

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

PROOF OF EVIDENCE
OF
MICHAEL ANTHONY BARNETT OF VIA EAST MIDLANDS LIMITED
ON BEHALF OF THE ACQUIRING AUTHORITY

1. QUALIFICATIONS AND EXPERIENCE

- 1.1. My name is Michael Anthony Barnett. I hold a First Class Honours Degree in Civil Engineering (BEng Hons) from Sheffield Hallam University and an MSc with distinction in Road Management and Engineering from the University of Birmingham. My background is in civil engineering and my expertise extends to project management, asset management, highway design and delivery, contract management, Compulsory Purchase Orders ("**CPOs**") and Side Road Orders ("**SROs**") and the preparation of planning applications and discharge of conditions. This expertise is relevant to the issues raised by the delivery of the Gedling Access Road Scheme ("**Scheme**").
- 1.2. I am a Team Manager and responsible for the delivery of major projects and small traffic improvement schemes at Via East Midlands Limited ("**Via EM**"), a company that since 29 March 2019 is fully owned by Nottinghamshire County Council ("**NCC**"). Via EM was formed on 1st July 2016 and originally jointly owned by NCC and CORSERV. CORSERV is fully owned by Cornwall County Council. Via EM delivers services for NCC that were formerly delivered within the Highways Department. The scope of these services are defined within a Service Contract between NCC and Via EM for an initial period of 10 years. Via EM by virtue of its 'Teckal status' is protected from State Aid issues and this status provides a legal background as to how the package of work to design and procure directly is a legitimate route to project delivery.
- 1.3. I was transferred to Via EM from NCC as part of the setup of the company and was in the same position previously at NCC since April 2013. Previous to that I worked as Highway Asset Manager for NCC and before that in a number of design and delivery roles for highway and civil engineering schemes. Through my role as Team Manager I have successfully delivered other major projects in Nottinghamshire, for example, Hucknall Town Centre Improvement Scheme and Workshop Bus Station.
- 1.4. I have over 20 years' experience in the design and delivery of highway and civil engineering infrastructure projects.

2. INVOLVEMENT WITH THE SCHEME

- 2.1. My role is to lead delivery of the Scheme on behalf of NCC and Via EM. I directly manage project managers involved in the delivery of the Scheme and have worked closely with Weightmans LLP on producing the documentation for the SRO and CPO (together the "**Orders**") required to deliver the Scheme. I am responsible for all aspects of the Scheme being delivered by Via EM and work closely with colleagues from across the organisation to ensure that design and planning requirements for the Scheme are met.
- 2.2. I have led on the selection of the Contractor procured to deliver the Scheme and my team are preparing all the contract documentation alongside managing the statutory process associated with the SRO and CPO required to deliver the Scheme.
- 2.3. I have been involved in the Scheme since 2013 and was involved in the refresh of the planning application for the Scheme and attended events that were held and were open to the public. I was also involved in the preparation, appraisal and selection of Keepmoat Homes Limited ("**Keepmoat**") as developer responsible for delivering the mixed-use

regeneration scheme on the development area at the former Gedling Colliery site (“DA”), and their subsequent planning applications, including on the interface between the DA and the Scheme.

- 2.4. I have been working with Andrew Prowse in relation to land negotiations and prepared various recommendations to obtain approvals for land acquisitions and the Orders. In relation to Governance I provide regular updates through NCC and present to Via EM as the project lead on the Scheme Executive Board.

3. SCOPE OF EVIDENCE

- 3.1. This Proof of Evidence focuses upon the background and history to the Scheme under consideration and its importance to NCC and the wider DA. This is set out in the need for the Scheme including narrative around existing traffic conditions and setting out how the traffic modelling establishes why the Scheme is necessary to improve the links, junctions and wider highway network. My Proof of Evidence includes a section on the wider benefits that are expected as a result of the Scheme and historic alternative alignments considered.
- 3.2. The evidence also includes relevant considerations involved in the assembly of land required in order to deliver the Scheme and forthcoming developments on plots within the Order Land and the history of negotiations with affected landowners. The Evidence also references Human Rights considerations and the reasons for acquisitions of rights linked to the objections of Mr Christopher Reckless (“**Mr Reckless**”) and Jigsaw Homes Limited (“**Jigsaw Homes**”).
- 3.3. My Evidence also includes detail on the Scheme funding and construction methods considered in selecting the Scheme and sets out the interface and work done to date with the Statutory Undertakers (“**SU’s**”) whose apparatus are affected by the Scheme. In doing so, I make specific reference to the objections of Cadent Gas Limited (“**Cadent**”) and Western Power Distribution Limited (“**WPD**”).

4. BACKGROUND TO THE SCHEME

- 4.1. On 25 October 2018 NCC made:
- The Nottinghamshire County Council (B684 to A612 Link Road) A6211 Gedling Access Road (Side Roads) Order 2018 (“SRO”) [**CD2.1**]; and
 - The Nottinghamshire County Council (Gedling Access Road) Compulsory Purchase Order 2018 (“CPO”) [**CD3.1**] (the SRO and CPO together being the “Orders”).
- 4.2. The Orders were made pursuant to NCC’s resolution of 16 March 2017 [**CD9.6**]. The Orders were submitted to the Secretary of State for Transport for confirmation on 29 November 2018. Eight statutory objections and one non-statutory objection were received to the Orders and those objections that have been sustained are summarised in the Evidence of Andrew Prowse [**AP01**].
- 4.3. The Statement of Case for the Scheme [**CD1.2**] described the aims and purposes of the Scheme and the reasons, the deliverability and purposes for making the Orders on the basis of the satisfaction of the following principles:

- Its justification and need;
 - The consultation process and how third-party interests have been considered;
 - The status of associated consents;
 - The availability of all necessary funding;
 - The availability of all the land required and the reasons why all the land identified is necessary;
 - The statutory requirements that must be satisfied before construction can start; and
 - Confirmation that there are no legal impediments to the Scheme being implemented.
- 4.4. The Statement demonstrates that the requirements of the non-statutory guidance document entitled “Compulsory Purchase Process and the Crichel Down Rules”, the requirements of the Highways Act 1980 (“**1980 Act**”) sections 14 and 125 [**CD2.4**] relating to SROs (stopping up and the provision of alternative access arrangements) and the requirements of Highways Circulars 1/97 [**CD2.6**] and 2/97 [**CD3.6**] have been met.
- 4.5. The SRO has been made under sections 14 and 125, and in accordance with Schedule 1, of the 1980 Act. Section 14 of the 1980 Act authorises NCC in relation to the classified road to:
- Stop up, improve, divert, raise or lower or otherwise alter a highway that crosses or enters the route of a road or is or will be otherwise affected by the construction of the road; and
 - To construct a new highway for purposes concerned with any such alteration or for any other purpose connected with the road or its construction and to close after such period as may be specified in the SRO any new highway so constructed for temporary purposes.
- 4.6. Section 125 of the 1980 Act provides that any order made by NCC under section 14 may authorise NCC to:
- Stop up each private means of access to premises adjoining or adjacent to land comprised in the route of the classified road, or forming the site of any works authorised by the order; and
 - To provide new private means of access to any such premises.
- 4.7. The CPO has been made under sections 239, 240, 246 and 250 of the 1980 Act. The powers of the 1980 Act enable NCC, as acquiring authority, to acquire land compulsorily and acquire rights compulsorily by creating new rights for the following purposes:
- The construction and maintenance of a new highway which will be a classified road from the B684 Mapperley Plains in a south-easterly direction for a 3.8 km to its junction with the A612 at Trent Valley Road / Nottingham Road;
 - The diversion and extinguishment of existing drainage and watercourses and the carrying out of drainage works in connections with the construction of highways, including the construction of six ponds for highway drainage purposes and a further three ponds for overland drainage collectively meeting storage and attenuation needs arising as a result of GAR. The highway and overland drainage systems are kept separate until their relative outfall points. The attenuation ponds are adjacent to the new highway along its route and new accesses to those attenuation ponds are provided within Scheme;

- In pursuance of The Nottinghamshire County Council (B684 to A612 Link Road) A6211 Gedling Access Road (Side Roads) Order 2018, there are improvements to the following existing highways:
 - B684 Mapperley Plains, Mapperley;
 - A6211 Arnold Lane, Mapperley – classification to change as a result of the GAR;
 - A6211 Gedling Road, Arnold;
 - B684 Plains Road, Mapperley;
 - Lambley Lane, Gedling;
 - A612 Trent Valley Road, Gedling;
 - A612 Nottingham Road, Gedling;
 - Burton Road, Gedling;
 - Nottingham Road, Burton Joyce (service road providing access to Whitworth Drive and properties 246 to 230).
 - Use by the acquiring authority to construct a turning head at Lambley Lane in connection with the construction and improvement of highways;
 - The provision of new means of access to premises pursuant to The Nottinghamshire County Council (B684 to A612 Link Road) A6211 Gedling Access Road (Side Roads) Order 2018; Mitigating the adverse effect that the existence or use of the highways proposed to be constructed will have on the surroundings thereof, by the provision of landscaping and habitat creation; and
 - Cleansing of Ouse Dyke and other watercourses.
- 4.8. The Scheme involves the construction of a new 3.8km link road and follows a south-eastern route from a new junction with the B684 Mapperley Plains in Mapperley north of Gedling, running parallel with the A6211 Arnold Lane, through the centre of the former Gedling Colliery site, to the east of which is the Gedling Country Park (“**Country Park**”). From the former colliery site, the Scheme crosses arable and pastureland, Glebe Farm, Lambley Lane and a section of the walled garden at Gedling House (which is a Grade II Listed Building), and a small section of the Carlton-le-Willows Academy (“**CLWA**”) grounds. The route terminates at a new junction with the Burton Road and the A612 Trent Valley Road / Nottingham Road junction east of Gedling.
- 4.9. The primary objective of the Scheme is that it will enable the sustainable redevelopment of the DA and adjoining land for mixed-use purposes by providing safe and adequate access to the proposed residential, employment and community related uses envisaged for these sites. The developer responsible for delivering the redevelopment of the DA (excluding the employment land area north of the Scheme) is Keepmoat.
- 4.10. The secondary objective of the Scheme is that with the wider road network it will also provide a ‘bypass’ link to the east of Gedling, and consequently Nottingham City Centre. NCC have been safeguarding proposals for a Gedling Village bypass for over 50 years, and the Scheme forms part of the proposals for the A612 Nottingham Eastern Outer Loop Road. This has, with the exception of the eastern most section around Gedling Village, been successfully completed by NCC. The Scheme will connect directly to the most recently constructed phase (the Gedling Major Integrated Transport Scheme) which opened to traffic in 2007 and its construction will have positive impacts on the transport network by improving connectivity of the local road network and reducing traffic flows along the A6211 Arnold Lane / Main Road corridor thereby reducing traffic congestion in Gedling Village. Such

roads are at present either at, or nearing, capacity and therefore provide neither a safe nor a pleasant environment for both local residents and drivers.

- 4.11. In addition, the Scheme is part of a wider package of sustainable transport measures in the local area and a key consideration will be ensuring that the Scheme integrates with existing infrastructure and Gedling Country Park ("**Country Park**").
- 4.12. Gedling Borough Council ("**GBC**") is the Local Planning Authority ("**LPA**") responsible for granting planning permission for the Scheme and NCC is the relevant Local Highway Authority ("**LHA**"). The Scheme is remote from the nearest Trunk Road or Motorway and Highways England (who are responsible for Trunk Roads and Motorways) are not involved in the Scheme.
- 4.13. The Scheme is located in the East Midlands region of England, between 6–8km north east of Nottingham City Centre. It is located wholly within the Borough of Gedling and is situated directly to the north of the settlements of Gedling, Carlton, Colwick and Netherfield, east of Mapperley, southeast of Arnold and Woodthorpe, south of Lambley and west of the settlement of Burton Joyce. This area is considered part of the wider Nottingham conurbation.
- 4.14. The less populated village of Lambley lies to the north of the Schemes route where dwellings are more linear and scattered, often interspersed by areas of agricultural land. Beyond the residential area to the north of the Scheme are large areas of pastoral and arable farmland. The former Gedling Colliery spoil heaps located directly to the north of the Scheme, were transformed into the Country Park which was opened to the public in March 2015.
- 4.15. The area of land within the Scheme planning boundary is 37.1 ha, which as noted above follows a linear route of approximately 3.8km as shown on drawing GAR02 [**CD4.4.8**]. Title to 31.4ha of land is required to deliver the Scheme, together with 6.1ha of land over which permanent rights are required. The Order Land has a total area of approximately 40.1ha. This comprises of 31.4ha for which title to the land is required, this includes 1.9ha of existing public highway. The remainder is made up of land over which rights or enabling works are required.

5. HISTORY OF THE SCHEME

- 5.1. The purpose of this section of the Proof of Evidence is to describe the history of the Scheme in a chronological order and is based around information provided in the Statement of Reasons [**CD1.1**] and Statement of Case. The original "Gedling Bypass" was a long-standing proposal that can be traced back to the 1930s when sections of the A612 Nottingham Eastern Outer Loop Road were originally proposed. However, although the possibility of a "Gedling Bypass" has been around for a long time, it had not featured within any delivery programme.
- 5.2. In 1986, part of the route of the Nottingham Eastern Outer Loop Road ("**NEOLR**") which would have passed through the centre of Gedling Village severing the local community was formally abandoned and replaced with an alternative bypass route to the east of the village. A copy of the Environment Committee Report from 1986 that describes options considered [**CD13.44**].

- 5.3. In 1992, the safeguarding of Gedling Village Bypass was confirmed as part of the Greater Nottingham Orbital Study which considered other possible highway schemes to the north and east of the Nottingham conurbation as far as M1 Junction 27, details of the route from the study is shown on an indicative route plan, dated February 1994 [CD13.45].
- 5.4. In 1996, the Nottinghamshire Structure Plan Review considered the existing strategic network to the north and east of Nottingham. It concluded that there was a need to relieve the traffic impact on Gedling Village and that the line of the “Gedling Bypass” should be protected. It should be noted that this proposed bypass extended from Victoria Road to Arno Vale. Plans for a more extensive Nottingham Orbital route were not considered necessary as part of the NCC’s future transport strategy.
- 5.5. A review carried out by the company, Scott Wilson in 1999, referred to in Chapter Four of the Environmental Statement (“ES”) [CD4.5] concluded that constructing the proposed Gedling Bypass purely to cater for car traffic growth would contravene then current local and national integrated transport strategy and that there was no transport case for an Outer Ring Road. The report continued its analysis to identify a number of problems that could justify the “need for some sort of relief road for Gedling Village”, as the A6211 (Arnold Lane) is a strategic road with no convenient alternative, that runs through a residential area (taking industrial traffic to and from Colwick Industrial Estate). The relief road would therefore not be required to cater for traffic growth. It “... would not contravene the local and national integrated transport strategy”. Although the original Gedling Bypass was considered unsustainable, there was a need for a relief road that would permit the A6211 to be downgraded from its current status as a strategic route and subsequently traffic calmed.
- 5.6. The Scott Wilson Report suggested a relief road passing through the Gedling Colliery site and adjoining land and linking into a southern section of the Gedling Bypass between the A612 Burton Road and Colwick Loop Road identifying that the relief road would need to accommodate a net increase in traffic that would reduce the strain on the A6211 Arnold Lane and significantly reduce flows through Gedling Village. It also predicted that the relief road would reduce the incidence of accidents by an estimated 19% per annum. The Gedling Bypass as a whole was therefore viewed as a longer-term project.
- 5.7. In 2003, the Nottinghamshire and Nottingham Joint Structure Plan Deposit Draft safeguarded the “A6211 Gedling Relief Road” and described it as “proposed for investigation”, with an implementation timetable of 2006 – 2011. Together with the “A612 Gedling Major Integrated Transport Scheme”, this road replaced the Gedling Bypass included in the 1996 Nottinghamshire Structure Plan.
- 5.8. The DA was a Tranche 1 site in the National Coalfield Programme located in the Green Belt and the Planning Inspector’s report for the Gedling Borough Replacement Local Plan 2005 (“Local Plan 2005”) [CD11.1] approved the withdrawal of the site from the Green Belt and for a mixed-use development subject to the construction of an access road (the Scheme) in advance of development.
- 5.9. The Local Plan 2005, adopted 12 July 2005, provides for the redevelopment of the DA adjacent to the predominantly residential suburb of Gedling and proposed the construction of the Scheme to serve the DA. However, some form of new road that would take traffic away from Gedling Village has been proposed for a much longer period of time.

- 5.10. In 2006, NCC and Nottingham City Council ("**City Council**") adopted the Joint Structure Plan, safeguarding the "A6211 Gedling Relief Road", it again being described as "proposed for investigation"; with an implementation timetable of 2006 – 2016.
- 5.11. In 2007, the most recently constructed phase of the A612 Nottingham Eastern Outer Loop Road, the section known as the Gedling Major Integrated Transport Scheme ("**GMITS**") was opened to traffic. This road is now called Trent Valley Road and provides a link between the A612 Colwick Look Road at Netherfield with Burton Road and the A612 Nottingham Road at Burton Joyce. The GMITS was designed and built such that the Scheme could be connected to it at the eastern junction with Burton Road.
- 5.12. In 2008, a development brief for the DA was formally adopted on 19 June 2018 as a Supplementary Planning Document ("**SPD**") [CD11.9]. This SPD adds further detail to the policies in the Local Plan 2005 and is a significant material consideration to be taken into account by GBC when processing planning applications relating to the Scheme. This SPD anticipated that an outline planning application would be submitted for the DA and a full application for the Scheme.
- 5.13. East Midlands Development Agency ("**EMDA**") submitted two applications for the DA and the Scheme during 2008. The first was an outline application for the area covered by the DA under application reference 2008/0460 and the second a full application for the construction of the Scheme under application reference 2008/0459. These applications were not determined and a key issue with the Scheme application was a requirement for the Scheme to be funded as a whole in advance of development. Due to limited availability of public funding the Scheme stalled on viability grounds and was not featured on any delivery programme.
- 5.14. All Regional Development Agencies, including EMDA, closed on 31 March 2012 and were abolished on 1 July 2012. The portfolio of land, property assets and liabilities transferred to the Homes and Communities Agency, who are now Homes England ("**HE**").
- 5.15. The DA was identified by GBC in the emerging Greater Nottingham Aligned Core Strategy as a key strategic site for future development on the urban edge of Nottingham and was viewed as a priority site for GBC in order to meet expected increasing housing demands. Working in partnership, the public-sector entities (being HE, GBC and NCC ("**Partners**")) considered options around phasing and funding for the DA and the Scheme. It was recognised that the existing highway network in the surrounding area had limitations with several roads already experiencing severe traffic congestion and having a very poor safety record.
- 5.16. In 2013, to support the priority to bring the DA forward transport modelling work was commissioned by the Partners. This was to consider a phased approach to the delivery of the DA and the Scheme that would assist in assembling a funding package to deliver the supporting infrastructure and minimising the impact on the existing network resulting from traffic generated from the DA. The outcomes from the modelling work included a Strategic Transport Assessment ("**STA**") using the Greater Nottingham Multi Modal Transport Model ("**GNMMTM**") which is a multi-modal transport model consisting of a highway model

("SATURN"), public transport model ("**Cube Voyager**") and a Variable Demand Model ("**VDM**") known as Cube.

- 5.17. The STA was presented to public-sector partners at a meeting on 27 June 2013 **[CD11.5]** and information put forward established that a phased programme for delivery of the DA could be adopted allowing 315 dwellings to be developed as a first phase without the need for the Scheme with the remainder of the mixed-use development being delivered in conjunction with a viable programme for the Scheme – the funding strategy is covered in detail in Section 12 of this Proof.
- 5.18. The initial limit of 315 dwellings was considered the maximum number that could be built in the DA without the Scheme when committed development elsewhere in the area was taken into account. This was based on the anticipated additional vehicle movements that the DA would create. Section 6 of this Evidence describes the need for the Scheme in detail.
- 5.19. The A6211 Arnold Lane corridor, which is directly affected by traffic generated by the DA is at or approaching its capacity. It is considered that the additional traffic generated would cause unacceptable detrimental impacts on the existing network without the provision of the Scheme as supporting infrastructure in terms of affecting quality of life for local residents, constraining the local economy, reducing the attractiveness of the area for visitors and creating unnecessary delays to local and strategic vehicle movements.
- 5.20. NCC resolved at its Transport and Highways Committee ("**THC**") on 6 June 2013 **[CD9.1]** to approve the Scheme as a bid for funding from the D2N2 Local Transport Body ("**D2N2**"). An allocation of £10.8 million towards the cost of the Scheme was subsequently approved by D2N2 on 22 July 2013.
- 5.21. In 2014, application reference 2008/0460 for the DA was formally withdrawn by HE in favour of a developer led approach to bring forward the planning for the site. Application reference 2008/0459 for GAR was also withdrawn without having been determined and finally disposed of on 31 December 2014.
- 5.22. A number of other funding agreements were secured during 2014 which gave increased certainty regarding the viability of the GAR that supported the progression of the DA. On 27 February 2014, NCC resolved to incorporate £5.4 million into its capital programme to support GAR **[CD9.2]**. In March 2014, NCC and HE completed funding agreements **[CD9.3]** that related to the acquisition of land required along the route, with a maximum capped value of £7 million. The other agreement was intended to provide funding related to the early construction of a roundabout forming a junction between the A6211 Arnold Lane and the DA.
- 5.23. HE owns the DA site, with the area totalling approximately 33.4ha, and sent out an Invitation to Tender ("**ITT**") during 2014 to appoint a developer to take forward the development of the DA. This ITT included restriction on the phasing and limit of 315 dwellings and requirements for funding towards GAR. For clarity, the need for the cap on a maximum of 315 dwellings being permitted prior to completion of the Scheme is demonstrated through the modelling work presented as part of the STA. Following a detailed assessment Keepmoat were appointed as the preferred developer for the DA to develop a residential led, mixed-use phased development of up to 1,050 dwellings with associated infrastructure.

- 5.24. In order to move forward with the delivery of the Scheme, HE undertook to refresh surveys and information required to resubmit an application for the Scheme. An application for full planning permission for the Scheme was submitted by HE on 1 August 2014, application reference 2014/0915 **[CD4.1]**. The Transport Assessment ("**TA**") **[CD4.7]** included as part planning application used the modelling from the GNMMTM and is consistent with the outputs from the STA.
- 5.25. GBC adopted the Aligned Core Strategy 2014 ("**ACS**") **[CD11.2]** on 10 September 2014 with Broxtowe Borough Council ("**BBC**") and the City Council and the document sets out the strategic policy direction for future development in Borough of Gedling. It is used to help decide planning applications and guide the location and design of development in the borough and some policies in the Local Plan 2005 were superseded by the adoption of the ACS. The DA and GAR remained a strategic location transport scheme within GBC's Local Plan 2005.
- 5.26. NCC submitted a Value for Money Appraisal to the D2N2 on 15 September 2014 **[CD13.46]** to provide a summary of work that had been undertaken to date and obtain feedback to support the submission of an Outline Business Case ("**OBC**") for the Scheme.
- 5.27. Full planning permission for application 2014/0915 was granted for construction of the GAR on 23 December 2014 ("**Original Permission**") **[CD4.1]**. The Original Permission included a requirement to construct the GAR in two phases. The first phase being the early construction of a roundabout forming a junction between the A6211 Arnold Lane and the DA, primarily the purpose of this roundabout was to support a first phase of housing within the DA.
- 5.28. HE made an application to vary condition 1 of the Original Permission by application under section 73 of the Town and Country Planning Act 1990 ("**1990 Act**") on 7 August 2015. Application reference 2015/1033 **[CD6.1]** proposed the removal of phasing for the early construction of a roundabout forming a junction between Arnold Lane and the DA.
- 5.29. At around the same time Keepmoat submitted a full planning application for phase 1 of the DA comprising 506 dwellings (two, three, four and five bedroom houses and flats), vehicular access from Arnold Lane, internal roads and all associated infrastructure in November 2015. Application reference 2015/1376 **[CD13.23]** ("**Keepmoat Application**") included outline planning permission for subsequent phases, with all matters reserved except for indicative access to the sites from phase 1, and future access from the GAR. The local centre and education facilities are contained within the outline application. The Keepmoat Application included proposals to access the first phase of the development solely from Arnold Lane using the old colliery access road.
- 5.30. D2N2 approved the Value for Money Appraisal as part of the OBC for the Scheme on 18 May 2016. GBC also granted consent on 3 June 2016 for application reference 2015/1033 ("**GAR Permission**"). This effectively permits the GAR to be constructed as a single phase. The GAR Permission provides additional benefits when compared to the Original Permission as it promotes the achievement of a better balance of cut and fill for the earthworks and minimises the importing of materials that would have been required to build the new

roundabout, if phase 1 of the Scheme as included in the Original Permission was constructed in isolation.

- 5.31. Planning permission for the Keepmoat scheme was granted by GBC on 3 March 2017 and construction commenced on the first phase of housing in Spring of that year. The proposed mixed-use development was and will continue to be planned around the Scheme and there is a planning condition attached to the Keepmoat permission that restricts the number of houses that can be built and occupied in advance of the opening of the GAR to traffic – this limit is 315 homes and links back to the transport modelling work undertaken in 2013.
- 5.32. NCC resolved at THC on 16 March 2017 **[CD9.6]** to take all necessary steps to make, advertise, obtain confirmation of and implement the Orders required to deliver the Scheme.
- 5.33. Via EM, on behalf of NCC, submitted applications to discharge pre-commencement conditions attached to the GAR Permission and these discharges were granted during December 2017 **[CD13.32]**. Drainage works required for the Scheme commenced the same month and on 20 December 2017 GBC confirmed that the GAR Permission had been lawfully implemented **[CD13.33]**.
- 5.34. An up to date picture of the planning status of the Scheme, together with details of how the Scheme accords with local and national planning policy, is set out in the Proof of Evidence of David Pick **[DP01]**. This includes reference to Local Planning Document – Part 2 Local Plan (“**LPD 2018**”) and how the latest LPD 2018 policies are relevant to the Scheme.

6. NEED FOR THE SCHEME

- 6.1. This section of the Proof of Evidence is to provide context for the Scheme and to satisfy the use of CPO powers to acquire land required for the Scheme on its justification and need, as well as justifying the associated SRO. The information regarding traffic conditions now and as a result of the Scheme are set out in greater detail in the TA **[CD4.7]** that was submitted as part of the Scheme planning application that secured the Original Permission **[CD4.1]**.

Existing Network Description and Conditions

- 6.2. The study area covered by the TA covers the route of the Scheme including its terminal junctions with the B684 Mapperley Plains, the A612 Trent Valley Road / Nottingham Road and all intermediate junctions. The TA included the route of the A6211 Arnold Lane between its junctions with the B684 and the A612 corridor including all intermediate junctions that comprises the existing local network of roads that the Scheme will provide traffic relief to once it is complete and open to traffic. The current A6211 will be declassified when the Scheme is open to the public, at which stage the Scheme will be classified as the A6211. For the avoidance of doubt, reference to A6211 in this section relates to Arnold Lane.
- 6.3. Mapperley Plains passes through the northern end of the study area and on the section adjoining the Scheme is subject to a 40mph speed limit, is street lit with footways and verges on both sides of the road and has a carriageway width of approximately 7.3m. The B684 is urban in character with existing residential properties along the route, some of which are accessed via minor roads off the B684. In the vicinity of the Scheme, properties opposite are accessed directly from Mapperley Plains via vehicle crossings over the footway and access will be maintained during and after the construction of the Scheme. At the signal-controlled

junction with the A6211 Arnold Lane / A6211 Gedling Road the carriageway widens to provide two through lanes and a right turn lane from the B684 in both directions onto the A6211.

- 6.4. Arnold Lane generally runs parallel to the route of the Scheme; through Gedling Village the road is narrow and in places has no footway which compounds the environmental problems and its safety record. At its north western end, Arnold Lane is a single carriageway road subject to the national speed limit (60mph), the section past the former Gedling Colliery site has a rural character with limited frontage development, and there is a single footway on the south western side and street lighting present. Travelling south east, the speed limit on Arnold Lane reduces to 40mph in advance of its junction with Linsdale Gardens. At this point, most of the residential properties on Arnold Lane have direct vehicular access to the road. There are also numerous side road junctions present on the south western side of the road from this point south eastwards towards Gedling Village.
- 6.5. On Arnold Lane between Featherstone Close and Shelford Road, at a point approximately 300m northwest of its junction with Lambley Lane the speed limit reduces to 30mph. A short distance to the south of its junction with Bessecar Avenue the A6211 has footways on both sides of the carriageway. From Lambley Lane the A6211 has continuous residential development on both sides with direct vehicular accesses and numerous side road junctions, with a carriageway width in the order of 6.5m.
- 6.6. The existing junction of Arnold Lane with Lambley Lane is a simple priority T-Junction and there is a signal-controlled pedestrian crossing located southeast of this junction adjacent to a local store. The Recreation Ground is situated further along Lambley Lane.
- 6.7. Further to the southeast along Arnold Lane the footway on the north eastern side adjacent to the All Hallows Church narrows and the footway terminates for approximately 80m with an off-carriageway route provided through the church grounds. A short distance to the southeast of the church there is a mini-roundabout junction with Main Road, at which point the A6211 becomes Main Road travelling further south before its name changes again to Shearing Hill at the junction with Wood Lane.
- 6.8. CLWA, a large comprehensive secondary school attended by around 1,350 pupils is located off Wood Lane within Gedling Village. Vehicular access to the academy is taken exclusively from the A6211 via Wood Lane. Proceeding south from Wood Lane the A6211 has a junction with Brooklands Drive which is used by traffic seeking to avoid traffic congestion on the A6211 Shearing Hill.
- 6.9. The junction of Shearing Hill with Burton Road is a signal-controlled T-Junction located immediately to the west of a railway bridge over the eastern Burton Road arm of the junction. The A6211 changes name to Burton Road on the western arm at this point and a short distance to the west is the signal-controlled T-Junction of the B686 with the A6211. The signal controls at both junctions are linked to manage traffic travelling along the route.
- 6.10. At the A6211 / B686 junction, the A6211 changes name to Colwick Loop Road and at this point Burton Road continues as the B686 towards Carlton. The A6211 between Shearing Hill and the B686 is subject to a 30mph speed limit.

- 6.11. Further along Colwick Road Loop, there is a simple priority T-junction with Conway Road and past this junction the speed limit changes to 40mph, there is no direct frontage access onto the A6211 along this section from Conway Road to the A612 Trent Valley Road. Colwick Loop Road terminates at a large traffic signalled junction with the A612.
- 6.12. At the Shearing Hill traffic signal-controlled junction, the section of Burton Road that continues in a northeast direction under the railway bridge to its junction with the A612 Nottingham Road and Trent Valley Road is an unclassified road. This section of Burton Road and Colwick Loop Road were part of the previous A612 corridor prior to the opening of the GMITS that resulted in Burton Road being declassified to an unclassified road and the road number on Colwick Loop Road changed from the A612 to A6211.
- 6.13. The unclassified section of Burton Road between the A6211 and A612 is predominantly residential and urban in nature, although there is less frontage development to the northern side as the road passes the playing fields associated with CLWA. This section of Burton Road is street lit and subject to a 30mph speed limit and there are footways on both sides from the A6211. On its southern side the footway terminates at Linden Grove, whilst on its northern side it becomes a continuous shared footway/cycleway from its junction with Coronation Walk (approximately 150m northeast of the Shearing Hill / Burton Road junction) to its junction with the A612 approximately 1km to the northeast.
- 6.14. There is a signal-controlled pedestrian crossing on Burton Road east of its junction with Coronation Walk and a number of central refuges in the carriageway opposite CLWA to assist pedestrian crossing movements. There are also several bus stops with associated laybys. At a point approximately 200m southwest of its junction with the A612 there are traffic signals in place controlling opposing traffic flow with associated carriageway narrowing. These traffic signals were previously used as a 'Bus Gate' along Burton Road installed as part of the GMITS, this is no longer in place and the Traffic Regulation Order prohibiting the movement of vehicles except for buses on Burton Road has been revoked. However, the traffic signals help to make Burton Road less desirable to use as a cut-through and reduces traffic speeds along the route which is heavily used by school children accessing CLWA.
- 6.15. There is also a 7.5t weight restriction in force on Burton Road between the A612 and the traffic signals 200m southwest of this junction. The purpose of this is to prevent Heavy Goods Vehicles ("HGVs") cutting through from the A612 onto Burton Road and keeping them on the principal road network. Vehicle turning facilities are provided on Burton Road in advance of the weight restriction, although this area tends to be used for school buses. Advanced warning signs for the existing weight restriction are in place on Burton Road at its junction with the A6211 Shearing Hill.
- 6.16. The A612 at the southern end of the study area towards Netherfield is known as Trent Valley Road. The A612 towards Burton Joyce is known as Nottingham Road. The A612 Trent Valley Road is a wide single carriageway road (9.3m and kerbed), is subject to a 40mph speed limit and is street lit. Trent Valley Road is currently rural in character, although planning permission has been granted for residential and industrial development on both sides of the road. In the vicinity of its junction with Burton Road the A612 carriageway widens out to provide an additional lane in both directions through the junction and a right turn lane is provided for vehicles travelling from Burton Joyce along the A612 to turn onto Burton Road.

The A612 corridor at this point is rural in character with only limited development on the north western side of the junction, served from an access road near to Whitworth Drive. There is a shared footway / cycleway running along the western side of the A612 linking Burton Joyce with Netherfield and Colwick.

- 6.17. Existing traffic flows on selected links, as described above, are given in Table 1. The data is given as Annual Average Daily Traffic levels ("**AADT**") together with the proportion of HGVs, expressed as a percentage of the AADT.
- 6.18. The capacity of the highway links across the network varies dependent upon the carriageway width, the number of traffic lanes, e.g. single carriageway or dual carriageway, the proportion of HGVs and the proportion of traffic travelling during the peak hours. The theoretical capacity of a link is an estimate of the AADT at which the carriageway is likely to be congested and congestion is defined as the situation when the hourly traffic demand exceeds the sustainable hourly throughput of the link (usually taken as in the peak periods on an average day, although it can also be exceeded at other times of the day). At the point where traffic demands exceed the hourly throughput traffic flow is likely to break down, average speeds will drop significantly, and traffic queues are likely to form.

Table 1: Traffic Numbers by AADT 2016

Link	AADT	%HGVs
B684 Mapperley Plains (Arnold Lane to Spring Lane)	21,450	1.5
B684 Plains Road Arnold Lane to Somersby Road)	20,000	1.0
A6211 Gedling Road (B684 Plains Road to Arno Vale Road)	12,250	2.2
A6211 Arnold Lane (B684 Mapperley Plains to Lambley Lane)	13,400	2.8
A6211 Arnold Lane (Lambley Lane to Main Road in Gedling Village)	17,100	2.5
A6211 Arnold Lane (Main Road in Gedling Village to Shearing Hill)	14,200	2.2
A6211 Arnold Lane (B684 Mapperley Plains to Shearing Hill) – Average	14,900	2.5
A612 Nottingham Road (Burton Road to Burton Joyce)	17,250	3.2
A612 Trent Valley Road (Burton Road to Stoke Lane)	11,050	4.6
Burton Road (Stoke Lane to Linden Grove)	7,900	0.4
Lambley Lane (A6211 Arnold Lane to Spring Lane)	4,400	0.7

- 6.19. The capacity of Arnold Lane varies along its length but is typically calculated to be at or below 17,000 vehicles AADT. In the case of the average AADT, the A6211 is currently operating at 87% of theoretical capacity, but on the section of Arnold Lane between Lambley Lane and Main Road through Gedling Village it is already above capacity. Mapperley Plains has a theoretical traffic capacity of 24,000 vehicles and this link between Arnold Lane and Spring Lane is currently operating at 90% capacity. The A612 Trent Valley Road by comparison is a newly built section of road constructed to a much higher standard than Arnold Lane with a traffic capacity calculated at over 30,000 vehicles AADT. This length of highway is operating at about 30% of its forecast capacity.
- 6.20. It should be noted on the highway network; junctions tend to exceed their design capacity before the links in between. For example, the A6211 Gedling Road / B684 Plains Road / A6211 Arnold Lane junction already operates over capacity in the peak travel periods and significant queues and delays result. The TA gives further details on the performance of junctions both with and without the DA and GAR.

Highway/Traffic Conditions

- 6.21. The traffic modelling undertaken in 2013 and described in sections 5.23 and 5.24 applied an assessment year of 2028, which is consistent with the end of plan period for the ACS. This examined the 2028 'Reference Case' and 2028 'With Development' scenarios.
- 6.22. The 2028 'Reference Case' includes the 2028 'Base' situation plus all committed transport infrastructure schemes and planned land-use developments that are expected to be complete by 2028, for clarity this excluded the GAR and DA.
- 6.23. The 'With Development' scenario examined the 2028 'Reference Case' plus the DA and GAR. The 'With Development' scenarios examined a phased delivery of the GAR and phased delivery of development on the DA, which at the time was assumed to comprise of 1,120 residential dwellings, 4,500sqm of B1 employment and 18,000sqm of B2 employment. This established that 315 dwellings could be accommodated without GAR.
- 6.24. The TA prepared and submitted to support the Scheme planning application included outputs from the 2013 traffic modelling to confirm the basis for a phased programme of both the DA and its linkage with the Scheme. This supported the provision of the Scheme for its primary purpose to facilitate the redevelopment of the DA. The TA references a number of terms, for clarity these are:

Term	Meaning
Reference Case	This is without the development and the GAR.
AM Peak	This is between 0800 and 0900 hours.
Inter Peak Hour	This is the average between 1100 and 1400 hours.
PM Peak	This is between 1700 and 1800 hours.
Design Flows	This is taking into account the full development and the GAR.
2019 Opening Year	For the purpose of the TA this is the year that the GAR will be open and available. Whilst it is likely that the road opening year is 2020, at the earliest, it is considered that the impact is negligible.
2034 Design Year	This is based on 15 years after the road opening.

- 6.25. The TA demonstrated the effect of the Scheme on the traffic network in the form of forecast traffic flow on the existing and new highway links and junctions. The TA includes the total vehicular trip generation expected from the completed DA and the effects of these additional traffic flows have been modelled in the design year flows.
- 6.26. The DA is forecast to generate an additional 1,010 2-way vehicles per hour in the AM peak hour, an additional 941 2-way vehicles an hour in the PM peak, with the average peak hour being almost 1,000 two-way vehicles an hour. Overall this is approximately an AADT increase of 10,000 over and above current levels and the existing highway network would not be able to accommodate this level of additional traffic generation without the provision of the Scheme, particularly as existing highway links and junctions are already approaching, and some are over, capacity. This would increase the average AADT on the A6211 to almost 25,000 which means Arnold Lane's estimated operating capacity of 17,000 would be exceeded by over 47%.
- 6.27. Tables 2 and 3 use outputs included in the TA to consider traffic flow forecasts on the A6211 corridor between the B684 Mapperley Plains and the A612 due to the Scheme and the DA.

Table 2 is based on the AADT and Table 3 is based on vehicles per day. Table 2 also considers the volume of traffic now compared to the Design Year of 2034 without GAR and includes traffic information on the B684 and Lambley Lane.

- 6.28. On Burton Road there is forecast to be an overall reduction in the number of vehicles using the highway in the AM peak as a result of the Scheme, but a modest flow increase is forecast in the PM peak (in the 2034 Design Year with full redevelopment).
- 6.29. Table 2 shows that there are predicted traffic increases along the A612 Trent Valley Road which was opened in 2007 as part of the GMITS. This is as anticipated as traffic reassigns to the more strategic orbital routes in the area avoiding the network congestion within Gedling Village. This is acceptable as this section of the A612 has traffic capacity at over 30,000 vehicles AADT and the forecast traffic would be operating at about 60% of its forecast capacity.
- 6.30. The data also shows an increase in traffic on Lambley Lane on the section between the Scheme and Spring Lane. This is expected as Lambley Lane is currently used by through traffic and similar traffic movements are expected and the forecast is for these to increase marginally. Wider traffic signage will be in place to promote the use of the road hierarchy for primary destinations and Environmental Weight Restrictions will be introduced to direct HGVs to the most suitable routes.

Table 2: Traffic Forecast on Existing Network with and without the Scheme in the future

Link	2016 AADT	2034 (Reference Case – without GAR and with the DA)	2034 (Design Year Flows AADT – with GAR and DA)	Percentage Changed (Reference to Design Year Flows)
B684 Mapperley Plains (Arnold Lane to Spring Lane)	21,450	24,400	23,250	-5%
B684 Plains Road (Arnold Lane to Somersby Road)	20,000	23,900	21,450	-10%
A6211 Gedling Road (B684 Plains Road to Arno Vale Road)	12,250	17,900	17,550	-2%
A6211 Arnold Lane (B684 Mapperley Plains to Shelford Road)	13,400	16,500	10,400	-37%
A6211 Arnold Lane (Shelford Road to Lambley Lane)		17,150	12,700	-26%
A6211 Arnold Lane (Lambley Lane to Main Road in Gedling Village)	17,100	24,200	18,350	-24%
A6211 Arnold Lane (Main Road in Gedling Village to Shearing Hill)	14,200			
A612 Nottingham Road (Burton Road to Burton Joyce)	17,250	21,200	21,600	3%
A612 Trent Valley Road (Burton Road to Stoke Lane)	11,050	14,350	18,300	28%
Burton Road (Stoke Lane to Linden Grove)	7,900	10,100	8,900	-13%
Lambley Lane (A6211 Arnold Lane to GAR)	4,400	6,400	4,600	-28%
Lambley Lane (GAR to Spring Lane)		7,150	8,450	18%

Table 3: Forecast Change in 2-Way Hourly Traffic Flows on the A6211 and Burton Road, Gedling

Link	2-Way Flow Changes attributable to the GAR with the full build-out for the DA – Vehicles Per Hour			
	2019 Open Year		2034 Design Year	
	AM	PM	AM	PM
A6211 Arnold Lane (B684 Mapperley Plains to Shelford Road)	-346	-456	-495	-406
A6211 Arnold Lane (Shelford Road to Lambley Lane)	-304	-386	-431	-309
A6211 Arnold Lane (Lambley Lane to Shearing Hill)	-345	-556	-484	-511
A6211 Shearing Hill	-298	-454	-408	-490
Burton Road (Shearing Hill northeast to A612)	-181	-200	-83	127
Average	-295	-410	-380	-318

Junctions

- 6.31. Detailed capacity assessments of the existing junctions are included in the TA. This includes existing junctions that require alteration for the Scheme and others that will not change but will be impacted by the change in traffic patterns. These assessments have been rechecked and the Scheme junction designs are still appropriate for the forecast traffic flows.
- 6.32. The operation of all proposed new and amended junctions affected by the Scheme has been tested and it has been demonstrated that they will operate within acceptable parameters at the 2034 Design Year assuming that the Scheme is open and with full redevelopment of the DA. The assessment of the junctions has been undertaken using the ARCADY 7, PICADY 5 and LINSIG 3 computer programmes which are the 'industry standard' traffic modelling computer software packages used for assessing the traffic capacity of roundabouts, simple priority junctions and signalised junctions respectively. The types of junctions used on GAR are a mixture including traffic signal controlled, priority junctions (some with right turn lanes) and roundabouts (including a mini roundabout on Lambley Lane).
- 6.33. The construction of the Scheme will require changes to existing junctions on the local highway network. These include the B684 Mapperley Plains / A6211 Arnold Lane / A6211 Gedling Road junction and the A612 Trent Valley Road / A612 Nottingham Road / Burton Road junction.
- 6.34. The B684 Mapperley Plains / A6211 Arnold Lane / A6211 Gedling Road junction will be amended so that it works in conjunction with the signal-controlled T-junction that will be built where the GAR joins Mapperley Plains. Current permitted traffic movements will be amended as part of the Scheme and additional queuing capacity created for traffic travelling along the B684. This junction is forecast to be operating at a level where queuing will start to be noticeable at the 2034 Design Year (Reserve Capacity ("RC") values of -11.0% in the AM and -12.4% in the PM Peaks).
- 6.35. Experience with RC calculations at existing junctions indicates that queuing does not become particularly noticeable until the degree of overload reaches 10% (i.e. -10% RC). However, this level of performance is deemed to be acceptable considering it is a Design Year forecast and the 'With Development' junction operation is significantly improved in comparison to the existing junction in the 2028 Reference Case scenario.

Wider Network

- 6.36. The TA also included further link flow summary information to demonstrate the impacts of the developments on the existing wider highway network.
- 6.37. Overall, the provision of the Scheme and the DA results in relatively small peak hour flow changes on the wider highway network at both the 2019 Opening and 2034 Design Years when compared to the Reference Case. Flows on the A612 through Burton Joyce, B684 Mapperley Plains north of GAR and on the A6211 Gedling Road towards Arnold remain essentially unchanged, whereas flows on the B684 Plains Road towards Nottingham (south of Westdale Lane) are forecast to be reduced. Flows on Main Street in Lambley increase by a very small amount, although the forecast differences are small and therefore unlikely to be noticeable in practice. Flows on the A612 Colwick Loop Road towards Nottingham (west of Victoria Park Way) are forecast to increase by approximately 5% to 7% in the PM peak hour

and by approximately 4% daily in both the Opening and 2034 Design Years when compared to the Reference Case.

- 6.38. With reference to the Peak Hour Flow across the whole network, there is a forecast reduction when comparing the Reference Case flows to the Design Flows in both peaks (AM and PM) at 2019 and at 2034. The link with the most significant flow increase is the A612 Trent Valley Road towards Nottingham, with smaller increases forecast on Burton Road in the PM peak, Spring Lane in the AM peak and on Lambley Lane. These increases are due to traffic re-routing to use the Scheme and corresponding flow reductions on the A6211 corridor.
- 6.39. With reference to the AADT across the whole network, there is a forecast reduction when comparing the daily Reference Case flows to the Design Flows at the 2019 opening and 2034 design years. The link with significant flow increases is the A612 Trent Valley Road (SW of Burton Road, towards Nottingham) which is forecast to experience a daily traffic flow increase of 3,204 vehicles per day (“VPD”) at the 2019 Opening Year and 3,987 VPD at the 2034 Design Year. Lambley Lane (on the section between the Scheme and Spring Lane) is forecast to experience a daily traffic flow increase of 363 VPD at the 2019 Opening Year and 1,271 VPD at the 2034 Design Year. The A612 Nottingham Road (northeast of Burton Road) is forecast to experience a small daily traffic flow increases of 191 VPD at the 2019 opening year and 699 VPD at the 2034 design year. Daily flow increases are also forecast on Westdale Lane at both the 2019 opening and 2034 design years.

7. BENEFITS OF THE SCHEME

- 7.1. As stated in section 4.2 the primary objective of the Scheme is to facilitate the full redevelopment of the DA and the Scheme provides this by creating the necessary capacity to accommodate the predicted traffic flows from the DA whilst providing traffic relief to the A6211 corridor through Gedling Village, which is its secondary objective.
- 7.2. The traffic forecast information summarised in Tables 2 and 3 above shows that the provision of the Scheme reduces traffic flows on all sections of the adjacent A6211 Arnold Lane corridor, and this takes into account the additional trips generated by the DA. The average peak hour flow changes across all sections of the current A6211 Arnold Lane corridor are a reduction of between 300 to 400 vehicles per hour (two-way). This equates to a reduction of between approximately five and seven vehicles per minute on the A6211 Arnold Lane corridor as through traffic movements are forecast to make use of GAR.
- 7.3. Comparing the operation of the existing A6211 Shearing Hill / Burton Road and the B686 Burton Road / A6211 Colwick Loop Road junction layouts in the ‘Reference Case’ scenario with their operation in the 2028 and 2034 with the ‘With Development’ scenario it can be seen that provision of the Scheme will assist with the operation of both of these signal-controlled junctions, with significant performance benefits.
- 7.4. In addition, the operation of existing junctions along the A6211 corridor will also benefit from the general reduction in traffic with fewer delays and queues experienced during peak hours. These existing junctions include major / minor type junctions, examples include Stanhope Road onto Arnold Lane, mini roundabout on Arnold Lane at the Memorial Hall and the Wood Lane junction.

- 7.5. Other benefits will be experienced by those using the existing A6211 corridor as a result of lower traffic flows (reduction of five and seven vehicles per minute), reduced vehicle speeds and the reduction in the numbers of HGVs, these include:
- Pedestrians finding it easier to cross the road, with fewer potential conflicts and more opportunity to cross;
 - Cyclists benefiting from reduced traffic flows and less HGVs, making shared use of the carriageway safer and therefore considered to be more appealing;
 - Reduced conflicts for right turn movements to / from the A6211; and
 - Improved junction performance, with reduced potential for queues and delays.
- 7.6. There is a housing development off Plains Road consisting of Bailey Drive, Howieson Court and Swindell Close. Currently access to this site is left in / left out from Arnold Lane (travelling towards the B684 / A6211 junction) and left in / left out from Plains Road (travelling away from the B684 / A6211 junction towards the city). The Scheme provides the opportunity to provide a right turn area for vehicles onto Bailey Drive from Plains Road that will benefit existing residents significantly over their current access arrangements.
- 7.7. The provision of the Scheme also provides opportunity for other complementary traffic management measures to be implemented in parallel with its opening and which are considered to support the need for the Scheme, these include:
- Classification of GAR as an 'A' road, being numbered the A6211 and downgrading of the classification of Arnold Lane;
 - Appropriate direction signage at the terminal junctions of the GAR and on the wider network to encourage use of the new road for through vehicle movements and to access the new development served by GAR;
 - Introduction of a lower 40mph mandatory speed limit on Arnold Lane between its junctions with the B684 Mapperley Plains Road and the new roundabout with GAR;
 - Introduction of a lower 30mph mandatory speed limit on Arnold lane to include the new roundabout with GAR and the existing 30mph speed limit at a point approximately 100m north west of its junction with Besecar Avenue – this is a planning obligation; and
 - Introduction of a new 7.5T environmental weight limit along Arnold Lane and on roads between Arnold Lane and GAR to remove HGV through traffic from the existing A6211 onto GAR. This will be supplemented by signage indicating the start / end of restrictions, and advanced signage.

8. ALTERNATIVES TO THE SCHEME

- 8.1. The Scheme represents the culmination of a long history of different proposals for a road around the eastern side of Nottingham. The extended history of this scheme is summarised in the table below. This is reproduced from analysis contained in the "Gedling Colliery Options Paper – Final Report" 7 March 2003 by Amion Consulting taken from Chapter Four of the ES [CD4.5.4].

Year	Proposals
1930s	Sections of the Nottingham Eastern Outer Loop Road proposed.
1952	Entire route of the Nottingham Eastern Outer Loop Road safeguarded in the approved County Development Plan.
1972	Nottingham Environs Transportation Study recommended that the southern section of the loop road be considered subject to clarification of the impact on Waverley Avenue.
1977	Loop route safeguarding reaffirmed.
1980-1984	Highway improvements at Lady Bay Bridge, Colwick Loop Road and the Daleside Road extension increased traffic through Gedling Village.
1986	The safeguarded Nottingham Eastern Loop Road was formally abandoned due to part of the route running through a built-up area of Gedling Village. An alternative bypass route along an eastern alignment was reserved.
1992	The Gedling Village bypass safeguarding was reaffirmed in the Greater Nottingham Orbital Study.
1996	The Nottinghamshire Structure Plan Review process concluded that the Nottingham Orbital was not an essential part of future transport strategy. However, it reviewed the existing strategic road network in the north and east of the conurbation and acknowledged the need to relieve the traffic stress on Gedling Village. As such, land for a Gedling Bypass would be safeguarded.
1996	The adopted Structure Plan Review reconfirmed safeguarding of the proposed Gedling Bypass route (linking the A6211 at Netherfield with Mapperley Plains Road), together with the Arno Vale link. Further amendments linked to facilitating a change of use of the Gedling colliery site and potential future use of the Gedling Mineral Railway Line for passenger use as part of the Greater Nottingham Area Rail Development Strategy and a possible new Park and Ride facility.
1999	The proposals for the Gedling Village bypass do not feature in the Local Transport Plan covering the period 2001-2006 and must therefore continue to be viewed as a long-term proposal. The Scott Wilson Review concludes however that the “County Council cannot continue to promote its safeguarded scheme at Gedling As this would not accord with an integrated transport strategy, either nationally or locally and is not sustainable”. As a consequence, the link to Arno Vale Road was abandoned and the Gedling Relief Road was retained which was seen to conform with planning policy.
2003	Nottinghamshire and Nottingham Joint Structure Plan Deposit Draft safeguards the “A6211 Gedling Relief Road” and describes it as “proposed for investigation”, with an implementation timetable of 2006 – 2011. Together with the “A612 Gedling Major Integrated Transport Scheme”, this road replaces the Gedling Bypass in the 1996 Structure Plan

- 8.2. In addition to the information provided in the ES there is historic information available that represents previous alignments of the Scheme that have been considered as part of the history and development of the Scheme. Each of these alignments have different environmental impacts and require varying land take – the amount of which is linked to the topography of the site.
- 8.3. In the NEOLR a route was proposed that would have passed through the centre of Gedling Village severing the local community, this route is shown on Figure 1 included at **[CD13.47]**. This route was abandoned, and alternative options proposed as shown on Figure 4 included as **[CD13.48]**. The route that best represents the latest proposals as included in the Order Land is shown as Route B.

- 8.4. Drawing number H/00096/141 included as **[CD13.41]** from 1987 shows a previously proposed alignment of the Scheme similar to Route A from the NEOLR. This alignment intersects Lambley Lane between Glebe Farm View and Jessops Lane and the alignment of the Scheme closer to Gedling Village than that the latest as proposed in the Orders.
- 8.5. NCC has for many years safeguarded the route of a proposed Gedling Bypass and historically, the 1996 Structure Plan safeguarded a Gedling Bypass route that consisted of three parts:
- The southern section from A612 Colwick Loop Road to A612 Burton Road;
 - The central section that bypassed Gedling 'Village' to the east and connected between the A612 Burton Road and B684 Plains Road; and
 - The third section continued the route north to link with the A6211 Arno Vale Road.
- 8.6. In the Gedling Local Plan First Replacement (Deposit Draft, February 2000), a route was proposed in conjunction with allocation of the DA. This route ran from the A612 up to Mapperley Plains in a similar fashion to the Scheme, but with certain important differences. The route is similar to Route A from the NEOLR report and this alignment has a greater impact residential property in this vicinity and would also limit the proposals contained within the LPD 2018 policy 64 for H3 – Willow Farm. An advantage of this route is that it helped to preserve the existing limits to development, reducing the pressure for future development and release of extensive areas of Green Belt land. Previous documentation also suggests that it was felt that this might also limit the wider visual and landscape impacts. The road would then run relatively straight, cutting into the edge of the colliery spoil heap, before turning westwards to join Arnold Lane before its junction with Mapperley Plains.
- 8.7. In the Revised Deposit Draft of the Gedling Local Plan First Replacement, a different route was proposed, which was even closer to the Scheme than as proposed. In this alignment the new road passes to the north of Harvey's Plantation and Glebe Farm View – further from the edge of the existing built up area of Gedling. This was seen as desirable to reduce the potential noise and other impacts of the road on existing residents. It would also have less impact on Harvey's Plantation and the surrounding Mature Landscape Area designation and that running it in cuttings had the potential to limit the wider visual and landscape impacts. This alignment would require the demolition of Glebe Farm but would see less disruption to properties around Glebe Farm View. Spurs connecting with Lambley Lane (north and south) were shown, recognising that the topography and cost implications would be unlikely to favour a grade separated junction. The road then curved south west to re-join the previous route cutting into the edge of the colliery spoil heap and running through the proposed DA.
- 8.8. This route also showed a roundabout close to, and linked with, Arnold Lane – but the main road continued north west to form a new junction with Mapperley Plains enabling Arnold Lane to remain open independently of the new road, which would align with land identified as safeguarded in the NCC Structure Plan for a future "Arno Vale Link" 4.
- 8.9. In 2003 a detailed design for the GAR was drawn up by Faber Maunsell engineers on behalf of EMDA, and draft Environmental Statements were prepared. That design followed a similar route to that described in section 8.7 with some further changes. The alignment was slightly closer to Gedling Wood Farm, and the link to Lambley Lane north was longer. The road would have been generally straighter between the A612 and this link. These changes were

introduced following discussions with NCC as LHA, in order to provide maximum visibility for safe overtaking on the section between the A612 and Lambley Lane whilst still providing a safe link to Lambley Lane. The 2003 design also have swung a little further south on the western side of Lambley Lane. This change was made to avoid engineering and stability issues related to the colliery spoil heap. It was also designed to minimise impacts on existing ponds, which would limit both engineering difficulties and minimise ecological impacts.

- 8.10. A new roundabout close to the existing household waste and recycling centre was introduced to service future developments, including a possible future park and ride site. The main roundabout was moved closer to Arnold Lane, and the final section up to Mapperley Plains was straighter than before. Again, this change was introduced following discussions with the LHA, in order to provide maximum visibility along this section.
- 8.11. The Nottinghamshire and Nottingham Joint Structure Plan Deposit Draft safeguarded the “A6211 Gedling Relief Road” together with the “A612 Gedling Major Integrated Transport Scheme”, this road replaced the Gedling Bypass in the 1996 NCC Structure Plan. The Arno Vale link was also described as “proposed for investigation” but would be abandoned if the A52 multi-modal study did not support the road. For reference, the Gedling Bypass to Arno Vale Road link which went between the B684 Mapperley Plains at the Arrow Public House (at the junction of Gedling Road and Arno Vale Road) was formally abandoned by the County Council’s Environment Committee in 1999. There is no intention to resurrect this section as part of the Scheme or for future phases.
- 8.12. In February 2006 the Joint Structure Plan (“JSP”) was adopted and this safeguarded the “A6211 Gedling Relief Road” and describes it as “proposed for investigation”; with an implementation timetable of 2006 – 2016.
- 8.13. As described in this section, ongoing changes have been made to the Scheme design, and certain alternative options have been considered historically. The preferred option for the Scheme assessed in the ES differs from the route adopted in the Local Plan of 2005. In terms of considering alternative options for a specific route, attention for the Scheme (as proposed) focussed on achieving the best solution, bearing in mind the following:
 - Traffic safety, capacity and flow needs;
 - Known environmental constraints;
 - Cost; and
 - The relationship between the Scheme and the DA.
- 8.14. The subsequent narrative in section 8 describe process that was considered and undertaken to set the Scheme alignment as proposed in the Orders. This demonstrates the iterative approach adopted and that throughout the length of the Scheme ongoing review was completed to ensure that the Scheme achieved the best balance between its impact on land and properties, engineering constraints and topography,
- 8.15. Consideration was given to utilising the section of Arnold Lane from the DA roundabout up to Mapperley Plains, with a major junction at that point. This would have avoided the need for the parallel section, with its issues surrounding the crossing of Mapperley Tunnel. It would have also reduced the need for the major embankments along this stretch of the route, kept the new road close to the urban edge, with reduced landscape and visual

impacts. However, this option was rejected, the main reason being that the existing Arnold Lane vertical profile includes gradients up to 12% and this is considered unacceptable by the LHA.

- 8.16. A gradient of 12% is greater than that permitted in the relevant design standards unless in exceptional circumstances and when no other alternative is available. The existing alignment on Arnold Lane is currently used by a range of vehicles including HGV's and the steep gradient causes issues to vehicles pulling off from a stationary position to proceed through the traffic signal junction. In my opinion this can create increased environmental impacts relating to noise and increased emissions. To improve Arnold Lane to meet acceptable gradients (maximum of 8%, without formal departures from standards) it would cost more to improve the alignment than provide a new section of road as included as part of the Scheme.
- 8.17. The Scheme as proposed also included moving the roundabout next to Arnold Lane further to the west due to an extension to the DA beyond the Local Plan 2005 allocation in order to accommodate more residential land. Consequent changes to the detailed design of the roundabout to accommodate different ground levels also influenced the detail of the Scheme at this point.
- 8.18. In the area where GAR runs close to the former colliery tip, the alignment varies from the Local Plan 2005. This is because the route indicated in the Local Plan 2005 would present engineering difficulties in relation to tip stability. Therefore, the Scheme alignment was moved slightly further away from the tip flanks. The junctions of the realigned Lambley Lane with the Scheme are in the form of "ghost island" priority junctions. With the provision of a mini roundabout onto the southern severed section of Lambley Lane, the only other changes to this layout have been in connection with the vertical profile of this section of the Scheme, necessitated due to changes in design at other locations.
- 8.19. Significant changes were also made to the Scheme adjacent to Gedling House Woods as the 2003 scheme adversely affected a substantial part of the wood, approximately 4,000m². Design solutions were sought that would avoid or minimise those impacts including:
 - Moving the alignment away from the wood;
 - Reducing the width of the road corridor;
 - Using a shallower cutting; or
 - Engineering solutions to create steeper cutting sides.
- 8.20. Consultation with the LHA raised concerns over a number of issues. Firstly, the initial section from Burton Road up to Gedling House Wood is relatively steep. In the context of a road where overtaking opportunities would be limited, NCC was concerned that car drivers would become frustrated, particularly if held back behind slow-moving lorries travelling up this hill. Secondly, the limitations to safe overtaking result from a combination of two things that restrict forward visibility for drivers - a crest near to Gedling Wood Farm, and a relatively tight curve around Gedling House Wood. The option to minimise impacts on the wood tends to increase the problems raised by the curve, as the road alignment is shifted as far east as possible in this area. This option raises the level of the road in order to minimise the cutting needed, so tightening the crest. Both of these factors would mean that a departure from

normal highway design standards would need to be approved by NCC before the Scheme could proceed in that form and subsequently be adopted.

- 8.21. The preferred option adopted in the Scheme, that prevented the requirement for departures in standards is to utilise a slope stabilisation technique called 'Soil Nailing', this strengthens the cutting walls and reduces the area of land take required at Gedling House Woods.
- 8.22. The Evidence of John Patchett **[JP01]** considers the design requirements and alternatives in relation to the objections received from Mr Reckless with reference to the walled garden. The walled garden is located directly to the southeast of the Gedling House Woods and the alignment of the Scheme adjacent to the Gedling House Woods also impacts on the walled garden and the land required at this point.
- 8.23. After feedback from public consultation undertaken in June and July 2014 as part of the Scheme planning application, the following further changes were made to the alignment and red line boundary of the Scheme as proposed in the Orders:
 - Scout Hut Access at Mapperley Plains - Provision of a 3m right turn harbourage protected by central islands;
 - Changes to the B684 Mapperley Plains / Scheme junction to provide a left turn only lane to aid road safety at and in the vicinity of this junction;
 - Re-positioning of the roundabout access to the Country Park and the alignment of the Scheme to ensure that the two lagoons which are a valued public amenity are not affected by the new road; and
 - Land Opposite Gedling Wood Farm - Red line boundary shifted slightly for additional screening;
 - The alignment has been adjusted between Gedling Wood and Burton Road to move the road away from Whitworth Drive and remove impact on existing tree screen. Approx. 9m shift at Meadowcroft and 5m shift at 246 Nottingham Road. The Red Line boundary on the school side of the road has been adjusted to replicate the original distance between the edge of the embankment; and
 - Changes to the Scheme / A612 junction to remove the left turning slip road to improve amenity and road safety for children attending CLWA.

9. CONTACT WITH AFFECTED LANDOWNERS

- 9.1. NCC have carried out extensive consultation with affected landowners in order to achieve an acceptable Scheme proposal, whilst having regard to the First Protocol of the European Convention on Human Rights. Consultation and public engagement undertaken as part of the application process is described in the section five of the Proof of Evidence of David Pick **[DP01]**.
- 9.2. As part of the land referencing process and identification of those with an interest in the land affected by the Scheme, NCC retained the service of TerraQuest who first wrote to affected landowners in January 2017 circulating statutory requests for information served under powers contained in section 16 of the Local Government (Miscellaneous Provisions) Act 1976. Further correspondence was sent to affected landowners who did not respond to these notices and contact with interested parties to ascertain the identity of all affected landowners.

- 9.3. Negotiations with affected landowners are ongoing to progress the voluntary acquisition of land interests required for the Scheme these NCC led negotiations will continue until agreement is reached. The latest information related to affected landowners who have objected to the Orders is covered in the Proof of Evidence of Andrew Prowse **[AP01]**.
- 9.4. Via EM has been working closely with key landowners as required under the obligations contained in the Unilateral Undertaking (“UU”) **[CD4.15]** as required by the Original Permission and updated as part of the GAR Permission – the planning obligations contained within the UU did not vary between permissions. The UU resulted in land acquisition, rights and mitigation works being agreed in principle with those parties defined in the UU.
- 9.5. The Order Land includes the private interests of 15 parties, one of whom is only affected on the basis that rights over their interest are to be acquired. The table in this section provides a summary of the latest position in relation to land acquisitions, for clarity this relates to Owners from Table 1 interests listed in Schedule 1 of the CPO. It excludes interests of NCC as LHA, Homes England (as land interests transfer to NCC as part of the confirmation of the CPO), interests in respect of the railway tunnel, interests in respect of mines and minerals only and 3rd party interests in respect of subsoil.

CPO Plot Number	Interest	Comments
2, 6, 10	The 3 rd Woodthorpe Scouts Group	Mitigation works and details of land exchange agreed in principle – legal conveyancing and licence agreements to be progressed in advance of Inquiry. Acquisition and agreements expected to be in place prior to confirmation of the CPO.
6a, 10a (rights)		
5	Cadent Cadent	Objection from Cadent to the Orders withdrawn and Asset Protection Agreement (“ APA ”) in place, acquisition principles agreed as part of APA.
5a, 5b, 5c (rights)		Objection from Cadent to the Orders withdrawn and Asset Protection Agreement (“ APA ”) in place that provides provision required to undertake works detailed under the rights required.
7	Killarney Homes Developments Limited	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
8	The Crown Interest	Acquisition by agreement of the Crown’s interest in the Order Land is currently ongoing and is expected to be finalised in advance of the confirmation of the CPO
11, 13, 16, 17, 20, 21, 23, 27, 30, 31, 42, 45, 49, 53, 66	Unknown	All requisite notices put in place to determine ownership, no further details obtained, to be included in the CPO confirmation.
13a, 16a, 17a, 31a, 53a (rights)		
12, 18, 19, 26, 33, 35, 36, 58	Gedling Borough Council	All details of land transfers including exchange land provided and approved by GBC in report to Portfolio holder as part of response to the making of the Orders. Dialogue ongoing to complete transfers in advance of the confirmation of the CPO.
12a, 26a (rights)		
14	Nottingham City Council	Heads of Terms agreed and legal conveyancing being progressed. Acquisition and agreements expected to be in place prior to confirmation of the CPO.
14a (rights)		
24, 25, 34	Harworth Estates	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
38	Heather Prince, 6 Chartwell Grove	Heads of Terms agreed and legal conveyancing being progressed. Acquisition and agreements expected to be in place prior to confirmation of the CPO.
41, 43	Alan Rowe, Glebe Farm	Land acquisition completed, now under NCC ownership.

CPO Plot Number	Interest	Comments
48	Jean and David Prince	Objection from David Prince to the Orders withdrawn and heads of terms in relation to acquisition at advanced stage of negotiation, expect acquisition in relation to title to be complete prior to confirmation of the CPO.
48a (rights)		
50	Langridge Homes Limited	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
50a, 50b (rights)		
51, 52, 53 (as reputed freeholder), 54, 56	Mrs Cole and Mrs Hall, Gedling Wood Farm	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
52a, 52b, 53a (rights)		
55	Patricia, Paul and Raymond Leonardi	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
57	Unknown (at making of Orders), land registered In November 2018 to Jane Roper and John Curtis	Ongoing dialogue to acquire by agreement, no objection lodged to the Orders.
59	Carl Walker, Woodside, Whitworth Drive	Objection from Carl Walker to the Orders withdrawn and conveyancing completed, exchanged expected in advance of the Public Inquiry.
61	Mr Reckless, with reference to the walled garden.	Objection from Mr Reckless to the Orders outstanding. Ongoing dialogue to acquire by agreement and to get objection withdrawn.
61a (rights)		
62a (rights)	New Charter Homes (jigsaw Homes)	Objection from Jigsaw Homes to the Orders outstanding. Ongoing dialogue to acquire rights by agreement and to get objection withdrawn.
63	Carlton le Willows Academy	Heads of Terms agreed and legal conveyancing being progressed. Acquisition and agreements expected to be in place prior to confirmation of the CPO.
63a (rights)		
65	Midlands Land Portfolio	Objection from Midlands Land Portfolio to the Orders outstanding. Ongoing dialogue to get objection withdrawn.

10. HUMAN RIGHTS CONSIDERATIONS

- 10.1. The Human Rights Act 1998 ("**1998 Act**") incorporated into domestic law the European Convention in Human Rights ("**Convention**"). The Convention includes provision in the form of articles, the aim of which is to protect the rights of the individual.
- 10.2. Section 6 of the 1998 Act prohibits public authorities from acting in a way which is incompatible with the Convention. Various Convention rights may be engaged in the process of making and considering a compulsory purchase order, notably the following Articles:
- Article 1 of the First Protocol protects the rights of everyone to the peaceful enjoyment of possessions. No one can be deprived of possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law;
 - Article 8 protects private and family life, home and correspondence. No public authority can interfere with these interests except if it is in accordance with the law and is necessary in a democratic society in the interest of national security, public safety or the economic wellbeing of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others; and
 - Article 14 protects the right to enjoy rights and freedoms in the Convention free from discrimination on a ground such as sex, race, colour, language, religion, political or other opinion or national or social origin.
- 10.3. The European Court of Human Rights has recognised in the context of Article 1 that regard must be had to the fair balance which has to be struck between the competing interests of the individual and of the community as a whole. Similarly, any interference with Article 8 rights must be necessary for the reasons set out. In this case, any interference with Convention rights is considered to be justified in the public interest to secure delivery of the Scheme and the economic, social and physical benefits that the Scheme will provide to the surrounding area.
- 10.4. Extensive consultation has been undertaken during the planning application process with the opportunity being given for interested parties to make representations regarding the proposals. Details of public consultation undertaken as part of the planning process is covered in the Evidence of David Pick **[DP01]**. Further representations have been made in the context of the Public Inquiry which the Secretary of State has given notice of intention to hold in connection with the Orders starting on 11 June 2019.
- 10.5. Those directly affected by the Orders will be entitled to statutory compensation and details have been sent out and are available electronically through the project website at www.nottinghamshire.gov.uk/GAR. Discussions regarding compensation are ongoing and the latest situation regarding negotiations is described within this Evidence at section 9.

11. RIGHTS REQUIRED IN RELATION TO OUTSTANDING OBJECTION

- 11.1. Both objections from Mr Reckless and Jigsaw Homes cite insufficient reasons or not having adequate information in relation to the rights being sought within the order. To confirm the rights contained with the Order are as follows:

“A right of access with or without vehicles, plant and machinery to the exclusion of others to repair, demolish and reconstruct an existing wall and foliage and trees and to construct, inspect and main works together with a right to install a temporary fence along the perimeter and provide a zoned area for operative safety ...”

- 11.2. The majority of the walled garden that requires demolition is in the ownership of Nottinghamshire County Council, but it has to be rebuilt wall within land owned by Mr Reckless. Further land is required from the MR Reckless title as part of the wider Scheme to build the road and provide the necessary highway features for it to be in accordance with design standards and operated safely. The detail of the walled garden in relation to land owned by Mr Reckless is covered in the Evidence of John Patchett [JP01]. I can confirm that there are no sections of the walled garden in the ownership of Jigsaw Homes that requires demolition.
- 11.3. However, the construction of the Scheme provides the opportunity of renovate the remaining wall that includes a programme of repair and consolidation works. This preserves the walled garden, albeit over a smaller area, for future generations to appreciate. This proposal for a programme of repair was included in the planning documentation submitted and approved as part of the Listed Building Consent for the Scheme, detail of which is covered in the Evidence of David Pick [DP01] and helps mitigate the impact of the demolition and rebuilding of part of the walled garden.
- 11.4. Excluding the section of demolished wall, the actual physical works affecting the existing wall (both inside and outside faces) abutting the car park area owned by Jigsaw Homes and Mr Reckless retained land are limited to repairs. The repairs include removing the top 2 courses (3 courses at end buttresses) and re-laid as existing, replacing missing bricks as required, vegetation clearance (on the wall, such as ivy) and repointing that ranges from 20 to 50% of existing with the quantity varying depending upon an assessment of its current condition.
- 11.5. Direct access to the walled garden is not available from the public highway and requires permission of the objectors to pass over private land. Without an agreement in place, NCC are unable to gain safe and legal access required to undertake the repair works. The rights included in the Order provide sufficient rights to undertake the repair work and access would be from the wider Scheme from the east side of site once the wall is demolished, negating the requirements for permissions to be obtained to access over private land.
- 11.6. On the internal face of the walled garden, the repairs will impact on the car parking available. However, the works are labour intensive on short sections of wall at a time and would require a mobile tower scaffold to be used enabling the repairs to be done on the higher parts of the wall safely. Notwithstanding any agreements, the repairs would be done in a construction methodology to minimise the time taken that construction teams would be working within plots 61a and 62a. Also, working zones would be adopted to minimise the repair work to short sections of wall at a time occupying a width of 4 metres and a length of approximately 10 metres at a time. This would ensure work areas are confined and that construction activities can be completed in a safe manner whilst the car park area remains open.
- 11.7. It is the preference of NCC, by agreement, to put a licence in place that provides vehicular access along the driveway from Wood Lane and provision for the Contractor to undertake

the programme of works in short sections described above to minimise the impact the objectors. Any licence provision would include that the land interest is not within the Vesting of the land. At this stage exact timings are not known, but I would anticipate it taking 3 – 4 months and the repairs would have to be done in conjunction with the demolition and rebuild rather than in advance. The reason for this is that construction teams need to reuse the existing bricks recycled from the wall taken down.

- 11.8. Without a licence in place, then rights are required through the Order to provide the necessary access to carry out the works required for the Scheme. Negotiations are ongoing with Jigsaw Homes to put a licence in place and dialogue is taking place with Mr Reckless. Of CPO powers are used to acquire rights from those directly affected by the Orders those affected will be entitled to statutory compensation in accordance with the matrix of enactments and judicial judgements that make up the Compensation Code.

12. SCHEME FUNDING

- 12.1. A funding package for the Scheme has been assembled totalling the £40.899 million required to deliver the Scheme. The funding stream contributions are as follows:

- Land and Enabling Works
 - HE - £7.17 million (Grant Funding);
- Construction (including design)
 - NCC Capital - £5.4 million;
 - D2N2 - £10.8 million (outline business case approval obtained; full approval required as discussed below);
 - Housing Developer Keepmoat - £17 million including Community Infrastructure Levy ("CIL") liabilities of £4.488 million via GBC;
 - Section 106 contributions - £0.529 million (£0.436 from Teal Close development).
- Total: £40.899 million

- 12.2. Information related to the funding agreements was laid out in detail in the Finance and Property report of 19 September 2016 [CD9.4]. The funding agreements seek to protect all parties and they are controlled by way of trigger points for funds to be drawn from, should trigger points not occur then the funds remain inaccessible. There are pre-requisites included in the agreements that are linked to planning, statutory procedures, timescales and funding and demonstration that delivery is viable.

- 12.3. The confirmation of the Orders will allow the agreements for construction to become unconditional and enable funding drawdown for construction. The land agreements permit funds to be drawn down in advance of confirmation of the Orders in order for land to be assembled.

- 12.4. Costs of the Scheme up until this point for design and construction will be met from NCC Capital and D2N2 pre-compliance funding with land purchases and costs associated with the Orders through the HE Grant Funding agreement.

- 12.5. The latest funding profile is shown in the table below however, the nature of the agreements enables flexibility on the spend profile if required.

	Funding contribution (£m)					
	2016/17	2017/18	2018/19	2019/20	2020/21	TOTAL
NCC	-	0.508	-	-	4.892	5.400
D2N2	-	0.500	1.400	8.900	-	10.800
Keepmoat / GBC	-	-	-	-	17.529	17.529
HE	0.138	0.206	1.600	2.000	3.226	7.170
TOTAL	0.138	1.214	3.000	10.900	25.647	40.899

Homes England – Grant Funding (Phase 1 Works)

- 12.6. The total value claimed by NCC under this agreement was £170,000 and this related to the early construction of a roundabout forming a junction between Arnold Lane, the Scheme and the DA as required in the Original Permission. The funding agreement had a maximum funding allocation of £1.9 million funded using Public Land Infrastructure Funding (“**PLIF**”) obtained by HE that would be repaid by the developer.
- 12.7. The phasing condition was seen as impeding the progress of the Scheme and the section 73 variation to the Original Permission removed the condition associated with phasing, resulting in the granting of the GAR Permission. This change was due to a range of factors including but not limited to the timing of planning for the Scheme, planning status of the DA and engineering challenges on the DA resulting from starting the development at the top of the site (the highest point being off the roundabout junction with Arnold Lane).
- 12.8. The GAR Permission removed the requirement for phase 1 to be constructed as a discrete and separate piece of work and enables the work to be incorporated into the main contract delivered as a single phase. However, opportunities were taken to utilise approximately £170,000 of this funding (which was received by NCC) to undertake gas diversion works on Arnold Lane and site clearance works. This work has been completed and these costs have been included in both the Scheme estimates and income for the construction work.

Homes England – Grant Funding (Enabling Works)

- 12.9. The total value available under this agreement is £7 million and it relates to the acquisition of land and rights required to construct and maintain the Scheme and is the second agreement that NCC entered with HE as a result of the approval given at the Committee meeting on the 24 March 2014 [CD9.3]. It also includes the provision for the title of land currently in the ownership of HE and defined as required to deliver GAR to transfer to NCC as part of the delivery of the overall Scheme.
- 12.10. The funding agreement provides for a contribution of up to a maximum capped value of £7 million from HE. Work has previously been undertaken to validate land acquisition costs and whilst these are subject to potentially fluctuating land values it is considered that this element of work can be delivered within the funding available. Recent work undertaken by the Valuation Office Agency has demonstrated that the funding available for land including costs associated with the CPO and compensation is sufficient to deliver GAR.

D2N2

- 12.11. At its board meeting of 22 July 2013 D2N2 agreed to allocate £10.8 million towards the cost of the Scheme from the £31.2 million available. The Scheme was one of only six schemes supported by D2N2 and is the largest single scheme it is supporting representing 35% of the allocation. The £10.8 million allocation is subject to LTB gateway progression in accordance with the Local Assurance Framework.
- 12.12. A transport user benefits appraisal ("**TUBA**") completed for the Scheme indicates that journey time savings and other safety and efficiency benefits are worth at least £73m (Present Value of Benefits) and this generates a benefit to cost ratio ("**BCR**") of 2.4 against the total Scheme cost (Present Value of Costs).
- 12.13. The Scheme shows a very good BCR based on headline economic impacts. With the addition of journey time reliability, land uplift values and wider economic benefits which will also flow from the scheme this would result in a BCR of 3.94. The D2N2 financial contribution is ¼ of the total Scheme cost and effectively the return on investment of the D2N2 contribution is a BCR of over £9 for every £1 invested.
- 12.14. At a D2N2 LEP Infrastructure Investment Board ("**IIB**") meeting on 21 December 2017, representatives from Via EM and NCC presented an update on the Scheme. This included a request for £0.5million of pre-compliance funding for use within the 2017-18 financial year. This was approved and provided the opportunity for the overall Scheme funding profile to be adjusted. NCC is seeking FBC approval during 2019-20 upon demonstrating that all land has been acquired either by negotiation or through confirmation of the CPO, this would then facilitate the drawdown of the D2N2 funding.

Keepmoat – Payment and Escrow Account

- 12.15. The total value available under this agreement is £17 million.
- 12.16. HE owns the DA site with Keepmoat appointed to develop the site. The DA will be delivered in three phases as described previously in the Statement and the site disposal will be via a phased drawdown as set out in an Agreement for Lease document between, HE and Keepmoat. Under the development agreement, Keepmoat pay £17 million towards the delivery of the Scheme with payments being made in instalments into a Payment and Escrow account, this is in accordance with an agreed schedule and will be fully paid by the end of 2019 which is largely in advance of development. Any residual land value will only be paid to the HE on completion of the whole DA.
- 12.17. The £17 million includes a maximum value of CIL liability for the three phases estimated at £4,448,120 (to take into account indexation). Any additional CIL liability over and above this value will be dealt with outside of the Payment and Escrow account and is not the responsibility of NCC. HE is a signatory to the Escrow Account as they own the land and have overall responsibility for the delivery of the DA.
- 12.18. In addition, Keepmoat are required to fund the section 106 agreement ("**s106**") for the DA, with contributions totalling almost £5.1 million. The s106 covers a range of items but those

specific to NCC include land and a £3.6 million contribution towards a new primary school plus contributions to public health, libraries, public transport and sustainable transport.

- 12.19. The CIL liability for Phase 1a of the DA (£1,225,715) has been paid by the Keepmoat to GBC. The value paid into the Payment and Escrow account will therefore be £15,774,285 which includes the CIL liabilities from Phases 1b and Phase 2 of the DA and enables NCC to drawdown the full amount if required for construction.
- 12.20. If all the funding is utilised by NCC from the Payment and Escrow account, then NCC will be required to pay back the Phase 1b and Phase 2 CIL monies into the Escrow account when the liability notices are issued in the future. This will enable the developer to meet its CIL liabilities.
- 12.21. The subsequent repayment of the funding from GBC to NCC is covered in a separate agreement between the two authorities.

Community Infrastructure Levy – Gedling Borough Council

- 12.22. The total value of this funding stream is £4.448 million, and this is linked to the Payment and Escrow Account which part funds the delivery of the Scheme.
- 12.23. CIL is a method for collecting financial contributions from developers towards the provision of infrastructure needed as a result of development. The liability for CIL on each phase of the DA is triggered on the grant of the related planning permission that first permits the proposed development such as the granting of full planning, change of use or approval of the last reserved matter on the grant of outline planning. Payment of CIL in respect of each phase of the DA is due on commencement of development of the phase either in accordance with any instalments policy or otherwise within 60 days of commencement.
- 12.24. A revised Charging Schedule was issued by GBC after consultation following the Community Infrastructure Levy (Amendment) Regulations 2014 coming into force and a review of the housing supply in the ACS. The revised CIL Charging Schedule set out where CIL would be levied and how much will be charged, it also included in GBC's "Regulation 123 list" [CD11.7].
- 12.25. The Regulation 123 list provides for contributions from CIL received by GBC to be allocated to the Scheme, the Gedling Colliery Country Park visitors centre and for secondary school contributions.
- 12.26. The DA will generate CIL liabilities on Phases 1a, 1b and 2 of the development site. As some of the phases are in the future CIL liabilities are index linked and the final value is unknown. However, to obtain certainty for the GAR then the values within the funding agreements have been agreed to cap the value of CIL liabilities that will be paid from the Payment and Escrow account. Any CIL required to be paid above the capped amount will be the responsibility of the developer.
- 12.27. The value of £4.448 million is the capped CIL figure for the purposes of the funding agreements. This contribution will be required from CIL receipts together with other funding streams to deliver the construction of GAR. An agreement is currently in draft form that will

facilitate the payment of CIL from GBC to NCC for infrastructure costs directly incurred on the construction of the Scheme and will be in place prior to confirmation of the Orders. The GBC CIL contributions have Full Council approval.

- 12.28. The CIL liability for Phase 1a of the DA have already been paid by Keepmoat to GBC and this can be used towards the construction of the Scheme. The funding agreement will facilitate NCC drawing down this funding from GBC when required.
- 12.29. The CIL regulations allow GBC to utilise CIL receipts to pay for infrastructure already built. Under the terms of this agreement the funding paid back into the Payment and Escrow account for CIL liabilities that was spent on the GAR could then be recovered by NCC from GBC through CIL, as expenditure would have been incurred on its construction.
- 12.30. In the event of the Scheme being delivered for less than the estimated costs then the contribution from CIL towards the Scheme will be less resulting in the remaining funding being utilised for other priorities on the Regulation 123 list, including secondary school provision.

Nottinghamshire County Council

- 12.31. The total value of funding allocated by NCC from its capital budgets is £5.4million.
- 12.32. At its Full Council meeting in February 2014 NCC resolved to incorporate funding of £5.4million into its capital programme to support the Scheme. Currently part of this funding is being brought forward to facilitate detailed design, procurement and site investigation works which will enable the road to be delivered subject to the completion of statutory processes. Details of NCC's spend are reflected in regular updates on the capital programme and in the annual budget with variations dependent upon actual spend and income received.

Teal Close – Section 106 Agreement

- 12.33. This site is not subject to CIL as planning permission was granted before GBC adopted its CIL Charging Schedule. However, the section 106 agreement includes a contribution of £436,000 towards the construction of the Scheme. Funding can be drawn down subject to contracts being in place to deliver the Scheme. There is sufficient contingent funding available for Scheme should there be a delay in drawdown of these Section 106 monies.

13. PRINCIPLES OF DESIGN AND CONSTRUCTION

- 13.1. The principles of design are covered in the Proof of Evidence of John Patchett [JP01], this includes specific responses linked to the outstanding objections. Furthermore, the Proof of Evidence of David Pick [DP01] provides a detailed background to the location, size and form of the Scheme junction with the A612 that relates directly to some of the outstanding objections.
- 13.2. The main construction works for the Scheme are being procured using Medium Schemes Framework (“MSF”) that is provided through the Midlands Highways Alliance (“MHA”) of which NCC is a member.

- 13.3. Using the framework helps to reduce procurement costs and gives greater flexibility over the timings of construction compared to a traditional tender route. However, the major benefit of the framework is that it enables a significant period of Early Contract Involvement (“ECI”) with a Contractor. This is a collaborative approach and key benefits includes enabling the Contractor to input into the design process, key suppliers and sub-contractors being involved in decisions at an early stage, carry out value engineering, assist in the management of risk and fix a target price for the works.
- 13.4. The latest iteration of the framework, MSF3, utilises Option C (target cost) from NEC4 Engineering and Construction Contract (“EEC”). The EEC form of contract has become the public sector contract of choice, being used for nearly all projects procured by national and local government bodies and agencies. Via EM on behalf of NCC have successfully used the previous framework, MSF2, to deliver other major highway projects including the Hucknall Town Centre Improvement Scheme (contract value £8.5 million) and Hucknall Rolls Royce (contract value £3.1 million), this has provided experience and knowledge of working with EEC contracts and the target cost option. The same teams are working on the GAR and using the experience gained in preparing the works information and contract documentation.
- 13.5. The construction of the GAR can be considered in two elements and it is anticipated that construction will be done on more than one phase concurrently. The first and largest element is off-line from the existing highway infrastructure and consists of undertaking an earthworks operation to form cuttings and embankments for the new road alignment. The second element of construction covers the interface works at the junctions onto the existing highway network.
- 13.6. The actual phasing and programming of the works will be put forward by the Contractor for approval as part of the contract. This gives the Contractor the opportunity to construct the Scheme in an efficient manner and to control its resources whilst working within constraints included as part of the contract. This includes but is not exclusive to constraints such as ecology (bird nesting season for site clearance and bat maternity seasons), land / access agreements, traffic management requirement, and noise and site conditions. Any changes to the programme will be agreed through the typical contractual arrangement available when using an EEC type contract. Key tasks that need to be undertaken to construct the Scheme are briefly described as follows:
- Clear site vegetation including tree felling, the removal of topsoil and the installation of fencing. Fencing may be temporary such as hoardings, but in some cases the permanent boundary fencing will also be installed;
 - Some site clearance may take place in advance of the main contract to avoid bird nesting season;
 - Demolition works, in the case of the Scheme this includes buildings at Glebe Farm, part of the walled garden and part of the outbuilding at Gedling Wood Farm;
 - Ecology mitigation works including fencing for amphibians, bat house and relocation of badger setts;
 - The next phase will be bulk earthworks to create the road formation with a cut and fill balance. These earthworks will be done in phases as per the overall construction programme. Any badger tunnels required for the delivery of the Scheme will also be installed during this stage;
 - Rebuilding of any walls and retaining structures such as the walled garden, sections of soil nailing and other retaining walls;

- Undertake top soiling on cuttings and embankments in advance of landscaping work;
 - Preparation of formation levels for new carriageway and footway construction;
 - Install kerbs, services, and drainage including ponds;
 - Lay the pavement layers in the carriageway and footways; and
 - Implement landscaping scheme, street lighting, road restraints, and signage and road markings.
- 13.7. The exact order of the above tasks will vary depending upon the work activities being undertaken and location on site. In addition, where possible, permanent noise acoustic fencing and landscaping will be implanted early to help planting get established but also mitigate construction noise.
- 13.8. During construction, there is the likelihood that construction works will be audible at properties close to the road corridor. This noise will be for a relatively short period as work progresses along the road corridor. A construction site noise assessment will be completed prior to works commencing utilising a 3-Dimensional site noise model to estimate noise levels during significant elements of the construction phase. Noise propagation calculations are in accordance with BS5228-1: Code of practice for noise and vibration control on construction and open sites ("**BS5228-1**") [CD13.21] and this is embedded in the modelling software, information contained in the assessment includes the following:
- Phasing and detailed programme of works;
 - List of noise generating plant to be utilised in each phase of works;
 - Quantity and proposed on-time of each piece of plant;
 - Proposed haul routes for each phase of works;
 - Proposed location and extent of compound(s) for storage of materials and welfare/office cabins including type and number of operational plant (including generators) in these areas;
 - Any other information deemed relevant for the purposes of undertaking the Construction Site Noise Assessment.
- 13.9. Notwithstanding the results from the noise assessment, the Contractor will implement Best Practicable Means ("**BPM**") consistent with the recommendations of BS5228-1.
- 13.10. If the noise assessment demonstrates that the ambient noise level will exceed the threshold value of 65 dB (A) then the Contractor shall submit a Section 61 application for 'prior consent' under Section 61 of the Control of Pollution Act 1974 to GBC. This offers the Contractor protection from any subsequent action by the local authority under Section 60 or Section 66 of the Control of Pollution Act 1974 or under the Environmental Protection Act 1990 to impose further controls on noise from the site. If this is required, the Contractor will abide by the terms of the Section 61 Prior Consent including any agreed noise limits and temporary noise mitigation. The application would include the construction site noise assessment and set out the details of the proposed works, details of any temporary measures to reduce noise from the works and method statements to demonstrate the adoption of BPM.
- 13.11. During construction, there is the likelihood that construction works will be felt in the form of vibration at properties close to the road corridor. The Contractor will use BPM to minimise vibration generated by the works taking account all relevant guidance including BS5228-1.

- 13.12. Nearby residents and users of buildings within the vicinity shall, as far as practicable, be protected from vibration. The Vibration Dose Values (“**VDV**”) shall not exceed those specified in BS 6472: 2008: Guide to evaluation of human exposure to vibration in buildings (“**BS 6472**”) which will result in a “low probability of adverse comment”. To protect buildings from physical damage, peak particle velocity (“**PPV**”) levels shall not exceed 5mm/sec. If deemed required, following the construction site noise assessment, details of appropriate control measures including method statements will be included in the section 61 application such as periodic vibration monitoring or extended periods of continuous monitoring, in either case, this will be in compliance with BS6472. Subjective vibration monitoring will be undertaken as part of the weekly site surveys.
- 13.13. A Site Waste Management Plan shall be developed by the Contractor to include earthworks strategy, compliance with health and safety, good storage, working practices to reduce waste at source, reuse and recycling waste, reducing material wastage, security measures to prevent loss of materials and disposal measures including management of traffic / haul route and full duty of care waste documentation to ensure full compliance with environmental regulation.
- 13.14. GAR will be a publicly maintainable highway as the LHA will be responsible for all maintenance aspects of the Scheme. Any sections of the GAR that are outside of the limits of public highway will be maintained by NCC as landowner or by the relevant landowner.

14. IMPACTS OF THE SCHEME ON THE LOCAL HIGHWAY NETWORK DURING CONSTRUCTION PHASE

- 14.1. A construction travel plan will be agreed with GBC prior to any works commencing to establish the most appropriate routes to and from the site. It is proposed construction and deliveries traffic will be scheduled and managed to minimise peak hour congestion where possible.
- 14.2. The construction contract will incorporate constraints to ensure that it is delivered effectively whilst minimising the impact on the local community and existing users of the highway network. Representations were made during the publicity of the Orders raising concerns as to the level of disruption and impact on local businesses that would arise due to the proposed closure of Lambley Lane for/and the duration of construction works. NCC has responded to concerns and is committed to ensuring that any disruption is kept to an absolute minimum. Safety of nearby residents and businesses, the general public, motorists and the construction workforce is paramount and a key consideration in any decisions. Further dialogue will take place as the process moves on and this will be in advance of any construction works affecting through traffic along Lambley Lane.
- 14.3. Any road closures will be secured by operation of temporary TROs and NCC will provide comprehensive signage as part of the diversion routes. Temporary traffic signal installations will be programmed and co-ordinated with other works on the network. In all cases, a communications plan will be adopted for the Scheme that will be designed to ensure that information is available and shared with those affected.
- 14.4. Whilst they may be subject to change, key relevant constraints include:

- The closure of Arnold Lane to construct tie in points to the GAR will not be undertaken until GAR is open and available for traffic to use as part of a diversion route;
- The main changes to the B684 junction through its signal-controlled junction with the A6211 Arnold Lane / Gedling Road will be undertaken, where possible, to coincide with the closure of the A6211 Arnold Lane. This is required because the alterations will be the right turn from the B684 onto Arnold Lane for traffic travelling from Nottingham. Right turning traffic will use the new junction constructed further north with GAR and the B684. Therefore, GAR needs to be opened for this to be implemented;
- Lambley Lane will be required to be closed to vehicular traffic at times during the construction of GAR. This closure is necessary in order to undertake safely the significant earthworks operation involved in delivery of GAR which will require approximately 150,000m³ of excavated material (equivalent to approximately 34,000 heavy plant crossings) to be hauled from east to west over Lambley Lane. There is no footway at this location and temporary closures remove conflict with construction traffic that will be using the route. This approach to construction work in this location is safer to members of the public using the highway (both pedestrians and motorists) and construction workers whilst also allowing for a more efficient, prompter conclusion of the works;
- The new junction of GAR with Burton Road and the A612 will be constructed whilst closing Burton Road to vehicular traffic, safe pedestrian and cycle routes will be maintained at all times;
- Two-way traffic will be maintained along the A612 at all times during peak hours, any temporary restrictions will be put in place off-peak.
- Pedestrian routes will be maintained from the Lambley Lane recreation ground and Public Footpath No. 2 (Carlton) throughout the duration of the works ensuring that access is available to users of the Country Park and between the areas of Gedling and Lambley. In order to ensure these are safe, temporary diversions may be required together with control measures to manage pedestrians crossing the site; and
- Access to local premises along the route, such as Gedling Wood Farm will be maintained, and any necessary temporary measures put in place. These will be discussed with the relevant affected parties as required.

14.5. Permanent Traffic Regulation Orders (“TROs”) will be required for the GAR to ensure it is operated as intended and to make changes to restrictions on the existing local highway network, some of which are planning obligations. These include static and moving restrictions, speed limits and environmental weight limits, specific orders include:

- Static – 24-hour clearway (this restriction is to prevent stopping or waiting) along the GAR and Arnold Lane (between the new 5-arm roundabout and the B684 junction);
- Static – ‘No Waiting At Any Time’ (double yellow lines) on the southern section of Lambley Lane in the turning head and on the new link to GAR;
- Moving – ‘No Right Turn’ restricting movements from Mapperley Plains onto Arnold Lane;
- Moving - ‘No Right Turn’ restricting movements from GAR onto Burton Road;
- Moving – ‘No U Turn’ restricting U turns from the GAR at the A612 junction;
- Speed Limit – Implementation of a 30mph speed limit on GAR (by virtue of streetlights, classed as a restricted road) between and including the new roundabouts;
- Speed Limit – Implementation of a 40mph speed limit on remaining lengths of the GAR;
- Speed Limit – Implementation of a 30mph speed limit (by virtue of streetlights, classed as a restricted road) on Arnold Lane (on southbound approach to new 5-arm roundabout

- and along remaining length of Arnold Lane towards Gedling Village), this will include revoking the existing 40 mph / derestriction order. This is a planning obligation for the GAR;
- Speed Limit – Implementation of a 40mph speed limit on Arnold Lane from Mapperley Plains junction towards the new 30mph terminal on the southbound approaching to new 5-arm roundabout this will include revoking the existing 40 mph / derestriction order; and
 - Environmental Weight Limit (“EWL”) – New 7.5T weight limit bounded by the GAR and to include Burton Road, Shearing Hill and Arnold Lane, this includes the revocation of the existing weight limit at the old bus plug on Burton Road as it would be covered by the new area-wide restriction.
- 14.6. Obtaining a permanent TRO is a separate legal procedure and these traffic management measures are not part of the Orders. The process of detailing the TRO for public advertisement and feedback from consultation may result in slight changes being made, objections may be received and if required, these would be considered via existing procedures at NCC. TROs will be progressed as and when required.
- 14.7. Temporary TROs will be required to deliver GAR in order for construction works to be completed efficiently and safely, this may include temporary changes to speed limits and road closures.
- 14.8. In addition to temporary TROs, there will be requirements for portable light signals on the existing network to manage traffic whilst construction works such as surfacing is carried out. Site approval is required for portable signals under the TSRGD from NCC and once approved bulletins are provided to interested parties.
- 14.9. As part of the delivery of GAR, a communication strategy will be implemented and this will include consideration for stakeholder consultation and updates regarding permanent and temporary TROs and other restrictions on the existing highway network such as portable traffic signals, lane closures and footpath closures.

15. IMPACT UPON UNDERTAKERS’ APPARATUS

- 15.1. When undertaking major improvement works, such as the construction of the Scheme, it is often the case that Statutory Undertaker’s (“SU”) apparatus (for example electricity cables and gas pipes running under the highway) may need to be diverted. The New Roads and Street Works Act 1991 (“NRSWA”), and relevant regulations such as The Street Works (Sharing of Costs of Works) (England) Regulations 2000 and Codes of Practices, provides a legislative framework for street works by undertakers and road works. The aim of NRSWA is to balance the statutory rights of highway authorities and SU’s in order that works may be carried out with minimal disruption to the rights of road users.

As part of the development of the Scheme, preliminary inquiries have been undertaken in order to ascertain details of the apparatus within the section of maintainable highway due to be altered or improved as part of the Scheme. In relation to the Scheme, the key areas are:

- B684 Mapperley Plains (where a new junction is to be formed as part of the Scheme);
- A6211 Arnold Lane / Gedling Road / Mapperley Plains where junction changes are required as part of the Scheme;

- Lambley Lane that is being realigned;
 - Services to Gedling Wood Farm; and
 - Burton Road and the junction with the A612 that will be altered as part of the Scheme.
- 15.2. SA10/05 in the Manual of Contract Documents for Highway Works provides guidance regarding the steps to be taken when diversionary works may be required, these include:
- C2 – Scheme Identification and Preliminary Inquiries;
 - C3 – Budget Estimates;
 - C4 – Detailed Estimates;
 - C5 – Scheme Commencement;
 - C6 – Issue of Main Orders; and
 - C7 – Construction.
- 15.3. In most cases, budget estimates (stage C3) have been received detailing the effects of the Scheme upon a SU's apparatus including estimates of costs for works required to ensure there is no impact upon the apparatus. In some cases, detailed estimates (stage C4) have been carried out, establishing in detail the necessary steps that need to be taken, if further works are required then financial orders are placed with the relevant SU.
- 15.4. The status of diversionary works depend upon a number of factors including whether they can be carried out in advance (diverted outside of the works area or lowered / protected in the current location) or need to be carried out in conjunction with improvements or require further investigation and / or design in order to understand the impact.
- 15.5. The list below summarises those apparatus that will require some form of alteration as a direct result of the Scheme, this list is non exhaustive and may change as the construction programme develops and / or as a result of any further site investigations. Where diversions are not included within this list, they will be dealt with through the construction programme.
- Mapperley Plains - Severn Trent Water ("**STW**") Main, Gas Main, BT and Western Power Distribution ("**WPD**") apparatus need to be diverted from the existing footway to within the new footway at the junction of GAR and Mapperley Plains;
 - Mapperley Plains – Severn Trent Water Main, Gas Main, BT and WPD apparatus need to be moved on the section to be widened on the south side adjacent to the Scouts carpark;
 - Mapperley Plains - A highway sewer needs to be demolished and replaced on the corner of Mapperley Plains and Arnold Lane due to the junction widening;
 - On the link between Mapperley Plains and the 5-arm western roundabout - A surface water sewer which serves the Clementine Drive development which connects into the Ouse Dyke will be underneath GAR. Manholes along this sewer will need to be replaced and the sewer may need to be structurally lined dependent on survey results;
 - Arnold Lane - Existing 33kv overhead line in the fields off Arnold Lane will be diverted underground within Arnold Lane as advanced works;
 - Arnold Lane - Gas Main on Southwest side of Arnold Lane has already been lowered / diverted as advanced works;
 - New 4-arm eastern roundabout – BT and WPD underground cable to be diverted;
 - Lambley Lane (southern section) - STW sewer, new manholes to be constructed to new levels near new mini roundabout on Lambley Lane;

- Lambley Lane (northern section) - Foul Water Gravity Fed Sewer to be replaced;
- Lambley Lane (northern section) - 27" water main to be diverted;
- Lambley Lane (northern section) - Gas to be diverted;
- Lambley Lane (northern section) - BT Overhead to be diverted underground;
- Lambley Lane (northern section) - WPD apparatus to be diverted;
- GAR adjacent to Gedling Wood Farm - Services to Gedling Wood Farm to be diverted;
- GAR adjacent to Whitworth Drive - Existing overhead BT apparatus at northern end of Whitworth Drive to be diverted underground under GAR; and
- Burton Road – Gas, STW, BT and WPD to be diverted or lowered, protection works may be required to Virgin Media apparatus.

16. CADENT GAS LIMITED

16.1. As set-out in the Proof of Evidence of Andrew Prowse [AP01], NCC is in the process of negotiating an Asset Protection Agreement ("APA") with Cadent. Notwithstanding the content and requirements contained within the APA, NCC is attempting to ensure the protection of existing apparatus due to be affected by the delivery of the Scheme. Wherever possible, diversions are being carried out in advance. In the event that diversion will need to take place during the delivery of the Scheme then the construction works will include details of the works required, constraints, specifications etc. required to action the diversion. The list below provides a summary of Cadent's apparatus and its current status:

- Mapperley Plains works around Gas Governor at the junction with Arnold Lane. The Scheme requires the construction of a retaining wall to accommodate a new footway and traffic lights on the Mapperley Plain approach to the existing Arnold Lane junction. Details of construction works required have been provide to Cadent and site meetings have been undertaken in order to understand the impact of the works. Cadent have provided a method statement to undertake the works at this location in relation to their apparatus and this will be incorporated into the construction works contract;
- B684 Mapperley Plains between on south eastern side (on interface with the Scheme) – Diversion of Medium Pressure ("MP") Gas Main - Cadent reference EMGD191163;
- Lambley Lane – Diversion of MP Gas Main – Cadent reference EMGD171219;
- Burton Road - Diversion of MP and Low-Pressure Gas Main – Cadent reference EMGD191127; and
- All the diversions are at stage C4 of the NRSWA process and require that diversion from the existing highway and into a new or improved highway that will need to be undertaken as part of the Scheme, orders will be placed at the appropriate time in the construction programme.

17. WESTERN POWER DISTRIBUTION LIMITED

17.1. As set-out in the Proof of Evidence of Andrew Prowse [AP01], NCC are in the process of negotiating an APA with WPD. Notwithstanding the content and requirements contained within the APA, NCC is attempting to ensure the protection of existing apparatus due to be affected by the delivery of the Scheme. Wherever possible, diversions are being carried out in advance. In the event that diversion will need to take place during the delivery of the Scheme then the construction works will include details of the works required, constraints, specifications etc. required to action the diversion. The list below provides a summary of WPD's apparatus and its current status:

- B684 Mapperley Plains and GAR Chainage (“Ch”) 0-25 - Diversion of approximately 270m of 11kV cable and 125m of LV cable – currently at stage C4 - WPD reference 2997827. The diversion from the existing highway into the new highway constructed will have to be undertaken as part of the Scheme, orders will be placed at the appropriate time in the construction programme;
- Land between Arnold Lane and GAR CH170-720 - Diversion of approximately 2.5km of 33kV cable and 830m of pilot cable – diversion in progress - WPD reference 281041. All ducting to lay the cables under Arnold Lane have been installed and are awaiting actual diversion of cables. These works tie into a wider diversion within the Keepmoat Homes site and completion is awaited dependent upon all agreements being in place. It is hoped that this will be completed in advanced of any main construction works in the vicinity of this apparatus. In the event that this is not the case, appropriate mitigation and protection measures will be implemented to ensure the apparatus is protected and the safety of the construction workforce whilst diversions are completed;
- At the new GAR 4-arm roundabout, including link from Keepmoat site at CH1450-1640 - Diversion of 11kV cable – currently at stage C4 - WPD reference 2997836. This apparatus supplies electricity to the Alkane Energy site and the diversion will move the apparatus to a suitable location within the new highway due to be constructed as part the Scheme;
- Gedling Wood Farm CH3160 - 11kV and LV diversions – currently at stage C4 - WPD reference 3178742. The Scheme will affect current supplies to the private property at Gedling Wood Farm, routes of new supplies have been identified but can only be implemented as part of the Scheme;
- Lambley Lane and GAR Ch 2000-2430 - Diversion of 2x 11kV cables and 1x LV cable – currently at stage C4 - WPD reference 3178748. Existing apparatus is within the public highway of Lambley Lane, the Scheme requires Lambley Lane to be realigned and this will result in the diversion of apparatus as part of the Scheme; and
- Burton Road and GAR junction CH3850 – 3870 - Diversion of 1x 11kV cable and 1x LV cable – stage C4 - WPD reference 2997928. Apparatus falls within the existing highway and the diversion will move the apparatus to a suitable location within the new highway due to be constructed as part the Scheme.

18. SUMMARY

- 18.1. I consider that the Scheme is necessary to facilitate the redevelopment of a priority site as proposed in the ACS and an essential component in the planning of this part of the Borough of Gedling.
- 18.2. Overall, the provision of the Scheme is beneficial in terms of impacts on the local highway network and the Scheme is therefore considered acceptable on transport grounds. The construction of the Scheme will have positive impacts to the transport network by improving connectivity of the local road network and reducing traffic flows along the A6211 corridor in all scenarios as traffic reassigns to new routes, thereby reducing traffic congestion that currently occurs on the existing highway network in and around Gedling Village. The range of complementary traffic management will integrate the Scheme and DA proposals into the existing transport network.
- 18.3. The operation of the existing junctions on the A6211 corridor will also benefit from the general reduction in traffic with fewer delays and queues experienced in peak hours.

- 18.4. The Scheme is also part of a wider package of sustainable transport measures for the area and a key aim of the Scheme is to ensure that it integrates with existing infrastructure including the Country Park. There is provision for non-motorised users by means of a shared 3.0m wide footway / cycleway facility for pedestrians and cyclists along the entire length of the Scheme. This will intersect with existing walking / cycling infrastructure at key locations.
- 18.5. There is also a planning obligation pursuant to Section 106 of the 1990 Act for post works monitoring and mitigation. In summary the planning obligations contained in this UU include requirements to:
- Publish a report within 24 months of the Scheme opening identifying;
 - The traffic usage of the local highway network based upon monitoring undertaken following the opening of the Scheme;
 - The safety record of the local highway network from notified personal injury accident statistics;
 - The results of any speed monitoring undertaken;
 - A review of the performance of the local highway network including the Scheme against applicable design and safety standards to assess if there are areas where mitigation measures should be implemented within six months of the report being submitted to the LPA;
 - Implement measures identified from the review subject to any consents and permissions necessary; and
 - Repeat and review after 60 months but prior to 66 months of the completion of the Scheme.
- 18.6. Potential measures that could be considered following the post works monitoring include:
- Traffic calming features on Arnold Lane adjacent to the proposed residential development on the DA site. This could take the form of 'speed tables' at access junctions, chicanes with priority movements, 'speed cushions' etc. The final form will need to be designed to complement the proposed residential development and cater for appropriate vehicle movements (e.g. buses);
 - New pedestrian crossing facilities on Arnold Lane such as Zebra, Pelican or Toucan;
 - Traffic signing (including Vehicle Activated Signs);
 - Road markings and anti-skid surfacing; and
 - Parking (e.g. restrictions in inappropriate locations, bollards, sheltered parking etc.).
- 18.7. The Scheme has been developed over a number of years, involving discussions between interested parties including (in particular) NCC as both Highway and Strategic Planning Authority; GBC as LPA and landowner; and other landowners in the proposed DA and along the route of the Scheme. Further design work has refined the route, largely on the basis of seeking an optimum balance of engineering, road safety and environmental factors, as far as they have been clear up to that point; whilst ensuring that the road would achieve its principal objective, being to serve the DA.
- 18.8. I am satisfied that this Evidence, together with those other presented on behalf of the Acquiring Authority demonstrate deliverability and purposes of the Scheme for making the Orders on the basis of the satisfaction of the following principles:
- Its justification and need;

- The consultation process and how third-party interests have been considered;
- The status of associated consents;
- The availability of all necessary funding;
- The availability of all the land required and the reasons why all the land identified is necessary;
- The statutory requirements that must be satisfied before construction can start; and
- Confirmation that there are no legal impediments to the Scheme being implemented.

19. STATEMENT OF TRUTH

- 19.1. I confirm that I am able to give evidence in light of my relevant experience as summarised above. I can confirm that the evidence I prepared is in accordance with the guidance of my professional institution and that the opinions given are my true professional opinions.

Signed: 
Date: 21 May 2019