

## **North London Line Future Maintenance Strategy**

### **NLRIP**

The North London Line (NLL) programme will alter the layout of the NLL, notably in the Channelsea-Camden part of the route. In the section where four lines are introduced and there are currently two or three lines, it will mean access to the line (in particular for day time 'Red Zone' working) will be restricted. In some places this method of working will be eliminated. Red Zone working, is work carried out while the train service is operating (under lookout protection only). On some parts of the line there will no longer be any position of safety for staff so all work will have to take place under a complete line blockage. The lines involved currently have a few areas that are Red Zone prohibited, this will substantially increase when the works are completed.

### **Maintenance Strategy Assumptions**

In April 2007, a strategic overview was carried out to assess the maintainability of the NLL by AMCL. In December 2007 a further study was commissioned with Kilborn Associates being given a very clear remit. This was to examine the access that would be required to maintain the railway assuming the increased services envisaged in the SLC2K proposal. The passenger service was set as 8tph each way on the route Channelsea-Camden (the core route). Another serious issue on the line is that there are no night time slots to carry out maintenance, due to the number of freight trains that traverse the route particularly in the period Monday to Friday night.

The Kilborns report is due out in stages. The initial report came out in February 2007 and showed the amount of time required to do maintenance using current work methods. This will be refined and amended as the study progresses. The full report will be ready with staffing allocation and detailed work breakdown at the beginning of April 2008. Initial assumptions were that the passenger rolling stock would be broadly similar in its impact on the track, although the tonnage would increase in line with the predicted weight of the units envisaged being in use. The assumption made regarding increases in freight traffic were based on the Cross London RUS. The tonnages of the new units and services were taken into account on the assumption that there are no changes imposed by the new types of rolling stock. The vehicle acceptance process is being addressed separately, work being undertaken by Bombardier and Network Rail to assess this. In addition, it was assumed that the core route would be largely renewed, so the maintenance organisation would be maintaining some new infrastructure. It was also assumed that the track category would increase over various parts of the route with the corresponding increases in inspections and maintenance. The timings assumed were for the increased passenger service to operate between 0445 and 0030 with only a few additional Passenger and Empty Coaching stock services operating outside those hours.

## **Restrictions**

The study noted that the main increases in services were in the Stratford-Willesden area. The main maintenance impact would be in the Camden-Channelsea part of the route. Maintenance in general being deemed not to be a major issue Stratford-Channelsea (as there is a diversionary route). Maintenance practice on the Gospel Oak-Barking line and the West London line would change only slightly with the traffic increases although track categories could rise. The main issue is in the section of line Channelsea to Camden where the increase in service was highest (from 4tph to 8tph each way). In addition, from Dalston to Camden the route would become 4-line with very restricted clearances. The introduction of 4 running lines will also mean that there was no 'safe cess' (a position where the staff stand awaiting the passage of trains between work activity). The study shows clearly that the only work that could be carried out in such a railway layout would be under 'Green Zone' conditions, so only when there is a complete line blockage. Current Rules of the Route allow just 7 hours per week of maintenance time and it was clear to Kilborn Associates that this would be inadequate to maintain the new railway.

## **The recommendations**

Kilborn Associates recommended that a full line blockage would be required on the core route (Dalston-Camden Road) for 10 hours on Saturday night-Sunday morning and an 8 hour block on Sunday night to Monday morning. Initial thoughts were partly based upon more cyclical night time blocks, but this would have been very disruptive to freight operations on the line and are not being considered at present. Separate studies are being carried out to establish what effect the new rolling stock will have, this could have an impact on maintenance time required.

The main works that needed to be programmed into the maintenance times were tamping and patrolling. Detailed studies were undertaken into signal and track maintenance and are included in the report.

## **Future developments**

Schedule 5 of the NLL Access Option is based on a future maintenance strategy. The assumptions being that Network Rail will be able to carry out the maintenance on this section of line in an 8-hour and a 5-hour possession each week, rather less than the initial Kilborn findings and taking into account, at least in principle, improved maintenance techniques. Initial thoughts are that it would include better access points (including out based storage facilities), remote switching for the overhead line power, remote isolation switches and other similar schemes to make the line easier to maintain without disrupting the service.

Schedule 13 of the NLL Access Option provides the Rules of the Route times that Network Rail intends to initially propose, based on the current Kilborn report, and existing maintenance techniques whilst work continues on reducing the amount of maintenance time that is required.