

**M42 Junction 6 Improvement
Scheme**

**Preliminary Environmental
Information Report - Non-Technical
Summary**

Contents

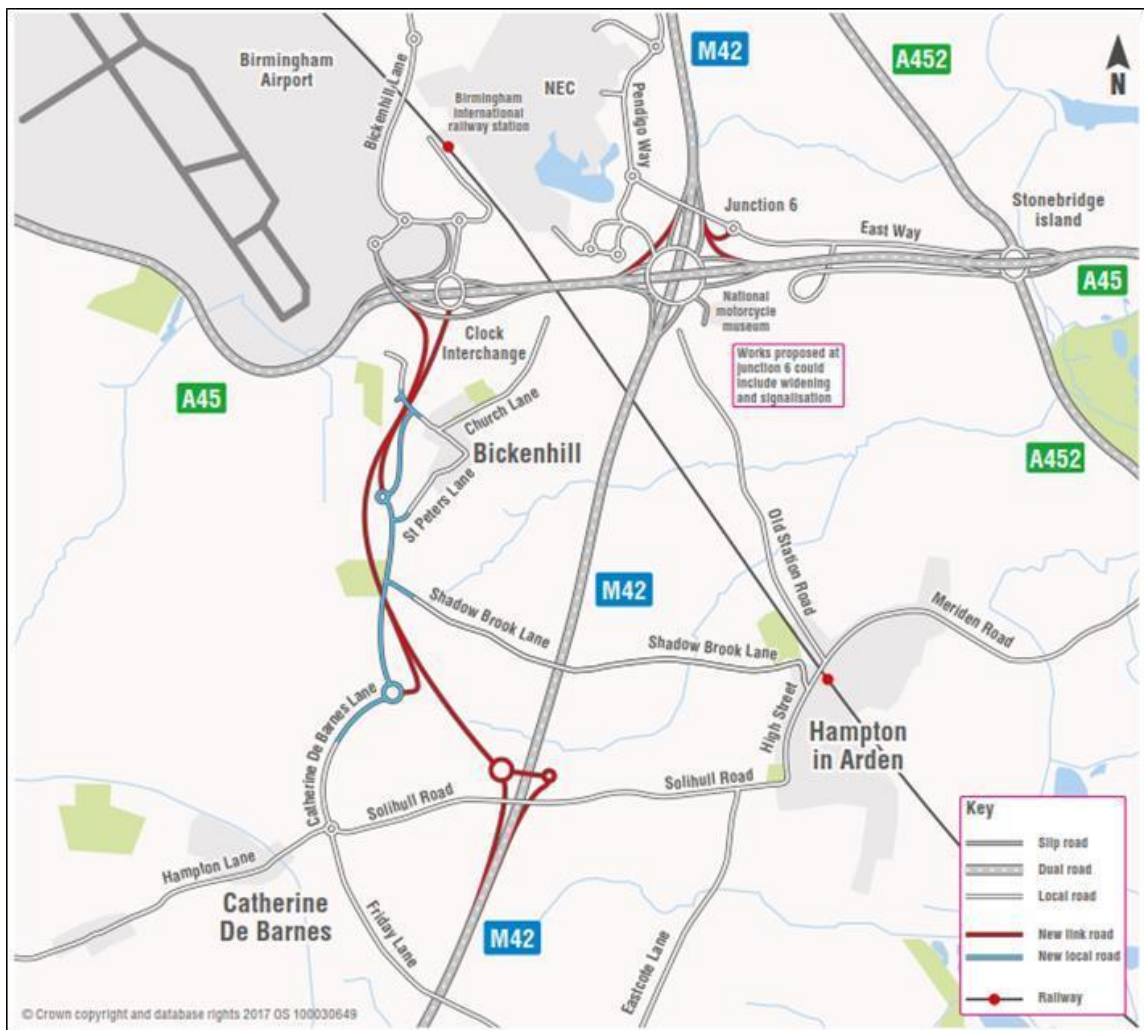
- 1. INTRODUCTION.....1**
- 1.1. Background1
- 2. DESCRIPTION OF THE PROPOSED SCHEME2**
- 2.1. Location and Need2
- 2.2. Scheme Objectives2
- 2.3. Scheme Alternatives and Options.....2
- 2.4. Scheme Description3
- 3. POTENTIAL ENVIRONMENTAL EFFECTS.....3**
- 4. AIR QUALITY4**
- 5. CULTURAL HERITAGE4**
- 6. LANDSCAPE4**
- 7. BIODIVERSITY5**
- 8. SOILS, GEOLOGY AND GROUNDWATER.....5**
- 9. MATERIALS6**
- 10. NOISE AND VIBRATION6**
- 11. PEOPLE AND COMMUNITIES6**
- 12. ROAD DRAINAGE AND WATER ENVIRONMENT7**
- 13. CLIMATE7**
- 14. ASSESSMENT OF CUMULATIVE EFFECTS7**
- 15. NEXT STEPS AND RESPONDING TO THIS CONSULTATION.....8**

1. INTRODUCTION

1.1. Background

- 1.1.1. Highways England is proposing improvements to junction 6 of the M42 motorway near Solihull in Birmingham. This is a location where significant road congestion and journey reliability issues are affecting local communities and businesses, and could constrain future investment and growth.
- 1.1.2. Improvements are being proposed to enable better movement of traffic; support improved access to the airport; and provide capacity on the road network for future traffic associated with the planned High Speed 2 Birmingham International Station.

M42 junction 6 – Scheme Location



- 1.1.3. The scheme is defined as a Nationally Significant Infrastructure Project (NSIP) to which the Planning Act 2008 applies. This requires Highways England to make an application to the Secretary of State for development consent to build and operate the scheme. Development consent is granted by the Secretary of State through a Development Consent Order (DCO) which sets out the powers to construct and operate the scheme.
- 1.1.4. A Preliminary Environmental Information (PEI) Report has been prepared for the purposes of consultation prior to the DCO application which presents information

available to date on the scheme's potential environmental impacts. Further investigations and possible mitigation measures to reduce environmental effects are ongoing. This information will be presented in an Environmental Statement which will be submitted with the application for development consent.

- 1.1.5. The PEI Report will enable members of the public, statutory consultees and other stakeholders to develop an informed view of the scheme and comment on particular aspects of interest. Feedback received will be used by Highways England to contribute to the continued development of the scheme design and inform the ongoing environmental impact assessment. This document provides a non-technical summary of the PEI Report.

2. DESCRIPTION OF THE PROPOSED SCHEME

2.1. Location and Need

- 2.1.1. The M42 motorway forms a key part of the country's strategic road network, passing to the east and south of Birmingham. This is an area which has been identified for substantial future development and growth. The motorway also provides important transport links to the wider motorway network and serves many economic assets including Birmingham Airport, the National Exhibition Centre and Birmingham Business Park.
- 2.1.2. An area of land to the north-east of junction 6 has been identified for future development by Solihull Metropolitan Borough Council, which includes the High Speed 2 Birmingham International Station. The region will also accommodate housing and employment growth in the coming years, which will place significant demands on the road network. Without this scheme, the predicted increase traffic is expected to worsen journey delays and congestion, and could constrain economic investment in the area.

2.2. Scheme Objectives

- 2.2.1. The scheme would:

- **Promote the safe and reliable operation of the road network:** by providing additional capacity, reducing driver stress and enabling safer access to and from the motorway.
- **Increase the capacity of the junction:** by improving traffic flow and removing a significant amount of vehicles from the existing junction.
- **Improve access to key businesses:** by improving the connections between the M42 motorway and the A45 Coventry Road, which provides strategic access to Birmingham and Coventry.
- **Support economic growth:** by encouraging continued investment in the regional economy and supporting new corporate, commercial and residential development opportunities.

2.3. Scheme Alternatives and Options

- 2.3.1. In 2016 Highways England identified some 40 possible solutions to meet the scheme objectives. These solutions were evaluated against a range of criteria, including environmental impacts, which led to the following options being taken forward for further review and assessment:
 - **Option 1:** A southern junction 2km south of junction 6 with a link road to the west of Bickenhill village, connecting to the A45 at Clock Interchange.

- **Option 2:** A southern junction 2km south of junction 6 with a link road to the east of Bickenhill village, connecting to the A45 at Clock Interchange via an additional roundabout.
 - **Option 3:** A southern junction 1km south of junction 6 with northbound exit and southbound entry onto the M42 only, and a link road to the east of Bickenhill village connecting to the A45 at Clock Interchange via an additional roundabout.
- 2.3.2. These options were consulted upon between December 2016 and January 2017, the outcomes of which identified that Option 1 was the preferred solution on the grounds of stakeholder and community preference, reduced environmental impact, and its ability to support future development in the area.
- 2.3.3. Subsequent modifications were made to Option 1 to further reduce potential impacts on local communities, businesses and the nationally important Bickenhill Meadows Site of Special Scientific Interest (SSSI), resulting in the preferred route for the scheme being announced in summer 2017.

2.4. Scheme Description

2.4.1. The scheme comprises the following:

- A new junction located approximately 1.8km south of junction 6.
- A new 2.4km long dual carriageway road to link the new junction to the Clock Interchange junction on the A45.
- Modifications to Clock Interchange junction.
- Upgrades to junction 6.
- Realignment and improvement of local roads west of the M42.

2.4.2. The design of the scheme is currently under development, and is being informed by the preliminary findings and outcomes of the environmental impact assessment. Environmental inputs to the design aim to:

- Avoiding sensitive, valued or important environmental features and interests where possible through careful design.
- Minimise the amount of land required to construct and accommodate the scheme.
- Address (mitigate) potential environmental effects through the use of earthworks, planting, drainage and barriers and the use of good construction working practices.
- Deliver potential environmental gains through enhancements.

3. POTENTIAL ENVIRONMENTAL EFFECTS

3.1.1. The scheme is being subjected to an environmental impact assessment (EIA) in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

3.1.2. A key stage has been the identification of issues to be considered in the EIA – a process known as scoping. A Scoping Report detailing the approach to the EIA was issued to the Planning Inspectorate in October 2017. The Scoping Report, and the Inspectorate’s response, have been published on the Inspectorate’s portal at: <https://infrastructure.planninginspectorate.gov.uk/projects/west-midlands/m42-junction-6-improvement/?ipcsection=docs>.

3.1.3. The environmental assessment covers the effects of the Scheme on: air quality, cultural heritage, landscape, biodiversity, soils and geology, materials and waste, noise and vibration, people and communities, road drainage and the water environment, and climate. The preliminary findings of the EIA are detailed in the sections below.

4. AIR QUALITY

- 4.1.1. During the scheme construction phase, the assessment considers dust emissions due to construction activities, and emissions of nitrogen dioxide and dust from construction traffic, and changes in traffic flows due to traffic management on the surrounding road network. During the scheme operational phase, the assessment considers the changes in nitrogen dioxide and particulate matter concentrations associated with traffic emissions due to changes in traffic flows due to the scheme.
- 4.1.2. There is an Air Quality Management Area (AQMA) in the vicinity of the scheme, located approximately 2km to the west of the existing M42 corridor. This AQMA has been declared due to the current exceedance of the European Union (EU) nitrogen dioxide annual mean limit value, and the exceedance of the 24 hour mean limit value.
- 4.1.3. There are a number of sensitive receptors (including residential properties) within 200m of the proposed construction works. As such, targeted dust mitigation measures to minimise potential impacts would be required – this includes dust suppression techniques, with a particular focus on where large areas of cutting would be required.
- 4.1.4. Air quality changes due to traffic are likely at locations in the vicinity of Bickenhill, as new traffic would be introduced along the proposed bypass. Air quality in this area is currently very good. It is currently considered unlikely that air quality concentrations due to the scheme would increase above national limit values. The scheme would ease congestion around junction 6. As such, a decrease in air quality concentrations at locations in this area is expected. Air quality concentrations elsewhere are expected to be marginal.

5. CULTURAL HERITAGE

- 5.1.1. There are numerous cultural heritage assets in the vicinity of the scheme – this includes 3 scheduled monuments, 2 conservation areas and 22 listed features within 1km. In addition, there are 23 non-designated built heritage features and 78 non-designated archaeological assets within 500m of the scheme.
- 5.1.2. During scheme construction, there would be no impacts on designated archaeological assets; however, seven non-designated archaeological assets and 17 designated and non-designated built heritage assets including conservations areas would potentially be affected by the scheme construction activities. Therefore, a programme of archaeological fieldwork would be undertaken to mitigate potential impacts. This programme will be developed further once the results of an archaeological investigation have been completed.
- 5.1.3. During scheme operation, a range of heritage assets have the potential to be impacted due to light intrusion, noise and changes in their setting. Mitigation measures to reduce potential impacts on heritage assets are being included in the scheme design, including the provision of a sympathetic landscape design, especially around Bickenhill Conservation Area and associated listed features.

6. LANDSCAPE

- 6.1.1. The scheme would be located within an area of significant transportation infrastructure and commercial development, although there are surrounding areas characterised by well-wooded farmland landscapes with rolling landform with an abundance of mature oaks primarily found within hedgerows that form the boundary for a diverse field pattern.

- 6.1.2. The scheme construction works have the potential to be intrusive. Impacts upon visual receptors in and around Bickenhill are likely to be greater than for users of local roads and the surround footpath network.
- 6.1.3. The new link road and junction and scheme components such as new signage, would introduce new elements into the landscape which have the potential to impact upon some local viewpoints. However, the scheme landscape design would aim to blend the scheme into the wider landscape.

7. BIODIVERSITY

- 7.1.1. There are no international statutory nature conservation designations within 10km of the scheme; nor any local statutory nature conservation designations within 1km of the scheme. However, there are 3 statutory national nature conservation designations within 2km of the scheme, namely the Bickenhill Meadows SSSI, the River Blythe SSSI, and the Coleshill and Bannerly Pools SSSI.
- 7.1.2. A range of habitats and species have been identified in the vicinity of the scheme through ecological surveys carried out throughout 2017. Identified habitats include broad-leaved woodland, scattered and dense scrub, hedgerows, arable grassland, running and standing water. Ecological species identified include bats, badger, otter, hedgehog, birds, great crested newt, terrestrial and aquatic invertebrates and fish.
- 7.1.3. Whilst the scheme is not anticipated to have a direct impact upon statutory nature conservation designations, there is the potential for indirect impacts due to emissions to air during scheme construction, and interception of ground or surface water as a result of scheme construction and long-term operation. The scheme does have the potential to directly impact upon a number of local wildlife sites due to land take requirements – this includes impacts to Aspbury’s Copse replanted ancient woodland.
- 7.1.4. Construction activities generating noise, air and light emissions have the potential to impact on a range of ecological species. Measures to manage and mitigate such impacts are being developed, which will take into account the results of ecological surveys planned for 2018. The ecological mitigation strategy will be defined in consultation with applicable consultees, with particular attention focused on the loss of Aspbury’s Copse and to encourage the free movement of protected species within the study area.

8. SOILS, GEOLOGY AND GROUNDWATER

- 8.1.1. The scheme footprint is underlain by the Mercia Mudst Group. Beneath the topsoil, materials include embankment construction material, worked ground (e.g. from former clay and sand pits), infilled ground (e.g. from infilled ponds) and areas of undifferentiated made ground (e.g. spoil heaps and areas of former construction). A range of potentially contaminative land uses have been identified within the study area, primarily relating to the construction of present and historical infrastructure.
- 8.1.2. The Agricultural Land Classification (ALC) map indicates that the entire footprint of the scheme comprises land of ALC Grade 3 – thus some soils may be considered to be best and most versatile agricultural land. An agricultural soil survey will be undertaken to confirm this.
- 8.1.3. There are no nationally important geological SSSIs within the 250m study area, although there are six landfill sites and waste features.
- 8.1.4. During the scheme construction phase, a range of mitigation and management practices will be put in place that in order to avoid risks to soils, geology and groundwater. Operation of the scheme is not anticipated to impact soils, geology and groundwater given that a suitable drainage system would be provided that would

capture and treat the scheme runoff (and pollutants resulting from incidents and spillages). Beneficial effects may occur due to the appropriate treatment of contaminated land that falls within the land requirements for the scheme.

9. MATERIALS

- 9.1.1. A wide range of material resources would be required to construct the scheme – this includes concrete, cement, timber, plywood, reinforcing fabrics and geotextiles and packaging materials. In addition, construction activities would inevitably generate waste. Given the nature of the scheme, large quantities of excavated material is likely, however, the project design aims to achieve a cut-fill balance if practicable.
- 9.1.2. All waste produced by the scheme would be managed in accordance with legal compliance and the principles of the waste hierarchy (i.e. prevention, re-use, recycling, recovery, disposal). As such, the scheme would explore opportunities to re-use materials on site, whilst where feasible sustainable construction materials and methods would be implemented. In order to ensure that materials and waste is appropriately managed, a Site Waste Management Plan will be implemented as part of a wider Construction Environmental Management Plan (CEMP).

10. NOISE AND VIBRATION

- 10.1.1. There are 5 designated Noise Important Areas (these areas capture the 1% of the population affected by the highest noise levels from major roads) within 1km of the scheme, as well as numerous sensitive residential receptors. A noise monitoring programme is planned for 2018 at up to 7 representative noise sensitive receptors located along the route of the scheme. This monitoring is anticipated to confirm that the prevailing noise environment is likely to be broadly dominated by a mix of road and aircraft traffic, with some localised commercial and industrial sources.
- 10.1.2. The nearest residential properties to the scheme construction activities would be those located along the B4438 Catherine De Barnes Lane, Shadowbrook Lane, St Peter's Lane, Clock Lane, Middle Bickenhill Lane (near M42 junction 6) and B4102 Solihull Road near M42. There is the potential that receptors in these locations would experience temporary, short term moderate to major adverse impacts during the noisier construction operations. As such, construction activities would be undertaken in accordance with a range of noise and vibration mitigation measures, plus appropriate mechanisms would be put in place to communicate with local residents to highlight potential periods of disruption.
- 10.1.3. Scheme operation has the potential to result in both beneficial and adverse traffic noise impacts at nearby noise sensitive receptors. The preliminary assessment indicates that there would be a potential decrease in noise for receptors along Catherine de Barnes Lane, however, the scheme would introduce a new noise source on the western side of Catherine De Barnes Lane. There would be both potential increases and decreases in noise levels on links at the M42 junction 6 and the junction of A45 and B4438. There is also the potential for adverse noise impacts at properties in and around Bickenhill and those situated on the proposed bypass alignment. Various techniques including the use of low noise surfacing, fencing and bunding are being investigated which aim to minimise adverse noise effects.

11. PEOPLE AND COMMUNITIES

- 11.1.1. Within the study area there are 12 public rights of way (PRoW), one traffic free cycle route on the B4438, a number of commercial enterprises, as well as individual working farmsteads and St Peter's Church in Bickenhill Village.

- 11.1.2. Scheme construction has the potential to generate some short-term, temporary adverse impacts on local community facilities due to road closures and diversions. Highways England is working with a number of local stakeholders to ensure that disruption would be kept to a minimum.
- 11.1.3. Given the relative rural nature of parts of the scheme, there is the potential to impact upon a number of PRow and community facilities. Seven PRow are likely to be permanently impacted upon by the scheme - however, the scheme is committed to replacing such losses with similar routes, including extending the existing PRow along Catherine de Barnes Lane (which provides safe access from Catherine de Barnes to the Airport and NEC etc.). Highways England is also working with stakeholders in the area to provide appropriate provisions for non-motorised users and the wider network.
- 11.1.4. The scheme is likely to result in a beneficial impact on driver stress throughout the local road network and on the M42 and supporting junctions in the long term.

12. ROAD DRAINAGE AND WATER ENVIRONMENT

- 12.1.1. Within the study area there are 7 watercourses and a number of standing water features. The scheme would cross 4 watercourses (Hollywell Brook, Shadow Brook, a tributary of Shadow Brook and a tributary of Pendigo Lake), with a further 2 watercourses (River Blythe and Low Brook) in close proximity (<1km) to the scheme. The majority of the scheme is located in Flood Z1 and is, therefore, considered to have a low risk of flooding. However, a flood risk assessment will be completed to understand and address the flood risks associated with the scheme.
- 12.1.2. During scheme construction there is the potential for impacts upon water quality (both groundwater and surface water) due to potential contaminants entering the water environment. However, with the implementation of standard construction mitigation measures, significant effects on the water environment are considered unlikely.
- 12.1.3. The scheme would result in new impermeable surfaces, which would result in additional surface run off during rainfall events. As such, the scheme would be provided with an appropriate drainage system with additional storage/ treatment. This system would manage impacts upon surrounding local water resources.
- 12.1.4. The scheme has the potential to result in some beneficial effects on the water environment due to improvements to the existing drainage network for the M42 and structures conveying watercourses beneath the M42.

13. CLIMATE

- 13.1.1. Climate change impacts are already impacting the reliability of local transport infrastructure. The scheme may thus be vulnerable to a range of climate change risks. A number of mitigation and adaptation measures are being considered to address scheme potential climate resilience risks – this includes the inclusion of appropriate infrastructure and assets within the proposed scheme design (e.g. specification of a highway drainage system that takes account of climate change predictions).

14. ASSESSMENT OF CUMULATIVE EFFECTS

- 14.1.1. The EIA for the scheme will consider the potential for combined and cumulative effects.
- 14.1.2. The scheme has the potential to generate a range of different impacts upon single receptors, for example noise, dust and traffic impacting upon a residential property. The potential for such combined is being undertaken and will be reported in the Environmental Statement (ES).

14.1.3. The ES will also consider the effects from other developments in the vicinity of the scheme which are under construction or have been consented. Effects from such development could interact with those associated with the scheme, resulting in so called cumulative effects. The PEI Report provides details of potential developments that will be considered during the cumulative impact assessment.

15. NEXT STEPS AND RESPONDING TO THIS CONSULTATION

15.1.1. The PEI Report has been prepared to assist the public in understanding the potential environmental impacts of the scheme and mitigation measures proposed. In order to further assist with this process, public consultation is taking place over a six week period between 9 January and 19 February 2018.

15.1.2. As part of this process, a series of public information exhibitions are being held which offer the opportunity for members of the public to ask any questions and make comments on the scheme. These exhibitions are being held at:

- 9 January 2018: The Arden Hotel, Bickenhill, B92 0EH. (13:00-20:00).
- 11 January 2018: St Peters Church Hall, Bickenhill, B92 0DN. (12:00-20:00).
- 13 January 2018: Catherine de Barnes Village Hall, B91 2TJ. (10:00-16:00).
- 17 January 2018: Marston Green Parish Hall, B37 7BT. (12:00-20:00).
- 19 January 2018: Fentham Hall, Hampton-in-Arden, B92 0AH. (12:00-20:00).
- 27 January 2018: Warwickshire Gaelic Athletic Association, B92 0DB. (10:00-16:00).
- 31 January 2018: The Core, Touchwood Centre, Solihull, B91 3RG. (09:00-17:45).

15.1.3. Your response to this consultation is very important to Highways England, as it will help shape the development and assessment of the scheme.

15.1.4. There are a number of ways in which you can respond:

- By post: Highways England, M42 J6 Project Team, The Cube, 199 Wharfside Street, Birmingham, B1 1RN
- Website: www.highways.gov.uk/m42-j6
- E-mail: m42junction6@highwaysengland.co.uk

15.1.5. Please ensure that your feedback reaches Highways England by **23:59 on 19 February 2018**.

15.1.6. Following this consultation, Highways England will prepare a Consultation Report on the responses received and how they have been taken into account, including whether or not they led to changes to the design of the scheme or the environmental impact assessment currently being undertaken. This report will be submitted as part of the DCO application.

15.1.7. You will have a further opportunity to comment as part of the DCO application examination process, which will be undertaken by the Planning Inspectorate on behalf of the Secretary of State. Details of how this process works can be found on the National Infrastructure Planning website at <http://infrastructure.planningportal.gov.uk/>.

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