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# Charnwood Borough Local Plan Mitigation: Technical Note 1 Hybrid Option

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## Quality information

Prepared by	Checked by	Verified by	Approved by
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## Revision History

Revision	Revision date	Details	Authorized	Name	Position
Original	8 <sup>th</sup> Jan 2021	-	Yes	S. Gogna	Associate Director

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## 1. Introduction

- 1.1 Charnwood Borough Council (CBC) commissioned AECOM to identify transport mitigation needed to support growth options being considered in CBC's emerging Local Plan. The work will provide information to support CBC in identifying a preferred growth option.
- 1.2 Technical Note 1 (TN1) was produced on 25<sup>th</sup> November 2020 by AECOM to identify broad locations for mitigation based on growth under Option 1 and Option 2. TN1 set out the approach and how information from modelling outputs and other sources were used to identify where mitigation may need to be focused.
- 1.3 Since then, CBC has identified a Hybrid Option for their Local Plan. For this commission, work on Option 1 and Option 2 has stopped and the focus is now on assessing the mitigation needs for the Hybrid Option.
- 1.4 This technical note uses the same approach and analysis set out in TN1 but for the Hybrid Option. The objective of this note is to identify the broad locations for where mitigation should be focused.

## 2. Hybrid Option

- 2.1 The Hybrid Option consists of:
  - 9,105 additional homes;
  - 5 hectares (ha) of employment land; and
  - 2,205 additional school places.
- 2.2 Figure 1 presents the distribution of sites that make up the Hybrid Option. Sites are located throughout the borough with key sites being proposed to expand existing urban areas, such as Loughborough, Shepshed and Syston, as well as smaller settlements such as Rothley, Sileby, Barrow upon Soar and Anstey.<sup>1</sup>

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<sup>1</sup> The distribution and scale of growth proposed under the Hybrid Option is broadly similar to that of Option 1, and comparatively more similar than Option 2. The main differences between the Hybrid Option and Option 1 is that the Hybrid Option has less growth in Sileby; and two new development sites have been included in the Hybrid Option which were Fairhaven Farm in Anstey, and Land at Lovrin Equine Stables in Wymeswold.

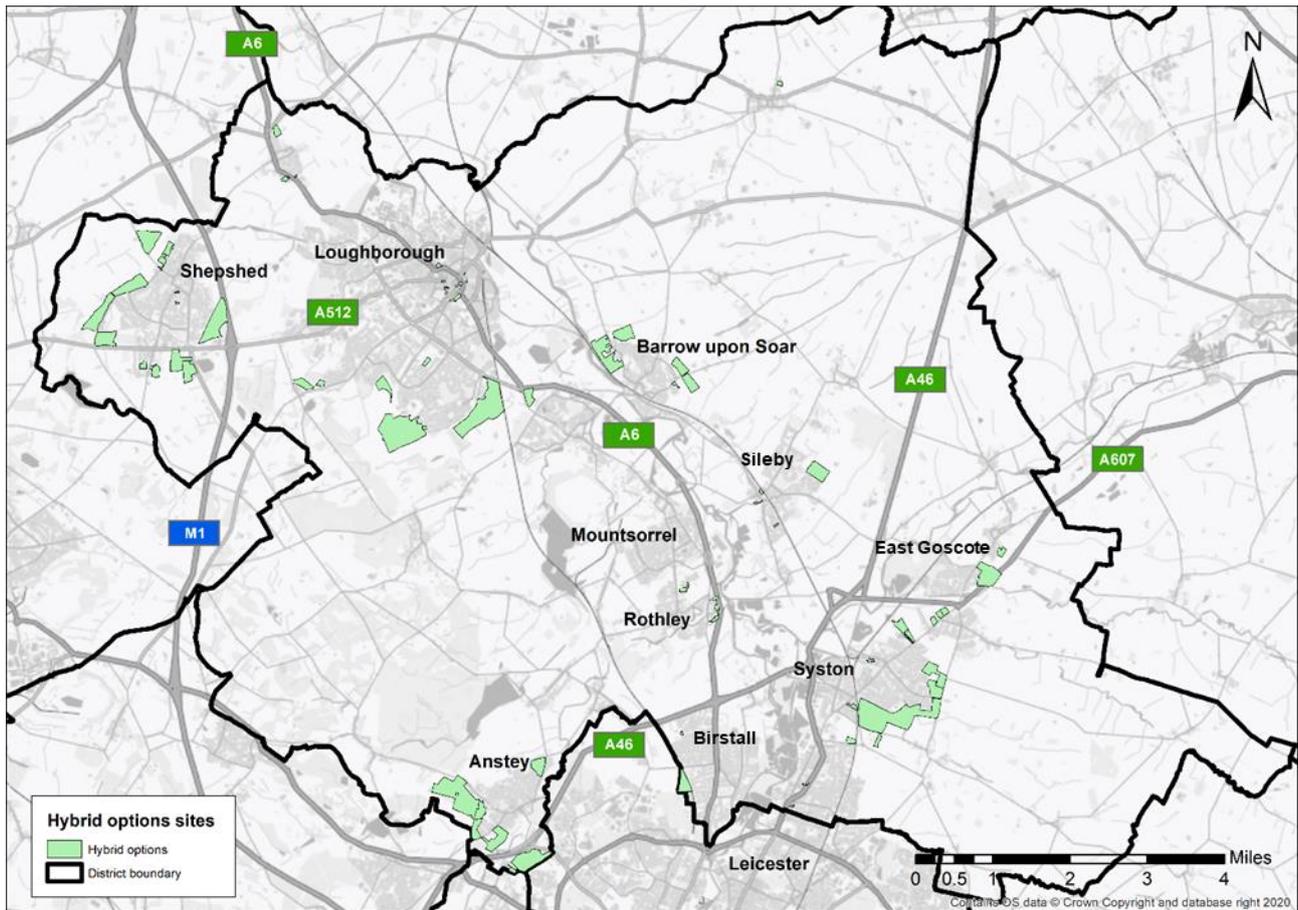


Figure 1: Development Sites of the Hybrid Option

### 3. Additional Information

- 3.1 The Hybrid Option was run through the Pan-Regional Transport Model (PRTM). This provided an opportunity to incorporate additional information. Minor updates were made to network assumptions, identified as part of the outputs to Option 1 and Option 2 forecasting, and through discussions with Leicester City regarding their work on the Leicester City Local Plan. The only significant change was the exclusion of the M1 J19-23a hard shoulder running scheme following updated information from Highways England that this scheme is now shortened and split into two: M1 J21-21a and M1 J21a-23a. Highways England has classified these schemes as 'reasonably foreseeable' and it was decided to exclude them from the Baseline and Hybrid Option assumptions.
- 3.2 The original TN1, for Option 1 and Option 2, informed discussions at a workshop held on 3rd December 2020 by AECOM, with CBC, Leicestershire County Council, Leicester City Council, and Highways England, on the potential impact of those options on the road network and initial views on what mitigation may be required to address impacts. There was agreement over the approach to identifying broad locations and for the broad locations initially identified, though a number of useful comments were made at the workshop, which informed the identification of broad locations:
- The importance of understanding any existing capacity issues on the SRN and how these may impact on the local road network, e.g. rerouting of traffic.
  - Recognition that the mitigation needs of broad locations may be interlinked through key transport corridors, such as the A512, A6, A46 and routes north of Leicester.
  - Areas of growth to the north of Leicester (Anstey, Birstall, and Syston) could be considered as being impacted by the same existing set of issues (SRN capacity and rat-running to circumvent these issues) and therefore interrelated (potentially part of one broad location).

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- 3.3 These points have informed this technical note, as relevant. Further analysis to understand the existing issues on the strategic road network (SRN) has been the focus of a separate note, the findings of which inform the approach to developing mitigation proposals. Other comments raised on location-specific issues (e.g. specific junctions) will be addressed when developing the long list of mitigation measures and packages. A list of issues raised at the workshop are listed in 0.

### 4. Broad Locations Requiring Mitigation

- 4.1 As per TN1, Figure 2 presents the locations where there is deemed to be a relatively significant change in Volume over Capacity (VoC), delay, and flow taken from the PRTM output, and the location of any known existing issues which may impact on the highway network.
- 4.2 As set out in TN1 the broad locations for mitigation have been identified based on the location and grouping of highway issues which point to the potential need for mitigation, as presented in Figure 2. The boundary of the broad locations, shown as a dashed red line, provides an indication for an area within which mitigation may be required. The boundary is illustrative of the area and is not definitive, i.e. mitigation could be considered along corridors and across boundaries.
- 4.3 There are a number of key corridors crossing the borough which link settlements and the locations where growth is proposed. These are shown by indicative shaded purple areas on the map in Figure 2. The key corridors are the A512 corridor (Shepshed to Loughborough), the A6 corridor (Loughborough to north Leicester via Barrow upon Soar, Rothley, Birstall, and Syston), and the A46 corridor (East Goscote to north Leicester via Syston, Birstall and Anstey).
- 4.4 The intention of the key corridors is to recognise the key, direct routes between locations of growth where direct impact on the network could be greatest and which could support integrated forms of mitigation. Recognising these corridors helps to address any concerns of a location-specific approach to mitigation, for example those raised at the workshop regarding north Leicester, Anstey, Birstall, and Syston.
- 4.5 There will be other important routes which link south Charnwood locations with Leicester City such as the A563 and A607, which may need to be considered as part of the wider picture when thinking through an integrated mitigation response. We recognise the transport network relationship between south of Charnwood and north of Leicester City, and this was highlighted at the workshop. The locations of growth and traffic movements between and across these areas will be considered when developing a mitigation long list.
- 4.6 The PRTM outputs also identified some delays in Leicester (primarily to the north). They lie south of the map boundary shown in Figure 2. These are not included when considering mitigation for the following reasons: the junctions showing delay lie relatively distant from the Charnwood boundary; these junction could already be close to capacity (further analysis required); the location and nature of growth in Leicester and other adjacent local authority areas may be different to that expressed in the PRTM and the requirement for mitigation will be an outcome of growth arising from other locations not only within Charnwood.
- 4.7 A corresponding list of the junctions which show significant changes in VoC, delay or flow is available.

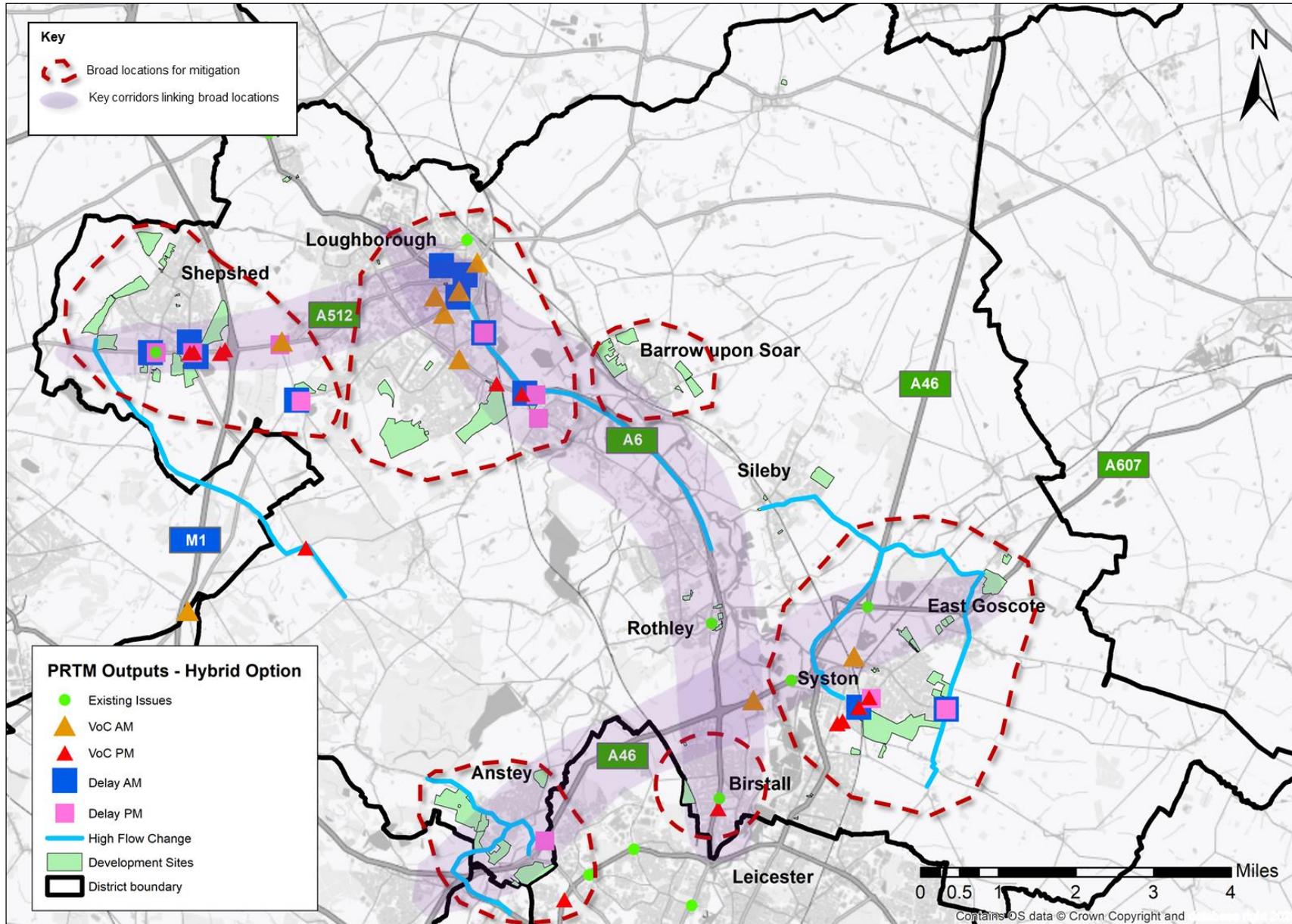


Figure 2: Hybrid Option PRTM outputs and broad locations requiring mitigation

## 5. Conclusions

- 5.1 Broad locations for where mitigation should be focused have been identified for the Hybrid Option based on PRTM outputs for the Hybrid Option and consideration of comments in the workshop held on 3<sup>rd</sup> December 2020. The broad locations are identical to those set out in the original TN1; however, it has been important to undertake the same process to establish locations for mitigation, and not assume that because the Hybrid Option is relatively similar to that of Option 1 the broad locations and specific junctions / links requiring mitigation as set out in TN1 would have sufficed.
- 5.2 By rerunning the process for the Hybrid Option, we can be confident, guided primarily by modelling assumptions and the views expressed by key stakeholders at the workshop, which locations and junctions may require mitigation.
- 5.3 Recognition of the key corridors of travel between settlements where growth is proposed and where impacts on the transport network will be felt, will also help consideration of geographically integrated mitigation.

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## Appendix: Workshop comments

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Workshop held on 3rd December 2020. Hosted by AECOM with Charnwood Borough Council, Leicestershire County Council, Leicester City Council, and Highways England.

Key comments raised:

### *Comments on identification of Broad Locations*

- Consideration should be given along the A46 Leicester Western Bypass, which is already heavily congested, and which could be why no issues are showing up in the model.
- The Anstey, Birstall, and Syston broad locations should cover a wider area and include more of the city to recognise they are affected by some of the same issues: displacement of traffic from Leicester City and rerouting off the main radial corridors onto local roads. Displacement on Leicester Road (in Birstall). Sileby should be included in the packages.
- The northern side of Leicester City should be treated as a whole – it is difficult to treat them as discrete areas. Issues due to displaced traffic. Barrow, Sileby and Syston should not be treated as individual either but rather interdependent areas.
- Highways England suggested that reference to DfT Circular 02/13 is important. Paragraphs 9, 18, 19 of the Circular will help consider how SRN issues are dealt with.
- More clarity requested on how existing issues on the SRN will be considered as part of the approach to mitigation of Local Plan growth.

### *Comments on AECOM's initial, early stage view of mitigation*

#### *Shepshed Mitigation*

- Mitigation measures do not focus on M1 J23 (and the A512 section across the junction) and therefore could consideration be given to bus priority or signal arrangements.

#### *Loughborough Mitigation*

- Issues regarding Epinal Way were flagged, particularly regarding the role of the road. Epinal Way has not been reclassified as part of the A6. It was also mentioned that the A6004 severs the university town and therefore there are strong pedestrian and cycle flows across the road (Loughborough College also facing onto it). It would be useful to understand what causes the traffic issues in the town. It was queried whether the mitigation proposed in Loughborough could be radical in terms of walking and cycling.

#### *Syston Mitigation*

- A key issue in Syston is trips diverting onto Broom Lane. It was noted that there are problems on the main roads outside of Syston and it was highlighted that if mitigation measures were provided on the more strategic routes then trips would be less inclined to route through the town centre.
- Support was given regarding smarter choices / modal change measures, but it was also noted that more focus should be given on the eastern route along Barkby Road to make it less desirable for cars.
- It was suggested that a pedestrian or cycle link to the railway station in Syston was also included as an alternative mode for traffic otherwise travelling into the city. Also suggested that we link this to buses in Leicester to support a sustainable connection to the city.
- At Hobby Horse roundabout Highways England does not want an increase in traffic merging onto the A46 at the Wanlip Road westbound onslip to the west (safety concerns).

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### *Birstall Mitigation*

- Birstall Interchange will also be improved as part of the Broadnook Sustainable Urban Extension (both development and scheme are in the model).
- Traffic in Birstall is largely to do with the way that vehicles route around Leicester City and that it is difficult to think of these broad areas discretely and independently.
- The broad mitigation area needed to be made wider and should consider other routes coming into Leicester. Was supportive of walking and cycling improvements. Noted that Birstall Park & Ride improvements provided opportunities to increase operating hours.

### *Anstey Mitigation*

- It was highlighted that the A46 causes severance between Anstey and Leicester and noted that this could be explored further.
- It was noted that there is potential to connect the mitigation to delivering the Beaumont Leys Park & Ride.

### *Barrow upon Soar*

- The effect that trips rat running through Barrow upon Soar that should be on more major routes has on local roads was queried. Although it was noted that the model outputs are likely to be caused by the proposed developments.

### *Other comments*

- Concerns were raised regarding whether the smarter choices approach is enough to mitigate the impact of the developments. It was noted that further discussions were needed around the SRN.