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M621 Road Investment Strategy Technical Approval – Junction 2

Date: 7 September 2022

Report of: Transport Strategy Transportation Engineering Manager

Report to: Chief Officer (Highways & Transportation)

Will the decision be open for call in? ☐ Yes ☒ No

Does the report contain confidential or exempt information? ☐ Yes ☒ No

Brief summary

- The report seeks approval from the Chief Officer (Highways & Transportation) for the proposed design layout changes to the M621 Junction 2 roundabout and to authorise negotiating the terms of and entering into agreement with National Highways to undertake construction of the junction.
- The report also seeks approval for the preferred preliminary design layout of Cemetery Road/Elland Road.
- The proposals have been developed by National Highways appointed designers with input from Leeds City Council's Highways Technical Leads.
- The objectives of the project are to reduce peak time congestion at Junction 2 and on the mainline of the M621 and improve the safe operation of these parts of the network through geometry changes and enhanced technology provision.
- The M621 Junction 1 to Junction 7 proposals have been developed alongside Leeds City Council's City Centre Package and, along with the Armley Gyratory, facilitates the closure of City Square by increasing capacity on the Strategic Road Network to accommodate displaced traffic.
- The project is wholly funded by National Highways as part of the Road Investment Strategy (RIS) 2 Programme.

Recommendations

The Chief Officer (Highways & Transportation) is requested to:

a) Approve the detailed design layout for M621 Junction 2 improvement as shown on drawing numbers HE551464-BWB-HGN-04-DR-CH-0100 and HE551464-BWB-HGN-05-DR-CH-0100 in Appendix 2.

b) Approve the preferred preliminary design layout for Elland Road/Cemetery Road junction as shown on drawing number HE551464-BWB-HGN-XX-SK-C-SK032 in Appendix 3 to allow detailed design to progress

c) Give authority to negotiate the terms of and enter into an agreement with National Highways under Section 4 and Section 8 of Highways Act 1980 to permit them to undertake construction activities on the local road network and LCC to maintain and operate the traffic signals at M621 Junction 2.

What is this report about?

1 National Highways (NH) is promoting and funding a Road Investment Strategy (RIS) scheme along the M621 between Junctions 1 and Junction 7. Work on Junction 7 has completed to coincide with the opening of Stourton Park and Ride and construction of the next phase (junction 1-6) commenced on 20th June 2022. Scheme map provided in Appendix 1.

2 The project aims to improve journey times, network resilience, driver information and safety, by the rationalisation of junction layouts and implementation of technology on the M621 mainline and key junctions along its length. These improvements will reduce the collision risk on the network, enable quicker response to incidents, and the increase in capacity will reduce congestion and improve journey time reliability

3 While the M621 is managed by NH, the project will also deliver improvement works on the Leeds City Council highways assets at Junction 2 (A643 Ingram Distributor/Elland Road) and at Cemetery Road/Elland Road in the vicinity of Junction 2a. Approval of the preliminary design and design principles for these works was obtained from Chief Officer (Highways and Transportation) on 19th May 2020.

4 Following joint design development with LCC's and NH's appointed technical leads, this report now seeks formal approval for the detailed and preliminary designs of Junction 2 and Cemetery Road/Elland Road junction respectively, and request authority to negotiate the terms of and enter into an agreement with NH under section 4 and section 8 of the Highways Act 1980 to permit NH's delivery partner, Keltbray, to commence construction on the local road network in October 2022 and LCC to maintain and operate the traffic signals at M621 Junction 2.

What impact will this proposal have?

<u>Revised Junction Layouts</u>
<u>Junction 2 Roundabout</u>

5 An EDCI screening assessment has been undertaken on the scheme proposals and it is provided in Appendix 2.

6 A Walking, Cycling, Horse-riding Assessment and Review (WCHAR) has been undertaken in accordance with GG 142.

7 The improvement works at Junction 2 seek to address AM and PM peak congestion queuing on both the M621 mainline and A643 Ingram Distributor, facilitate smoother interface between the Strategic and Local Road Networks and improve safety at the junction, reducing instances of low-speed collisions.

8 This will be achieved through widening of the roundabout circulatory to create an additional running lane between M621 clockwise on- and off-slips and two additional running lanes between the M621 counter-clockwise on- and off-slips as shown on drawing number HE551464-BWB-HGN-04-DR-CH-0100 in Appendix 3. These changes will accommodate free flow running between the M621 and A643 Ingram Distributor northbound and the A643 Elland Road and M621.

9 The upgrade of the existing traffic signal equipment and introduction of adaptive operation technologies will provide greater control over the timings of the junctions allowing UTMC to react quickly to incidents or adverse queuing.

10 While the widened carriageway will result in an overall increase in non-permeable surface, this will be offset through the installation of a buried water attenuation system designed to hold and store surface water.
11 Signing and lining changes at the junction and on the M621 mainline have been designed to complement the network changes delivered by Connecting Leeds (LPTIP) and the City Centre Package and fulfil the Leeds's wider strategic objectives.
12 Formal pedestrian crossing facilities are removed from the M621 Junction 2 and users are diverted via Lowfields Road and Lowfields Avenue.

Cemetery Road/Elland Road

13 The proposed M621 Junction 1 to 7 Improvement work put forward by NH necessitates the closure of the Junction 2a off-slip in Hunslet. This is to improve safety on the M621 mainline and simplify the counter-clockwise carriageway layout between Junctions 3 and 2.
14 The closure of this slip-road will result in the displacement of traffic to Junction 2 and onto Elland Road. To minimise the impact of this displacement, the widening and signalisation of Cemetery Road/Elland Road junction is required with the revised preliminary design layout shown on drawing number HE551464-BWB-HGN-XX-SK-C-SK032 in Appendix 4.
15 These proposed amendments include localised carriageway widening to accommodate additional left and right turn lanes on Elland Road and a right turn lane on Cemetery Road. Traffic signals and pedestrian crossing facilities will also be installed at this junction to improve traffic moment and provide safe, controlled crossing points for pedestrians and cyclists on all arms of the junction.
16 The amended kerbline on Cemetery Road between Junction 2a on-slip and Elland Road will be facilitated through the resiting of an existing bus shelter to the back of the revised footway. This proposal has been developed with input from the West Yorkshire Combined Authority.

Construction Phase

17 During the construction works, it is expected that the carriageway widening works will be carried out offline, behind safety barriers. The working space has been afforded through the temporary acquisition of land and through the installation of narrow running lanes on the roundabout circulatory.
18 These arrangements will be in place from October 2022 and traffic will be monitored throughout.
19 It is expected that some works including carriageway resurfacing will require overnight or weekend closures and these will be agreed and managed with the Network Management team at an appropriate time prior to these activities taking place.
20 With the level of construction activities active on the network throughout 2022 and 2023, regular collaborative coordination meetings will be held between NH and LCC works promotors and Network Management teams. This is in addition to regular comms planning meetings between Connecting Leeds and National Highways Comms teams.
21 Junction 2 forms a key route for Leeds Park and Ride services operating from the Elland Road Park and Ride site. NH have committed to working with the West Yorkshire Combined Authority and the Park and Ride operator to minimise and manage disruption and delays to services throughout construction.

Future Maintenance

22 The works undertaken by NH at Junction 2 will result in the future maintenance requirement for new highways assets by LCC. These include upgraded traffic signal units, ancillary traffic detection and monitoring equipment associated with the traffic signals, additional areas of hard (carriageway and footway surfacing) and soft (embankment, grassed verge) landscaping, additional drainage connections and pipework and buried water attenuation units. A complete schedule of these items will be included in the Section 4/8 agreements.

How does this proposal impact the three pillars of the Best City Ambition?

☒ Health and Wellbeing ☒ Inclusive Growth ☒ Zero Carbon

Health and Wellbeing

23 The M621 J1-7 Improvement scheme seeks to work alongside Leeds City Council and WYCA investment programmes and initiatives to deliver improvements in air quality through the reduction of local congestion and the increase of public transport patronage and improved journeys. It seeks to deliver renewed and reliable infrastructure, reducing future maintenance needs and the congestions associated with these kinds of works.

24 By improving congestion and facilitating the redistribution of traffic onto the strategic road network, the scheme assists in delivering an overall reduction in through traffic within the city centre, City Square and the train station. This will open up areas for landscaping to offset carbon levels and enhance air quality. Further to this, it provides greater opportunities for the continuation of cycling infrastructure, provide enhanced connectivity between the centre and the wider metropolitan area.

25 Through the use of technology, the programme is able to support the delivery of a modern, adaptive city and assist with the delivery of "Smart City" enhancements, adaptive to future needs and facilitating smoother traffic movements.

Inclusive Growth

26 The M621 J1-7 Improvement scheme supports LCC's City Centre Package (LCCP) ambition to regenerate dated highway infrastructure within the city and refresh of key public spaces within the city centre core.

27 LCCP will create an internationally recognisable and vibrant city, desirable to visitors and residents and the creation of new landmark sites will entice day tourism to the city.

28 The programme seeks to unlock areas for business and housing development through stronger, more reliable, transport links which will entice new investment into the city and facilitate business rate growth. Alongside this, enhancements to existing junctions and the public realm will facilitate safe and easy access around both the inner and outer city centre areas.

29 Working closely with design and delivery partners will allow Leeds City Council to boost the local economy through social investment and a locally sourced workforce.

30 Removal of unnecessary traffic from the city centre and making better use of existing strategic/main roads will help to achieve inclusive growth.

31 The NH are also working with HMP Leeds, HMP Whealstun and HMP New Hall to plan events and promote opportunities in the construction industry. As supply chain partners are appointed, discussions are also taking place to understand opportunities for wider social value and community legacy. Applications are also being made to National Highways' designated fundsing packages for further community enhancement and legacy opportunities.

Zero Carbon

32 Through a range of co-produced and collaborative strategies, the city is making major progress in the delivery of people centric infrastructure and public spaces across the city centre. This strategy focusses on providing high quality spaces in between buildings which meet the needs of people first, to improve connectivity to and from surrounding neighbourhoods, help tackle the climate emergency, improve air quality and to foster enjoyment community, innovation and collaboration – all whilst ensuring there is sufficient resilience within the highway network and promoting sustainable transport modes.

33 The closure of City Square to through traffic as part of CCP – enabled by re-routeing the Loop Road – supports creation of a world class public space and arrival gateway for the city centre. This was intended to address significant noise and air quality issues caused by traffic using Neville Street and passing through City Square, a route which is presently designed to accommodate significant traffic flows, some of which has easy access straight off the motorway and is going to destinations beyond the city centre. More than 1,800 vehicles an hour pass through City Square at peak times. Air quality monitoring in the 'dark arches' on Neville Street has indicated that it has been amongst the top 10 most polluted streets in the country, a problem exacerbated because it is a very busy walking route connecting the South Bank with the station and retail core, leading to large numbers of people having to endure poor air quality. The road layout and traffic volumes also sever the main station entrances from the city centre and create an unwelcoming arrival experience.

34 As future growth occurs, and pedestrian flows and travel demand increases, the air quality, noise and severance issues would get worse without action.

35 An assessment for the M621 scheme of climate effects was undertaken as part of the Environmental Statement and determined that the project would likely contribute a total of 106,885 tCO2e emissions over the life of the project when compared to the Do Minimum Scenario. This consists of 14,073 tCO2e during the construction phase and 92,812 tCO2e over a 60-year operational life.

36 A programme of essential and embedded mitigation has been developed to reduce or prevent greenhouse gas emissions during construction and operation. These measures include the following commitments from the Contractor:

- Reduce waste diverted from landfill by 95%;
- Reduce the primary material use by a minimum of 31% through the use of recycled materials;
- Seek opportunities for the local procurement of materials and labour (60% from within 20 miles of the site)
- Seek opportunities to utilise low-energy lighting and traffic management systems and electric/hybrid plant and vehicles.
- Explore renewable energy sources for on-site activities.

What consultation and engagement has taken place?

Wards affected: Beeston and Holbeck, Hunslet and Riverside		
Have ward members been consulted?	☒ Yes	☐ No

Internal

37 Briefings have been held with the Executive Member for Infrastructure and Climate and key Ward Members across Leeds, including Hunslet and Riverside, and Beeston and Holbeck. NH provided a written update on scheme progress and offered briefing calls to all Leeds Ward Members. Briefings were also provided to Ward members for Adel and Wharfedale, Alwoodley, Cross Gates and Whinmoor, Kirkstall, and Middleton Park.

38 Monthly design workshops were held with Highways and Transportation technical lead throughout the development of the detailed design proposals at Junction 2 with representation from Traffic Management, Maintenance, UTMC, Flood Risk Management, Transport Strategy, Transport Policy and Bridges.

39 Further to these meetings, NH's appointed design specialists have been liaising with LCC technical teams to understand and resolve outstanding comments in relation to the design layout and proposed infrastructure changes to achieve the approved layout.

40 Input has also been sought from LCC's Active Travel and Accessibility teams to ensure that Walks, Cyclists and Horse Riders (WCHR) and disability groups needs have been met by the proposed design. This engagement will continue throughout the design of Junction 2a and the construction phase.

41 LCC's Network Management and Events Teams have been actively consulted throughout to plan and manage the coordination of works on the network and minimise disruption. Target meetings are to be held to discuss and agree traffic management proposals around Junction 2 in advance of works starting in October 2022. Network Management and LCC Events continue to input into NH's delivery programme as events are agreed and information becomes available.

42 Regular liaison meetings will be held with representatives from other nearby schemes including the likes of Armley Gyratory and Leeds Station Gateway to ensure co-ordination with the ongoing works especially in relation to traffic management.

External

43 Further to the public consultation summary submitted with the report in May 2020 (see Appendix 5) and in addition to progressing project governance, NH have been proactively engaging with members of the public to understand the needs of the customers using the M621 and the associated junctions.

44 Throughout June 2022, Leeds City Council supported NH's community engagement and assisted the deployment of the NH engagement van at various locations along the M621 corridor, including events at Dortmund Square, Elland Road Park and Ride, Stourton Park and Ride and at Crown Point retail park. A total of 140 people visited the van during this time with largely positive responses to the scheme's objectives. Leaflets containing QR code links to NH's project website were also passed to many of the commuters at the park and ride sites in order to capture as many comments as possible. Common themes included support for the scheme's objective to tackle peak time congestion issues, concerns over noise during construction, clarity around traffic management as well as some concern about the impact on residents at Junctions 5 and 7 all of which were addressed by the team on site or via email correspondence.

45 The responses had no negative impact on the proposed scheme and were addressed by the team on site or via email correspondence. Mitigation measures put in place include daytime working where possible and undertaking disruptive activities offline or out of hours to limit impact on peak traffic flows.

46 3651 letters were sent out to members of the public advising of these events and a joint press release between NH and LCC was issued to provide an update on the project and to promote the events.

47 In August 2022, a further press release was issued to advise residents of the start of works. This press release was supported by a similar letter drop to residents, which also provided details of the scheme's launch of the virtual engagement room (an online tool used to simulate public information events). 3651 people received this letter, with 630 people visiting the virtual hall to date. Online chat and telephone surgery sessions focusing on the proposals at Junctions 2 and 2A were held on the week commencing 1st August 2022 and residents were largely receptive to the proposals.

48 NH and Keltbray have also attended the Hunslet Carr Residents Association meeting and are looking to follow this up with attendance at their next meeting in September.

49 Prior to start of works, the NH team have also met with Leeds United Football to discuss the best ways to minimise impacts from the large scope of works in this area. Ongoing engagement and collaborative working opportunities are being sought with the West Yorkshire Police and Elland Road with access provided to NH's satellite compound for mounted police units for all home match days.

50 Moving forward, the team are planning four face-to-face engagement sessions at Hillside Enterprise Centre in Holbeck targeted towards local residents around the direct impact of the Junction 2a closure where there will be an opportunity to comment on the signalisation proposals for Elland Road / Cemetery Road, with comments to be taken account of in the detailed design stage.

What are the resource implications?

51 The project is wholly funded by NH from the Road Investment Strategy (RIS) 2 programme. Designed and construction will be undertaken by Keltbray on behalf of NH.

What are the key risks and how are they being managed?

Coordination with other major road works

52 The works proposed on the M621 are programmed to be constructed between June 2022 and July 2024. These dates coincide with other large infrastructure projects within the wider city centre area including Armley Gyratory, Bishopgate Street, City Square and Crown Point Road.

53 To minimise disruption and delay on the network, it is essential that construction related activities across all packages of work are delivered using appropriate traffic management and in a coordinated way.

54 To mitigate this risk, a monthly workshop is held between LCC's Network Management Team and NH to discuss proposed works and traffic management and coordinate activities and comms between the key works promotors.

55 To ensure a coordinated approach is taken to address network incidents, LCC and NH are committed to developing an incident management plan across the active major projects around the city centre.

56 All NH works on the network will be carried out under a section 4 agreement and clashes with other works will be managed through the roadspace booking permit scheme.

Shallow mine workings

57 The presence of shallow mine workings has been identified at Junction 2 within the vicinity of existing highways infrastructure.

58 While it is expected that the amended layout of the roundabout will not impact on these mining assets, provision has been made in the works budget to carry out extensive surveying to identify the location of the workings and a further allowance has been made in the risk budget to undertake grouting and ground stabilisation should these interventions prove necessary.

What are the legal implications?

59 National Highways as Highway Authortity for the strategic road network will deliver the M621 improvement project using the powers contained within the Highways Act 1980. The project received a single objection in December 2019. This resulted in a scheduled Public Inquiry due to be held in November 2020. In October 2020, the Department for Transport confirmed that the Public Inquiry would be removed following the withdrawal of the objection.

60 As construction will be undertaken by NH's delivery partners on LCC's highways assets, it will be necessary for LCC and NH to enter into an agreement under Section 4 and 8 of the

Highways Act 1980. This report seeks authorisation to enter into this agreement. This agreement will require NH to bear the costs of their improvements and indemnify the council against specified claims arising from the execution of said improvements.

61 This decision is not a Key Decision according to 13.4.2.c of Article 13 given the previous decision taken on the report dated 19 May 2020.

Options, timescales and measuring success

What other options were considered?

M621 Junction 2

62 The works at the junction 2 roundabout did not form part of the initial preferred route announcement for the M621 improvements and no proposal was put forward for initial inclusion.

63 During the development of the LCCP, LCC and NH modelling both determined that the proposed changes across the wider network necessitated intervention at this junction to mitigate displaced city centre traffic and realise the wider objectives of the LCCP and RIS.

Cemetery Road/Elland Road

64 The works at Cemetery Road/Elland Road junction were identified as mitigation for the closure of the M621 Junction 2a off-slip and the resulting displaced traffic at Junction 2.

65 Two revised layout options were initially developed. However, both layouts had comparable operational benefits with one (option 2) able to achieve these without displacing existing bus stops around the junction. The preferred option includes signalised pedestrian crossings on all three arms, operated during an all-red stage. Although the modelling shows a slightly worse performance overall with this option (modelled using future year forecast flows), the benefit from including all the crossings – especially next to the inbound bus stop – have been considered to outweigh the slightly better efficiency of option 1.

66 A workshop was held between LCC and NH officers on 22nd August 2022 to discuss the preliminary design presented in Appendix 3. Attendees agreed that the design was suitable for sign-off at this stage noting that there are several aspects which will be reviewed at the detailed design stage, namely: a) as the lane widths on Cemetery Road are about 3.0m north of Elland Road, whether some localised widening can be included on the eastern side, perhaps about 0.5m, to enable widths above 3.0m and reduce issues with bus wing mirrors being struck on this busy bus route; b) removal of guardrailing except for retention of several panels where the footpath meets the footway near the existing crossing on the east side of Cemetery Road; c) look to remove the proposed secondary nearside signal head on Elland Road or move equipment to enable the high-mast lighting column to be maintained; d) widen the proposed crossings from 3.6m to 4.0m to facilitate any future conversion to toucans; and e) details on gullies along Elland Road and fence line across J2a slip to be determined at detailed design. Also for clarity the drawing labels will need amending to reflect that the pedestrian crossings are signal controlled on all three arms of the junction.

How will success be measured?

67 Resilience - the increase in capacity will lead to a reduction in accidents, improvements in journey times and reliability. The provision of technology will improve the resilience of the network when incidents occur.

68 Journey Times - providing additional capacity will reduce journey times and provide a smoother flow of traffic. In conjunction with the LCCP proposals, the project will help remove strategic traffic from the local road network.

69 Safety - The provision of additional capacity and improved driver information will reduce the number of shunt type accidents. The proposed rationalisation of junction layouts and closure of J2a will reduce the collision risk on the network. The technology proposals for the project will also help improve safety performance

70 Improving user satisfaction - the project will improve the customer experience by adding new technology to smooth the flow of traffic. Increasing capacity will improve journey time reliability, decrease traffic congestion, and will enhance the overall journey quality.

71 Economic growth and development - the additional capacity will reduce both existing and future congestion, and, as a result, will reduce journey times. In addition, increasing the capacity of the M621 will support LCC's proposals for the city centre, which includes planned housing and job creation in the area. Junction 7 works were delivered early to help facilitate these proposals.

What is the timetable and who will be responsible for implementation?

72 Construction of mainline M621 works commenced on 20th June 2022

73 Construction of M621 Junction 2 works will commence in October 2022

74 Construction of Cemetery Road/Elland Road to commence in April 2023, following acceptance of the detailed design in Jan 2023

75 Completion of all works will be July 2024

76 National Highways will be responsible for implementation, whilst the Chief Officer Highways and Transportation will be responsible for ensuring LCC's requirements are reflected in the Section 4 and 8 agreements required by NH for works on the LCC highway network.

Appendices

77 Appendix 1 – Scheme Map
78 Appendix 2 – EDCI Screening
79 Appendix 3 – M621 Junction 2 Proposed Revised Layout Drawings
80 Appendix 4 – Cemetery Road/Elland Road Preliminary General Arrangement Drawing
81 Appendix 5 – Public Consultation Feedback September/October 2017 (From original Chief Officer Approval May 2020)

Background papers

82 None.