

ASSESSMENT OF THE SOUTHERN REGION WATER CANNON LEAF AFFECTED TRACK IN 1976

During the 1970s Southern Region made a considerable effort to clean the surface of leaf affected track in areas where difficulties had been experienced during previous leaf fall seasons.

The approach that is the subject of this report is to blast the railhead with sand entrained in water. This delivered at high pressure from water cannons mounted, on modified de-icing trains.

Due to different climatic conditions from year to year, it was noted that it is difficult to assess the efficiency of the treatment by traffic delays or the number of wheelsets needing to be re-turned. It was therefore decided to carry out track observations during treatment to study the removal of the leaf debris directly.

Several conclusions were reached:

- The higher pressure water cannon unit was the more effective.
- Markedly improved cleaning was achieved by a repeat treatment within 3 hours.
- The cleanest rails were observed during or soon after heavy rain.
- Leaf films were transferred along the track by carry over on the wheel treads (and it is possible that tread braking reduces the spread of contamination by this process).
- Thick leaf films are removed more easily than thin ones.
- Leaf films build up significantly on initially clean rails after the passage of a few trains only.