehicles (TP)		
		Arrival	Departure	Total	Arrival	Departure	Total	Arrival	Departure	Total
6:00 AM	7:00 AM	0.425	0.000	0.425	0.361	0.000	0.361	0.279	0.000	0.279
7:00 AM	8:00 AM	0.028	0.406	0.434	0.024	0.345	0.369	0.018	0.266	0.285
8:00 AM	9:00 AM	0.083	0.000	0.083	0.071	0.000	0.071	0.055	0.000	0.055
9:00 AM	10:00 AM									
10:00 AM	11:00 AM									
11:00 AM	12:00 PM									
12:00 PM	1:00 PM									
1:00 PM	2:00 PM									
2:00 PM	3:00 PM									
3:00 PM	4:00 PM	0.039	0.039	0.078	0.033	0.033	0.067	0.026	0.026	0.051
4:00 PM	5:00 PM	0.000	0.055	0.055	0.000	0.047	0.047	0.000	0.036	0.036
5:00 PM	6:00 PM	0.000	0.055	0.055	0.000	0.047	0.047	0.000	0.036	0.036
6:00 PM	7:00 PM	0.386	0.000	0.386	0.328	0.000	0.328	0.253	0.000	0.253
7:00 PM	8:00 PM	0.000	0.386	0.386	0.000	0.328	0.328	0.000	0.253	0.253
8:00 PM	9:00 PM									
9:00 PM	10:00 PM									
10:00 PM	11:00 PM	0.020	0.000	0.020	0.017	0.000	0.017	0.013	0.000	0.013
11:00 PM	12:00 AM	0.000	0.020	0.020	0.000	0.017	0.017	0.000	0.013	0.013
12:00 AM	1:00 AM	0.000	0.019	0.019	0.000	0.016	0.016	0.000	0.012	0.012

Comparisons with the Northern Gateway Transport Modelling

14. For comparison purposes, trip rates were determined for four different land uses which are anticipated to come forward as part of the Northern Gateway site JPA1.1. They are presented in **Table 3** and represent the data sources that were used in the Transport Assessment Scoping Note Update (TASNU).
15. The peak hour rates for the giga-factory (based upon 85% of trips being undertaken by car) are also included in the table for ease of comparison.

Table 3: Peak and Inter-Peak Trip Rates (Comparison between Northern Gateway TA Trip Rates and the Giga Scale Use) – Trip Rates per 100sqm

AM Peak (0800-0900)				PM Peak (1700-1800)			
	Arr	Dep	Total		Arr	Dep	Total
AM	0.456	0.049	0.505	AM	0.024	0.189	0.213
B1C	0.405	0.197	0.602	B1C	0.169	0.413	0.582
B2	0.259	0.059	0.318	B2	0.048	0.358	0.406
B8	0.092	0.041	0.133	B8	0.027	0.085	0.112
Giga-Scale	0.071	0.000	0.071	Giga-Scale	0.000	0.047	0.047

Conclusions

16. Several conclusions can be drawn from the comparison:

- In the AM peak period, the giga-scale use generates only half the number of trips than the land use with the least number of trips, tested in the Northern Gateway TA (B8 Land Use).
- In the PM peak period, the giga-scale use generates less than half of the lowest generating land use assessed within the Northern Gateway TA (B8 Land Use).

17. The conclusion is that if the JPA1.1 Allocation is fortunate enough to successfully attract a giga-scale employer, the resulting peak hour trip generation per square metre will be less than the trip generation for any other potential land use that it replaces. The maximum quantum of floorspace is fixed in the Allocation, so Giga-scale presence equates to lower trip generation. For that reason the Northern Gateway assessments are sound and indeed over robust should a giga-scale development transpire. No additional analysis is proposed at this stage. If a giga-scale employer does emerge then an additional test can be undertaken to establish if identified mitigation need not be provided.