

Ref:	NR/L2/TRK/001/mod03
Issue:	7
Date:	06 September 2014
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Plain line track

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1 Scope

This module of NR/L2/TRK/001 covers the following aspects of plain line track:

- a) minimum rail lengths and closure rails
- b) check rails;
- c) ballast (profile & condition);
- d) sleepers;
- e) fastenings;
- f) work affecting stress condition of CWR;
- g) work limitations (on lines open to traffic).

2 Definitions

See Glossary (NR/L2TRK/001/mod01).

3 Rail

3.1 Closure rails

A closure rail shall be of the same nominal section and similar hardness/grade of steel as at least one of the adjacent rails, and in no worse condition than either.

Closure rails installed in jointed or CWR track shall comply with the minimum rail lengths specified in Table 1.

Closure rails shall be installed to minimise the number of welded joints.

Stress restore closure rails in CWR in accordance with NR/L2/TRK/3011.

Complete TEF3011 for all closure rails installed in CWR.

3.2 Temporary Closure rails

Where it is not practicable to provide permanent welded closures of the minimum lengths, the temporary use of short fishplated or clamped closures is permitted.

The minimum length of a temporary closure rail shall be 4.5m.

For details on forming joints for temporary closures, see NR/L2TRK/001/mod04.

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Table 1 - Minimum rail length between joints			
Between → and ↓	Welded joint	Insulated joint See note 1	Fishplated joint See note 2
Welded joint Track radius < 600 m	9.0 m See note 3	4.5 m	4.5 m
Welded joint Track radius > 600m or more	4.5 m See note 3	4.5 m	4.5 m
Insulated joint See note 1	4.5 m	4.5 m	9.0 m
Fishplated joint See note 2	4.5 m	9.0 m	9.0 m
Adjustment switch (from end of full rail section)	4.5 m See note 4	4.5 m See note 4	8.0 m See note 4 & 5
Notes: 1. Suitable for use in continuous welded rail (CWR) 2. Includes insulated joints not suitable for use in CWR. 3. In particularly constrained sites these distances may be reduced to 3 metres with the approval of the RAM [Track]. 4. This distance is measured along the full rail section (the machined length of the switch tip is additional). 5. This distance may be reduced to 5 metres in Track Categories 4, 5 and 6 only, to permit re-use of cascaded adjustment switches.			

3.3 Flame cut rail ends

Flame cutting of rail is permissible when:

- a) cutting into stressed rail (saw or disc cutting is prohibited for this purpose);
- b) the rail end in Normal Grade (220) and Standard Grade (260) rail is to be joined by welding.

The welded joint shall normally be completed within 24 hours and before any traffic passes over. In an emergency traffic may pass at a maximum speed of 20 mph, for up to seven days, if the rail end is fitted with approved emergency clamped fishplates.

3.4 Check rails and flangeways

In track fitted with a continuous check rail in plain line, maintain the distance between the check rail rubbing face and opposite running edge at 1391 (+1/-8) mm.

The check rail shall be securely located in its chair or other housing.

Maintain track gauge so that wheels are guided correctly into the flangeway.

Keep flangeways clear of debris and ballast.

Entry flares shall be machined. Flame cut entry flares are not permitted.