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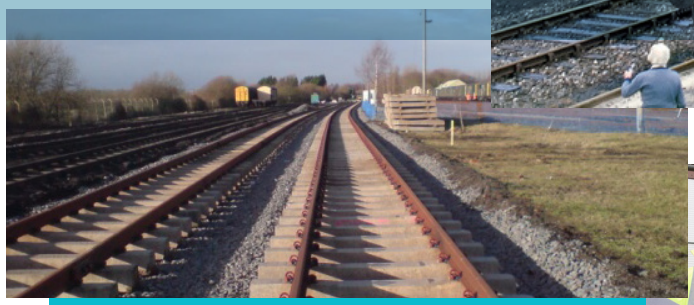
MOORLAND & CITY RAILWAYS

Leekbrook to Leek Track Estimate Commentary



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Moorland and City Railways
Leekbrook to Leek Track
Estimate Commentary

Moorland & City Railways (MCR) has carried out an estimate of the cost of the works involved in the relaying the railway from Leekbrook back into Leek. The single track will be suitable for heritage trains operated by the Churnet Valley Railway (CVR) and subsequently for commercial DMU operation as well as heritage running. This Commentary is in support of the enabling development at Leekbrook for the restoration of the railway back into Leek.

The MCR calculations are at Appendix A. They have been checked and found to be a realistic estimate of the costs involved, taken with our comments, which are:

1. The costs provided relate only to the engineering works involved

2. In addition, a set of buffers will be required at the Leek end of the site. They will be provided and installed free-of-charge by CVR we understand

3. The minimal site clearance required will be carried out by the volunteer labour using the hired plant provided for in the estimate

4. A provisional sum of £50,000 should be included for any works required to the tunnel. It is noted that the tunnel, although wet, shows no signs of distortion or distress. A detailed inspection will be required

5. The rock face to the south of the tunnel is showing some signs of instability and will require attention. An additional £10,000 should be included for bolting and netting

6. Severn Trent Water's (STW) sewers. Reference has been made to our Existing Drainage Review Report dated 20th December 2013 and our application of the Report to the track layout shown in Appendix B. The range of possible outcomes are:
    a. Fully relaying of both sewers is required at £380,000
    b. Full relaying of the affected sewer is done at £100,000
    c. Relaying of some lengths of sewer is carried out
    d. Targeted strengthening and alterations
    e. The sewers are not touched. Reference to Network Rail standards would support this result.

All of these outcomes are stated without reference to the condition of the sewers, which would need to be established.

It is concluded that the approach taken by MCR to the sewerage alterations of allowing £100,000 is a reasonable assumption on their part.

7. Capita has been commissioned by MCR as their Engineers. Therefore, our fees would need to be added at approximately £50,000.

8. The total cost is assessed to be £567,400.

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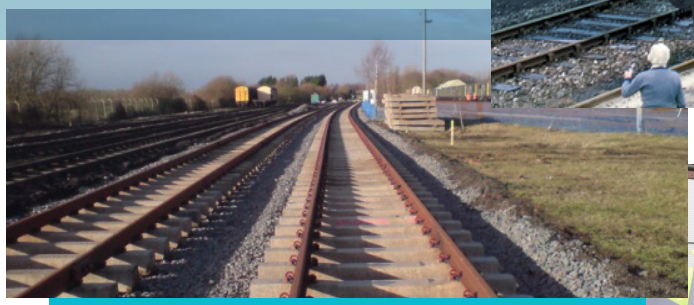
Appendices



Appendix A.
Moorland & City Railways Calculations

	Description	Quantity
1.	Main Line (connection to current line at Leekbrook to the Cornhill station site)	1400m
2.	Leek Runaround Loop	150m
3.	Panel Length 18.29m	Sleepers per panel - 27
4.	Main Line	80 Panels (to allow for headshunt)
5.	Loop	9 Panels

	Component Requirements	Quantity
6.	Sleepers	2400
7.	Chairs	4800
8.	Bolts (x3)	14400
9.	Keys	4800
10.	Fishplates	180
11.	Ballast	@ 2.3Tn/M- Run 3565 Tn.

	Proposed Construction
12.	A new single line railway using serviceable bullhead rail, chairs and fishplates bought from CVR (recovered from the Froghall - Oakamoor section.)
13.	All other track components will be new including timber sleepers. Construction will use volunteer labour and management from CVR; technical design and supervision/ sign off by Capita.

	Draft Calculation		Quantity	Rate (£)	Cost (£)
14.	Track/Chairs/Fishplates	(To be agreed.)			65000
15.	Chairscrews		14400	1	14400
16.	Plastic Ferrules		14400	0.10	1500
17.	Keys		4800	2.95	14500
18.	Softwood Sleepers		2400	32	77000
19.	Two Sets of Points		2	35000	70000
20.	Ballast		3565 Tn	12 Tn	45000
21.	Line Fencing			10/M	28000
22.	Centre Fencing				17000
23.	Plant Hire	Provisional Sum			25000
24.	Trackbed Drainage Protection				100000

*Component Prices have all been supplied by Trackwork

Appendix B.
Interaction Between Sewerage and Railway Alignment

- The single track railway line will be sited on the west side of the original, doubled-track, disused railway line. Based on the Imperial 12'-0" width, that equates to 3.6m wide track. The live load will be spread from the sleepers to the full width via the bottom ballast

- Secondly, it is assumed that the new track will not extend northwards beyond manhole 0401

- The STW requirement for an 8m kinetic envelope has been ignored. The effect of such a constraint would be to completely sterilise the disused railway line. The grounds for making this assumption are that an "agreement" will only survive, if both sides to it benefit. The other issue is that such a large envelope can be shown by calculation to be unnecessary both now and when the pipes' condition has been accurately ascertained

- Considering the easterly pipe run, it is between 3.0m and 5.0m from edge of track to centre line of pipe, the shallower lengths are outside the cone of influence of the track. For the greater depths, their position in the track's cone of influence is as a result of their greater depth. Therefore, the Existing Drainage Report's conclusion that the pipes will be sufficiently strong has been used

- It is deduced that it is a reasonable assumption that the easterly pipe-run can remain unaltered with the new railway track in place alongside it, condition permitting

- Turning to the second, westerly pipe run, it is under or very close to the new track throughout its length. The simplest solution is to relay it throughout on its existing line. A further, site inspection may yield a better alignment. However, the potential requirement to replace this length remains a risk, even though the Report, and the Capita Rail Division's check using Network Rail Standard Details, both give it the all-clear to remain, dependant on condition, of course.

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