

Environment, Development and Transport Committee

Item No.....

Report title:	Norwich Northern Distributor Road – construction progress update
Date of meeting:	Wednesday 21 June 2017
Responsible Chief Officer:	Tom McCabe (Executive Director – Community & Environmental Services)
Strategic impact The Norwich Northern Distributor Road (NDR) is a major element of the Norwich Area Transport Strategy (NATS) Implementation Plan ('Transport for Norwich' - TfN). TfN also includes pedestrian and cycle enhancements in the city centre, public transport improvements and traffic management in the suburbs. The overall Plan has been developed to provide the essential transport infrastructure to accommodate planned for growth in housing and employment within the greater Norwich area.	

Executive summary

This report provides a summary of the progress made to date in delivering the construction of the NDR project. Satisfactory overall progress has been made, however there are areas where the programme has been negatively impacted (e.g. at Rackheath bridge and as a consequence of delayed utility diversions), and there are elements where more delivery was expected during 2016 (e.g. carrier drain work).

There has been good progress in completing the necessary environmental clearance and fencing works, archaeology works, bulk earthworks, the majority of bridge structures and pavement construction. A review of the programme has shown that the full opening of the NDR will not now be possible by the end of 2017 due to issues at the eastern end of the scheme, mainly at Rackheath bridge. There is a real possibility of opening significant sections of the NDR, particularly at the western end during 2017. More details will be brought to Committee setting out the implications of this when further analysis and assessment has been completed.

Recommendations:

- 1. That Members note the details in this construction update report and provide initial comments on the potential to open sections of the NDR early and in advance of the full scheme being completed (subject to more details on this matter to be presented to Committee in September 2017).**

1. Introduction

- 1.1 A report on progress of the Transport for Norwich projects and NDR was provided to Committee in July 2016. This report provides an update specifically on the NDR project, which is 18 months into its construction. A more detailed report on the wider TfN progress is planned to be provided to Committee in September 2017. A separate report is also planned in September on the progress made in relation to the Norwich Western Link project.
 - 1.2 The NDR construction programme was set out previously with a start of work on 4 January 2016, and an ambition to complete the opening of the NDR in December 2017, which was approximately 3 months ahead of the contract

programme. Details provided in section 2 below highlight that this timescale is now not possible, however there remains potential to open sections of the NDR during 2017. Assessment work is being undertaken to determine whether partially opening the NDR in sections will create unacceptable congestion in the short term. An update on this will be brought back to Committee in September 2017.

- 1.3 The NDR was approved by the Secretary of State by the confirmation of a Development Consent Order. That Order has specific Requirements included within it that must be complied with. Some of those Requirements place a duty on NCC to resolve specific matters prior to the opening of the NDR. Good progress has been made on this and an update is provided below:

Requirement and Timescale for Discharge	Details of Requirement	Progress to Date
26 (Pre-opening of the NDR)	Development and implementation of a scheme for the routing of vehicles to and from the A47 (to the west of Norwich) to Norwich International Airport and Cromer.	Requirement has been discharged. Technical approval for detailed sign designs on the A47 currently being sought from Highways England.
27 (Pre-opening of the NDR, with implementation within 6 months of opening)	Development of a scheme and timetable for implementation for traffic calming measures in Weston Longville and Hockering.	<u>Weston Longville</u> Public consultation completed, determining final scheme to take forward for discharge and implementation in 2017/18. <u>Hockering</u> Finalising scheme proposals for consultation with submission for discharge to follow.
28 (Pre-opening of the NDR)	Development and timetable for implementation of: <ul style="list-style-type: none"> enhanced traffic calming measures in Costessey West End, including the feasibility of using average speed cameras, a scheme for the enforcement of the existing weight restrictions (including the potential for camera enforcement) on roads over the River Wensum, namely Ringland Road, Taverham Lane and Costessey Lane, a 30mph speed limit based on a speed limit assessment on Ringland Road through Ringland, a scheme for traffic calming on Hall Lane (north and south), Drayton. 	<u>Costessey West End</u> Norfolk Safety Camera Partnership (NSCP) do not support average speed cameras at this location. Discussion ongoing with town council on way forward. <u>Bridge Weight Restriction Enforcement -</u> Finalising scheme proposals for consultation with submission for discharge to follow. <u>Ringland Speed Limit</u> Extents of speed limit amended following comments received. Revised proposal being submitted for discharge with implementation in 2017/18. <u>Drayton Hall Lane</u> Scheme implemented.
30 (Pre-opening of the NDR)	Development of a programme of post NDR monitoring of traffic approved prior to NDR opening.	Final monitoring programme agreed following consultation. Relevant parish councils and local members to be advised of final programme with submission for discharge to follow.
31 (Pre-opening of the NDR)	Development of an action plan of NATS measures up to the year 2020/21.	Action plan currently being developed for consultation with District Councils with submission for discharge to follow.

- 1.4 In addition to the above, Committee is reminded that a condition of the DfT funding is for NCC to “commit to a funded and timetabled package of sustainable

transport in the city centre, on the basis of the Norwich Area Transportation Strategy". This is all part of the integrated approach of delivering these proposals as part of the NATS Implementation Plan ('Transport for Norwich'). This is similar to the DCO Requirement 31 in the table above. Good progress has already been made in delivering key TfN projects, particularly in the city centre. Details of this and a clear plan for future years that meets the DfT funding requirement will be provided to Committee in September.

- 1.5 In the last report an update on the completion of Postwick Hub was provided. This included a proposal to construct a segregated left turn lane to alleviate traffic delay at the existing Broadland Way roundabout. This work was completed following Committee approval and has been successful in improving the overall junction operation. In addition, Committee agreed to the early construction of a new cycle/walking link from the Park and Ride site to the existing Broadland Business Park. This link has also recently been completed and opened.
- 1.6 The early completion of the Postwick Hub has provided significant delivery benefits for the NDR. There is a need for some relatively minor amendments to the junction, but the NDR connection at Postwick to the A47 will now be very simple and generate minimal impact for existing users of the junction and Broadland Business Park.

2. Project Progress Update

- 2.1 Progress on the project has largely been satisfactory although, as set out earlier in this report, items on the critical path have delayed the delivery at the eastern end of the project and will now prevent an early opening of the full NDR. Progress is summarised below under key headings:

2.2 Environmental works completed

- Ditch and lagoon excavated to protect the Wensum Valley
- Two bat houses constructed
- 15 bat boxes provided and erected
- 50 bird nesting boxes provided and erected with 50 still to erect plus 10 owl boxes
- Site clearance (tree and shrub/hedgerow removal as well as topsoil strip) mostly completed avoiding bird nesting season in 2016
- 7 km of newt fencing installed
- 4 new newt ponds excavated and planted and several existing ponds improved for newts
- 2531 amphibians safely translocated including 861 great crested newts
- Significant amount of landscape planting and boundary hedging achieved during the winter months
- Colony of nesting sand martins protected on site
- Extensive archaeological investigation completed and report compiled
- Historic building surveys completed before demolition
- WW2 crash site excavated/investigated sensitively

2.3 Earthworks

- Significant progress was made on bulk earthmoving between April and November 2016 despite losing most of June due to an intense rainfall event. The main operation was suspended in November as the site became too wet to work economically (which is normal on contracts with major earthworks). However, minor works on side roads did continue throughout the winter period.
- Regular reviews took place in February/March 2017 and the earthworks team was built up gradually as sections of the site became workable. It is

noteworthy that whilst there was a relatively mild winter the wet conditions, particularly at the eastern end of the project, did prevent earthworks recommencing fully until April 2017. Good progress has been made since then during the good (dry) weather conditions.

- 520,000 cu.m of topsoil stripped – some has already been re-used topsoiling verges, batters and landscape areas and the remainder is stored in temporary spoil heaps ready for future use.
- 26 drainage lagoons excavated.
- 1,600,000 cu.m of bulk excavation completed most of which has been placed in areas of fill.
- Use of site won material maximised for use in the scheme. All hard excavated material crushed and re-used within the permanent works.
- Just over 50% of stabilised sub-base has been laid out of a total of 34 linear km of carriageway.

2.4 Surfacing

- Over 16,000 tonnes of mainline surfacing material has been laid out of a total of 168,000. Tarmac (surfacing subcontractor) are currently laying around 1,000 tonnes each day.
- Bituminous coating plant set up at Postwick to mix surfacing material for the scheme.

2.5 Side Roads and Junctions

- Fakenham Road Roundabout and the western tie-in completed.
- Fir Covert Road Roundabout completed.
- Reepham Road Roundabout completed.
- Salhouse Road Roundabout completed.
- North Walsham Road Roundabout ready for surfacing.
- Drayton Link/Holt Road Roundabout completed.
- Drayton Link/Reepham Road Roundabout and Drayton Lane South completed.
- Drayton Link between Holt Road and Reepham Road including mainline roundabout ready for surfacing and programmed to open in July.
- Buxton Road Diversion on to new over-bridge – carriageway construction either side of new bridge in progress and bridge due to be opened in August.

2.6 Drainage

- Approximately 22 km of surface water drainage pipe has been installed out of a total of 54 km.
- All the surface water drainage is piped to the various lagoons along the site – 26 excavated to date.

2.7 Structures progress

- Bell Farm Bridge – beams installed April 2017.
- Marriott's Way Green Bridge – deck concreted April 2017. Approach embankments planted.
- Buxton Road Bridge – deck and diaphragms completed May 2017. Programmed to open to traffic August.
- Cromer Road Bridge – deck concreted May 2017
- Plumstead Road Bridge – deck and diaphragms completed May 2017. Vertical stone column ground improvement nearing completion
- Rackheath Railway Bridge – this structure is on the critical path of the scheme programme and has suffered significant delays. Beams installed April 2017 and the deck is now programmed to be concreted in June.

- Newman Road Bridge – abutments, columns and reinforced earth wingwalls completed – beams due to be installed in July.
- Middle Road Bridge – abutments and columns complete.
- Bat underpass – structure due to start soon using pre-cast concrete culvert units.
- 7 bat bridges – works will commence shortly.
- General – a total of 6,000 cu m of concrete placed (out of 8,230 cu m).

2.8 Utility diversions

- 72 diversions have been completed out of a total of 86.
- The major high pressure gas main (from Bacton) was diverted as programmed.
- Other diversions have taken significantly longer to complete than originally planned and efforts continue to engage with the utility companies to get these works completed.

2.9 Progress summary

To summarise the above, good overall progress on delivery has been made. There are areas where the programme has been negatively impacted, and there are elements where more delivery would have been better in 2016. However, there has also been some good progress in terms of environmental works, bulk earthworks, bridge structures and pavement construction.

2.10 Health and Safety

The progress set out above has been achieved with an excellent Health and Safety record. To date nearly 900,000 'operative hours' have been recorded on site without a Lost Time Accident. This good record has resulted in Balfour Beatty being awarded a ROSPA Silver Award.

- 2.11 The site has also been used for a major incident response exercise. This was carried out on site and involved Balfour Beatty, the Fire and Rescue Service and the East Anglian Air Ambulance and was very successful for emergency services training.

3. Financial Update

- 3.1 Since the initial grant allocation agreed with the DfT the spend profile has changed at the request of the DfT, as set out in the table below. In addition, the full allocation of £10m funding from the New Anglia LEP agreed to fund the project has been provided during 2016/17. The net effect of this has been a reduction in funding required from NCC during 2016/17, however there will be a requirement for the balance of funding to be provided by NCC in 2017/18 and 2018/19:

Financial Year	Grant (Original)	Grant (Actual)	Comments
15/16	£16,700,000.00	£16,700,000.00	
16/17	£31,300,000.00	£43,476,797.00	Increased at the request and agreement with DfT.
17/18	£29,490,000.00	£17,313,203.00	Reduced due to advanced funding being received in 16/17
	£77,490,000.00	£77,490,000.00	

4. Issues and risks

- 4.1 An update on key project risks was provided to Committee in November 2016 (Finance Update Report). The main risks related to the following:

Rackheath Rail Bridge. This primarily related to obtaining Network Rail approvals for both design and construction working methods which had significantly delayed the programme for this bridge and increased design and construction costs.

Review of Land costs. This related to the land values submitted by land agents on behalf of landowners and their claims being above that anticipated and allowed for in the original project budget.

Detailed site surveys. Following full access to all land associated with the project there was a need for an amended earthworks strategy to ensure a balance of excavation and fill, which resulted in a redesign process, and reworking of the overall delivery.

Unseasonal rainfall through June 2016. This was above what was allowed for in the provisions within the contract.

Utilities. There have been additional surveys, design, works and risk management associated with existing utilities and their necessary diversions, which is in addition to the budget for the utility company works.

Changes to the design of the project. This was in part to deal with formal approval processes due to the Development Consent Order, but also linked to necessary redesign at, for example, Rackheath bridge.

Landscaping. This is being provided direct by GYB Services, rather than via the main works contract and is expected to provide an overall saving.

- 4.2 The project still has remaining risks that will be realised, reduce or drop out as the project continues to progress. The key remaining risks that could impact on the project are:
- Weather conditions (primarily a risk of going into a further winter period at the end of 2017/early 2018)
 - Unforeseen ground or physical conditions
 - Land costs that are still to be resolved through negotiation
 - Completion of Rackheath Rail Bridge (ongoing risk working over a live rail line)
 - Utility diversions (continued delays and impact to the main works)
 - Environmental impacts (ground nesting birds, protected species entering the works areas)
 - Assessing and concluding compensation events to deal with project changes

5. Background

5.1 The following reports provide background details and updates for the NDR project:

- [July 2015 EDT Committee \(NATS/NDR Update\)](#)
- [November 2015 Full Council Meeting](#)
- [July 2016 EDT Committee \(NATS/NDR Update\)](#)
- [November 2016 EDT Committee \(Finance Update report\)](#)

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