

**A64**  
**Hopgrove**  
Feasibility Study Summary

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## 1. Introduction

- 1.1.** In 2014 the Government announced the first Road Investment Strategy (RIS1) outlining the long term programme for England's motorways and major roads for the period of 2015 to 2020. Within this announcement, the A64 Hopgrove junction was identified as one of 15 schemes to be developed within this period for delivery in the following period, 2020 to 2025 (RIS2). The RIS stated A64 Hopgrove junction – upgrading the Hopgrove junction, to the east of York, to a grade separated junction.
- 1.2.** The work undertaken so far in addressing the RIS requirements for the A64 Hopgrove junction comprises a feasibility study and this summary document outlines; the study's aims and objectives; the current and likely future problems along the route; the development and assessment of potential options; and the assessment of business cases for prioritised investment options.

## 2. Context

- 2.1.** The A64 Hopgrove scheme is a study into the improvement of the A64 Hopgrove junction (consisting of the Hopgrove Roundabout and Malton Road Roundabout) connecting the A1237 ring road and A64 near York. This includes consideration into the potential upgrade of the A64 between Hopgrove and Barton-le-Willows.
- 2.2.** The existing A64 Hopgrove junction comprises a large at-grade roundabout with signal control. The approach from the south/west is dual carriageway linking back to the A1 (M) and the route north/east of the roundabout comprises a short length of dual carriageway (approx. 500m) which then merges into single carriageway (**Figure 1**). The single carriageway continues to Barton-le-Willows (approx. 9.5 km) where a switch to dual carriageway occurs.

**Figure 1** – Existing A64 Hopgrove junction



### 3. Study Aims and Objectives

**3.1.** The work on the scheme to date has comprised of a feasibility study, the objectives of which were to:

- Develop potential solution options and assess the ability of these options to:
  - Relieve congestion on the A64 in the Hopgrove area
  - Improve capacity and journey time reliability at Hopgrove junction to meet current and future demand
  - Improve safety on the A64 in the study area
  - Support regeneration, economic development and the regional economy
- Define the traffic problems present on the existing route and the primary constraints to any improvement scheme

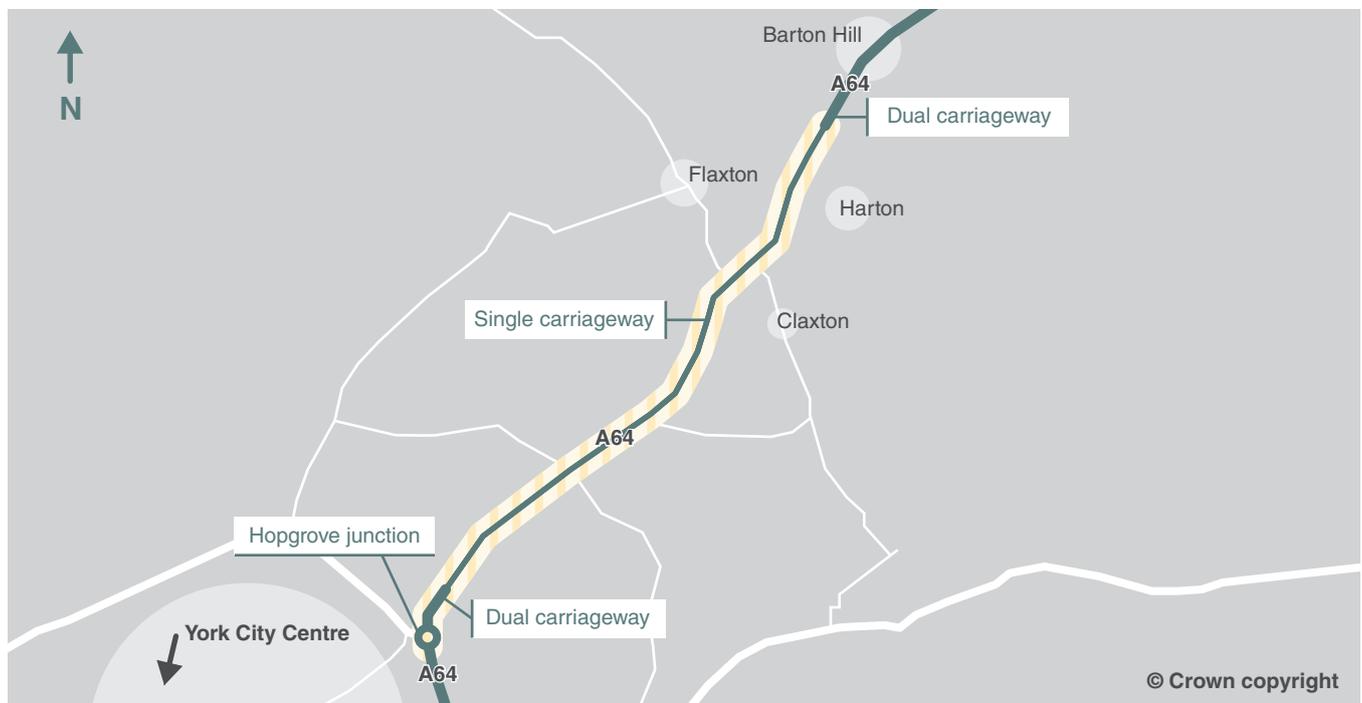
- Establish the case for a grade separated junction improvement (flyover or underpass) to meet the RIS requirement

- Demonstrate a strategic business case for further progression of an improvement scheme for the route

**3.2.** In terms of geographic scope, the study considered the length of the A64 from Hopgrove Roundabout to Barton-le-Willows where, at present, the single carriageway returns to dual carriageway (**Figure 2**).

**3.3.** The study took place from spring 2016 to spring 2017 and was undertaken by Highways England and its consultants.

**Figure 2 – A64 Hopgrove junction study area**



## 4. Current and Future Situation

- 4.1.** The first part of the study reviewed evidence from other relevant study work and analysis to form an understanding of the nature and scale of current and future performance on the A64 Hopgrove junction.
- 4.2.** Analysis of traffic data suggested that there are a number of problems and issues on the A64 that impact upon the efficient and safe movement of people and goods. These problems are likely to be exacerbated in the future as a result of forecast traffic growth on the route.
- 4.3.** The stakeholder engagement undertaken during the feasibility study comprised of initial meetings to present the study and seek input on requirements/constraints. These discussions took place with the affected local highway authorities (City of York Council and North Yorkshire County Council) and MPs whose constituencies are directly affected. There was strong support for a dual carriageway option and concern that a junction improvement alone will not deliver the journey time benefits commuters and businesses require.
- 4.4.** Through the study process, the problems and issues along the route were identified as:
- The single carriageway section of the route is significantly stressed and is particularly congested during holiday periods and summer weekends, with significant journey time variability.
  - The current capacity at Hopgrove Roundabout is sufficient for the current observed flows at the junction. The delays that are observed on the approaches to the junction can be attributed to the blocking back from the merge from dual to single carriageway on the A64 approximately 500m north east of the Hopgrove junction. The congestion starts to build when traffic flows exceed 1000 vehicles per hour which occurs mainly at weekends and during holiday periods.
- 4.5.** The number of accidents and the casualties generated by these accidents are more than double the national averages on the existing dual and single carriageway sections studied. At the Hopgrove junction itself accident rates are approximately 30% lower than national average, whilst casualty rates are in line with national average rates.
- 4.5.** There are numerous planned residential, commercial and industrial land developments in the proximity of the A64 Hopgrove scheme which will increase the pressure on the A64 and the junction further exacerbating the congestion and delays currently seen at the junction.
- 4.6.** National Road Traffic Forecasts suggest that traffic will grow by up to 28% by 2035 due to both increased population within the area from developments and due to increased car usage.
- 4.7.** The single carriageway section of the route between Hopgrove and Barton-le-Willows is currently at its operational capacity during identified peak periods (weekends and holiday periods), and additional traffic could not be accommodated during these times. Growth in traffic flows during other periods would lead to an increased likelihood of delays during these periods also. The wider impacts of this would be felt on the surrounding road network as drivers would seek alternative routes away from this section of the A64.

## 5. Investment Options

- 5.1.** As part of the development of options, the study sought to identify potentially viable designs to demonstrate the business case for further scheme development. A four-stage process was followed:
- Generation of conceptual options in a workshop based upon the initial issues identification work
  - Initial alignment development of these options in a road geometry design model
  - Determination of preferred dualling and junction options using the Highways England, Early Assessment and Sifting Tool (EAST)
  - Further development of these preferred options to provide increased detail for economic assessment and commercial estimation
- 5.2.** A wide range of options was generated and subsequently consolidated into 13 conceptual dualling options and five conceptual junction options. Additionally four junction options generated by previous work were also taken into consideration.
- 5.3.** The five junction options consisted of both **at-grade** and **grade-separated** solutions, and had varying capital cost, traffic and environmental impacts. The four junction options from the previous assessment were also taken forward to EAST giving nine junction and 13 dualling options for consideration.
- 5.4.** Of the 13 dualling options taken for further assessment, two were **online** (along the current route) and 11 were **offline**. Each of the **offline** options traversed a different part of the surrounding landscape to the existing carriageway. The options ended at different locations along the existing carriageway. This gave a range of concepts with different lengths and thus different levels of capital cost, traffic improvement and environmental impact.
- 5.5.** Four dualling options and two junction options were progressed for more detailed assessment as they met all of the sifting criteria of the EAST tool. This detailed work used the Department for Transport's Options Assessment Framework which assesses the strategic economic, financial, management, delivery and commercial cases in line with the Treasury best practice. Please see Annex A for detailed description of options.
- 5.6.** Both junction schemes relating to development of the roundabout alone fail to address the aims to improve congestion, safety and resilience on this corridor. Despite this, given the preliminary nature of the modelling exercise and the time savings generated when tested with certain traffic conditions on the A64, they are considered worthy of further assessment.
- 5.7.** Dualling options A, C and D all address the main source of congestion on the route (i.e. the single carriageway section of the A64), and would therefore address the scheme objectives and support wider regional and local policy. The options generate significant journey time savings but have potential for slightly adverse impacts on noise and air quality, and moderate to large adverse impacts on historic, environment and water environment considerations.
- 5.8.** The partial dualling assumed within option B does not fully address the main source of congestion on the route; as such the option does not fully address the scheme objectives. It is acknowledged that the assessment was generated from a preliminary modelling exercise and, given the financial savings and reduced environmental impacts compared to the other dualling options, it is considered worthy of further assessment.

## 6. Investment Cases

- 6.1. The study used the Department for Transport's appraisal guidance and considered the benefits and business cases for each of the six options selected during the sifting process, as well as the cumulative or additional benefits and impacts from investment in the corridor as a whole.
- 6.2. The appraisal conducted was appropriate to the early stage of development of proposals and will be developed further to ensure a full understanding of the impacts of proposals and value for public money.
- 6.3. Please see **Annex A** for detailed description of options.

## 7. Study Outcomes

- 7.1. The root cause of the issues at the location is not related to the performance of the Hopgrove junction. The current capacity at the Hopgrove junction is sufficient for the current observed traffic flows and an improvement at this location alone would not solve the traffic problems and issues identified.
- 7.2. The single carriageway section of the A64 immediately to the east of the junction is significantly stressed which is exacerbated further during holiday periods and summer weekends, with significant journey time variability.
- 7.3. The performance of this single carriageway section causes congestion and delay at the Hopgrove junction during these periods.
- 7.4. Dualling the single carriageway section between Hopgrove and Barton-le-Willows alone would alleviate the current and future potential issues at the junction for approximately 15 years.
- 7.5. Prioritisation of a dualling scheme over the grade separation of the Hopgrove junction should be considered as part of a phased approach to delivery on this section of the A64.

**A64 Hopgrove Junction Options**

<p><b>Junction option 1</b></p>	<p>A replacement of the existing Hopgrove and Malton Road roundabouts with a single elongated, signalised roundabout. It utilises existing north and south legs of the Hopgrove Roundabout and adds an additional northbound through-movement. A new left-turn slip lane from Hopgrove Roundabout is also included, heading north.</p>
<p><b>Junction option 2</b></p>	<p>An elongated Hopgrove Roundabout with a double overbridge, A64 through movement. The A64 through carriageway is also realigned.</p>

**A64 Hopgrove Dualling Options**

<p><b>Option A</b></p>	<p>Option A utilises the existing alignment of the A64 as far as possible to reduce cost and environmental impact. This option includes on-line dualling of existing single carriageway from a point 500m north of Hopgrove Roundabout to Jinnah Restaurant.</p>
<p><b>Option B</b></p>	<p>A combination of online widening designed as a partial route upgrade. It consists of on-line dualling of the existing single carriageway from a point 500m north of Hopgrove Roundabout to a new roundabout at Towthorpe Moor Lane.</p>
<p><b>Option C</b></p>	<p>On-line dualling from a point 500m north of Hopgrove Roundabout for approximately 1.8km, then offline dual carriageway improvement to the northwest of the existing alignment, re-joining the existing A64 500m south of the Jinnah Restaurant.</p>
<p><b>Option D</b></p>	<p>On-line dualling from a point 500m north of Hopgrove Roundabout for approximately 1.8km, then offline dual carriageway improvement to the northwest of the existing alignment, then crossing to the east of the existing alignment to re-join the existing A64 500m south of the Jinnah Restaurant.</p>

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