Harrogate Congestion Study

Engagement Group

5th June 2018
Background:

Study Overview

- Stage 1 study undertaken in 2017 with Options Assessment Report (OAR) published in November / December.
- This included:
  - Thorough evidence review, to understand the current and future situation, based upon the perception of traffic congestion in the vicinity of Harrogate and Knaresborough.
  - Determining the need for intervention.
  - Setting of Strategic and Specific objectives.
  - Identification of potential schemes / measures to address this issue.
  - High level appraisal of interventions to reduce Long List to Short List.
  - Formation of Packages, which included interventions considered to be complementary to each other.
  - Detailed (EAST) appraisal of Packages and subsequent prioritisation.
Background:

Study Area
Key findings and need for intervention

- Cross boundary commuting is high due to mismatch in prevalence of low value jobs and a well-educated and qualified resident population.
- Aspiration to grow Harrogate’s economy, particularly in relation to higher value sectors; local transport network consistently identified as a barrier to achieving inward investment and realising this growth.
- Key routes through the study area (A59, A61 and A661) carry very high volumes of traffic, for the standard of road.
- Journey times are up to 145% higher in the peak hour compared to the Interpeak, with average speeds that reduce to 9km/hr on some roads in the busiest periods.
- The majority (over 90%) of trips are either purely internal or have an origin or destination in the main urban areas – through traffic is a very minor issue (7% of traffic). Approx. half of all traffic, in both the AM and PM peak periods, is made up of trips that are wholly within the Harrogate/Knaresborough urban area (avg. length 2.5km).
- High traffic flows and existing congestion are contributing to Air Quality issues on key routes with AQMA’s being either declared or considered in the sites of most concentrated congestion.
- Local Plan growth = almost 5,700 additional trips in each peak hour by 2035. Majority of junctions forecast to operate with significant delays and increases in journey times of up to 26%.
- Without intervention, within the study area, the A59 will remain a constraint on the entire route, limiting the benefits of improvements in other locations and its potential as a strategic east-west corridor.
Background:

Strategic Objectives

- **S01**: Support the Sustainable Growth of Harrogate and Knaresborough in line with National, Regional and Local Policies and Plans
- **S02**: Improve the Quality of Life for Local Communities
- **S03**: Support Sustainable Economic Growth
- **S04**: Protect and enhance the built and natural environment
- **S05**: Improve East-West Connectivity
### Background:

### Specific Objectives

<table>
<thead>
<tr>
<th>SPO</th>
<th>Specific Objective (SPO)</th>
<th>Primary Contribution to SOs</th>
<th>Secondary Contribution to SOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPO-01</td>
<td>Reduce congestion and delay and improve journey time reliability on routes through the study area</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-02</td>
<td>Improve network resilience and efficiency</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-03</td>
<td>Reduce the number of HGVs in the town centres of Harrogate and Knarborough</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-04</td>
<td>Reduce the number of road user casualties</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-05</td>
<td>Increase modal shift to more sustainable modes of transport</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-06</td>
<td>Increase levels of walking and cycling for utility purposes (non-sport or leisure)</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-07</td>
<td>Reduce levels of pedestrian severance in and around the centres of Harrogate and Knarborough</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-08</td>
<td>Contribute to improvements in air quality</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-09</td>
<td>Contribute to local environmental targets</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-10</td>
<td>Contribute to a reduction in greenhouse gas emissions</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-11</td>
<td>Contribute to climate resilience</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-12</td>
<td>Contribute to a reduced dependency on fossil fuels</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-13</td>
<td>Reduce noise and vibration in residential areas and the town centres</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-14</td>
<td>Contribute to the improved health of local residents</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-15</td>
<td>Support an increase in the proportion of high value jobs in the study area</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<td>SPO-16</td>
<td>Maximise sustainable access to new development sites</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-17</td>
<td>Support targeted growth in the visitor economy</td>
<td>S01: 0</td>
<td>S02: 0</td>
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<tr>
<td>SPO-18</td>
<td>Improve the connectivity and accessibility of Leeds Bradford Airport from Harrogate and Knarborough</td>
<td>S01: 0</td>
<td>S02: 0</td>
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</tbody>
</table>
Previous Stakeholder engagement

Background:

During Stage 1 extensive engagement undertaken between May and July 2017 including:
- 1 to 1 meetings
- Questionnaire

The key issues and / or themes identified by stakeholders (and incorporated into our Stage 1 work), were:
- Impact of school travel;
- Levels of public transport
- Traffic signal operation and coordination;
- Car parking (cost and availability);
- Economy (focused too much on low value sectors);
- Environment (unique setting, air quality);
- Provision of sustainable transport; and
- Poor visitor experience

Stakeholders also offered ideas for improvement options which have been included in the OAR
Background:

Option generation and sifting

Long List

- Identified from a range of sources:
  - Review of historical schemes
  - Review of existing policies and strategies
  - Review of existing studies and proposals
  - Consideration of issues and opportunities identified in the evidence review
  - Stakeholder consultation
  - Internal study team workshop

- 38 interventions identified in the following categories:
  - Information
  - Demand Management
  - Highways
  - Parking
  - Public Transport
  - Cycling
  - Walking
Background:

Option generation and sifting

Short Listing

Determined by Initial Sift which considered:

- Contribution to Specific Objectives
- Deliverability
- Dependence upon other interventions
- Indicative cost
- Timescales

15 interventions removed from the process at this point
Option generation and sifting

Packaging

Packages of Interventions considered to be the most appropriate solution to the complex nature of the traffic issues in Harrogate and Knaresborough

Packaging based upon:

• Potential impact on mode choice and behaviour
• Spatial category (for particular types of movement or in specific locations)
• Fit and contribution to metrics including economy, environment, feasibility and risk

5 Packages formed to be taken forward to EAST appraisal:

• **Package A:** Demand Management Package
• **Package B:** Demand Management and Behaviour Change Package
• **Package C:** Relief Road Only Package
• **Package D:** Relief Road and Highway Operational Improvement Measures Package
• **Package E:** Relief Road, Highway Operational Improvement Measures plus Sustainable Travel and Urban Realm Improvement Package
Background:

Option generation and sifting

Package Prioritisation

Detailed appraisal using DfT EAST – based upon Five Case Model:

- Strategic Case
- Economic Case
- Financial Case
- Commercial Case
- Management Case

Greatest level of benefit:

- Package B: Demand Management and Behaviour Change Package
- Package E: Relief Road, Highway Operational Improvement Measures plus Sustainable Travel and Urban Realm Improvement Package

Reasonable benefit:

- Package A: Demand Management Package

Lowest level of benefit:

- Package C: Relief Road Only Package
- Package D: Relief Road and Highway Operational Improvement Measures Package
Packaging Recommendation

Package B:

Demand management and behavioural changes

- A1 Variable Message Signs
- A2 Real Time Passenger Information
- A3 Area wide signage strategy
- A4 Publicity campaigns for sustainable transport
- A5 Improved digital provision
- A6 Personalised journey planning
- B1 Extend pedestrianisation of Harrogate central core
- B2 Congestion charge / low emission zone
- B4 Area wide travel planning
- B7 HGV ban / loading restrictions
- B8 20mph speed limits / zones
- B9 Car sharing
- B10 Car clubs (electric vehicles)
- B11 Work with schools to ameliorate the impact of school run
- C3 Network optimisation
- C4 Area wide signal strategy review
- D1 Area wide car parking strategy
- E1 Bus / rail interchange development and public realm improvements
- E4 Sustainable transport options for new developments
- E11 Improved access to rail stations
- F1 Cycling infrastructure Plan
- G1 Area wide public realm strategy
Packaging Recommendation

Package E:

Relief Road, highway operational improvement measures, sustainable transport interventions and urban realm improvements

- A1 Variable Message Signs
- A2 Real Time Passenger Information
- A3 Area wide signage strategy
- B1 Extend pedestrianisation of Harrogate central core
- B7 HGV ban / loading restrictions
- B8 20mph speed limits / zones
- C1 Relief Road
- D1 Area wide car parking strategy
- E1 Bus / rail interchange development and public realm improvements
- E11 Improved access to rail

stations
- F1 Cycling infrastructure Plan
- G1 Area wide public realm strategy
Packaging Recommendation
Relief Road option

In order to assess the packages that contain a relief road option, a generic relief road corridor had to be put forward.

5 options modelled using the Harrogate Knaresborough Strategic Model.

Inner southern and inner northern (including Killinghall tie-in) offer the greatest traffic relief.
Scope of Further Work:

**Why?**

- Recommendation from Area Committee and decision of NYCC Executive Committee to delay public consultation, subject to further option development of the two highest scoring Packages (B&E).
- To identify potential specific locations and resulting impacts of the non-relief road interventions
- To provide a comparative BCR for both packages

**Methodology**

- Review of Long List, Short List & Package Formation
- Further development of non-relief road Interventions
- Appraisal and determination of benefits for each Package
  - Active Mode Appraisal
  - Further relief road modelling
- Addendum to the OAR
### Scope of Further Work:

#### Programme

<table>
<thead>
<tr>
<th>Task</th>
<th>Timescales</th>
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<tbody>
<tr>
<td><strong>Further option Development:</strong></td>
<td></td>
</tr>
<tr>
<td>• Review long list</td>
<td>April / May 2018</td>
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<tr>
<td>• Review and agree shortlist</td>
<td></td>
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<tr>
<td>• Review and challenge of initial appraisal outcomes</td>
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<tr>
<td>• Finalise Short List and Package Components</td>
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<tr>
<td><strong>Develop Individual Components</strong></td>
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<td><strong>Produce Package Plans</strong></td>
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<tr>
<td>• High level schematic / visual plan</td>
<td>June / July 2018</td>
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<td>• Interdependencies and related benefits</td>
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<td>• Alignment with strategy and policy aspirations</td>
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<td>• Indicative programme</td>
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<tr>
<td>• High level Package costs and consideration of funding sources</td>
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<tr>
<td>• Quantitative Risk Assessment</td>
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<tr>
<td>• Engagement meeting no. 2</td>
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<td><strong>Develop Appraisal Specification</strong></td>
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<td><strong>Package Appraisal</strong></td>
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<tr>
<td>• Active Mode Appraisal</td>
<td>July – September 2018</td>
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<tr>
<td>• Further Relief Road modelling</td>
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<tr>
<td>• Engagement meeting no. 3</td>
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<tr>
<td><strong>Produce Package BCRs</strong></td>
<td>September 2018</td>
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<tr>
<td><strong>OAR Addendum</strong></td>
<td>October 2018</td>
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Questions and discussion