

PERMANENT WAY

SECTION 210

PERMANENT WAY - GENERAL REQUIREMENTS

General

- 1** The Specification for Permanent Way details requirements applicable to all Sites unless specified otherwise in the relevant Particular Specification. Requirements applicable to particular Sites are specified in the relevant Particular Specification. In case of any discrepancy, the relevant Particular Specification shall take precedence.

(210.001)

Permanent Way Standard Drawings

- 2** All Permanent Way shall be in accordance with the relevant Permanent Way Standard Drawings. Drawings numbered in the Series RE/PW/XXX referenced in this Specification, are Permanent Way Standard Drawings. A list of all current Permanent Way Standard Drawings is available from:

Civil Engineering Directorate
Eastside Offices
Kings Cross Station
London N1 9AP

Tel: 0171 465 9218

Fax: 0171 922 9011

Copies of Permanent Way Standard Drawings are available from:

Owen Williams Railways
Meridian
85 Smallbrook Queensway
Birmingham B5 4HY

Tel: 0121 654 7328

Fax: 0121 654 7387

CEDG York Ltd
Hudson House
Toft Green
York YO1 1HP

Tel: 01904 522164

Fax: 01904 523876

Scott Wilson Mainline Ltd
Western House
1, Holbrook Way
Swindon SN1 1BY

Tel: 01793 515888

Fax: 01793 515844

Scott Wilson IDG Ltd
Buchanan House
58, Port Dundas Road
Glasgow G4 0HG

Tel: 0141 335 3272

Fax: 0141 335 2757

W. S. Atkins Rail (CEDAC) Ltd
Berkshire House
171, High Holborn
London WC1V 7AA

Tel: 0171 497 1502

Fax: 0171 379 8563

(210.002)

Abbreviations

- 3** Abbreviations used in the Contract Specification shall have the following meanings:

ATP	–	automatic train protection
AWS	–	automatic warning system
BH	–	bull head (rail)
CWR	–	continuous welded rail
DTS	–	dynamic track stabiliser
ESR	–	emergency speed restriction
FB	–	flat bottomed (rail)
IB	–	impedance bond
IRJ	–	insulated rail joint (= insulated block joint)
LWR	–	long welded rail
PSR	–	permanent speed restriction
S&C	–	switches and crossings
TSR	–	temporary speed restriction

(210.003)

Track category

- 4** Permanent Way installations shall be designed, installed and maintained as applicable to the track category as listed in the relevant Particular Specification, for the particular location.

(210.004)

Competency of operatives

- 5** Further to Railtrack Line Standard RT/LS/S008, work processes affecting the Permanent Way such as but not limited to rail drilling and cutting, rail stressing, rail welding, ultrasonic testing of rails and welds, shall be carried out only by competent certificated Contractor's personnel.

Ultrasonic testing of rails shall be carried out by Contractor's personnel who have attended and satisfactorily completed an ultrasonic testing of rails training course provided by:

NDT Training Centre
Serco Railtest Ltd
P.O. Box 243
Railway Technical Centre
London Road
Derby DE24 8ZZ

Tel: 013322 63397
Fax: 013322 62012/64965

Welding of rail shall be carried out by Contractor's personnel who have attended and satisfactorily completed a rail welding training course provided by one of the following companies:

AMEC Rail Limited
Training Centre
Fairbairn Close
(Off Beaumont Road)
Purley
Surrey CR2 2AT

Tel: 0181 666 6920/84
Fax: 0181 666 6417

Fastline Track Renewals
Training Centre
(York Welding School)
Old Biscuit Warehouse
Leeman Road
York YO2 4XD

Tel: 01904 522237
Fax: 01904 522013

GTRM Training Centre
Nunn Mills Road
(Off Bedford Road)
Northampton NN1 5NZ

Tel: 01604 30362
Fax: 01604 38385

First Engineering Ltd
Training Development Centre
Quay Road
Rutherglen
Glasgow
G73 1LD

Tel: 0141 335 4488
Fax: 0141 335 4498

Amey Railways
Welding Training Centre
Training Development Department
2nd Floor, 125 House,
1 Gloucester Street
Swindon SN1 1SU

Tel: 01793 515117
Fax: 01793 515688

(210.005)

Ballast working generally

- 6** Track ballast shall be unloaded and levelled in a manner that minimises the generation of concentrations of airborne dust.

Ballast shall be placed on the tracks in accordance with Railtrack Line Standard RT/CE/S102, and kept clear of all running, check and conductor rails and clear of all flangeways and switch rails to S&C.

Where practicable, excavated ballast, spent or fouled ballast, ballast cleaner screenings and other excavated spoil shall be removed from the Site. When agreed by the Engineer, such material may be spread evenly upon embankment slopes at the locations and in accordance with the limitations specified in the relevant Particular Specification.

Such materials shall be placed not closer than 3.0 metres from the nearest rail, and shall not be placed on cutting slopes, or fall into the cess, cess walkways, against boundary fences, into drains, drainage ditches or watercourses, nor obstruct access to a place of safety and shall be kept clear of existing cable troughing routes, signalling equipment and a.c. electrification overhead line equipment masts.

Contractor's personnel whose duties require them to work on or in the vicinity of the unloading of track ballast or other operations involving major disturbance of track ballast shall be provided with dust respirators appropriate to the work being carried out and their relative location.

In addition to the requirements for loading and unloading of rail vehicles specified in the Contract, the following shall apply for delivery of ballast by rail.

Contractor's personnel shall not get on or off moving rail vehicles, and shall not remain on moving rail vehicles unless proper provision, such as handrails and platforms on hopper vehicles has been made for them .

During the unloading of ballast vehicles:

- (i) the opening of doors shall be controlled to avoid build up of ballast on running rails, and to avoid excess ballast in the four foot,
- (ii) on completion, all doors shall be made secure, and checked for closure to avoid unintended spillage during transit.

Ballast shall be cleared from the wheels, brake equipment, etc, and the doors securely closed, before the wagons leave the Site. Any other ballast on the outside of rail vehicles likely to dislodge during transit shall be removed before the wagons leave Site.

(210.006)

**Supply of rail for
plain line generally**

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New and serviceable rail for plain line required for the Works will be supplied free issue to the Contractor, and will be delivered by Railtrack under the Network Agreement to one of the Rail Nodal Points specified in Appendix 210B.

New rail will be supplied in lengths required by the Contractor (subject to agreement by the Employer's Representative that the lengths ordered are appropriate).

The approximate quantities of new rail to be supplied are specified in the relevant Particular Specification. Prior to ordering of rail, the exact lengths and tonnage of each grade of rail required for the Works shall be agreed with the Employer's Representative by the Contractor.

Unless stated otherwise in the relevant Particular Specification for serviceable rail, each length will be 91 metres approximately.

Rail for plain line shall be ordered by the Contractor through Railtrack's Rail Controller using the Rail Order Form (Form I) in Appendix 210A.

The address and telephone number of the Rail Controller is:

1st Floor, Room 114,
St Peter's House
Gower Street,
Derby DE1 1SB

Tel: 01332 207024
Fax: 01332 207023

The lead time required for the ordering of new and serviceable rail is 12 weeks. Where practicable rail requirements shall be placed with the Rail Controller two weeks prior to the quarter in which the rail is required, although orders will be placed for specific dates to accord with the Contractor's programme for the Works. Quarters commence on the first of April, July, October and January.

Attendance shall be provided by the Contractor at the Rail Nodal Point for unloading and reloading of serviceable rail for delivery to Site, and any necessary temporary storage facilities shall be provided.

Material trains for the delivery of rail from the Nodal Point to the Site will be supplied by Railtrack's Infrastructure Transport Services, with whom the Contractor shall make all necessary arrangements giving all necessary notice.

The address and telephone number of Railtrack's Infrastructure Transport Services is:

National Contracts Manager
2nd Floor
Prudential House
28 - 40 Blossom Street
York YO2 2AJ

Tel: 01 904 525079
Fax: 01 904 525676

Serviceable rail in lengths 18.3 metres or greater will be delivered to Site from the Rail Nodal Points in material trains provided by Railtrack. Delivery of serviceable rail in lengths less than 18.3 metres shall be arranged and carried out by the Contractor, unless specified otherwise in the relevant Particular Specification.

Delivery to the Site and unloading of CWR at Site shall be in accordance with Section 212: Installation of New and Renewal of Existing Permanent Way.

Unloading of serviceable rail at the Site shall be carried out by the Contractor.

Receipt of the CWR shall be acknowledged to the Rail Controller on the 'Notification of Despatch from Castleton/BSTP and Receipt by Contractor' (Form 2) sent by the CWR supplier. A typical form is included in Appendix 210A.

All rail wagons shall be returned to the Rail Nodal Point.
(210.007)

Handling of rails

- 8** When rails are being unloaded, the utmost care shall be taken to ensure that the rails are not struck with any tool, implement or length of rail and that damage is not caused to anything in the vicinity such as sleepers and signalling equipment and cables. Cables and other equipment shall be protected to prevent rails resting directly upon them.

Plain rail and S&C units shall be loaded and unloaded from rail vehicles by crane, lifting arm or side rail loader using approved slings, clamps, and where necessary, a lifting beam.

When plain rails and track panels are required to be lifted, or plain rails required to be moved by means of a thimble, a safe method of work, in accordance with Railway Group Standard GC/OG0021 shall be used.

Where it is necessary to place rails in the four foot of an existing line open to traffic, the rails shall be positioned so that the maximum height of the rail above the plane of the running surfaces of the running rails is not greater than 25 mm. Where ATP cables exist, the rails shall be positioned not less than 300 mm from the cables.

Particular care shall be taken when unloading or placing rail in the four foot alongside IBs. The following precautions shall be observed:

- (i) rail may only be placed in the four foot alongside an IB where the layout of the signalling cables joining the IB to the running rail leaves enough height for this to be effected.
- (ii) rails shall not be placed directly upon signalling cables but shall be packed up clear of any signalling cables on suitable wood packing.

On tracks electrified with third or fourth rail systems, rails and other metallic components shall be kept clear of the conductor rails and feeder cables.

On track circuited lines, rails shall be laid sufficiently clear of the running rails and secured to ensure that vibration from passing traffic will not cause the rails to make electrical contact with the running rails or fastenings. Rails shall not be positioned close to insulated joints where expansion might cause bridging (short circuiting).

Adjacent rails shall be placed with an overlap to permit free expansion of the rail ends.