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RAILTRACK PLC

**MODEL CLAUSES FOR SPECIFYING
CIVIL ENGINEERING WORKS**

SECTIONS 255 - 257

Management of Lineside Vegetation

ISSUE NO. 1 REVISION B

RT/CE/C/008/255N

Page 1 of 34

Date: 31 March 1996

Amendments

Amendments and additions since the previous issue are marked by a vertical line in the right hand margin.

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SECTIONS 255 - 257

MANAGEMENT OF LINESIDE VEGETATION

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SECTIONS 255 - 257

MANAGEMENT OF LINESIDE VEGETATION

NOTES TO SPECIFIER

These notes do not form part of the Specification.

**Use of this
Specification**

255.1

The Model Clauses within Sections 255 - 257 have been written assuming that management of lineside vegetation shall be carried out to a plan:

- (i) proposed by the Contractor, in which case the contract period should be not less than 5 years, or*
- (ii) determined by the Zonal Environmental Manager,*

Specifications for specific items of work can also be determined from the chosen plan using these Model Clauses, as applicable.

Where (i) above applies, use Sections 255 - 257 inclusive. Where (ii) above applies, use Section 256 or 257 as appropriate to specify particular items of work.

Tree felling

255.2

Tree felling usually involves the selective felling of heavy leaf-fall species of deciduous tree, notably Ash, Sycamore, Poplar Horse Chestnut, Maple and Crack Willow.

In autumn dead leaves are crushed onto the rails, reducing adhesion, causing braking problems and wheel spin. In addition the accumulation of leaf matter prevents the triggering of track circuits, affecting signalling and the detection of trains.

The Model Clauses in Section 257 have been written to provide a Specification to clear, where achievable, a 5 metre strip of woody vegetation, adjacent to the tracks enabling it to be managed annually by mechanical flailing, and eventually establishing a grass sward.

Additionally the Model Clauses provide a Specification for the felling of trees of heavy leaf-fall species together with the removal of unstable trees. Birch, Wych Elm, Field Maple, Hazel, Whitebeam and Small Leafed Lime should be coppiced. The live root system will help consolidate embankments and cutting slopes, together with coppiced understorey species such as Hazel, Hawthorn and Elder.

Stable species, notably oaks that do not compromise track safety should be retained. Some thinning and lifting of branches at the trackside may be needed to promote healthy, well-shaped stable trees. Some trees may require crown reduction. The canopy formed by these species assists in suppressing regrowth and the establishment of invasive species such as Ash and Sycamore.

**Tree preservation
orders**

255.3

To check for tree preservation orders and places of Sites of Special Scientific Interest (SSSI), or Conservation Areas, contact Director, Property on 00 35811.

Where appropriate trees subject to preservation orders should be shown on the Contract Drawings and details of Sites of Special Scientific Interest or Conservation Areas listed in the Contract.

Prevention of heavy leaf fall 255.4

The Specifier should refer to the Leaf Fall Handbook 'Get a grip on leaves' for further information.

MANAGEMENT OF LINESIDE VEGETATION

SECTION 255

GENERAL REQUIREMENTS FOR THE MANAGEMENT OF LINESIDE VEGETATION

Clearance of cess strip 255.001

On each side of the tracks, a cess strip shall be cleared of all woody vegetation to permit such land to be managed by mechanical flailing.

Where practicable, the cess strip shall be 5.0 metres wide measured from the nearest rail on which trains may pass. The minimum width of the cess strip appropriate to line speed shall be in accordance Table 255/1.

Table 255/1	
Line Speed (mph)	Width of cess measured from nearest line on which trains may pass (metres)
< 100	2.10
101 - 125	2.80
> 125	3.60

NOTE TO SPECIFIER

Physical restraints may prevent the achievement of a 5.0 metre cess strip. Where heavily wooded areas adjoin the railway provision of a 5.0 metre cess strip may increase problems, in which case leaf trapping shrubs should be planted or retained where present.

In all cases, the last line of trees abutting the boundary fence should be retained to provide screening.

(255.001)

Management plan 255.002

The management of lineside vegetation in the verge shall be carried out in accordance with a Management Plan determined by the Contractor following consultation with the Railtrack Zonal Environmental Manager, and shall be agreed with the Employer's Representative.

The Management Plan shall include a planned programme of work to provide a co-ordinated systematic approach to vegetation management in accordance with the requirements of this Section of the Specification, **!CHECK!** and shall where practicable accord with the recommendations in Appendix 255A. **!CHECK!** In particular, the Management Plan shall include for:

- (i) identification and removal of trees liable to fall in high winds or otherwise infringe the Standard clearance as defined in Railway Group Standard GC/RT5204, or touch a.c. electrification overhead line equipment,
- (ii) removal of lineside vegetation liable to obscure signals or reduce sighting distances for lookouts, drivers, level crossing users etc,

- (iii) identification and removal or coppicing of trees liable to produce a heavy leaf fall,
- (iv) elimination of fire hazards particularly to signalling equipment and cables arising from lineside vegetation,
- (v) ensuring surface cracking and movement on embankments and cuttings due to lineside vegetation is minimised,
- (vi) ensuring the function of ditches and drainage is not affected by lineside vegetation.

The Management Plan shall identify Contractor's personnel with particular responsibilities, and provide details of their training, experience and competence.

Following identification of areas requiring action, the work shall be programmed using an order of priority based on the factors:

- (i) safety and railway operational requirements,
- (ii) nature conservation,
- (iii) landscape amenity and aesthetics.

Priority shall be given to locations with recorded heavy leaf fall, and to locations with potentially hazardous trees.

The Management Plan shall be reviewed not less than annually, and any changes considered necessary by the Contractor shall be agreed with the Employer's Representative.

A record of actual work carried out shall be maintained for audit purposes. The record shall include:

- (i) details of trees pollarded or coppiced and date when repollarding or coppicing will need to be repeated,
- (ii) details of controlled burning, and details of Sites registered for burning by the Contractor.

(255.002)

**Prevention of
heavy leaf fall**

255.003
!C!

Further to Clause 255.002, **!CHECK!** lineside vegetation shall be inspected to determine a priority for action to be taken where trees are liable to heavy leaf fall.

Areas shall be categorised for sections of each quarter mile length of track as follows:

1. No trees or shrubs.
2. Shrubs with gaps between them.
3. Half grown trees and shrubs with some gaps between them.

4. Short lengths of fully grown trees with branches overhanging the tracks in places.
5. Extensive lengths of trees with branches overhanging the tracks.

The Management Plan shall include for the prioritised removal, coppicing where appropriate, of trees liable to heavy leaf fall as listed in Appendix 255C, **!C!** **!CHECK!** in areas categorised 4 or 5.

Trees of species liable to heavy leaf fall growing adjacent to Railtrack owned land shall have the removal of their overhanging branches included in the Management Plan, subject to the agreement of the neighbours on whose land the tree is growing, and that such removal does not leave the tree unstable.

Within each category priority shall be given to track circuited lines and lengths of track where trains regularly accelerate or brake.
(255.003)

**Good
neighbourliness**

255.004
!C!

Further to Clause 255.002, **!CHECK!** the management of lineside vegetation shall ensure that:

- (i) vegetation does not provide a screen which would encourage trespass or vandalism, and where practicable acts as a deterrent to trespass,
- (ii) scrub cover for rabbits that are damaging farm crops is reduced so that access can be gained to their warrens for their eradication,
- (iii) noxious weeds as specified in the Weeds Act 1959 such as spear thistle, creeping or field thistle, curled dock, broad leaved dock and ragwort are removed,
- (iv) the growth of lineside vegetation does not adversely affect adjacent property.

Where work is proposed to be carried out in statutory designated Sites (SSSIs, Conservation Areas, tree preservation orders etc), the appropriate Authority shall be notified. Details of designated Sites are listed in Clause 255.013. **!C!** **!CHECK!**

Weeds subject to nuisance legislation and diseased vegetation injurious to crops and orchards such as scrub harbouring infestations of the brown tailed moth shall be controlled.

Trees, scrub or weed shall be cleared as necessary, where complaints from adjacent property owners are found by the Employer's Representative to be justified.

When carrying out tree clearance works next to residential or public land, the last line of trees and shrubs inside the boundary of Railtrack premises shall be retained, or the screening otherwise maintained. Pollarding shall be considered for the provision of high screening where the fence line is close to the railway.
(255.004)

- Conservation of wildlife** **255.005** The management of lineside vegetation shall ensure that:
- (i) healthy trees and shrubs, wherever possible, are retained to provide a food source and cover for birds,
 - (ii) areas of fine grassland with a wide range of flora retain their significance and are not invaded by scrub or brambles,
 - (iii) scrub, where appropriate, is retained to provide cover for small mammals and birds.
- Work likely to affect nesting birds shall not be carried out during the nesting period.
- (255.005)
-
- Preservation of landscape** **255.006** The management of lineside vegetation shall ensure that:
- (i) attractive views from trains are kept open on passenger lines,
 - (ii) woodlands and trees, where possible, are managed so as to maintain and provide continuing features in the landscape,
 - (iii) attractive, rare or unusual areas of vegetation, are retained,
 - (iv) open areas, which result from the removal of over-mature trees, and which occur as the result of development work, are replanted with slow growing species.
- (255.006)
-
- Requirements for the management of trees** **255.007** Trees shall not be planted to stabilise cuttings or embankments and the areas of cuttings covered by trees shall not increase.
- On clay soils no additional trees shall be planted within 30 metres of buildings or structures.
- Trees that are to have work carried out shall be marked on Site to a marking system agreed with the Employer's Representative. Red paint shall not be used for such marking.
- Trees on clay soils shall be identified either for pollarding to reduce water demand, or removal, subject to any resultant clay heave not affecting adjacent embankments, cuttings or structures and the Employer's Representative shall be advised accordingly.
- Trees on embankments may be allowed to grow where benefit to the local landscape is provided, and no hazard to the operation of the railway or slope instability will be caused. Trees on embankments shall not cause shrinkage or cracking due to moisture extraction.
- (255.007)
-
- Inspection for unsafe trees** **255.008** Inspection of trees on the lineside shall be carried out at a frequency agreed with the Employer's Representative, in order to identify trees which are unsafe.
- Trees shall be examined for:

- (i) signs of disease or ill-health such as fungus growing on the trunk, cavities in the trunk, bark falling off, dying twigs or branches in the crown, discoloured leaves,
- (ii) signs of instability, such as tall, thin trees leaning over at an angle, tree roots pulling out of the ground, recently fallen branches.

Trees shall be inspected a minimum of twice a year, and following any severe gale or storm. Trees identified as unsafe shall be inspected weekly until remedial works have been carried out.

Records of inspection shall be maintained by the Contractor for audit purposes.

The Employer's Representative shall be advised of the location and other relevant details of all diseased or unstable trees.

Trees considered liable to affect the safety or operation of the Railway shall be removed or otherwise made safe at the earliest practical opportunity.

Diseased trees shall be monitored, and removal arranged during planned maintenance in accordance with the Management Plan.
(255.008)

**Vegetation
management -
chemical methods**

255.009 *!C!* Herbicides shall be used and applied in accordance with Section 256:
Weedkilling. *!CHECK!*
(255.009)

**Vegetation
management -
mechanical
methods**

255.010 Flailing may be used for the management of lineside vegetation below 70 mm diameter on the verge or cess. Flails may be on-track, road/rail or road only.

Flail equipment shall be used with a safe system of work in accordance with Railway Group Standard GC/OG0022.

Chain saws, clearing saws and strimmers shall comply with and shall be used with a safe system of work in accordance with Railway Group Standard GC/OG0011.

Strimming shall be used in areas less than 300 m².
(255.010)

**Vegetation
management -
manual methods**

255.011 Controlled burning shall be carried out clear of all lineside equipment, and where such burning will assist the development of fine grassland. The controlled burning of small areas may be undertaken in conjunction with other work.

Tree felling, coppicing, planting and grass cutting shall only be undertaken by competent Contractor's personnel.
(255.011)