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NET Network Extensions

Review of Clifton Option Adjacent to Former Railway Corridor

Report reference 61985/19/B

12 March 2002

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Nottingham Express Transit Network Extensions

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Issue and Revision Record

Rev	Date	Originator (Print) (Signature)	Checker (Print) (Signature)	Approver (Print) (Signature)	Description
A	06 March 2002	RJ Park	CTC Gibson	DA Hand	First Issue
B	12 March 2002	RJ Park	CTC Gibson	DA Hand	Client comments incorporated

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Summary

Line 1 of the proposed Nottingham Express Transit light rapid transit (LRT) system is currently under construction, running northward from Nottingham Midland Station. A number of southern route extensions to this Line are under consideration, running to Beeston and Chilwell, Clifton and West Bridgford.

This report considers the engineering issues associated with the section of the Clifton via Wilford route between Coronation Avenue and Wilford Lane, and compares the currently proposed route along a disused railway embankment with an alternative option running immediately to the east of the railway embankment.

The alternative option would avoid potential ecological and noise impacts associated with running along the railway embankment, but would require landtake from allotments and two cricket pitches and would require the tram to cross two access tracks at-grade.

We recommend that the railway embankment remains as the preferred option, as this option provides a segregated route along a former transport corridor with no direct third party impacts. However, should significant environmental issues arise for this route which cannot be adequately mitigated, then further consideration of the alternative option may be merited.

1 Introduction

1.1 General

Line 1 of the proposed Nottingham Express Transit light rapid transit (LRT) system is currently under construction, running northward from Nottingham Midland Station. A number of southern route extensions to this Line are under consideration, running to Beeston and Chilwell, Clifton and West Bridgford.

NET Project Office have requested that a review of an alternative route between Coronation Avenue and Wilford Lane on the Clifton via Wilford route be carried out. In this area, the core option runs along the disused Great Central Railway Embankment. The alternative option runs through the existing playing fields immediately east of the disused railway line before re-joining the corridor at Wilford Lane Junction.

The aim of this report is to provide a comparison of the engineering implications of the two routes. These routes are illustrated on Drawing 61985/NWD/018.

2 Route Discussion

The following table discusses the alignment issues of both the core Clifton via Wilford option and the alternative route adjacent to the former rail line.

Table 2.1 Route Comparisons

Issue	Clifton via Wilford Core Option	Clifton Option Adjacent to Former Railway Corridor
General Alignment Issues	• The alignment joins the former railway corridor via a new signalised junction at the end of Coronation Avenue, before ramping up onto the embankment. The horizontal radius across the junction is approximately 40m. • Partial removal of the existing embankment is proposed to provide sufficient width to accommodate double track tramway and a possible parallel footpath. • Alignment ramps down to cross Wilford Lane at new signalised at-grade junction.	• Alignment crosses Coronation Avenue at new signalised junction. Horizontal radius across the junction is approximately 80m, which may allow the tram to maintain marginally higher speed (by a max of 5mph) than the core route. Localised removal of some of the existing embankment is required at Coronation Avenue junction to accommodate suitable visibility splays. • The edge of the tram corridor from Coronation Avenue to Wilford Lane is generally offset by a minimum of approximately 4.5m from the east edge of the embankment. This distance is dictated by the layout of the priority junctions (see below) • The route re-joins the former railway corridor prior to Wilford Lane. This is to allow the crossing of Wilford Lane and entry to stop south of Wilford Lane to be on a straight horizontal alignment
Footpath/Track Interface	• Two existing tracks leading to the allotments pass through the embankment on bridges with greater than standard headroom. These existing bridges would be reconstructed with lower headroom clearance than existing	• The two existing tracks leading to the allotments pass through the embankment on bridges. Existing bridges under the railway corridor would remain, but at-grade junctions with tram required adjacent to bridges to maintain vehicular access. It appears that these access tracks are lightly used. • Subject to discussion with the Railway Inspectorate, we consider that the junction could operate as priority junction since adequate visibility can be provided for tram 50mph design speed. • The horizontal tram alignment is positioned to provide 4.5m minimum visibility set back from junction on access track.

Issue	Clifton via Wilford Core Option	Clifton Option Adjacent to Former Railway Corridor
Interface with proposed Cycle Track (shown on drawing 61985/NWD/	• The proposed cycle track is not affected by the existing core option. The cycle track will be on street along Coronation Avenue at the Coronation Avenue/tram junction	• The proposed cycle track runs east along Coronation Avenue before turning south and running immediately adjacent to the embankment. It then joins the track to the allotments . • The current routeing of the cycle track route crosses the alternative alignment twice. A preferable solution would be for the cycletrack to cross the tram tracks once (at the Coronation Avenue junction) and then route to the east of the tram

General Environmental Issues	• The existing footpath currently running on the railway embankment could be realigned to run alongside the proposed tram alignment.
	• Much of the vegetation on the railway corridor would be removed, but with some scope for replacement mitigation planting within the corridor.
	• Based on preliminary desktop study by ERM:
	  • the dismantled railway corridor is possibly a valuable wildlife corridor. However no protected species have been identified to date and this site is likely to be of nature conservation interest at a local scale only. Loss of this corridor may have indirect impacts on the Wilwell Farm cutting SSSI (site of special scientific interest). Further ecological survey is recommended to determine the nature conservation value of the corridor.
	  • there are residential receptors (approximately 14) which may experience significant changes in noise due to the tram, although screening could reduce this figure.
	• This option involves greater potential construction disruption due to removal of spoil, some of which may be contaminated
		• Existing footpath on railway embankment would remain as existing
		• Only minor loss likely of existing vegetation/trees
		• Noise issues less likely to be significant, since the alternative alignment is 30m further away from houses to west of railway embankment
		• Further consideration required of policy issues associated with running tram alignment through land with recreation and allotment land uses where there is an adjacent former transport corridor available

Issue	Clifton via Wilford Core Option	Clifton Option Adjacent to Former Railway Corridor
Other 3rd Party Interface	• The Core route does not impact directly upon the cricket pitches and allotments.	• The proposed alignment passes through two cricket pitches situated east of the former railway corridor. As illustrated on drawing 018, the cricket boundary of the pitches already falls below the minimum required circumference. Landtake would reduce the pitch size further below standard. Realignment or relocation of these pitches to maintain existing size does not appear possible within assumed existing boundaries of cricket club • Landtake from the west edge (approx 500m^2 subject to confirmation of land boundaries) of the allotments east of the corridor would be required to accommodate the tram alignment and priority junction with the access track. There may be a requirement to replace this with adjacent land
Run Times	• Negligible difference between the options.	• Negligible difference between the options.
Cost Comparison	• Capital Cost is £67.2m.	• Capital Cost is £66.2m. • Potential saving of £1m. However this estimate excludes costs for land acquisition and accommodation works which could be significant.

3 Conclusion

The core Clifton via Wilford route runs along runs along the disused railway corridor between Coronation Avenue and Wilford Lane. This report has considered an alternative option through the fields adjacent to the former railway corridor. Both of these routes are feasible but have individual key issues which are listed as follows.

Key issues for the core option include:

- Completely segregated alignment with no interaction with other vehicles or cyclists except at signalised junctions with Wilford Lane and Coronation Avenue
- No direct impact on cricket pitches or allotments
- Much of the vegetation on the railway corridor would be removed, but with scope for replacement mitigation planting.
- Based on preliminary desktop study by ERM, the route is possibly a valuable wildlife corridor. However, the site is likely to be of nature conservation interest at a local scale only

Key issues for the alternative option include:

- Alignment runs through, and would require modification of, two cricket pitches and allotments.
- Potential cost saving of £1m in comparison with core option, although this estimate excludes costs for land acquisition.
- Two priority junctions are required where lightly used tracks cross the alignment. This could cause occasional slight delay to trams if trams have to slow on approach due to pedestrian or vehicular crossing of tracks
- Further consideration would be required of policy issues associated with running tram alignment through land with recreation and allotment land uses where there is an adjacent former transport corridor available

In conclusion, we recommend that the railway embankment is the preferred option, as this option provides a segregated route along a former transport corridor with no direct third party impacts. However, should significant environmental issues arise for this route which cannot be adequately mitigated, then further consideration of the alternative option may be merited.