

# **A38 Derby Junctions**

## **Scheme Number TR010022**

### **8.42 Markeaton Junction Alignment Optioneering Summary**

Planning Act 2008

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**A38 Derby Junctions**  
Development Consent Order 202[ ]

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**Markeaton Junction Alternative Optioneering Summary**

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## **1 Introduction**

- 1.1 This note has been prepared in response to the Examining Authority's request to provide information on the alternative options considered for the alignment at the Markeaton junction and evidence that consideration had been provided to an alignment that minimised (with avoidance if possible) the need for compulsory acquisition of the Queensway properties.

## **2 Alternative Option Parameters**

- 2.1 During the Compulsory Acquisition Hearing (CAH) a request was made by the ExA to detail the reasoning behind the proposed alignment and to explain why the A38 has not been routed further west into Markeaton Park in order to minimise the compulsory acquisition of the Queensway properties.
- 2.2 The request made by the ExA must be considered against the following constraints:
- avoiding the Army Reserves Centre buildings;
  - avoiding land take or impacting on the McDonald's and Euro Garages businesses;
  - minimising the impacts on the Queensway properties by using more of the land in Markeaton Park to the west of the A38; and
  - avoiding further property acquisition on Ashbourne Road.

## **3 Constraints and Influencing Factors**

- 3.1 The area around the A38 is urban with a number of residential properties including those on Queensway and Ashbourne Road. The land use in this area also consists of a significant amount of Public Open Space (POS) Markeaton Park, local and national cycle routes and a number of pedestrian routes including the Markeaton Footbridge crossing over the A38. Markeaton Park in particular, is a high value recreational asset being one of only two city parks within the administrative area of Derby City Council. Visitation to the park (based on information provided by Derby City Council) is drawn from the East Midlands region and in this regard, it can be said to have high value in respect of usage by the public. The Park is multi-functional, with a number of different sporting and recreational activities provided within an attractive setting combining a mix of open space and mature landscaping. To the immediate west of the A38 within Markeaton Park is Markeaton Lake, this is a significant and attractive water feature that links to the Mill Pond to the east of the A38 via a culvert under the road.
- 3.2 To the south west of the junction are two well used convenience businesses, McDonald's and Euro Garages.
- 3.3 To the east, located behind the row of houses on Queensway is the Royal School for the Deaf Derby.
- 3.4 The A52 Ashbourne Road passes through the junction in a broadly east-west direction.

## **4 Optioneering History of Proposed Markeaton Junction**

- 4.1 From the Road Based Study (2002) the following four options for grade of this junction separation emerged:
- Option 1 was for the A38 to pass beneath the junction in an underpass. There would be a single bridge carrying the A52 over the A38 with slip road providing all turning movements between the A38 and A52. The slip roads would join the A52 at signalised junctions. Additional land required to accommodate the underpass and slip roads would be on the east side of the A38 to avoid impacts on Markeaton Park and the petrol filling station and fast food restaurant on the west side of the junction. This would adversely

affect 16 detached houses on Queensway, 2 semi-detached houses on Ashbourne Road and would require land from the TA Centre. See Figure 4.1.



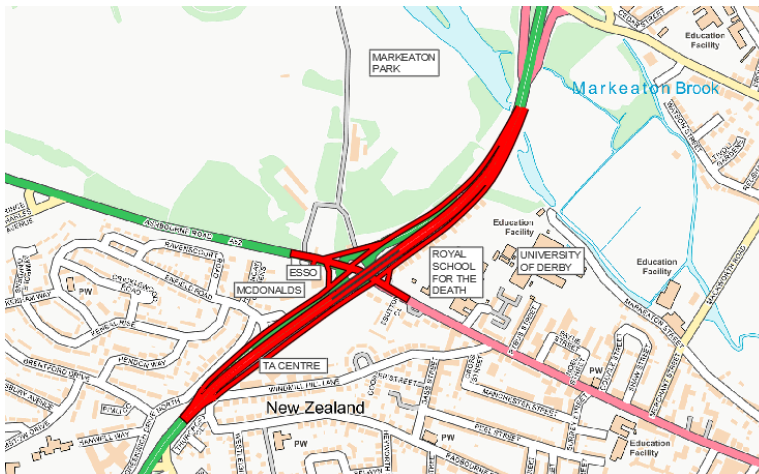
**Figure 4.1 RBS Option1**

- Option 2 was similar to Option 1 except that the additional land required to accommodate the underpass and slip roads would have been taken on the west side of the A38 to avoid impacts on the houses on Queensway and Ashbourne Road. Land would be taken from Markeaton Park, the petrol filling station and fast food restaurant on the west side of the junction. See Figure 4.2.



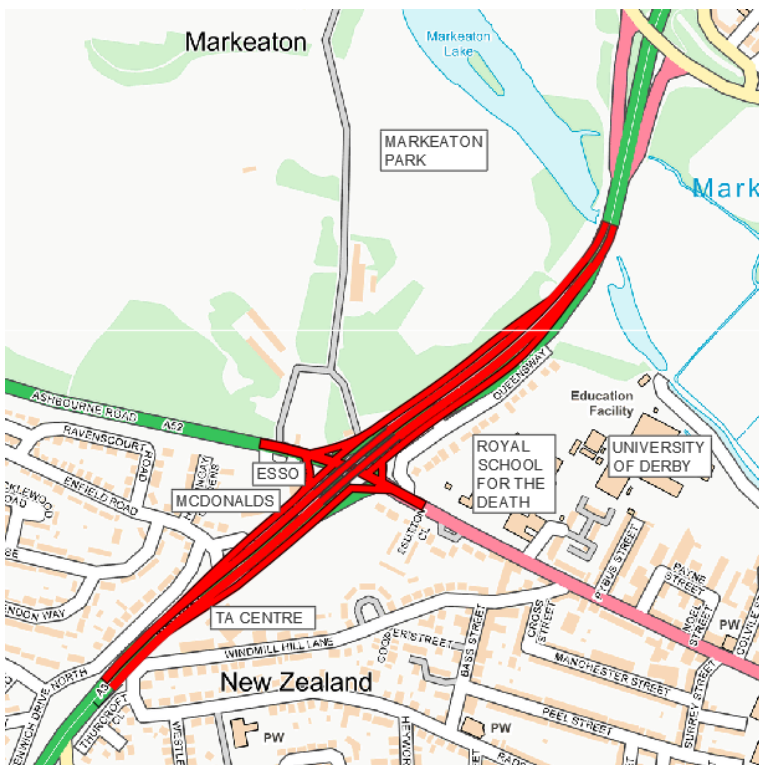
**Figure 4.2 RBS Option 2**

- Option 3 was similar to Option 1 but with the A38 being on embankment over the junction as opposed to being in an underpass. See Figure 4.3.



**Figure 4.3 RBS Option 3**

- Option 4 was similar to Option 2 but with the A38 being on embankment over the junction as opposed to being in an underpass. See Figure 4.4.



**Figure 4.4 RBS Option 4**

- 4.2 The RBS concluded that Option 1 was the preferred option. The primary reason being that an underpass solution was considered preferable to an embankment and flyover at it would be less visually obtrusive in the urban and parkland setting.. This conclusion was reached with an option to move land take to the west (option 2) having been included in the consideration. Whilst that option would have reduced the impact on the Queensway properties, the balance of impacts in this constrained location was determined to fall in favour of option 1. It was considered preferable to reduce the impact on Markeaton Park and petrol filling station and fast food restaurant albeit with increased impact on the residential properties on Queensway.



- 4.3 In response to the main question this paper addresses, Highways England therefore did consider and include in the optioneering an option of moving land take to the west with the effect of reducing impact on the properties in Queensway.
- 4.4 Following on from the initial Road Base Study further design development was undertaken between 2002 to 2008. Traffic modelling of the RBS preferred option highlighted operational issues in that the signalised single bridge junction could not effectively accommodate the forecast traffic flows. This led to the layout becoming amended such that the A38 passed through the junction at low level with a roundabout on the A52 above. It was considered that this would offer traffic management, construction and operational benefits. As part of the development of this option, consideration was given to revisions required to increase the speed limit from 40mph to 50mph through Kingsway and Markeaton junctions. See Figure 4.5.



**Figure 4.5 Roundabout Option**

- 4.5 Following the re-establishment of the scheme in 2014 after the economic down turn, a non-statutory Public Consultation was held to reintroduce the scheme to the local population of Derby City. Although some alternative options were received for Markeaton junction (e.g. tunnel from south of Kingsway junction to the north of Markeaton junction; new trunk road from A38/A50 Toyota junction to north of Little Eaton junction), none of these options passed the initial sifting process and as such were excluded from further assessment.
- 4.6 Following the completion of the 2015 public consultation, further design work was undertaken to focus on specific aspects of the junction to ensure the option was feasible and deliverable. These included:
- Reviewing the layout of the roundabout with a view to it operating under traffic signal control. This was identified as a necessary measure to accommodate the latest design traffic flows and to accommodate controlled pedestrian crossings on all arms of the roundabout;
  - Examining the operation of the short weaving length between Markeaton junction and Kedleston Road;
  - Developing the outline design for facilities for non-motorised users based upon feedback received during the consultation;

- Developing designs for maintaining access to Markeaton Park and the McDonalds/petrol filling station site;
- Conducting environmental surveys and assessments to quantify the adverse impacts and positive benefits of the scheme; and to inform the design of mitigation measures.

## **5 Appraisal of rejected option 2 alignment**

- 5.1 The following section of this note, is provided to respond to the request of the ExA, but should be treated for information purposes only. As such, no design or assessment work has been undertaken in respect of it and although Highways England has provided a response, it would wish to draw to the attention of the ExA that the Scheme submitted as an application and currently the subject of examination represents the preferred route and the Scheme to be determined by the ExA. Highways England do not have the ability to make significant revisions to the alignment within the terms of the current application particularly as what is being applied for as part of this DCO is an alteration to an existing strategic highway (under s.22(1)(b) of the Planning Act) and not the construction of a new highway deviating significantly from the line of the existing carriageway.
- 5.2 Moreover, Highways England considers that the proposed Scheme alignment strikes the right balance between private loss and public benefit, taking account of environmental, engineering and economic factors, amongst others. Highway England do not consider it appropriate to spend any significant examination time considering changes which would be outside the scope of the application currently before the Examining Authority and therefore cannot form part of the scheme for which consent is sought. .
- 5.3 It should be noted that this theoretical westerly alignment based very loosely on option 2 has not been subject to the same level of analysis and assessment against the scheme objectives and no Environmental Assessment has been undertaken. The following comments are therefore based upon the observations drawn from previous option analysis and observed direct impacts that this alternative has on engineering, safety in the immediate local area.
- 5.4 To avoid compulsory acquisition of additional properties on Ashbourne Road in the theoretical option 2 scenario, no further land has been taken from the Army Reserves Centre. Swinging the alignment east into the Army Reserves land before swinging to the east into Markeaton Park would result in additional property acquisition and potentially introduce further Stopping Sight Distance (SSD) Departures from Standards that may not be granted.
- 5.5 Turning the mainline alignment west after the McDonald's/Euro Garage site would mean that the position and size of the Markeaton Junction would stay mostly unaltered. The proposed northbound diverge and southbound merge slip roads remain as in the proposed scheme. To turn the A38 mainline west enough to effectively minimise the impact on the Queensway properties, a horizontal curve several steps below desirable minimum would be required (as required by the DMRB TD9/93). The resultant curves to subsequently push the A38 further west into Markeaton park and then reconnect with the existing road are all below desirable minimum, therefore, curve widening would be required to give an acceptable provision for SSD. This in turn would increase the land take requirements and increase the length and cost of any structures spanning the main carriageway.
- 5.6 As the proposed A38/A52 junction would remain unchanged, this theoretical westerly alignment would still require acquisition of 5 or 6 of the Queensway properties and sever the access road to the remainder. Therefore, an alternate access arrangement would need to be made.
- 5.7 As the design standards do not permit accesses on or off slip roads (connector roads) it would be necessary to provide a suitable access road to service the remaining 9 or 10 Queensway properties.



- 5.8 This access road would require further land take from a third party (the Royal School for the Deaf Derby). An appropriate location for the access road, at a suitably safe distance from the proposed Markeaton junction, would be at approximately the same position as the school's existing access on the A52 Ashbourne road. The provision of such an access road would result in the loss of some parking for the school and the total loss of the Mundy wall along the A52 boundary. One benefit of this, however, is that the school would have an improved access to and from Ashbourne Road.
- 5.9 In addition to this, the realignment to the west into Markeaton Park could result in the loss of around 26,000m<sup>2</sup> of Public Open Space, this is in the order of an additional 23,000m<sup>2</sup> over that required by the Proposed Scheme. This significant amount of POS loss would present a major challenge in finding replacement land due to the urban location of the scheme. This is therefore an extremely difficult requirement to fulfil. Moreover, the land taken in this scenario would be high value parts of the park (rather than the proposed scheme which seeks to acquire linear strips with lower recreational value to the edges of the park immediately adjacent to the A38) which would be likely undermine the value and function of Markeaton Park and thereby cause a loss of open green space and recreational resource affecting a large number of people.
- 5.10 Further, and taking the constrained nature of the location and lack of alternative open space into account, replacement land for the loss of open space would be difficult to identify. This would require consideration of the use of compulsory acquisition power to try and provide replacement space elsewhere, simply moving the impact rather than avoiding it while increasing the amount of land affected. Where Highways England were unable to provide sufficient replacement land, including because the impact of compulsory acquisition to do so could not be justified, then the requirements of Section 131 and 132 of the Planning Act 2008 could not be met and the application would likely be subject to Special Parliamentary Procedure. This process would create significant programme uncertainty and risk to the delivery of the Scheme.
- 5.11 To the northern end of the theoretical westerly alignment the carriageway and verge features would extend out over Markeaton Lake. The environmental impacts of this would require detailed assessment, however, it would be likely to present a significant impact and result in adverse effects.
- 5.12 In addition to the impact to Markeaton Lake, the theoretical westerly alignment would require the removal of almost all of the mature trees screening the Park from the A38. Extensive landscaping would be required to mitigate this, which would present a significant challenge given the scale of existing mature planting and resulting in increased adverse impacts
- 5.13 The area of existing A38 carriageway remaining between the remaining Queensway properties and the theoretical westerly alignment could be used to accommodate highway drainage attenuation features and maintain the local and national cycleway network along the scheme.
- 5.14 The western access ramp of the Markeaton Footbridge on the Proposed Scheme has, through consultation with the public, been situated directly on the footprint of the existing bridge to minimise mature trees loss. With the theoretical westerly alignment the footbridge, if retained as a feature, would require further intrusion into the Park with additional land acquisition being needed.

## 6 Summary

- 6.1 The objective of the ExA's query on alignment was to ascertain whether minimisation of the compulsory purchase of the Queensway properties had been properly considered in coming to the Scheme alignment. Of the existing 15 properties, Highways England considers 9 could potentially be retained by moving land take further to the west. However,

4 would still require compulsory acquisition and a further 2 are at risk (or as a minimum would lose land from the frontages). While the number of properties acquired could be minimised that would result in a number of adverse impacts and could simply move the need for compulsory acquisition from these properties to other areas.

- 6.2 As a point of reference, it is worth noting that there have been no objections received to the compulsory acquisition of the properties on Queensway for the proposed scheme. Of the 15 properties, 6 are already owned by Highways England, 5 have had blight applications accepted and a further blight application is expected imminently from another. Two of them are investment properties with student tenants and the final one is Mr and Mrs Gartside with whom discussions are ongoing (who also stated, at the CA hearing, that he would not wish to live there even if the road could be moved to avoid the CA of his property).
- 6.3 With reference to Mr Gartside's oral submission at the compulsory acquisition hearing on the 10<sup>th</sup> December 2019 with regard to impacts of alternative A38 alignment options, Highways England would draw attention to the stated concerns on the amenity value and the living conditions experienced by residents, should they remain in the properties, which was considered to be very undesirable with potentially no ability to claim compensation.
- 6.4 The impact on public open space in the area as a result of the suggested option would be significant and Highways England considers that it would be unable to provide sufficient replacement land in quantitative and qualitative terms. The impacts on the public would therefore be significant as a result of the land take likely to be necessary, which would undermine the value of the park as a high value city park and one of the most important areas of public open space within Derby, which has a regional draw in respect of visitation.
- 6.5 The theoretical westerly alignment deviates outside of the submitted Red Line Boundary (RLB). As such this would result in a material change and would increase the land required to be secured through compulsory acquisition. Highways England considers that the submitted Scheme optimises land take within the RLB, providing an efficient cost-effective solution. In overall terms, Highways England considers that the submitted Scheme appropriately balances the public interest against private loss and the land which is the subject of compulsory acquisition is necessary in order to deliver the Scheme. Conversely, Highways England considers that the theoretical westerly alignment would result in greater and unacceptable impacts on the public in seeking to account for the impact on private loss.