

## THE NETWORK RAIL (LEEDS TO MICKLEFIELD ENHANCEMENTS) ORDER

### RE: LISTED BUILDING CONSENT OPTIONEERING COSTS

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#### NOTE

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1. During questions to Mr Harrison on Day 5 of the Inquiry, a question was raised as to the correct costs and cost comparisons for the options outlined in the Alternative Options Evaluation Studies (AEOS) which accompany the Listed Building Consents. Network Rail offered to provide correct costs for each of the options stated.

2. This note identifies AOES paragraphs that should be replaced with italicised text set out below. Cost comparisons between each option have been removed from the AEOS text, as a straightforward presentation of cost figures for each option provides a more accurate and simple comparison. An indicative Whole Lifecycle Costs comparison table is provided in this note for ease of comparison.

1-3. Footnote 1 provides a definition of Whole Lifecycle Costs.

Ridge Road Bridge ~~(CD 1.18.37)~~

2-4. The following paragraphs of the AOES should be ~~amended as shown:~~ replaced with the italicised text as set out below.

3-5. Option A1 – Bridge Deck Reconstruction

Paragraph 6.3.5 *'If a standard concrete flat deck option is installed, the cost of Option A1 is considered Supportive as it provides the most cost effective and risk free option to retain a structure at this location whilst achieving the necessary clearance for electrification. Whole Life Cycle Lifecycle Costs<sup>1</sup> (WLC) costs for a bridge reconstruction ~~(circa £7.9m) of this type are about half those for the track slue options and between~~ approximately two and four times less than the track lower options' £7.9m.*

4-6. Option C – Track Lower

Paragraph 6.6.8 *'The ~~WLC's~~ WLC for Options C1-C3 varied between £11m (for sub-functional clearance) and £28m due to the impact on the rock cutting and potential mine remediation works, ~~between about 2-4 times that of the preferred option A1 and with~~ and higher ongoing maintenance costs to maintain sub optimal alignments and clearances compared to Option A1. For these reasons this option was graded Highly Unsupportive from a cost point'.*

Brady Farm Bridge ~~(CD 1.18.19)~~

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<sup>1</sup> Whole Lifecycle Costs refer to all the total expense of owning an asset over its entire life, from purchase to disposal. Whole-life cost includes removal of existing, purchase and installation of new materials, operating costs, maintenance, associated financing costs, depreciation, and disposal costs.

~~5.7.~~ The following paragraphs of the AOES should be ~~amended as shown:~~ replaced with the italicised text as set out below.

~~6.8.~~ Option A – Abandonment

Paragraph 6.3.5 *'Option A is Supportive on a cost basis as costs are restricted to the removal of the structure. Once removed, there are no ongoing maintenance costs to be considered; therefore Whole Life Cycle (WLC) are negligible, **being around £700k**'.*

~~7.9.~~ Option B1 -Bridge Deck Reconstruction

Paragraph 6.4.5 *'If a standard concrete flat deck option is installed, the cost is Neutral as it provides the most cost effective and risk free option to retain a structure at this location whilst achieving the necessary clearance for electrification. Whole ~~Life Cycle~~Lifecycle Cost (WLC) ~~costs~~ for a bridge reconstruction ~~(circa of this type are approximately £2m)~~ are around one fifth those for the track slue options and between three and ten times less than the track lower options'.*

~~8.10.~~ Option C – Track Slue

Paragraph 6.6.8 *'The WLC's for Options C1-C3 varied between **£9.1m** (for sub-functional clearance) and **£10.9m** and with including higher ongoing maintenance costs to maintain sub optimal alignments and clearances compared to Option B1. For these reasons this option was graded Highly Unsupportive on cost'.*

~~9.11.~~ Option D – Track Lower

Paragraph 6.7.9 *'The WLC's for Options D1-D3 varied between **£6.2m** (for sub-functional clearance) and **£19.6m**, with including higher ongoing maintenance costs to maintain sub optimal alignments and clearances compared to Option B1. For these reasons this option was graded Highly Unsupportive from a cost point'.*

Austhorpe Lane Bridge ~~(CD 1.18.12)~~

~~10.12.~~ The following paragraphs of the AOES should be ~~amended as shown:~~ replaced with the italicised text as set out below.

~~11.13.~~ Option A – Bridge Deck reconstruction

Paragraph 6.3.5 *'If a standard concrete flat deck option is installed, the cost of Option A is considered Neutral as it provides the most cost effective and risk free option to retain a structure at this location whilst achieving the necessary clearance for electrification. Whole ~~Life Cycle~~Lifecycle Cost (WLC) ~~costs~~ for a bridge reconstruction ~~(circa £5.1m)~~ of this type are around half those for the track slue options and between approximately five and six times less than the track lower options' £5.1m'.*

~~12.14.~~ Option B – Track Lower and Track Slue

Paragraph 6.4.8 *'The WLC for Option B was estimated to be around **£24m** due to the impact on the bridge sub-structures/adjacent earthworks, impact on the Yorkshire Water sewer and the likelihood of a requirement for mining remediation, between 4 to around 5 times that of the preferred option A standard bridge deck reconstruction and with including higher ongoing*

*maintenance costs to maintain sub optimal alignments and clearances compared to Option A. For these reasons this option was graded Highly Unsupportive from a cost point’.*

Crawshaw Woods Bridge ~~(CD 1.18.28)~~

13.15. The following paragraphs of the AOES should be ~~amended as shown:~~ replaced with the italicised text as set out below.

14.16. Option A1 – Bridge Deck reconstruction

*Paragraph 8.3.5 ‘If a standard concrete flat deck option is installed, the cost of Option A1 is considered Highly Supportive as it can be achieved at low cost with reduced maintenance costs due to its simpler deck to inspect and maintain whilst achieving the necessary clearance for electrification. Whole ~~Life Cycle~~ Lifecycle (WLC) costs for a bridge reconstruction ~~(circa £3.7m) of this type~~ are considerably less than those for the track slue options and track lower options’ approximately £3.7m’.*

#### Indicative Whole Lifecycle Cost Comparison Table

	Ridge Road	Brady Farm	Austhorpe Lane	Crawshaw Woods
Abandonment	n/a	£0.7m	n/a	-
Reconstruction – flat arch	£7.9m	£2.0m	£5.1m	
Bridge lift and repair	n/a		n/a	£3.7m
Track Slue	£15m	£10.1m (£9.1M for sub-functional clearance option)	£24.3m	£14.6m
Track Lower	£23-28m (£11m for sub-functional clearance option)	<del>£</del> £15.3-19.6m (£6.2m for sub-functional clearance option)		

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