

## ABLE MARINE ENERGY PARK TR030001

### SUMMARY OF APPLICANT'S CASE PUT AT 22 OCTOBER 2012 HEARINGS

1. This is a summary of the case put by the applicant for the Able Marine Energy Park project, Able Humber Ports Ltd, at the hearings that took place on Monday 22 October 2012 at the Humber Royal Hotel, Grimsby.

#### **Documents Submitted with this Summary**

2. To augment this summary of the applicant's oral case, the following documents are annexed:

- Annex 1 – Junction Location Plan
- Annex 2 – Transport Assessment Signposting Report
- Annex 3 – Stage 1 Road Safety Audit Brief, Report and Designer's Response
- Annex 4 – Junction Model Outputs
- Annex 5 – Pelham Road Mitigation Layout
- Annex 6 – WebTAG Transport Appraisal Summary Table
- Annex 7 – Trip Generation and Distribution Explanatory Note

#### **Morning hearing: Local Impact Reports**

3. The applicant made no oral contribution to the morning's proceedings. To ABP's suggestion that AMEP was in conflict with policy IN4A of the North Lincolnshire Local Plan, the applicant would comment that AMEP is port development and so would not conflict with the policy. It could not be intended that a planning policy was only applicable to one developer.

#### **Afternoon hearing: road transport**

##### ***Applicant's road transport case***

4. The applicant's road transport case is contained in its transport assessment (TA), which is found at Annex 15.1 to its Environmental Statement<sup>1</sup>. The approach – baseline data from the A160/A180 SATURN model and A180/A1136 traffic survey, plus 'committed developments' traffic (exclusion of TEMPRO traffic growth), plus AMEP traffic - was agreed with the three relevant highway authorities: North Lincolnshire Council (NLC), North East Lincolnshire Council (NELC) and the Highways Agency (HA) and accords with WebTAG guidance. The junctions analysed in the TA are shown at Annex 1 of this document for convenience.

5. Four meetings were held with the HA and NLC, together with separate meetings with NELC, to agree the TA methodology and assessment parameters. The HA advised JMP to identify mitigation measures that did not prejudice the A160/A180 improvement scheme and that were within the highway boundary. The level of agreement between the applicant and the highway authorities on:

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<sup>1</sup> <http://infrastructure.planningportal.gov.uk/wp-content/ipc/uploads/projects/TR030001/2.%20Post-Submission/Application%20Documents/Environmental%20Statement/File%208-12%20Environmental%20Statement%20Vol%201%20-%20Annexes/File%2011%20-%20Vol%201%20Annexes/15%20-%20Annex/15.1%20-%20Transport%20Assessment.pdf>

- the study area;
- baseline traffic flows;
- future year assessment;
- trip generation & distribution;
- road safety analysis;
- impact assessment;
- mitigation measures;
- construction traffic;
- framework travel plan; and
- the relationship between AMEP and the A160 upgrade scheme

6. is evidenced in the Statements of Common Ground with each of them and which were submitted in July.

7. The applicant's mitigation measures are based on the principle of 'nil detriment' at the junctions impacted by the development; that is, the functionality of the junctions should be made no worse by the AMEP traffic than it would be with base traffic flows plus committed developments traffic. This can be achieved at all the junctions that have been assessed. In particular, traffic to and from the Port of Immingham will suffer 'nil detriment', as shown in the capacity assessments summarised in Tables 1 to 13 below. The results are reported both in relation to the existing junctions where there is no mitigation proposed and those where mitigation works to the existing layout are proposed.

8. The assessments have been undertaken using industry standard software PICADY for priority T-junctions, Arcady for Roundabouts and LinSig for traffic signal controlled junctions. The full model outputs are contained within Annex 4. In reading Tables 1 to 13, the junctions are considered to be operating within capacity if they do not exceed the percentages below:

- Roundabout capacity should not exceed 85 per cent
- Traffic light controlled junctions should not exceed 90 per cent
- T junctions should not exceed 85 per cent

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
From Manby Rd turning left	69.9	2	35.6	1
From Manby Rd turning right	28.4	0	14.4	0
Turning right into Manby Rd	25.8	0	35.3	1

**Table 1: PICADY results for Priority T- Junction A (A1173 / Manby Rd)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
From Haven Road turning left	16.4	0	45.3	1
From Haven Road turning right	29.8	0	32.8	0
Turning right into Haven Road	46.4	1	17.0	0

**Table 2: PICADY results for Junction B (Chase Hill Rd / Rosper Rd / Haven Road – T Junction)**

Arm	AM Peak Hour		PM Peak Hour	
	Degree of Saturation (%)	Max Queue Length (vehs)	Degree of Saturation (%)	Max Queue Length (vehs)
<b>Base &amp; Committed Development Flows (committed scheme)</b>				
Rosper Road left	19.1	1.5	9.3	1.0
Rosper Road right	65.6	5.8	86.5	13.6
Humber Road east ahead	18.4	2.1	85.8	23.6
Humber Road east right	155.0	27.5	40.5	2.8
Humber Road west ahead	66.6	14.2	23.4	3.5
Humber Road west left	41.4	5.5	21.0	2.7
<b>Practical Reserve Capacity (PRC) for junction</b>	<b>- 72.2%</b>		<b>+ 4.0%</b>	
<b>Base, Committed Development &amp; AMEP Flows (mitigation layout)</b>				
Rosper Road left	62.6	5.0	77.1	11.7
Rosper Road right	68.7	5.3	84.6	12.8
Humber Road east ahead	17.6	1.8	85.8	23.6
Humber Road east right	66.1	1.7	42.1	2.8
Humber Road west ahead	71.9	17.3	23.3	3.5
Humber Road west left	68.6	14.9	22.0	3.1
Humber Road merge – nearside	18.6	0.1	70.8	1.2
Humber Road merge – offside	12.8	3.7	31.4	10.6
<b>PRC for junction</b>	<b>+25.2%</b>		<b>+4.9%</b>	

**Table 3: LINSIG results for Junction C (Rosper Road / Humber Road – traffic light controlled T Junction)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
A160 Ulceby Road	69.1	2	49.3	1
Top Road	49.1	1	63.6	2
A160 Humber Road	51.1	1	78.8	4
Habrough Road	40.0	1	32.6	1

**Table 4: ARCADY results for Junction D (A160 / Top Rd / Habrough Rd - roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows (mitigation layout)</b>				
A160 Humber Road	56.6	1	55.8	1
Industrial Units	0.3	0	0.1	0
Humber Road	47.9	2	69.4	2
A1173 Manby Road	43.1	1	43.5	1
Depot	1.1	0	2.3	0

**Table 5: ARCADY results for Junction E (A160 / A1173 / Humber Rd - roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
Chase Hill Road west	50.7	1	11.1	0
New Access	17.5	0	32.0	1
Chase Hill Road east	33.1	1	55.4	1
Eastfield Road	49.7	1	36.6	1

**Table 6: ARCADY results for Junction F (Eastfield Rd / Chase Hill Rd – Roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
A1173 north	69.6	2	64.4	2
Kings Road	25.2	0	47.9	1
A1173 south	63.6	2	47.0	1

**Table 7: ARCADY results for Junction G (A1173 / Kings Rd – Roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base + Committed Development (existing layout)</b>				
A1173 north	75.7	3	67.2	2
North Moss Lane	40.4	1	110.7	62
Kiln Lane	0.3	0	0.0	0
A1173 west	105.6	60	52.8	1
<b>Base, Committed Development &amp; AMEP Flows (mitigation layout)</b>				
A1173 north	83.3	5	81.8	4
North Moss Lane	27.4	0	78.4	3
Kiln Lane	0.3	0	0.0	0
A1173 west	92.9	11	43.3	1

**Table 8: ARCADY results for Junction H (A1173 / North Moss Lane / Kiln Lane - roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows (Existing layout)</b>				
A160 west ahead	70.8	22.0	68.6	21.0
A160 west right	18.9	1.4	18.8	0.9
Eastfield Rd north right	66.3	7.0	64.4	8.9
Eastfield Rd north right & ahead	70.3	7.6	73.0	10.7
A160 east ahead & left	66.9	19.9	71.5	21.7
A160 east right	69.4	6.2	66.6	3.8
Eastfield Rd south	66.7	5.4	71.5	5.2
<b>PRC for junction</b>	<b>+ 27.1%</b>		<b>+ 23.3%</b>	

**Table 9: LINSIG results for Junction L (A160 / Eastfield Rd – traffic light controlled crossroad)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development &amp; AMEP Flows</b>				
A180 west	39.0	1	11.1	0
A1173	50.5	1	74.2	3
A180 east	57.9	1	33.2	1

**Table 10: ARCADY results for Junction M (A180 / A1173 I Roundabout)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base &amp; AMEP Flows</b>				
Bridge link road	15.9	0	36.9	1
A180 westbound off-slip	15.6	0	16.1	0
A1136	24.8	0	23.3	0

**Table 12: ARCADY results for A180 / A1136 Europarc southern roundabout (East of Junction J)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base &amp; AMEP Flows</b>				
A180 eastbound off-slip	16.6	0	17.3	0
Europarc	5.8	0	32.2	1
Bridge link road	30.7	0	7.5	0

**Table 12: ARCADY results for A180 / A1136 Europarc northern roundabout (East of Junction J)**

Arm	Morning peak hour		Evening peak hour	
	Degree of Saturation (%)	Max. queue length (vehs)	Degree of Saturation (%)	Max. queue length (vehs)
<b>Base, Committed Development (existing layout)</b>				
A1173 southeast	116.0	69	115.3	65

Pelham Road	110.8	28	55.6	1
A1173 northwest	81.5	4	114.6	65
<b>Base, Committed Development &amp; AMEP (mitigation layout)</b>				
A1173 southeast	113.5	73	97.1	15
Pelham Road	106.1	21	47.6	1
A1173 northwest	56.5	1	90.7	8

**Table 13: Results for Junction N (A1173/Pelham Road proposed layout – mini roundabout)**

9. It can be seen from the tables that where no mitigation is proposed the junctions are operating within capacity, and where mitigation is proposed the junctions are no worse than without mitigation or AMEP.

10. The applicant has undertaken Stage 1 Road Safety Audits (RSAs) at junctions where junction improvement works are proposed. The RSAs are included in Annex 3 of this document and cover the following junctions:

- Junction C - Humber Road / Rosper Road (NEA1114-01 Rev D)
- Junction E - A160 / A1173 / Humber Road (NEA1114-02 Rev C)
- Junction H - A1173 / North Moss Lane / Kiln Lane (NEA1114-06 Rev B)

11. In addition, the applicant has agreed to undertake a road safety audit for Junction N, the A1173 / Pelham Road (NEA1114/PO/01).

#### ***Update on Committed Developments***

12. Since the publication of the TA it has been announced that the proposed Drax Heron Renewable Energy Plant proposed at the junction of Rosper Road and Humber Road has been cancelled. The applicant explained at the Hearing that two other committed developments included in the applicant's transport assessment are not now taking place, the bioethanol plant (planning reference PA/2010/0325) and the URSA development (planning reference PA/2008/0988) have also been cancelled.

13. Whilst the impact of removing the Drax development traffic from the network is locally significant, the other two developments were principally accessing the Able Logistics Park via the A180, A160 and then from Eastfield Road, so withdrawal of the latter projects will have limited impact on the transport assessment undertaken for the applicant.

14. The implications of removing the Drax development traffic are most significant at Junction C (Humber Road/Rosper Road) and Junction E (A160/Humber Road/Manby Road roundabout). The traffic flows associated with the Drax development are 364 eastbound in the morning peak hour and 364 westbound in the evening peak hour on Humber Road.

#### ***Written comments on the Applicant's road transport case***

15. In its 31 March 2012 relevant representation (No.47), ABP identified three 'specific concerns' – adequacy of highway mitigation works, inconsistencies and mathematical errors in the

TA and the exclusion of the future growth of the Port of Immingham from the traffic modelling. These concerns were elaborated upon in the written representation of Simon Tucker (ST) of DTA dated 12 June on behalf of ABP. In its comments on the written representations (submitted on 3 August 2012) JMP on behalf of the applicant responded to ABP and other road transport representations at Appendix WR22.2<sup>2</sup>. The response to ABP dealt with:

- future port growth: ‘committed developments’ amounted to a reasonable representation of background traffic growth for modelling purposes;
- the exclusion of the Drax construction traffic and the consequences for the operation of the Rosper Rd / Humber Road and Humber Road A160 / A1173 Manby Rd junctions;
- safety audits and amended junction layouts;
- traffic flow issues: the non-materiality of the criticism of the use of the default HGV percentage, given the robust nature of the TA traffic assessment;
- the DTA new traffic survey / assessment (higher HGV percentage, higher base flows, Port of Immingham future growth): the unrealism of the DTA’s baseline traffic assessment and why the JMP TA baseline traffic situation remained a reasonable representation of the baseline traffic flows for modelling purposes;
- revisions to the traffic flow assessment: the difference in the HGV percentage;
- the appropriateness of the exclusion of the Port of Immingham traffic growth in the absence of the HA’s A160 improvement works;
- the misunderstanding regarding the erroneous one-lane approach from Humber Rd west in the Humber Rd / Rosper Rd junction: two-lane approach correctly modelled.

16. The applicant’s response to the written representations included initial Stage 1 Road Safety Audits carried out for Junctions C (Humber Road/Rosper Road), E (A160/A1173 (Manby Road)/Humber Road) and H (A1173/North Moss Lane/Kiln Lane) and these are included at Appendix A of WR22.2

17. Following comments from the Highways Agency, the Stage 1 Road Safety Audits were undertaken again for Junctions C, E and H and the revised audits are included in Annex 2 of this document. The Highways Agency has confirmed its acceptance of the revised audits.

18. ABP submitted a response to the applicant’s comments on the Relevant Representations on 3 August, including further comments from ST, in relation to the use of WebTAG methodology, the contents of the initial Road Safety Audits and on the Highways Agency’s position. On 12 October, ABP submitted further comments on, inter alia, highway issues.

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<sup>2</sup> Starting on page 422 of <http://infrastructure.planningportal.gov.uk/wp-content/ipc/uploads/projects/TR030001/2.%20Post-Submission/Representations/Comments/Written%20Representations/CM023%20TR030001%20Leslie%20Hutchings%20on%20behalf%20of%20Able%20UK%20Ltd.msg.pdf>



19. Five months after the end of the representation period, Royal Mail made a representation (BNP Paribas letter 12 September 2012 and accompanying NTP report) principally concerning possible congestion at Junction N, the Pelham Road/A1173 junction.

20. It is stated within Royal Mail's written representation that deliveries to the Royal Mail Immingham Delivery Office (DO) will occur at:

- 05.35 Monday to Saturday; and at
- 06.30 and 07.45 Tuesday to Saturday.

21. Peak staff vehicle movements to the Immingham DO will occur between the hours of 06.00 to 08.00 in the morning and 14.00 to 16.00 in the afternoon. Collections from the DO may be made by members of the public between:

- 06.30 to 15.30 Monday to Friday; and
- 06.30 to 14.15 on Saturdays.

22. AMEP peak traffic movements are associated with the Day-shift (9.00am to 5.00pm) and as such will not coincide with deliveries or staff movements to/from the Immingham DO.

23. The applicant has been in discussion with Royal Mail and, at the hearing, understood that it had addressed its concerns on the use of committed development trips in the TA. NTP (Mr Vernon) confirmed at the Hearing that they would be willing to accept the proposed amendments to the Pelham Road/A1173 junction shown in Annex 5 (refer also to Table 13), subject to the findings of a Stage 1 Road Safety Audit which the applicant has agreed to undertake and provide to the Examining Authority.

### ***Travel plan***

24. The applicant explained at the Hearing that the Framework Travel Plan (FTP), included in Appendix 15.2 of the ES, was an over-arching plan that would be supplemented by Occupiers' Travel Plans. FTP identifies targets for the maximum permissible single occupancy car trips to AMEP (56 percent), but does not prescribe precise measures; these would be left to the occupiers to determine. . Given the geographically imposed remoteness of the Humberside location of the port development from residential development, the most practical measures to achieve the above target are likely to be by car sharing and worker buses provided by the on-site employers. Whilst ABP sought to discount the potential for car park charging by employers as a means of discouraging single occupancy car trips, on the basis that it was non-typical for North Lincolnshire, the applicant regards that present fact as irrelevant. In order for the FTP targets to be achieved it will be necessary to change normal patterns of behaviour, and economic pressure is a valid (and potentially necessary) means of achieving that effect.

25. ABP also commented on the relevance of an initiative in the FTP in relation to walking. Again, the applicant accepts that the remoteness of the site militates against any significant benefit arising from walking to work, but a public footpath network does exist between East Halton and AMEP and could be used by future workers living there.

26. The Panel queried how the Travel Plan for the scheme was to be enforced to ensure compliance. In short, a Requirement has been included in the draft DCO submitted to the Examining Authority of 9 October and is reproduced below:

*24.—(1) No stage of the of the authorised development shall commence until, for that stage, after*

*consultation with the highway authority, North East Lincolnshire Council and Contrica plc, a travel plan, which must include details of the expected means of travel to and from the authorized development and any parking to be provided, has been submitted to and approved by the relevant planning authority.*

*(2) No part of the authorised development shall be brought into use until, after consultation with the highway authority, a travel plan, which must include details of the expected means of travel to and from the authorised development and any parking to be provided, has been submitted to and approved by the relevant planning authority.*

*(3) The plan approved under paragraph (1) must be implemented during the construction of the authorised development and the plan approved under paragraph (2) must be implemented within one month of the authorised development being brought into use and shall continue to be implemented for as long as the authorised development is used.*

27. These requirements would be enforceable by the Local Planning Authority and subject to the same methods of enforcement as any planning condition.

28. The Panel suggested that the FTP should be reviewed on an annual basis and the applicant noted that this was consistent with the survey requirements set out in the FTP and agrees that an annual review period would be appropriate.

29. NELC supported a travel plan being required in the DCO. NELC have also called for a Traffic Management Plan and the applicant has included this at Requirement 26 in the 26 October version of the DCO. In the light of comments made at the hearings, this is to be reviewed every six months until the relevant authorities agree a longer period can be used. It will be a live document and the suitability of routes for access/egress to the AMEP site constantly monitored.

### ***Committed Development and the Port of Immingham Masterplan***

30. In response to questions, ABP's witness Simon Tucker (ST) confirmed his principal concern to be that traffic growth implied from the Port of Immingham Masterplan had not been included as committed development traffic<sup>3</sup>. ST explained that by not doing so, ABP considered that the impacts of AMEP on the Port of Immingham had been underestimated. ST stated that he had used information within Table 1.1 the Consultation Draft Master Plan (CDMP) in order to estimate the likely increase in port traffic during the Master Plan period; for ease of reference Table 1.1 of the CDMP is reproduced in Figure 1 below.

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<sup>3</sup> It is to be noted that in answer to questions ST said he did not make any criticism that TEMPRO background growth had not been included in the TA model.

Cargo category	Units	2008 (actual) 000s	2020 (forecast) 000s	2030 (forecast) 000s
<b>Dry bulks – energy/industrial</b>				
Coal	Tonnes	15,231	17,000	20,000
Iron ore	Tonnes	5,761	6,000	6,000
Biomass	Tonnes	114	5,000	7,500
<b>Dry bulks – agribulks</b>	Tonnes	1,485	2,500	3,000
<b>Liquid bulks</b>	Tonnes	22,925	24,000	25,500
<b>Unitised</b>	Tonnes	7,719	11,660	15,811
Roll on-roll off trailers	Units	367	556	713
Lift on-lift off containers	Units	97	146	250
Trade vehicles	Units	193	300	450
<b>General/other bulks</b>	Tonnes	1,869	2,000	2,300
<b>TOTAL</b>	<b>Tonnes</b>	<b>55,104</b>	<b>68,160</b>	<b>80,111</b>

Table 1.1: Forecast demand analysis for the Port of Immingham to 2030 (ABP).

**Figure 1:** Abstract from ABP Consultation Draft Master Plan showing forecast Trade in 2020 and 2030

31. ST further explained that he had made a number of assumptions in order to derive the percentage traffic growth between 2008 and 2020 and also between 2008 and 2030, and pointed out that his assessment is included in ABP's written representation. Again, for ease of reference, the tabulated figures included in the WR are reproduced in Figures 2 to 4 below. In short, the Figures show the following:

Figure 2 This records DT's assumptions about the percentage of each cargo type that is likely to be transported by road. So, for example, it is assumed that 10 per cent of biomass imported at the Port of Immingham will be supplied to the end-user by HGV. By 2030, this amounts to 750,000 tonnes of material.

Figure 3 This records assumptions about the load that will be carried by each HGV by cargo type. So, for example, all bulk material transported by road (including biomass) will be transported in 20 tonne loads. By 2030, this amounts to 37,500 HGV movements per annum or 204 per day for biomass alone.

Figure 4 This records the total number of HGV movements that will be required to transport cargoes from the Port of Immingham by Road. So, by 2030, ABP anticipate adding around 1,500,000 HGV movements per annum to the road network or adding 4 109 HGV movements per day (750,000 departures necessitates 750,000 arrivals). This excludes any increase in the numbers of private cars due to direct and indirect increases in employment.

Cargo	Units	Share to road	2008	2020	2030
Coal	Tonnes	10%	1523	1700	2000
Iron Ore	Tonnes	0	0	0	0
Biomass	Tonnes	10%	11	500	750
Agribulks	Tonnes	100%	1485	2500	3000
Liquid bulks	Tonnes	50%	11463	12000	12750
Unitised	Tonnes	70%	5403	8162	11068
Other Bulks	Tonnes	90%	1682	1800	2070
Total	Tonnes		21567	26662	31638
Ro Ro	Units	100%	367	556	713
Lo Lo	Units	70%	68	102	175
Trade Vehicles	Units	80%	154	240	360

**Figure 2:** Abstract from ABP Written Representation showing Road Distribution by Cargo Type (Thousand Tonnes)

Cargo	Units per HGV		Notes
Bulk	20	tonnes	Assume load one way only
Trade vehicles	13	cars	Assume load one way only
Ro-Ro	1	hgvs	Assume load both ways
Lo-Lo	1.03		Assume load both ways with 3% empty tractor

**Figure 3:** Abstract from ABP Written Representation, HGV Load Carrying Assumptions

Cargo	2008	2020	2030
Bulk	1,078,370	1,333,100	1,581,885
Ro Ro	12,867	20,000	30,000
Lo Lo	183,500	278,000	356,500
Trade Vehicles	34,969	52,633	90,125
Total	1,309,705	1,683,733	2,058,510

**Figure 4:** Abstract from ABP Written Representation, Potential HGV No's per Annum

32. ST further recorded that he had reviewed the final Masterplan, recently issued by ABP and distributed at the Hearing on 17 October, and had calculated that the increase in traffic would be even more than estimated in the WR, this was quantified in his submission dated 12 October (refer to paragraphs 9.1 and 9.2 of that submission).

33. In response to the above, the applicant distributed abstracts from the Guidance on the Preparation of Port Master Plans (Department for Transport, 2008). In particular, the applicant read out parts of paragraphs 9 and 10; these paragraphs are reproduced in Figure 5 below, and the applicant drew particular attention to paragraph 10, bullet 5.

**The purpose of master plans**

9. The main purposes of port master plans are to:

- **clarify** the port's own strategic planning for the medium to long term;
- **assist** regional and local planning bodies, and transport network providers, in preparing and revising their own development strategies; and
- **inform** port users, employees and local communities as to how they can expect to see the port develop over the coming years.

10. It does this by setting out:

- how the port expects to **grow and develop** its business over time;
- why this is feasible in the context of **wider patterns of supply and demand**;
- **where** changes of land-use are likely to be required to support growth areas;
- what **alternative** ways of meeting demand have been and will be considered;
- what **environmental** measures will be taken to ensure that not only are adverse effects mitigated, but as far as possible the port makes a **positive** contribution to environment and amenity;
- **when** individual development proposals will be put forward;
- **how** people will be consulted — both within the master planning process itself, and beyond; and
- **how** the port's development plans integrate, support and inform the regional and local economic, transport and planning policy context as the result of close liaison with local and regional planning bodies during the production of the master plan.

**Figure 5:** Abstract from Department for Transport *Guidance on the Preparation of Port Master Plans* (refer to Annex \*)

34. For completeness, paragraph 70 of the guidance is also reproduced in Figure 6 below although this was not distributed at the Hearing.

70. The plan should then outline the expected impact future growth intentions will have on inland access routes and consider potential solutions. These solutions should include measures to reduce the impact of increased traffic, for example those that seek to increase the modal share of water and rail, as well as the identification of potential enhancement schemes. There should also be a consideration of potential solutions, including the provision of capacity within the port estate, for HGV storage in the event of delays at the port, i.e. to reduce the impact on nearby roads.

**Figure 6:** Abstract from Department for Transport *Guidance on the Preparation of Port Master Plans* (refer to Annex \*)

35. In response to a question, ST recorded that he was only 'fleeting' familiar with the guidance document on Port Master Plans but acknowledged that the 'final version' of the Port of Immingham Port Master Plan did not include a Traffic Impact Assessment. It is therefore quite

evident that the document produced by ABP, and which they refer to as a Master Plan is not compliant with the guidance in that it fails to identify any measures that would be needed to mitigate the consequential adverse environmental effects of generating thousands of additional traffic movements per day and distributing them onto an already congested local highway network.

36. Asked if he considered the Port of Immingham’s Master Plan to be a ‘plan or project’ for the purposes of EIA, Counsel for ABP intervened to indicate that ST was not the person to answer that question.

37. In believing that all of the growth at the Port of Immingham would be achieved through permitted development rights; ST’s work is based on a false premise – much of it would require applications of one kind or another to be made and could not be regarded as ‘committed development’. To illustrate this, Table 14 below lists the 16 projects identified within the Port of Immingham Master Plan (17 October version) with the applicant’s comments on their consenting route or their relevance to the traffic impact assessment. As can be seen, very little proposed development is likely to be ‘permitted development’ within the General Permitted Development Order, as EIA development is specifically excluded from the Order.

38. In summary of the above, the applicant’s case on the relevance of ABP’s Master Plan is:

- The premise that ST has based his work upon, namely that there is substantial Port of Immingham growth that is committed, is not true. He has assumed that ABP have permitted development rights for all the projects that they have identified in the company’s so-called Master Plan whereas it is beyond doubt that they do not for most of them.
- Whilst ABP seek to use the document they refer to as a Master Plan as a means of reserving capacity on the road network, they have confused its purpose. In accordance with the guidance, a Port Master Plan (as opposed to the document that ABP has produced and called a Master Plan) should, *inter alia*, be used to identify the adverse environmental impacts that might arise in the duration of the Port Master Plan and then identify the mitigation measures that **the Port** will need to implement.

Item	Description of Development	Comments
1	Western Deepwater Jetty	HRO/DCO required dependent upon capacity. Schedule 1 development, ABP will need to undertake EIA and mitigate impacts.
2	Associated Jetty Development Area	Associated with Item 1. Schedule 1 development, ABP will need to undertake EIA and mitigate impacts.
3	Link road to South Humber Bank Ports and Logistics Centre	Highway works that will reduce traffic through the western entrance
4	Humber International Terminal Rail Extension	DCO required. Schedule 2 development, ABP will need to undertake EIA and mitigate impacts
5	Humber International Terminal Berth 3	Associated with Item 1. Schedule 1 development, ABP will need to undertake EIA and mitigate impacts
6	Proposed Renewable Energy Plant	Cancelled. No highway impacts
7	Western Entrance Redevelopment	Highway works only, no traffic generated.

		Planning application required, outside of the Port Estate
8	Immingham Renewables Fuel Terminal	Schedule 2 development, ABP will need to undertake EIA and mitigate impacts
9	Immingham Outer Harbour Berth 5	HRO/DCO, dependent on capacity. ABP will need to undertake EIA and mitigate impacts
10	Immingham Outer Harbour Berth 4	HRO/DCO, dependent on capacity. Schedule 1 development, ABP will need to undertake EIA and mitigate impacts.
11	Intermodal Rail Hub	DCO. Schedule 2 development, ABP will need to undertake EIA and mitigate impacts
12	Agribulk Redevelopment Area	Schedule 2 development, ABP will need to undertake EIA and mitigate impacts
13	Immingham Oil Terminal Storage Expansion	Schedule 2 development, ABP will need to undertake EIA and mitigate impacts
14	Immingham Oil Terminal Berth Developments	Schedule 1 development, ABP will need to undertake EIA and mitigate impacts ABP will need to undertake EIA and mitigate impacts
15	East Gate Developments	Unlikely to increase traffic using Humber Road
16	Stallingborough Site Development	Schedule 2 development, ABP will need to undertake EIA and mitigate impacts Planning application to North East Lincolnshire Council.

**Table 14 :** Applicant’s comments on the List of Developments shown in Figure 7.2 of ABP’s Final Masterplan

***Methodology***

39. In WR22.2, paragraph 2.17, the applicant addresses ABP’s criticisms of JMP’s calculation of the proportions of HGVs on the network. ST maintains that JMP underestimated the impact of traffic on the junction as it had not made full allowance for the high proportion of HGV’s on the local and strategic road network

40. This would be replicated by implementing the appropriate traffic proportions within the DfT approved traffic software packages ARCADY and PICADY, when considering roundabouts and priority junctions respectively. A Passenger Car Unit factor (PCU) would need to be applied to the traffic flows considered with LinSig (traffic signal controlled) model in order to replicate a HGV or bus on the network.

41. In the TA, JMP used a default percentage of 10 per cent HGV traffic on the network when assessing roundabouts and priority junctions.

42. JMP has retrospectively applied the PCU conversion factors (all traffic converted to passenger car units) sourced from WebTAG guidance to the Linsig models previously assessed within the TA. Specifically they are the values used within the Department for Transport’s FORGE model which undertakes the highways modelling within the National Transport Model. These values are publicly referenced within the “Network Analysis of Freight Traffic” report (Section 3.3, Paragraph 3.8, List number 7) published by MDS Transmodal Ltd on behalf of the Department of Transport.

43. The values are also referenced in numerous WebTAG guidance documents related to scheme appraisal such as TAG Unit 3.9.5 Major Scheme Appraisal: Road Decongestion Benefits, Table 8 Appendix A.

44. The PCU values are detailed below:

- Car / light good vehicle - 1
- Rigid goods vehicle – 1.9
- Articulated goods vehicle – 2.9
- Buses / coaches – 2.5

45. The data available to JMP was not segmented into separate Rigid and Articulated HGV classifications and consequently it was assumed that on average 50% are rigid and 50% are articulated. This results in a PCU factor of 2.4 for HGVs.

46. These factors were applied to the base flow surveys provided to the applicant by the Highways Agency for the purposes of the TA. The classification of the vehicles for the committed development flows is not known therefore the same percentage of HGVs used within the base flows has been applied to the committed developments. As the percentages varies considerably between movements each movement has been calculated separately, as per the example matrix below. Within ARCADY and PICADY the percentage of HGV's has been input into the models directly.

Base - All vehicles (veh)				Committed Development – All vehicles (veh)			
	A	B	C		A	B	C
A	0	215	289	A	0	174	364
B	82	0	46	B	44	0	0
C	124	32	0	C	0	31	0
Base - Cars (veh)				Committed Development - Cars (veh)			
	A	B	C		A	B	C
A	0	153	169	A	0	124	213
B	43	0	31	B	23	0	0
C	26	10	0	C	0	10	0
Base – HGVs only (veh)				Committed Development – HGVs only (veh)			
	A	B	C		A	B	C
A	0	62	120	A	0	50	151
B	39	0	15	B	21	0	0
C	98	22	0	C	0	21	0
Base - HGV %age							
	A	B	C				
A	-	29%	42%				



<b>B</b>	48%	-	33%				
<b>C</b>	79%	69%	-				
<b>Base - All vehicles (PCU)</b>				<b>Committed Development – All vehicles (PCU)</b>			
	<b>A</b>	<b>B</b>	<b>C</b>		<b>A</b>	<b>B</b>	<b>C</b>
<b>A</b>	0	302	457	<b>A</b>	0	244	576
<b>B</b>	137	0	67	<b>B</b>	73	0	0
<b>C</b>	261	63	0	<b>C</b>	0	61	0

**Table 15:** Example PCU calculation for committed development (Rosper Rd / Humber Rd – AM)

### **WebTAG**

47. At the Hearing, ABP claimed that the applicant had not used WebTAG as referred to at paragraph 5.4.4 of the National Policy Statement for Ports. In fact, the application documents contain all of the information that should be included in a WebTAG assessment, refer to Annex 6 of this document

48. Throughout the WebTAG NATA (TAG Unit 2.5) process, the Government’s five objectives for transport are outlined. These are:

- **Environmental** impact involves reducing the direct and indirect impacts of transport facilities on the environment of both users and non-users;
- **Safety** is concerned with reducing the loss of life, injuries and damage to property resulting from transport incidents and crime;
- **Economy** is concerned with improving the economic efficiency of transport;
- **Accessibility** is concerned with the ability with which people can reach different locations and facilities by different modes;
- **Integration** aims to ensure that all decisions are taken in the context of the Government’s integrated transport policy.

49. The TA adopts the principles of WebTAG NATA through;

- the Environmental Statement (Environment);
- investigation into the accessibility through referral to the commitment to the provision of the Framework Travel Plan, which promotes sustainable transport choices and reducing the need to travel (Accessibility, Integration);
- through accident analysis mitigation measures and the Stage 1 Road Safety Audit reports (Safety); and

- through the applicants contribution to the implementation of measures to improve the movement and operations of the local and strategic road network and through the development contributing to the economic regeneration of North Lincolnshire and the South Humber Area (Economy).

### ***Traffic estimates***

50. At a meeting on 9 November 2010 between Able, JMP, NLC and the HA, it was agreed that all of the committed junction improvement layouts associated with the Able Logistics Park development should be used as an initial basis for the assessing the base + committed traffic flows.

51. At the progress meeting on 8 March 2011, the HA acknowledged that '*nil detriment*' applied to the junction assessments. Therefore, JMP only sought to identify improvements that were necessary to:

- ensure a junction operated within capacity if AMEP caused the junction to become congested, or
- ensure the junction was no more congested with AMEP if it was already over capacity with other committed development.

52. JMP were not expected to identify improvements that would make a junction operate within its theoretical capacity if the situation with the 'base + committed developments' was not at this level of operation.

53. At the Hearing, Royal Mail stated that the flows contained within the TA did not correspond to the information sent to them by JMP and used within the detailed junction assessments. To address those concerns the full spreadsheet with an explanatory note is attached at Annex 7.

### ***A160/A180 upgrade project***

54. At the Hearing, the Chairman expressed his understanding that the Highways Agency had indicated that their A160/A180 improvement scheme would be likely to proceed within 3 years and very likely within 10 years. The applicant has spoken to Daniel Gaunt of the Highways Agency who was unable to confirm that understanding.

55. ABP acknowledged that the Highways Agency was promoting the A160/A180 project specifically to increase road capacity for the Port of Immingham, but denied that it was actually needed to allow growth at Immingham.

### ***Issues at particular junctions***

#### ***Junction C Rosper Road/Humber Road***

56. ABP asserted that the proposed introduction of traffic lights at the junction of Humber Road and Rosper Road would be severely detrimental to operations at the Port of Immingham.

57. The principle of a signal-controlled junction at the Rosper Road / Humber Road junction has already been agreed with the local highway authority and is included as mitigation for the impacts of the Able Logistics Park which the local planning authority are minded to approve. This existing committed layout upgrades the current priority junction to a signal-controlled junction.

58. The mitigation scheme proposed by JMP at the Rosper Road / Humber Road junction includes two lanes on Rosper Road, which merge into one lane prior to the railway bridge. The mitigation scheme has been subject to a Stage 1 Road Safety Audit (RSA). This was undertaken by an independent and suitably qualified Road Safety Audit team and verified by John Mather, DIP ASM, I.ENG, MCIHT, MSORSA, Senior Safety Engineer, of A-one Integrated Highway Services Ltd, acting as a Road Safety Audit Team Observer.

59. JMP addressed the recommendations in the RSA in a Designer's Response and amended the mitigation layout as appropriate. One amendment included the phasing of the traffic signals as shown in Annex 3 of this document.

60. In paragraph 5.4.3 of the David Tucker Associates (DTA) Response to Written Representations Further Response (October 2012), it states that the merge length on Humber Road westbound is substandard. TD 50/04 The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts of the Design Manual for Roads and Bridges (DMRB) is the basis of this assertion. Para 2.31 recommends that the 'lane continuity' should be 100 metres beyond the intervisibility zone, as detailed in Figure 7 below.

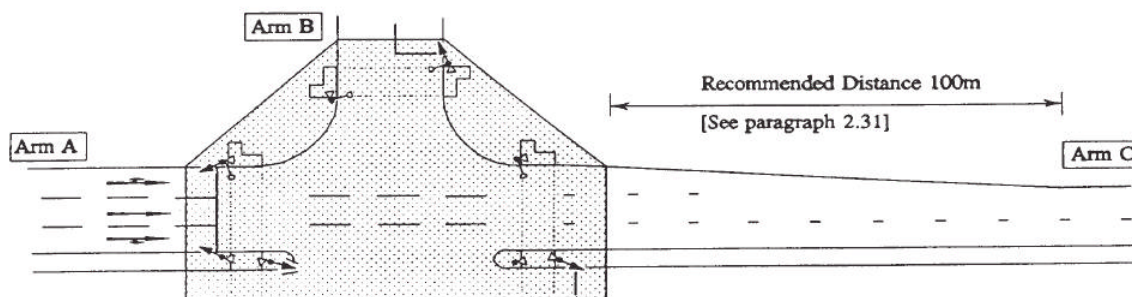


Figure 2/11: Lane Continuity Through Junction Intervisibility Zone

Figure 7 : Abstract from TD5/04 *The Geometric Layout of Signal-Controlled Junctions and Signalised Roundabouts* (Design Manual for Roads and Bridges)

61. The DMRB is design guidance produced by the Highways Agency and as such primarily refers to the trunk road network and not the local road network, which is governed by local design standards. The proposals for the layout of the junction have been agreed with the Highways Team at North Lincolnshire Council as outlined in Paragraph 6.12.7 of North Lincolnshire Council's Statement of Common Ground. In addition, the scheme was subject to a full, comprehensive and independent Stage 1 Road Safety Audit and no recommendations were made with regard to the length of the merge being less than 100 m.

62. It is also noted that Volume 2 Section 0 GD02/08 Quality Management Systems for Highway Design of the DMRB states '*Mandatory sections of this document are contained in boxes. The Design Organisation must comply with these sections or obtain agreement to a Departure from Standard from the Overseeing Organisation. The remainder of the document contains advice and explanation which is commended to users for their consideration*'. It should be noted that the aforementioned paragraph 2.31 is not contained in a box, even when designing on the trunk road network.

63. To achieve the 'recommended' 100 metres would result in significant amendments to the Humber Road Railway Bridge. Paragraph 32 of the National Planning Policy Framework highlights that decisions should take account of whether *'improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe'*. The works, and associated cost, to facilitate the additional length of continuity lane is not considered to be in scale with the impact of the development.

64. A departure from standard is considered appropriate in this instance for the following additional reasons:

a) The recommended length of the continuity lane is 100 metres designed for two lanes of traffic travelling straight ahead and crossing the stop line in free flow. The 'lane continuity' provided as part of the AMEP proposals has been measured as 75 metres from the limit of the Humber Road/Rosper Road junction intervisibility zone.

b) The Humber Road westbound approach to the junction has only one straight ahead lane and therefore merging will not be required on exit.

c) Given that traffic signals are proposed at this junction a large proportion of vehicles completing this manoeuvre will be travelling from a standing stop or from a rolling queue and will therefore be travelling at low speeds. Should the junction be working essentially as 'free-flow' they will be forced to reduce speed in order to perform the manoeuvre by the geometry of the junction.

d) Given the reduced speeds associated with vehicles merging at this location it is considered that a 75 metre continuity lane is acceptable without raising road safety concerns.

65. In paragraph 5.4.2 of the DTA report it states that the right turn traffic island at the Humber Road east approach is a fundamental safety requirement. However, the removal of the right turn traffic island was recommended in the RSA, which JMP agreed with. The traffic signal phasing has been altered to reflect this

66. As a result of amendments to the phasing of the signals and coding of the merge arrangement the junction operates within capacity as shown below. The maximum average delay/veh is predicted to be 66 seconds.

67. In short, it is not reasonable to argue that this delay is a cause of serious detriment to the operation of the Port of Immingham, any more than the erection of traffic lights anywhere else on the network would be.

68. An additional sensitivity test has been undertaken at this junction, just for comparison purposes, with trips associated with the Drax development trips removed. The results of which demonstrate that there is additional spare capacity in the road network, refer to Table 16 and 17 below.

Arm	AM Peak Hour		PM Peak Hour	
	Degree of Saturation (%)	Max Queue Length (vehs)	Degree of Saturation (%)	Max Queue Length (vehs)
<b>Base, Committed Development &amp; AMEP Flows (mitigation layout)</b>				
Rosper Road left	62.6	5.0	77.1	11.7
Rosper Road right	68.7	5.3	84.6	12.8
Humber Road east ahead	17.6	1.8	85.8	23.6
Humber Road east right	66.1	1.7	42.1	2.8
Humber Road west ahead	71.9	17.3	23.3	3.5
Humber Road west left	68.6	14.9	22.0	3.1
Humber Road merge – nearside	18.6	0.1	70.8	1.2
Humber Road merge – offside	12.8	3.7	31.4	10.6
<b>PRC for junction</b>	<b>+25.2%</b>		<b>+4.9%</b>	

**Table 16:** LINSIG results for Rosper Road / Humber Road – Saturation Flow Test with all committed developments including the Heron Renewable Energy Plant

Arm	AM Peak Hour		PM Peak Hour	
	Degree of Saturation (%)	Max Queue Length (vehs)	Degree of Saturation (%)	Max Queue Length (vehs)
<b>Base, Committed Development &amp; AMEP Flows (mitigation layout)</b>				
Rosper Road left	62.6	5.0	48.9	8.2
Rosper Road right	68.7	5.3	53.7	8.4
Humber Road east ahead	17.6	1.8	53.8	9.0
Humber Road east right	66.1	1.7	53.7	4.8
Humber Road west ahead	31.8	4.8	37.4	5.8
Humber Road west left	68.6	14.9	35.2	5.0
Humber Road merge – nearside	18.6	0.1	42.9	0.4
Humber Road merge – offside	12.8	3.7	31.4	8.2
<b>PRC for junction</b>	<b>+31.1%</b>		<b>+67.4%</b>	

**Table 17:** LINSIG results for Rosper Road / Humber Road – Saturation Flow Test with committed developments excluding the Heron Renewable Energy Plant

### ***Junction E Humber Road/Manby Road Roundabout***

69. This junction is proposed to be improved and will operate within capacity, refer to Table 5.

70. Simon Tucker for ABP accepted that his figures for growth at the Port of Immingham caused the Humber Road/Manby Road to exceed its capacity without AMEP, although there was no evidence that ABP would address this.

### ***Junction N Pelham Road/A1173***

71. A Royal mail distribution office is located 100 m south of Junction N.

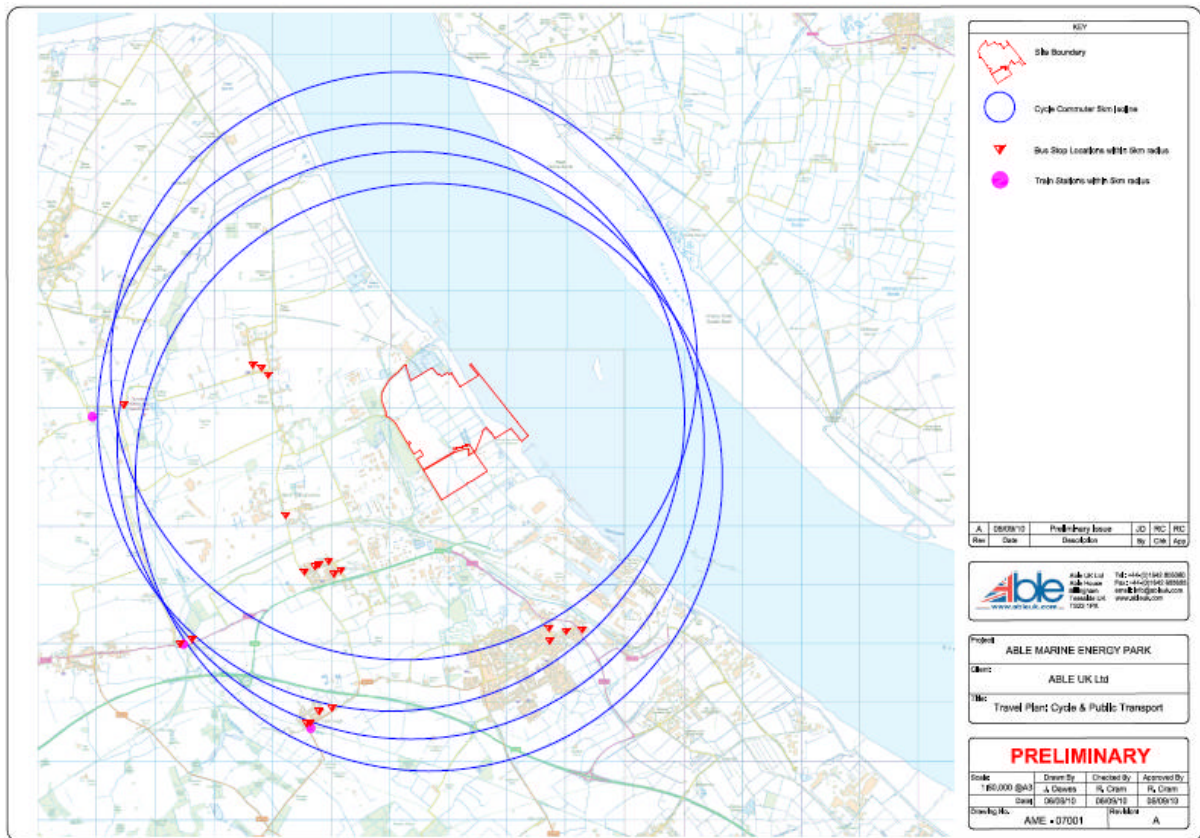
72. At the hearing John Vernon for Royal Mail said that the proposed scheme addressed capacity issues caused by AMEP, but still had some reservations over turning movements at the junction. However, he said that if a Road Safety Audit confirmed that a redesigned Pelham Road/A1173 junction was shown to be safe, Royal Mail would accept the design. The assessment of the junction and the proposed mitigation scheme is contained within Annex 5. This mitigation scheme has been agreed in principle with NELC.

### ***Cycling***

73. ABP asserted that the junction improvements proposed had no regard to the safety of cyclists. In particular, ABP asserted that the proposed improvements to the Manby Road roundabout and the Humber Road/Rosper Road junction had had no regard to the safety of cyclists.

74. The Institution of Highways and Transportation state that the average length of a cycle journey is 5.0 km (2.8 miles). Figure 8 of the ES shows 5.0km isolines from the proposed site entrances. This shows that the only settlements within 5km cycle isolines are:

- East Halton
- North Killingholme
- South Killingholme
- Habrough); and
- Immingham



**Figure 8:** 5km Isolines from AMEP

75. The issue that arises is the extent to which it is reasonably practicable to incorporate measures specifically for cyclists at these junctions taking into account the cost of providing safe provision at the junctions but just as importantly, the relative safety for cyclists, the numbers likely to use the road network in this location and the relative safety on the rest of the highway approaches to the site from Immingham.

76. Quantitatively, AMEP will result in 3324 employees commuting to the site each day, over all shifts. Based upon the accessibility of revised gravity model allocations 9% of employees will live locally, though this incorporates a larger area than encompassed within the isoline. The resulting numbers and their associated wards are shown in Table 18 below.

Ward	Number employees
A1077	79
A1173 to Immingham	155
A1173 to Kiln Lane	4
A180 South	12
Unallocated	48

**Table 18:** Number of employees residing in the 'local' area

77. The journey to work census data for seven “super output” areas within the Ferry Ward of North Lincolnshire is shown in Table 19 below.

Mode	Percentage
Train	0.1%
Bus	1.9%
Taxi	0.2%
Car Driver	81.8%
Car Passenger	10.9%
Motorcycle	1.2%
Bicycle	2.1%
On Foot	1.1%
Other	0.7%

**Table 19:** Journey to work Census data

78. Based on the journey to work data the number of predicted cyclists is shown in Table 20 below.

Ward	Number cycle (2.1%)
A1077	2
A173 to Immingham	3
A173 to Kiln Lane	0
A180 South	0
Unallocated	1

**Table 20:** Number of Local employees predicted to cycle to AMEP site based on census data

79. The number of employees that might cycle to work is therefore likely to be very low indeed.

80. Whilst ABP asserted at the Hearing that the flat topography in the area was conducive to cycling, they had no idea, when asked, how many of their own employees cycled to work. Topography alone is a limited measure of the attractiveness of an area for cycling. Safety for cyclists is largely dependent on the flow and speed of motor traffic and the very high level of HGV’s on the roads in and around the Port of Immingham is an obvious deterrent to most cyclists



81. It is normally recommended that on roads carrying between 1,000 - 4,000 vehicles per day, the provision of advisory cycle lanes should be considered. In 2010 two way flows of 7796 vehicles were recorded on Humber Road in a 12hr period; this already takes it well over the threshold and as such segregated cycleways would need to be considered.

82. In short, it is too simplistic to consider safety issues for cyclist at junctions alone and the road network in and around the Port of Immingham necessitates the provision of segregated cycleways and this infrastructure does not exist at present.

83. The applicant agreed in the Statement of Common Ground with North East Lincolnshire Council (paragraphs 46 and 47) to keep this issue under review.