

## Strategic Review of Transportation Assessments With Regard to the Suitability of the Site for Development

Site AS18, Oriel Drive, Aintree

### Site Summary

Site AS18 is located on Oriel Drive in Aintree, approximately six miles north east of the centre of Liverpool. It is on the edge of a residential area.

The site area is 26.1 hectares and can accommodate 350 homes.

The technical note, providing the core transportation evidence was submitted by AECOM on behalf of GVA.



### Purpose of Strategic Review

The Transport Assessment was produced by AECOM on behalf of GVA. This Strategic Review will determine whether the submitted transportation evidence for the above site is sufficiently robust to support the principle of development on the site.

Recommendations are presented below on the three strategic issues which are identified in paragraph 32 of the National Planning Policy Framework.

#### 1. What improvements can be undertaken within the transport network that limit the significant impacts of the development?

The submitted transportation evidence has a number of shortcomings in its technical aspects:

- Use of mean trip rates instead of 85<sup>th</sup> percentile trip rates
- Non-robust trip distribution method
- Does not take account of other sites identified in the Local Plan.

A consequence of this is the need to rework the trip generation and distribution, to reconsider the number of junctions modelled based on the distribution results, and to remodel junctions based on the revised trip generation and distribution rates (see Appendix 1 and Table 1 below for more information on trip generation and trip distribution).

When undertaking the trip distribution, it needs to be ensured that the area of assessment considers that there are only a limited number of internal and external accesses in Aintree Village and these would all modelling.

Until the above is addressed, it is not possible to determine the severity of residual cumulative impacts of development, or identify the need and viability of improvements to the transport network.

It is important to ensure that development does not have an adverse impact on traffic flow in Sefton that cannot be mitigated, and therefore this uncertainty must be addressed.

**2. Can safe and suitable access to the site be achieved for all people?**

The submitted technical note is very limited in terms of the information submitted for walking, cycling and public transport accessibility.

The site has is in a fairly accessible location for non-car users. The following work should be undertaken to demonstrate the strategic suitability of the site:

- A review of the accident data to ensure that increased traffic flows will not exacerbate any existing safety issues.
- A review the need for pedestrian crossings on Oriel Drive
- Consideration of capacity for two-way movements on Oriel Drive
- Provide detail of the internal layout and site accesses and how these will accommodate pedestrians and cyclists.

**3. What opportunities for sustainable transport modes have been taken up to reduce the need for major transport infrastructure?**

The following opportunities are suggested that would resolve existing issues with regard to the site location and reduce the dependence of the development on access by car:

- Pedestrian crossings on Oriel Drive.
- Segregated cycle facilities, depending on further review of cycle accessibility.
- Improvements to existing bus stops, to include a shelter and seating.

**Conclusions and Recommendations**

The site is in a location that can be made accessible to all modes of transport with appropriate mitigation.

However due to the above described shortcomings in the technical work, the cumulative residual impact of the development remains unclear, and it is therefore not possible to judge whether the local road network can accommodate the development's traffic impact.

Therefore it is has not been demonstrated that the site is suitable for development.

## Appendix 1

### Trip Generation

Trip Generation for each land use of the proposed development should be derived, with methodology and assumptions clearly stated.

Developers should look to provide a range of scenarios from a worst case to target trip rates. This is to account for the higher trip rates that tend to occur where a new build “edge of town” residential development has a high proportion of private housing.

As a guide, we have developed our own trip rates for edge of town residential developments.

Please refer to Table 1: Approach to Trip Generation and Scenario Management for Strategic Site Modelling for more details.

Residential Trip Rates per Dwelling	Mean Trip Rates		85 <sup>th</sup> Percentile Trip Rates	
	Inbound	Outbound	Inbound	Outbound
AM Peak	0.153	0.413	0.287	0.454
PM Peak	0.390	0.232	0.556	0.222

### Trip Distribution

Generated traffic should be distributed across the road network. Methodology and assumptions should be clearly stated, and traffic flow diagrams appended. Suggested best practice for trip distribution is included in Table 1: Approach to Trip Generation and Scenario Management for Strategic Site Modelling.

### Area of Assessment

Identify links and junctions to be assessed, with accompanying map and justification for any exclusions. As a guide this should include links and junctions which are affected by an increase in two-flow of more than 50 vehicles per hour.

### **Junction or Network Assessments**

The identified junctions and links should be assessed in line with Table 1: Approach to Trip Generation and Scenario Management for Strategic Site Modelling.

Flows should be presented as the total number of vehicles with percentage HGVs, or PCUs.

Appropriate industry-approved software should be used to model the network. Summaries should be provided of junction and link capacity (e.g. Ratio of Flow to Capacity or Degree of Saturation), queue lengths, and delay, to determine whether the traffic growth caused by the development will have a material impact on junction operation. Roundabout assessments should account for unequal lane usage where appropriate.

**Table 1: Approach to Trip Generation, Scoping and Scenario Management for Strategic Site Modelling**

	Trip Generation	Description	Outcome
Step 1 (identify trip rates)	<b>Target</b> - Lower Trip Rates	<p><b>Target level of Trip Generation through sustainable trip reduction</b></p> <p>Considerations include assessment of location, location of schools and jobs, demographic profile, surrounding infrastructure, cycle and walking facilities, and use of best practice documents on sustainable modes. Commit to Travel Plan Measures to achieve target trip rates.</p>	Assess the most appropriate Trip Generation Rate for the Strategic Site for use in the Transport Assessment. Provide Sefton Council with justification on trip rates employed through an evidenced based approach. If no justification is provided, then use Worst Case 85 <sup>th</sup> % Trip Rates from TRICS.
	<b>Most Likely</b> - Between "Target" and "Worst Case"	<p><b>Most Likely level of Trip Generation with some level of sustainable trip reduction</b></p> <p>Assess Location and development mix. Use the TRICS database or other evidence to justify appropriate Trip Rates.</p>	
	<b>Worst Case</b> - 85th % Trip Rates from TRICS (or HA 85th percentile Trip Rates)	<p><b>Worst Case level of Trip Generation with no sustainable trip reduction</b></p> <p>Based solely on assessment of location and development mix. Use the TRICS database to justify appropriate 85th percentile Trip Rates.</p>	
	<b>Scope of Network Assessment Coverage</b>	<b>Trip Distribution and derivation of 'In Scope' network</b>	
Step 2 (identify network coverage)	Gravity Model or SATURN Modelling	<p>Gravity Model showing origins and destinations of AM and PM Car Driver Trips to and from development. Trip distribution flow diagram(s) showing assignment of trips to network.</p> <p>or</p> <p>Employ use of the Transport Model where available following due diligence by the developer.</p>	
	Junction Assessment Criteria	<p>Threshold number of 50, two-way trips, on links and junctions from and to the development.</p> <p>Use of Appropriate Modelling Software</p>	

	Modelling Scenario Management	Description	Growth to be Applied
Step 3 (Modelled Scenarios)	1. <b>Base Year 2013/2014</b>	Base year demonstrating existing conditions	None
	2. Future Year <b>Reference Case</b>  Assumed to be full build out year (Intermediate year assessments to be considered for phasing of development)	Base + Committed Developments + Background Growth	<b>Committed Developments</b> - Use Existing TA's. <b>Background Growth</b> - For car driver growth use TEMPRO & NTM adjustment. Planning Assumptions should be adjusted to reflect total Local Plan Development & with assessed development removed. For LGV & HGV Growth use NTM. (All should be in line with webTAG Unit 3.15.2).
	3. Future Year <b>Reference Case + Development</b>  Assumed to be full build out year (Intermediate year assessments to be considered for phasing of development)	Base + Committed Developments + Background Growth + Development	<b>Committed Developments</b> - Use Existing TA's. <b>Background Growth</b> - For car driver growth use TEMPRO & NTM adjustment. Planning Assumptions should be adjusted to reflect total Local Plan Development & with assessed development removed. For LGV & HGV Growth use NTM. (All should be in line with webTAG Unit 3.15.2). <b>Development Traffic</b> - Use trips generated using agreed trip rates, and distribution using agreed gravity model distribution.

	Cumulative Impact Assessment of Adjacent Developments	Description	Growth to be applied
<p>Step 4 (Detailed Cumulative Impact Assessment)</p>	<p>Future Year <b>Reference Case</b> (with adjusted Background Growth) + <b>Adjacent Development + Development</b></p>	<p>Base + Adjacent Developments + Background Growth (adjusted for adjacent developments) + Development</p>	<p><b>Committed Developments</b> - Use Existing TA's.  <b>Background Growth</b> - For car driver growth use TEMPRO &amp; NTM adjustment. Planning Assumptions should be adjusted to reflect total Local Plan Development &amp; with assessed &amp; adjacent developments removed. For LGV &amp; HGV Growth use NTM. (All should be in line with webTAG Unit 3.15.2).  <b>Adjacent Local Plan Developments (not committed)</b> - Explicitly model trips from nearby Strategic Sites.  <b>Development Traffic</b> - Use trips generated using agreed trip rates, and distribution using agreed gravity model distribution.</p>