Liverpool City Region freight study
– Preliminary stage

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Superport and Freight Stakeholder Forum
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1. **Study Objectives**

- Based upon the dual context of national forecasts AND the Superport vision to 2020
- To identify existing transport network pinch points & other constraints inhibiting emerging 'Superport' opportunities
  - to inform bidding for transport sector funding
- To draw up terms of reference for a more comprehensive city region freight study
  - taking port, rail, urban freight and logistics issues into account
2. Approach

• Run GB Freight model based upon local strategies
  – Liverpool 2
  – rail linked distribution parks e.g. Ditton, Knowsley and others
  – underlying growth

• Assign results onto road and rail networks

• Assess changes (increased demand) against capacity
3. **Road Network**

- Compared base year projections against 2020
- Identified change / growth through strategic assessment
- Assessed impact of that change
  - broad conclusion that net impact of growth in freight traffic on urban network minimal
  - main impacts access to Seaforth (A5036), Mersey crossing (Halton) and Knowsley Industrial Park
  - Congestion hotspots / pinch points – key junctions
- Major Schemes / HA Programme
5. Forecast HGV movements 2020
6. Additional HGV movements
7. Freight and multimodal sites
8. 2012 to 2020 % increase in traffic/HGV's
Key Existing Congestion hot spots
10. Committed Highway and future prioritised schemes

[Map showing various highway schemes and improvements, including
- Thornton to Switch Island Link Road
- M58 Junction 1 Improvement
- A565/ A563 Corridor Improvement Scheme
- Access Improvements, Knowsley Industrial Park
- A570 Southern Employment Corridor Improvements
- Edge Lane and Hall Lane Highway Improvement Scheme
- A5300/ A562 Improvements
- Mersey Gateway
- Tower Road Bridges Replacement
- City Centre Strand Corridor Scheme & City Centre Connectivity Programme]
11. Rail Network

• Identified base year train volumes
• Determined forecast train volumes
  – Increase in intermodal
  – Decline of coal
  – Emergency of biomass
• Determined growth compared with base year projections
12. 2011 Mean freight trains per day

- Proposed / emerging rail-linked distribution sites

- KIP
- Seaforth
- Parkside
- Port Salford
- Ditton
13. Forecast 2020 freight trains per day
14. Additional freight trains per day, 2011 - 2020
15. Additional freight paths per day 2011 - 2020
16. Rail: Key Issues

- Northern Hub will increase passenger volumes along Chat Moss significantly

- Current timetabling exercises highly provisional and **not** conflict free
  - and do not take into account new terminals (on/off movements)
  - role of Rail North to secure freight capacity within passenger franchise specification potentially **crucial**.

- Regional access to low cost haulage to serve southern Britain depends on West Coast Main Line capacity
  - Liverpool City Region's DCs in competition with growth forecasts for Scotland/Greater Manchester etc.
  - HS2 **ADDs** further passenger trains north of Birmingham **reducing** national freight capacity
  - North West's overall capacity to distribute nationally negatively **impacted**.
17. Rail freight: West Coast Main Line

- HS2 phase 1 provides marginal relief south of Rugby
  - but Felixstow to Nuneaton upgrade more important in freeing up capacity for North West DCs to serve southern Britain

- North of Birmingham freight demand expected to grow from 3 to 6 paths/hour by 2033
  - currently little spare capacity
  - HS2 trains on conventional network probably deduct 2 paths
  - for North West to use rail to extend its distribution to reach to South East requires rail to cut costs
  - extension of HS2 to North West crucial if potential to be realised

Yesterday's announcement therefore crucial
".... separating long-distance passenger traffic from freight and local services .... allow .... more room for freight."

".... those benefits could be spread further north sooner if Phase 2 were accelerated and the line were extended to a new regional transport hub at Crewe by 2027, 6 years earlier than planned."
19. Current demand for rail paths per day per day

Sum of both directions
20. Forecast demand for rail paths: 2033

Sum of both directions
21. Additional demand for rail paths to 2033

Sum of both directions
22. Rail: a two way street

- Intermodal rail services cater for over half of all deep-sea containers arriving in the North West
  - followed by feeder services
  - Argued rail therefore 'assists' south-east ports and has diluted role of northern ports
  - L2 intended to address that

- Round trip container rates approximately £200/round trip lower than by road from south-east

However

- Introducing rail to the domestic market allows North West to penetrate southern distribution market versus Golden Triangle
  - given adequate rail terminal capacity
  - Given rail network capacity
### 23. North West v Midlands to the South East

<table>
<thead>
<tr>
<th></th>
<th>North West DC</th>
<th>MIDLANDS</th>
<th>£ per pallet</th>
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</thead>
<tbody>
<tr>
<td>£30</td>
<td>ROAD + RAIL</td>
<td>RENT + LABOUR</td>
<td>Use of rail and lower rent and labour costs compensate for the longer distances involved.</td>
</tr>
<tr>
<td>£15</td>
<td>RENT + LABOUR</td>
<td>ROAD</td>
<td>Therefore there is a cost advantage if the source of the cargo is closer to the North West.</td>
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<td>£0</td>
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- Zero backloads
- Sheds equidistant from source of cargo
24. The HS2 Announcement

• Without simultaneous extension of HS2 to Crewe
  – capacity available for freight north of Birmingham less than currently used
  – major junction works required on WCML

• With extension
  – HS2 passenger trains for North West/Scotland travel faster
  – freight capacity to Manchester better protected
  – remaining congestion between Crewe and Warrington

• Half a solution!
25. Summary

- Impact of extra freight on local road network limited to:
  - Seaforth to Switch Island
  - Halton crossing (addressed by Mersey Gateway)
  - Positive result for quality of local life
  - But potential to enhance through Urban Freight Distribution initiatives

- Aspirations to expand city region hinterland through rail freight compared base year projections against 2020 and 2033
  - Inhibited by Northern Hub/HS2 developments – but some encouragement yesterday
  - Important to identify operational or infrastructure solutions

WORK IN PROGRESS!
Thank you!

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