THE HIGHWAYS ACT 1980

AND

THE ACQUISITION OF LAND ACT 1981

THE NOTTINGHAMSHIRE COUNTY COUNCIL (B684 TO A612 LINK ROAD) A6211 GEDLING ACCESS ROAD (SIDE ROADS) ORDER 2018

THE NOTTINGHAMSHIRE COUNTY COUNCIL (GEDLING ACCESS ROAD) COMPULSORY PURCHASE ORDER 2018

SUMMARY PROOF OF EVIDENCE

OF

JOHN PATCHETT OF VIA EAST MIDLANDS LIMITED

ON BEHALF OF THE ACQUIRING AUTHORITY

1. QUALIFICATIONS AND EXPERIENCE

1.1. My name is John Patchett. I am an Incorporated Engineer and a member of the Institute of Civil Engineers with over 37 years of experience in the design and delivery of highway projects, including other non-highway related civil engineering schemes.

1.2. I am a Principal Project Engineer in the Highway Design section of Via East Midlands Limited, formerly the Highway Design section of Nottinghamshire County Council (**"NCC"**).

1.3. My role is to ensure the design and delivery of new highway infrastructure projects for NCC as well as the protection of NCC's assets through the assessment of third-party design submissions that impact on the local highway network.

2. INVOLVEMENT WITH THE GEDLING ACCESS ROAD

2.1. I have been involved with the Gedling Access Road Scheme (**"Scheme"**) since 2009 by providing technical support to White Young Green (**"WYG"**) leading up to the submission of the Scheme planning application in 2014 (reference 2014/0915). Since 2014, I have been Principle Designer on the Scheme, taking the lead on all highway design elements contributing to Contractor procurement and contract information, and development of the overall Scheme Specification.

3. SCOPE OF EVIDENCE

3.1. This Proof of Evidence focuses upon the design considered for the proposed Scheme, providing background to and justification of design choices and responds directly to objections received to the Scheme. In preparing this Proof of Evidence I have focussed on relevant design principles and the alternatives considered.

4. DESIGN PRINCIPLES AND DETAILED SCHEME DESIGN INFORMATION

4.1. To ensure a consistent and safe approach to the Scheme design, the design is principally based on a suite of standards contained within the Design Manual for Roads and Bridges (**"DMRB"**) **[CD13.2]**. The DMRB also incorporates design advice and other recognised published documents relating to the design and operation of new and existing highways. The other relevant standard used is the Nottinghamshire Design Guide (**"NDG"**) **[CD11.6]**.

4.2. The Scheme is a new single carriageway road linking the A612 Trent Valley Road in the east with the B684 Mapperley Plains in the west, measuring 3.8km in length with a width generally of 7.3m throughout (except for the climbing lane section running from the A612 past the walled garden). Once constructed, the Scheme will be classified as an 'A' road – the A6211 – with the existing A6211 through Gedling Village becoming an unclassified road. The A6211 Colwick Loop Road with be reclassified as a 'B' road, becoming an extension of the B686.

4.3. The Scheme includes seven junctions (a mix of roundabout and traffic signal-controlled type junctions) to enable movement between the new road and the existing highway network and to permit access to key development areas including the former Gedling Colliery. As such, the design also includes facilities for non-motorised users.

4.4. Overall, the Scheme will be in cutting or on embankment of varying width. Where the Scheme is constructed on embankment, the gradient of the slope is generally 1:2 (incorporating reinforcement) although where possible gradients have been reduced to 1:3 to mitigate against the need for reinforcement. A typical cross section, south side to north side, comprises verge (width varies), carriageway (7.3m wide), shared footway/cycleway (3m wide with 0.5m verge). A drawing showing a typical cross section is at **[CD4.4.7].**

4.5. All elements of the Scheme have been designed to consider the requirements of surrounding local wildlife and their habitats to reduce the impact of the Scheme.

5. DESIGN IMPACT ON INTERESTS OF MR RECKLESS

5.1. The objection to the Scheme made by Mr Reckless refers to insufficient explanation of the land required adjacent to his property interest.

5.2. The Scheme joins the A612 at an existing traffic signal-controlled junction which has been designed to reduce the footprint of the overall Scheme and subsequently defines the route of the Scheme in a north-westerly direction.

5.3. The route choice and design has been chosen to maximise the use of land in the ownership of NCC. This is described in more detail in the Proof of Evidence of David Pick **[DP01]**.

5.4. The design of the Scheme in the vicinity of the property interest of Mr Reckless is such that there are a number of highway design features including a climbing lane to facilitate safe overtaking of slow moving westbound traffic; a vehicle restraint system (**"VRS"**) with associated set-back and working widths as per the standards sited in DMRB; and sloped embankment, the gradient for which varies between 1:2 and 1:3. All of these highway design features have design requirements associated with them which influence the amount of land take required in order to install them in accordance with the design specification and relevant design standards. The profile view of the Scheme in relation to the walled garden is shown at [CDxx] and shows highways features in relation to the location of the wall and illustrates the need for the proposed amount of land take.

5.5. Alternative design options were explored and subsequently discounted, leading to the current iteration of the Scheme design in the vicinity of the property belonging to Mr Reckless. The alternative designs considered included, removal of the proposed climbing lane and provision of an integrated retaining wall which are described in more detail in the ensuing paragraphs.

5.6. **Climbing lane** – the requirements for a climbing lane are covered in DMRB TD9/93 Section 5 [CDxx]. Due to the vertical gradient at this location and potential for slow moving vehicles, the likelihood of overtaking vehicles is increased, thus provision of the climbing lane will facilitate safe overtaking. This arrangement is considered to reduce the likelihood of driver frustration and provide a safer opportunity to overtake slower moving vehicles.

5.7. **Integrated retaining wall** - an integrated retaining wall that is combined with the rebuilt walled garden has also been considered to enable the east wall of the walled garden to be reconstructed 7.0m closer to the road at its northern end running approximately parallel to

the alignment of the GAR carriageway. The costs associated with this construction were not considered to offer value for money and would not show any demonstrable visual difference to the option proposed within the Orders.

6. DESIGN SPECIFIC RELATED TO MIDLAND LAND PORTFOLIO ("MLPL") OBJECTION

6.1. The alternative design options were explored and subsequently discounted, leading to the current iteration of the Scheme design. The design completed for the Scheme drainage is in accordance with the relevant standards and guidance and the location of the attenuation pond is as agreed within the approved planning application reference 2014/0915.

6.2. **Under-carriageway storage** – To achieve the same required storage as provided by the pond 796,000 litres of surface water run-off, a tank measuring approximately 50m long by 27m wide by 0.75m deep would be required. The tank would need to be set 0.6m below the carriageway; the depth below the carriageway needs to be very shallow due to outfall constraints meaning that the storage feature would have to be designed to enable significant prolonged traffic loading. This would create a number of issues around installation and maintenance of the tank and would not provide the same ecological and environmental benefits associated with the existing pond option.

6.3. **Storage within the Carlton-le-Willows site/Whitworth Drive area** – Due to the local topography in the area, a series of small terraced attenuation ponds could be an alternative storage solution. The amount of earthworks involved in creating ponds cut into the hillside would be impractical, with little or no opportunity for redistribution of the cut earth elsewhere on site. The environmental and financial implications relating to removal from site would be too great. In addition, due to the increased amount of impermeable surface between Burton Road and the A612 / Scheme junction, would create a need for a downstream pond at the low point i.e. in the proximity of the proposed location within MLPL land.

7. SUMMARY

7.1. I confirm that the design for the Scheme has been undertaken in accordance with all accepted highway standards taking into consideration relevant constraints to provide a robust design. In all circumstances NCC have sought to minimise land take and impacts upon affected landowners whilst ensuring the Scheme is delivered in line with relevant principles.