

NORTH LINCOLNSHIRE COUNCIL

**ENVIRONMENT
CABINET MEMBER**

**A18 MELTON ROSS BRIDGE
REPLACEMENT UPDATE**

1. OBJECT AND KEY POINTS IN THIS REPORT

- 1.1 To update the Cabinet Member on the preferred layout option for the replacement of the existing A18, Melton Ross Railway Bridge.
- 1.2 To seek approval to commence the final design for the replacement of the A18 Melton Ross Bridge
- 1.3 The key points in the report are:-
 - Appraisal of the proposed bridge design

2. BACKGROUND INFORMATION

- 2.1 In December 2014 an Options Report was produced which outlined the various alternatives available to remedy the structural problems affecting the A18, Melton Ross Railway Bridge.
- 2.2 In early 2015 a decision was taken to proceed with works to temporarily support the bridge. This temporary propping solution is now in place and working effectively. It was further agreed to thereafter proceed with an “off line” bridge replacement option with a design road speed of 70kph, which is the subject of this report.
- 2.3 Various options were considered for the replacement of the existing Melton Ross Railway Bridge and the realignment of the A18 and B1211 in the vicinity of the bridge.
- 2.4 The main objects of the scheme are as follows:
 - To minimise the required land take for construction
 - To minimise the disruption from working adjacent to and above the railway
 - To minimise the expense of construction
- 2.5 The scope of the scheme includes the following:
 - A deck width of 12.5m is required, comprising of a 7.3m carriageway, with 0.5m hard strips, 1.5m wide verges and 0.6m wide parapet plinths.

- A minimum vertical clearance above the railway rails of 5.2 metres is required.
- A minimum lateral clearance to the face of the abutment of 4.5 metres from outside rail of both live track and the disused track is required.

2.6 The following timescales are likely to apply to the project:

- 12 months planning and design (including land purchase)
- 3 – 6 month tender
- 12 – 18 month construction

2.7 The current temporary propping arrangement on the existing bridge has so far proved effective and is subject to regular monitoring.

3. **OPTIONS FOR CONSIDERATION**

3.1 The proposed option emerged from previous work on finding solutions from the December 2014 report after analysing various options. Appendix 1 shows the preliminary design appraisal on the proposal. Appendix 2 shows the proposed alignment layout.

3.2 The Cabinet Member has the following options:

3.2.1 **Option 1** – To approve the preferred draft design and continue with the detailed design required to take the project forward.

3.2.2 **Option 2** – Not to approve the proposal and review at alternative proposals.

4. **ANALYSIS OF OPTIONS**

4.1 This design suggested is considered to be the best option, in terms of causing the least disruption to the public. It is for this reason that this option is recommended at an estimated construction cost of £7.6million.

4.2 Utilising this design will best deliver the objects of the scheme and the scope. Buildability is considered to be good, improving the existing junction of the A18 and B1211. It is envisaged that the majority of the scheme will progress with minimal disruption to the A18 approach across the rail bridge.

5. **RESOURCE IMPLICATIONS (FINANCIAL, STAFFING, PROPERTY, IT)**

5.1 Financial

5.1.1 There is a significant gap in the funding required for this project. A fully designed scheme will be a requirement of any future business cases put forward as part of bids for external funding to assist with meeting the cost of the project.

5.2 There are no other resource implications to consider.

6. **OUTCOMES OF INTEGRATED IMPACT ASSESSMENT (IF APPLICABLE)**

6.1 Not applicable.

7. **OUTCOMES OF CONSULTATION AND CONFLICTS OF INTERESTS DECLARED**

7.1 None.

8. **RECOMMENDATIONS**

8.1 That the Cabinet Member approves the preferred draft design and authorises the progress of detailed design work towards a final scheme.

8.2 That the Cabinet Member is updated on the progress of the final design on a regular basis.

DIRECTOR OF PLACES

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Background Papers used in the preparation of this report:

Highways & Neighborhoods Cabinet Member Report 1 August 2013

Cabinet – 11 November 2014 Minute 1124 (21)

A18 Melton Ross Bridge Scheme Files - Various Information (Held at Billet Lane Offices)

Preliminary Design Appraisal

Outline Cost (Highways)	Civils Works (Approaches):	£1,219,000
	Civils Works (Roundabouts)	£350,000
	Earthworks	£294,560
	Railway Bridge - Mean	£1,290,000
	Sub Total	£3,153,560
	Preliminaries (@20%)	£630,712
	Traffic Management (@10% Civils and earthworks)	£186,356
	Statutory Undertakers (@15%)	£473,034
	Land Costs	£810,000
Total	£5,253,662	
	Optimism Bias (Risk @44%)	£2,311,611
	Total (Inc OB)	£7,565,273

Outline Cost (Structure) Lower Bound - £880,000 Upper Bound - £1,700,000

Alignment Length Total length of realigned highway is as follows

- i) A18 – 847m
- ii) B1211 – 221m

Roundabout 46m ICD

Bridge Skew & Length 48° skew, 38m bridge length

Land Area (Land Registry Titles) The following land areas have been identified as being required for delivery of the scheme. Where it is considered that land will be sterilised by the scheme it has also been included.

<u>Land Registry Title & Usage</u>	<u>Area (m²)</u>
HS36491 (Industrial)	21,145
HS120128 (Industrial)	6,145
Total Area Required	27,290

Buildability Buildability of this scheme is considered good as the position of the junction allows full offline construction of the approaches. Once the roundabout and links to the east of the B1211 are constructed it is expected that phasing of the traffic management will allow unimpeded construction of the A18 approach across the rail bridge

Junction Form & Geometry

Realignment of the A18 adopts minimum or desirable minimal horizontal geometry for a 70kph (40mph) design speed. Vertical geometry adopts a “one step below desirable minimum” for a 70kph (40mph) design speed.

The priority junction is replaced by a 46m ICD roundabout sited to the west of the B1211. The roundabout has been sized to reflect the recently completed Humberside Airport Roundabout which was tested to confirm suitable capacity. The position of the junction allows full construction of the A18 and B1211 approaches.

Proposed Alignment

