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Report of Chief Officer, Highways and Transportation

Report to Director of City Development

Date: 31st January 2019

Subject: DEPUTATION TO COUNCIL REGARDING A660 CORRIDOR SCHEME PROPOSALS AND LAWNSWOOD JUNCTION

Are specific electoral wards affected? If yes, name(s) of ward(s): Adel & Wharfedale, and Weetwood Wards	☒ Yes	☐ No
Are there implications for equality and diversity and cohesion and integration?	☐ Yes	☒ No
Is the decision eligible for call-in?	☐ Yes	☒ No
Does the report contain confidential or exempt information? If relevant, access to information procedure rule number: Appendix number:	☐ Yes	☒ No

Summary of main issues

1. This report addresses the Deputation received at the Full Council meeting held on 12th September 2018 from the West Park Residents who raised concerns about initial scheme proposals for the A660 and their impact on the local area, and particularly the proposed changes to the A660/A6120 Lawnswood Roundabout.
2. Specific issues raised by the Deputation were:
    a. Concern for additional delays, congestion, pollution and increased risk of traffic collisions at Lawnswood roundabout and other junctions along Otley Road;
    b. No proposals for a traffic-light controlled roundabout;
    c. Changes along the A660 bus corridor;
    d. Release of data and simulation models uses to support the scheme.
3. In July 2018 the Executive Board granted further approval to the progression of key elements in the £173.5 million package of proposals for investing in the public transport network as part of the Connecting Leeds Programme. This package features new and enhanced Park & Ride services, and authorised further work on the integrated bus measures along five key bus corridors and modernised transport hubs across the city previously identified when the programme was first approved.

4. The proposals for Lawnswood form part of a wider plan to double bus patronage by delivering quicker and more reliable bus journeys along the A660. Elsewhere on the A6120 improvements including East Leeds Orbital Road (ELOR) and other junction sites are being progressed as part of the longer term strategy for the Outer Ring Road.
5. It is recognised that the Deputation has raised a number of issues arising from the engagement process for the Lawnswood proposals and this report covers these in the context of the measures proposed, which are intended to tackle both bus priority and wider mobility and road safety issues.

Recommendations

6 The Director of City Development is requested to:

i) Note the contents of the report in response to the Deputation of 12 September 2018;

ii) Endorse the actions identified in section 5.4 of the report as part of the ongoing process for developing the proposals in the elements of the Leeds Public Transport investment Programme pertaining to this report;

iii) Receive further progress reports as the work progresses;

iv) Approve that this report be published and the Deputees be notified accordingly.

1. Purpose of this report

1.1 This report responds to the Deputation from the residents of West Park in North Leeds received at the Full Council meeting on 12th September 2018 pertaining to proposals for the A6120/A660 Lawnswood junction and the Connecting Leeds scheme for the A660.

2. Background information

2.1 The Connecting Leeds investment programme which includes the £173.5 million Leeds Public Transport Investment Programme (LPTIP) provides the first local cross cutting national investment in public transport in Leeds for several decades. It sits alongside the £1bn West Yorkshire Transport Fund which is funding a series of major infrastructure interventions for the city.

2.2 Working with other partners, including the West Yorkshire Combined Authority, Network Rail, bus operators and key businesses, LPTIP provides a comprehensive package of interventions which are being progressed with the primary aims of doubling bus patronage within 10 years and increasing rail travel opportunities.

2.3 The LPTIP, consisting of around £270m investment in total from the DfT, LCC, Combined Authority, bus operator investments and developer contributions will deliver significant investment in public transport by 2021. First Bus have already introduced over 90 of the latest high quality, clean buses into the fleet, with a further 200 planned as part of their £71 million investment during 2019 and thereafter. Similarly Arriva have invested in 37 similar buses with further plans in due course.

2.4 Delivery of the Connecting Leeds Vision plays a crucial role in tackling air quality in the City. Executive Board has recently approved a scheme for a Clean Air Zone which has been endorsed and funded by DEFRA, which is complemented by the proposals. Changing vehicle technology and travel mode choices will help tackle the congestion and health challenges in a sustainable, equitable and complementary manner.

3. Main issues

3.1 This section of the report addresses the range of issues that have been covered by the Deputation including the draft proposals for the Lawnswood junction and other matters relating to the wider A660 corridor. It is also recognised that at this time the scope of detailed proposals for the entire corridor is yet to be fully consulted upon.

Benefits

3.2 The Lawnswood Junction Improvement Scheme is planned to deliver the following key benefits:

- Improved road safety, particularly for cyclists and pedestrians, helping encourage sustainable and active travel. This junction is ranked second on the Leeds City Council's current 'Sites for Concern' report, with 30 collisions and accidents recorded between 2013 and 2017.
- More reliable bus services through the Lawnswood junction. Evidence suggests bus journey times can range up to 8 minutes along a distance of 700m and this is expected to get worse in the future.

- Quicker bus journeys, particularly in future years when traffic levels are anticipated to grow. The proposed scheme will reduce journey times southbound towards the city centre during the morning peak period by 4 minutes (in comparison to a 'do nothing' scenario in opening year).
- Reduced congestion and improved general traffic flow. Over 60,000 vehicles use the junction each day. This scheme is forecast to deliver average journey time savings of circa 1.5 minutes during the morning peak period initially which could extend to circa 3 minutes in the long term. During the evening peak period savings of up to 4 minutes for certain movements are anticipated in the short to medium term (compared to the 'do nothing scenario).
- Contribution to the development of a more resilient highway network which can be managed intelligently and efficiently. This schema will complement the recent introduction of signal controls at several other Outer Ring Road junctions. It will also complement proposed schemes at Fink Hill (Horsforth) and King Lane (Moor Allerton), as well as the scheme currently under construction at the A61 Harrogate Road (Moortown).

Road safety

3.3 The scheme has been designed with full regard to the road collision and injury data held by the Council and West Yorkshire Police and applying current guidance and standards. If the scheme is to progress it will be subject to a full road safety audit in accordance with nationally established guidelines with consequent reviews and modifications where deemed necessary prior to construction. Lawnswood junction is number 2 on the Council's Sites for Concern list with 30 road injury collisions recorded over a 5 year period. Fourteen of these recorded collisions involved cyclists, notwithstanding that cyclists represent less than 1% of traffic using the junction.

Pedestrian Crossings

3.4 The scheme will deliver five new signal controlled toucan crossings on Otley Road, three on the Outer Ring Road and one on Otley Old Road (nine in total). Each of these will make walking and travelling by mobility scooter in the area easier and safer. The crossings will also improve access to bus stops and encourage bus use. Dropped kerbs will be included at all crossing points to make them accessible for wheelchair and mobility scooter users, with tactile paving to assist people with visual impairments. Footways will be provided throughout the scheme with a minimum width of 2m.

3.5 In order to maximise the efficiency of the road network, the crossings are staged meaning pedestrians/mobility scooter users will need to wait for a few moments on a pedestrian refuge island whilst they wait for signals to stop another traffic approach, to give them priority. Although more direct crossings might appear to be beneficial to pedestrians, the staggered crossings are the most effective way of balancing junction performance and road safety.

3.6 Importantly, the scheme will seek to address road safety concerns at this location. The Lawnswood junction is the second highest road collision site for concern in the Leeds district. The proposed scheme will improve road safety and reduce traffic severance by providing formal controlled crossings covering all legs of the junction.

In order to maximise the efficiency of the road network, the crossings will be integrated into the traffic signal timings which will be optimised to minimise delays to their journeys. Although more direct crossings might appear to be beneficial to pedestrians, the staggered crossings are the most effective way of balancing junction performance and road safety. Overall journeys for many users should be easier with controlled facilities on all legs rather than the singe offset crossing currently provided on Otley Road.

Grass Verges

3.7 The exact amount of grass verge and grassed central reserve to be impacted by the scheme will not be known until we reach detailed design stage. However, the current design will mean some grass verges and grassed central reservations are reduced in width. Wherever possible, verge loss has been minimised to recognise the visual amenity this provides for the local areas. Any verges that are retained are required to avoid falling below a minimum width to ensure they can be maintained in good condition.

3.8 Whilst conversion of the roundabout will involve the loss of the central island, the design team are exploring ways to introduce new landscaping features as part of the junction design, including opportunities for landscaping and seasonal bulb planting in the islands created by the various left turn slip roads.

3.9 In order to deliver protected cycle tracks and a new bus lane along Otley Road between Lawnswood Cemetery and the junction, the grassed central reservation will be narrowed. At present, the central reservation maintains a width of between 8.5m and 11m. If the scheme is delivered as proposed, it will maintain a central reservation width of between 6.8m and 10.5m. It is proposed new trees and other greenery are planted along the central reservation to further enhance the visual appeal of the corridor.

Right turn into Lawnswood School

3.10 A new priority right turn into the Lawnswood School site is proposed before drivers reach the new junction. Whilst it is not proposed for this right turn to be signalised, drivers will be able to take advantage of gaps in the traffic created when the signals change at the main junction.

Traffic using the surrounding side streets

3.11 At most times, journey times on the main road network will be quicker than use of other routes which are primarily residential in character, thereby reducing the risk of rat-running occurring. The efficient optimisation of traffic signal timings in real time, taking account of route priority, will also help encourage drivers to stay on the main road.

Comparison with the A6120 scheme at A61 Harrogate Road Junction (Moortown)

3.12 In considering the design proposed at Lawnswood with that Moortown, there are a number of significant differences between traffic flows at the two junctions, with higher total flows (14% higher), higher right turn movements (30% higher) and greater flow variability observed at Lawnswood compared to Harrogate Road.

3.13 Despite extensive investigation into potential design permutations, it has not been possible to identify a suitably effective traffic signal controlled roundabout arrangement capable of accounting for the following factors specific to Lawnswood:

- The observed traffic volumes (including variability of traffic);
- The constraints on available space;
- The need to accommodate right turning traffic queues on the internal links of a roundabout;
- The requirement to accommodate safe crossings for pedestrians and cycles; and
- The need for traffic signal layouts that would be safe in operation.

3.14 These differences have contributed to different conclusions about the most appropriate junction form to provide in the two locations.

Comparison of alternative signal crossroad v signal roundabout options

3.15 Various options for a signalised roundabout have been assessed as part of the design development process. However, this has shown a signalised roundabout in this location would operate less effectively than both a signalised crossing option and the current junction layout for the following reasons:

Land Availability

- In order for a signalised roundabout to be most effective, it is desirable to have a sufficiently large and circular island to enable traffic signals to be installed on the circulatory area at each point of entry onto the roundabout. In this way, right turning traffic can be 'stored' at stop lines around the circulatory area to increase efficiency and minimise the impact on other movements being made at the junction.
- The diameter of the current roundabout and its irregular oval shape is only able to accommodate two internal stop lines on the circulatory area (for right turning movements from Otley Road onto the Outer Ring Road). Increasing the size of the roundabout in order to introduce additional internal stop lines (for right turning movements from the Outer Ring Road onto Otley Road) is not feasible in this location without acquisition of adjacent properties and /or significant impacts on surrounding trees.
- This constraint influences the characteristics and efficiency of a signalised roundabout that could be introduced in this location. Further testing was however undertaken to compare its performance with both the current situation and a signalised crossroads.

Junction operation

- Both scheme options have been tested using TRANSYT traffic modelling software. TRANSYT is a conventional local junction model specifically used in traffic signal design. It uses average traffic flows (surveyed in 2017) across the peak hour and fixed traffic signal timings to provide a

representation of traffic conditions. Toucan (pedestrian and cycle crossings) were modelled in both layouts, to reflect constraints on junction operation.

- The outputs of this initial modelling exercise showed the signal controlled crossroads to offer more operational flexibility due to its ability to give longer 'green times' to accommodate demand, and to vary the sequence of lights and 'green times' according to demand on the approaches and capacity on the exits. This results from having dedicated lanes for most turning movements, enabling each movement to be controlled independently.
- Due to the large number of right turns made at the junction (20% of total demand) and the resulting internal queues on the roundabout which might block other movements, a signal controlled roundabout at Lawnswood would need to operate with a shorter traffic signal cycle time (around 60 seconds) for both safety and operational reasons. This reduces the effective capacity of the roundabout to the extent that TRANSYT predicts delays would be worse than in the current situation.
- Given the variability in current demand observed at the junction during the peak period, a microsimulation model of the signalised roundabout was also developed using VISSIM software which provides an additional simulation tool that allows a greater understanding of the significance of these operational constraints when applied in conjunction with the traffic signal design tool.
- Testing, using the VISSIM model, confirmed queues on the roundabout would block traffic on other movements far more regularly than would be expected based on the average conditions initially modelled in TRANSYT. This would need to be managed for safety and operational reasons by reducing 'green time' at all points of entry onto the roundabout, resulting in increases in overall delay compared to the existing situation. Since it is only possible to vary the 'green time' for each entry onto the roundabout as a whole, regardless of the movement being made, ahead and left turn movements would be delayed as a result of the need to limit the number of right turning vehicles entering the junction.
- Without bus lanes, the issues associated with the signalised roundabout would result in increased delay for buses. With bus lanes, the queue of general traffic from the signalised roundabout is forecast by VISSIM to exceed the length of two lane approach available, resulting in long delays for general traffic and significant delay for buses at peak times as they would be unable to reach the start of the bus lane.

<u>Pedestrian and cycle crossing implications</u>

3.16 Crossing facilities for pedestrians and cyclists on each exit from the signalised roundabout would need to be located further away from the main pedestrian desire lines close to the junction in order to provide sufficient space in which to safely stop traffic when the crossings are in use.

3.17 This would be less convenient for pedestrians and cyclists as they would be required to take an indirect route in order to cross the roundabout approaches. Even allowing for more remote crossing locations, modelling work has shown traffic queues at signalised crossings would on occasion extend back to the roundabout itself, further reducing capacity and presenting a safety risk.

Changes proposed elsewhere: Shaw Lane and St Anne's Road junction

3.18 Further proposals are in development following the initial engagement for other locations along the Adel to Leeds route which aim to reduce the impact of issues in central Headingley and other problem locations, particularly the detrimental effect they have on buses. The proposals for the Lawnswood junction will complement improvements these plans but are not dependent on them being delivered.

3.19 The initial public engagement held during June to August 2018 presented potential concepts to address these issues and the trade-offs associated with making any changes. The feedback received is being used to refine and further develop the proposed, which are likely to include:

- New bus lanes and bus gates, to help deliver improved bus journey times and service reliability;
- Revised parking and loading arrangements, to help improve traffic flow;
- Improved bus stop facilities, to enhance the experience of travelling by bus and reduce conflicts with other vehicles at bus stops; and
- Improved access to bus stops for pedestrians.

3.20 Whilst inbound bus journeys beyond Lawnswood are impacted by other issues at certain times, the presence of an existing bus lane from Weetwood Hall to Shaw Lane ensure buses are largely protected from traffic delays in the morning peak period once they get passed the Lawnswood Roundabout.

3.21 The city's strategy for dealing with congestion on key routes into the city centre, where only limited amounts of road space exist, is to encourage greater use of public transport amongst those for whom travel by bus offers a viable option.

3.22 Approximately 54,000 people are estimated to live within walking distance of bus services using the Adel to Leeds route. One in four workers who live on the route commute to Leeds City Centre and could therefore potentially travel by bus. However, at present only around one-fifth of these workers are bus users.

Aesthetic impact of the scheme:

3.23 The consultation materials explained where changes were proposed and why they were required. Detail analysis of traffic flows and the issues all road users face at this location has been used to justify the changes and the road widening, wider footways and cycle tracks/lanes associated with it.

3.24 Having recognised this impact, the Council have developed plans to plant a significant number of new trees as part of the proposals. The exact number of trees to be planted will not be known until detailed design work is complete. The aim is to plant at least 3 trees for every tree removed and where practicable to plant semi mature trees. Further detailed work is needed to reach precise numbers, but this early work indicates an ample opportunity to deliver a significant uplift in greenery. We would welcome any opportunity to work with the local community to further refine the proposals for tree planting where appropriate and productive. Particular attention will be given to the immediate vicinity of the roundabout where change will be most significant.

3.25 It is noted that the community publicity has indicated 49 trees may be removed, however this is not the estimate that has been used in the engagement which quoted an estimate of 17 trees for removal and a further 20 requiring management but not removal. The project team are working on this and no final numbers have been provided at the moment for either removals or the replacement planting. The overall approach will be to minimise tree loss wherever possible.

3.26 Our initial designs (first published in June 2018) identified 11 trees for removal and a further 20 at risk. The increase in the number of trees to be removed came as a result of the need to address concerns raised by The University of Leeds and the Weetwood Hall Estate in relation to access to their site from Otley Road.

Justification of the scheme

3.27 The objectives of the Lawnswood junction improvement scheme do not all relate to traffic and congestion. The proposal for the junction form part of a wider plan for the Adel to Leeds route which seeks to deliver against the following objectives:

- To improve end-to-end journey times for buses;
- To improve punctuality by reducing journey time variability;
- To improve quality of bus passenger experience and levels of satisfaction;
- To improve access to employment and training via public transport;
- To enhance streetscapes, the built environment and provide 'greener' routes;
- To improve network safety for all users;
- To improve facilities for cyclists and pedestrians, including access to bus stops; and
- To reduce NOx levels on key public transport corridors.
- To reduce the number of accidents on the roundabout, particularly cycling casualties. The junction currently has the 2nd worst accident record in Leeds.

3.28 Many of the issues observed at the junction occur throughout the day and not just during peak periods (such as cycle and pedestrian safety). Although traffic congestion is worst during peak periods evidence suggests as traffic volumes grow and the existing junction approaches and reaches full capacity this period will extend (starting earlier and finishing later).

3.29 Detailed modelling has been undertaken based on the latest designs and this indicates the scheme will offer significant benefits to bus users.

Access to properties on the Outer Ring Road and grass verges

3.30 Following the public engagement, the proposals have been amended to retain the verges and omit the shared pedestrian and cycle facilities. This element remains work in progress and may be subject to change. This modification has been suggested in response to the concerns raised by residents and other stakeholders.

Request for data and evidence

3.31 The designs are still work in progress and have evolved several times in the past few months as a result of feedback. In response to requests, data including outputs from the traffic modelling software packages and junction layouts has been shared with residents. Further information will be published as the work progresses.

3.32 Relevant data and background information report will be published alongside this report on the Connecting Leeds website and associated links to the Leeds City Council website.

4. Corporate considerations

4.1 Consultation and engagement

4.1.1 No specific public consultation has taken place as a result of this report other than local discussions with a group representing residents in the immediate vicinity of the Lawnswood junction site. The timing of further consultations and engagement will align with work programmes as they evolve over 2019.

4.1.2 Since that time, the transport conversation was initiated engagement has been planned in accordance with progress and development of the programme and communications plan, with input of a bi-monthly Cross Party meeting of elected Members chaired by Chair of WYCA Transport Committee which has had early sighting and involvement of the schemes as they progress.

4.1.3 Since the first phases of project engagement where inaugurated In February 2018 there have been over 30,000 leaflets and flyers distributed and 7,000 visits to the Commonplace website with over 4,000 contributions. Engagement has also taken place with key city stakeholders and groups.

4.2 Equality and diversity / cohesion and integration

4.2.1 No EDCI has been prepared with regards to this report as it contains no proposals. However, an EDCI has been prepared for the full programme and reported accordingly to the Executive Board and decision makers throughout.

4.2.2 As part of the LPTIP consultation and engagement process due regard has been given to equality, diversity, cohesion and integration. Equality Screening takes place for all discrete elements of the programme as they are brought forward for approval. Learning from previous projects which has drawn on the understanding of potential to have a differential impacts on some equality groups with particular regard to gender, disability, race, age, younger and older people.

4.2.3 The programme team have organised a meetings, workshops and attended events with Child Friendly Leeds, Access Groups, BME Hub, Disability Hub, LGBT Hub, Access and Use-Ability Group, Physical and Sensory Impairment (PSI) Network and Womens' Live Leeds. Leeds Involving People (LIP) are a key partner in ensuring that seldom heard groups are involved in shaping a transport strategy for Leeds that's inclusive and meets the needs of individuals, communities and the city. Specific attention has also been given to seeking contributions to those groups who seldom heard.

4.3 Council policies and best council plan

4.3.1 The Leeds Public Transport Investment Programme brings a range of cross-cutting benefits for the transport, economy and life of the city. The programme aligns closely with the overall vision for Leeds 2030 goal to be the best city in the UK, and the best Council Priorities for Inclusive Growth; 21st Century Infrastructure and a Child-friendly city, and the Health and Wellbeing Strategy.

4.3.2 The programme aligns closely with Transport Strategy prospectus for Leeds and the West Yorkshire Transport Strategy and Strategic Economic Plan and complements the Local Development Framework and Inclusive Growth Strategy for Leeds.

4.4 Resources and value for money

4.4.1 This report has no specific funding implications. Any modifications or issues arising from this Deputation will be considered as part of any consequent decision recommendations and approvals.

4.5 Legal implications, access to information, and call-in

4.5.1 This report is not eligible for call-in. There are no specific legal implications arising from this report.

4.6 Risk management

4.6.1 The LPTIP risk management process is managed through the programme governance established within the City Council in conjunction with the West Yorkshire Combined Authority's assurance processes and the formal processes of reporting according with the constitutional requirements of each authority.

5. Conclusions

5.1 This report has considered the Deputation and provided information pertaining to the matters raised. The consequential issues will be considered further in the process for developing and refining the proposed scheme interventions which are the subject of the Deputation.

5.2 The necessary work to confirm preferred options for projects within the A660 corridor and elsewhere within the programme is proceeding. In the light of comments received attention will continue to be given to the conduct of timely and appropriate engagement including the effective use of the Common Place and other engagement media.

5.3 Future formal steps in the process for securing approval to final recommended proposals will involve reporting to the meetings of the West Yorkshire Combined Authority and Investment Committee and the City Council's Executive Board. It is anticipated that proposals will reach this stage later in 2019 but the timelines for this remain under review and subject to confirmation.

5.4 Actions arising from this report are:

i) To note the concerns and issues raised and ensure due regard and consideration of these is given in terms of further engagement and determining the final recommendations for any scheme proposals;
ii) To ensure that formal reporting for any scheme proposals records this Deputation and the actions taken as a result;
iii) To ensure that publication of pertinent information is actioned as detailed in the report.

6. Recommendations

6.1 The Director of City Development is requested to:

i) Note the contents of the report in response to the Deputation of 12 September 2018;

ii) Endorse the actions identified in section 5.4 of the report as part of the ongoing process for developing the proposals in the elements of the Leeds Public Transport investment Programme pertaining to this report;

iii) Receive further progress reports as the work progresses;

iv) Approve that this report be published and the Deputees be notified accordingly.

7. Background documents[1]

7.1 There are no background documents relating to this report.

[1] The background documents listed in this section are available to download from the Council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.