



AUSTRALIAN RAIL TRACK CORPORATION LTD

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Standard

Boundary Fencing

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Applicability

New South Wales	✓	CRIA (NSW CRN)	
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Primary Source

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Amendment Record

Version	Date Reviewed	Clause	Description of Amendment
1.0	01 Dec 09		Implementation draft. Supersedes NSW Standards RMP 05 v1.2 and RDS 01 v1.1
1.1	18 Jun 10		Banner added regarding mandatory requirements in other documents and alternative interpretations.

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Mandatory requirements also exist in other documents.

Where alternative interpretations occur, the Manager Standards shall be informed so the ambiguity can be removed. Pending removal of the ambiguity the interpretation with the safest outcome shall be adopted.

1 Scope

This instruction specifies the requirement for maintaining boundary fencing in the NSW Australian Rail Track Corporation system. Construction standards for standard fencing are also included.

2 Historical

2.1 Origin of Fenced Lines

The various lines and section of lines comprising the railway system in New South Wales were constructed by authority of a series of Acts of Parliament. The lines thus authorised to be constructed were built in some cases by the Railways, and in other cases by the Public Works Department, but in every case the constructing authority was subject to the provisions of the relevant Construction Act, which imposes certain obligations, generally speaking, in the following terms:

"The Commissioner shall make and at all times thereafter maintain the following works for the accommodation of the owners and occupiers of lands adjoining the railway (that is to say) - sufficient posts rails, hedges, ditches, mounds or other fences for separating the land taken for the use of the railway from the adjoining lands not taken and protecting such land from trespass or the cattle of the owners or occupiers thereof from straying thereout by reason of the railway together with all necessary gates made to open towards such adjoining lands and not towards the railway and all necessary stiles and such posts, rails and other fences shall be made forthwith after the taking of any such lands if the owners thereof shall so require and the said other works as soon as conveniently may be".

2.2 Origin of Unfenced Lines

In the concluding years of the 19th century, Parliament decided, in many instances, to dispense with the obligation to erect fencing, and when authorising the construction of country lines, to include a Section negating the obligation to fence, which otherwise would have been imposed by the Public Works Act. Lines constructed under the authority of Acts containing this specific exemption, as well as a number of existing lines which were relieved from the obligation by statutory provision, are classified as "unfenced lines", while all other lines remaining subject to the requirements in the Public Works Act are classified as "fenced lines". It may be noted that for its own purposes the Railways have in fact, constructed boundary fences on certain lines, where by reason of the Construction Act, it was under no obligation to do so.

3 Fenced Line Responsibility

The ARTC's responsibility in respect of fencing extends to the owners or occupiers of lands adjoining the railway, and the measure of this obligation is to erect a fence sufficient to protect adjoining lands from trespass and to prevent stock on such adjoining land from gaining access to railway land at no cost to the owner.

The Standard Fence in accordance with clause 13 is adequate to achieve this. If it can be shown that by reason of lack of maintenance, or other cause, the condition of the fence deteriorates to, and remains in, such a state that stock can make their way through it, or if by any act of ARTC's servants, the continuity of the fence is interrupted, ARTC is liable to compensate the owner in respect to any injury to stock which may result from the presence of the stock on railway property.

There is no statutory obligation to provide a fence on the common boundary of railway land and any public road. It is however recommended practice to provide a standard fence on all such boundaries, (except seldom used bushland). - A stock route is legally classified as a public road.

ARTC is not responsible for injury to stock that has strayed onto public roads before entering railway land. ARTC may be held responsible for stock that strays from an adjacent paddock onto railway land and then strays onto a public road.

4 Fences at Waterways

Where the boundary line is intersected by a permanent waterway, the fence is to be returned to the abutments of the bridge or culvert as a "wing" fence.

The location of the boundary fence across small variable flow waterways is difficult to define and each case is to be treated on its merits to, essentially, avoid storm damage to the fence and yet retain effective stock control.

Flood gates are to be avoided wherever possible by grading the ground surface to allow an even line of fencing without wire-netting or providing wing fences to the bridge abutment or culvert wing walls.

Where floodgates exist, and it is claimed that ARTC is responsible for maintenance, available records should be checked and if responsibility is accepted, the decision is to be noted on permanent record for future reference. If wing fences and a flood gate exist, it is reasonable to decline responsibility.

5 Attachment of Netting to Boundary Fence

No person, such as the owner or occupier of the adjacent land, is permitted to attach wire netting, etc, or make any structural alteration to the fence without first obtaining permission from the authorised ARTC representative.

Owners and occupiers wishing to attach wire netting to the boundary wire fence must first give an undertaking that:

- 1) The netting will be attached and paid for by the landholder to the satisfaction of ARTC and will remain on the fence at the landholder's risk. Responsibility is transferred to subsequent owners.
- 2) When renewal of the railway fence is necessary the landholder will remove and refix the wire netting, if it still required.
- 3) No watercourse will be blocked as a result of attaching such netting, and
- 4) If the requirements of ARTC necessitate the removal of the netting at some future date, the landholder will meet the cost of the work.

Where the adjacent owner desires to construct a superior fence, ARTC's interest is to be limited to supplying the equivalent materials for a standard boundary fence. The owner becomes responsible for future maintenance.

6 1.8 Metre Fence

In areas where trespass onto railway land may occur, it may be necessary to provide a superior fence. In such locations a 1.8 metre chain wire or mesh fence is to be provided.

These fences are erected under similar maintenance responsibility to the standard boundary fence. (See clause 3)

The locations where the Standard 1.8 Metre Fence may be erected are:

- 1) Adjacent to roads where the running lines are close to the boundary.
- 2) Along boundaries with recreation areas and schools.
- 3) In shopping areas and where short sections of fencing occur in the urban areas.
- 4) At locations where trespass is occurring.

- 5) At locations where a road dead end abuts the railway fence and trespass is occurring.
- 6) Commuter Car Parks where control of access to a Railway Station and protection of the running line is necessary.

7 Standard Manproof Fence

Manproof Fences are only to be erected where the added security given by the barbed wire is required.

8 Dividing Fences Act

Australian Rail Track Corporation is not bound by the provisions of the Dividing Fences Act in regards to its running line or sidewidth boundary fences and is not compelled to contribute towards the cost of fencing erected by an adjoining land owner or occupier. However, if the existing boundary fence requires renewal and the owner wants a fence, Australian Rail Track Corporation will make an ex gratia payment towards the cost of the fence on fenced lines only. This does not apply to a superior stock fence.

This ex gratia payment for a superior type fence is to be based on half the minimum cost for the removal of the old fence and replacement with a standard 1.5m or 1.8m paling fence subject to the rates being reasonable.

Where the existing fence requires replacement with a standard paling fence, it is to be constructed to the following specification, which has been approved by Councils:

- 130mm x 130mm corner posts.
- 130mm x 50mm posts.
- Posts to be 750mm into ground well tamped at 2.5m centres.
- Each post to be mortised to receive rails at 1m maximum centres.
- 750mm x 50mm rails to be scarfed at ends to fit into post mortise.
- 1.5m palings fitted close together and double nailed at each rail.

9 Dividing Fences Act - Fences Adjacent to Residences

In line with a heightened community awareness of the need for increased safety, ARTC will, where necessary, assist with the provision of a 'child proof' boundary fence between any private residential block and adjacent Authority land.

The 'child proof' standard is to be a minimum of 1.5m high - material to be used being wooden palings, metal cladding, masonry of 'man proof' chain wire type. Wire netting, wire mesh or strand wire is unacceptable.

Assistance is to be provided as outlined in clause 8.

When the adjacent usage changes from rural to residential, any new superior fence is to be erected at the private owner's expense (ie Developer responsibility) without ARTC assistance.

10 Unfenced Lines Responsibility

As stated Clauses 2.1 and 2.2 ARTC has no statutory obligation to maintain a fence on the boundary of an unfenced line. However, it is free to erect and maintain such a fence at its discretion.

This discretion has been exercised as follows:

10.1 Picton to Mittagong Mainline

This mainline section is legally an unfenced line, but as it has been maintained as a fenced line, this arrangement is to continue. The ARTC is required to maintain the fence on this line in a stock proof condition for railway reasons along the line and at Station yards, and accordingly, it need not be maintained where there is no stock on adjacent land. ARTC is not responsible for injuries or loss of stock on this line.

10.2 Molong - Dubbo Line

This section is legally an unfenced line. The Authority has directed that, on this line only, ARTC is to supply adjacent landholders with materials to reconstruct the boundary fence to Authority standards only. The owner is responsible for subsequent maintenance and no responsibility is accepted for stock claims.

10.3 Muswellbrook - Ulan - Gulgong

The Act authorising the construction of line from Sandy Hollow to Gulgong did not stipulate that fences be provided as accommodation works, but the then Commissioner, exercising discretionary powers, directed that it be fenced for railway reasons and that the section of the Merriwa Line from Muswellbrook to Sandy Hollow be upgraded to conform with the proposed new line. Although the Merriwa Line is an 'unfenced line' the Section between Muswellbrook and Sandy Hollow is treated similarly to the Picton to Mittagong Line in Clause 10.1 above.

10.4 North Coast Line

On the North Coast Line between Maitland and South Grafton, and Casino and Kyogle the same conditions apply as for the Picton to Mittagong Line as stated in clause 10.1 above.

10.5 Mt Thorley Line

This is legally unfenced, but at the request of landholders, some boundary fences were provided. The maintenance of these fences is the responsibility of the landholder. At locations where a boundary fence was constructed to allow a cattle stop to be located clear to cuttings, the maintenance of the fence is ARTC's responsibility.

On all other 'unfenced lines' only the yards were fenced and this fencing is now only maintained for security.

Cattle stops can only be removed with the written approval of the affected landholders. If additional cattle stops are required to subdivide paddocks, cost of installation and subsequent maintenance is at the expense of the applicant. Where possible this practice is to be avoided and the applicant encouraged to construct boundary fences along the railway boundary to permit division of paddocks without affecting the line.

The ARTC is responsible for maintenance of the cattle stop required to allow the line to pass through the property boundary fence. The private property owner maintains the fence up to the cattle stop, even though the fence is on railway land, except where a railway access gate is provided to allow construction of firebreaks etc. In this case, the fence between the gate and the cattle stop is to be maintained by the authorised ARTC representative.

No assistance whatsoever is to be given in the way of labour or material to adjoining owners and occupiers of land adjacent to 'unfenced lines' other than those specifically mentioned in Section 10.2

The unfenced lines in the State are listed in Table 1.

11 Requirements - Occupational Health and Safety Act

It is recommended that in consideration of the Act and ARTC's general common law duties, ARTC identify work places which are of a particular public danger and take whatever reasonable means are available within its resources to restrict public access thereto i.e. by providing appropriate fencing. Such areas may include:

- Places where unusual or concealed dangers exist;
- Places that might constitute or contain allurements to children
- Places where hazardous substances are stored.

The OH & S Act does not specifically refer to fencing, however, Section 16 of the Act places onus on the employer to: "ensure that persons not in his employment are not exposed to risks to their health or safety arising from the conduct of his undertaking while they are at his place of work".

Controlling the entry of persons onto an employer's work place is a reasonable action to adopt in order to begin complying with this requirement and that fencing could be regarded as part of such control. In the case of trespass the obligation of Section 16 would still appear to arise.

A defence to proceedings brought against persons for breach of the Act is provided under Section 53 of the OH&S Act. The defence may comprise a case that it was not reasonably practical to comply with the provision of the Act or a case that the offence was due to causes over which ARTC had no control and for which it was impractical to make provision.

While the OH & S Act does not affect ARTC's boundary fencing policy directly, ARTC does have a responsibility to take reasonable precaution against public access to those areas which present a particular public danger. At a local level this would involve not only identifying those areas which require fencing but also establishing an effective system which can identify existing fenced areas in need of repair or replacement. The amount of new fencing erected and existing fencing repaired or replaced in any one year is a function of the amount of funds made available, however, if it can be demonstrated in general that a practical strategy has been adopted for the available funds, then successful claims against Australian Rail Track Corporation and individuals will be less likely.

12 Access Gates

In all types of fencing, access for track and property maintenance is to be considered. Wherever such access is warranted, correctly constructed gates are to be provided and maintained.

On unfenced lines, if gates are required in a privately owned fence, the provision of such a gate is to be mutually arranged with the owner at the cost of the authorised ARTC representative.

13 Standard Fencing

a) Construction Standards

All boundary fencing should be constructed in accordance with the details in this section and Drawing No. S.G. 423A.

All wire will normally be galvanised steel to A.S. N1, N2, N3, N4 - "Galvanised Wire and Wire Netting".

Line posts shall be varnished star steel fence posts or an approved equivalent. They shall be placed into position by driving.

Excavation for steel rail or approved equivalent posts shall be backfilled in 150 mm layers and rammed thoroughly.

The spacing of posts shall be as shown detailed on the Drawing. Care shall be taken to ensure that posts are evenly spaced except where the ground spacing is to be modified to suit the configuration of the ground.

Where the fence traverses gullies and where posts can be subjected to an upward tensile force from the change, two additional strainer sets are to be placed at the change of the vertical direction.

The fence shall generally follow the ground surface and except for minor irregularities shall be plumb, taut, true to line and grade, and complete in all detail.

Where the fence is required to be constructed across waterways, creek bed depressions or any other form of surface erosion, the depression must be fenced in such a manner that it is stockproof.

b) Requirements for Gates

Gates shall be constructed in the locations as directed in accordance with the details shown on Drawing No. 95-121.

Gate construction shall be completed with posts vertical and true and gates hung properly and swinging free of the ground.

c) Connection with Intersecting Fences

Paddock dividing fences and Private Property dividing fences are to terminate on their own end post to the satisfaction of the owners. A stockproof connection is to be provided between the private fence and the Railway Boundary Fence.

d) Fencing on Curves

Where the fence is required to be erected on an existing curved boundary, the fence is to be erected as a series of chords or tangents and the distance between straining posts reduced.

The length of the straight is to be determined for each location to reduce to a minimum encroachment on private property yet retaining adequate land for firebreaks, access and other ARTC requirements.

It is to be noted that since about 1930, all boundaries now on "fenced" lines have been designed as a series of straights and not curved. On these lines, the existing boundary is to be retained.

Table 1

List of Unfenced Lines and Lines Legally Unfenced but Fenced under Discretionary Powers as detailed in Section 12.

Lines constructed prior to 1902 and declared unfenced by Government Railways Act (Fencing) No. 76 of 1902 are indicated by * in Act column.

FROM	TO	ACT
Port Kembla	Moss Vale	Act No. 63 of 1924
Picton	Mittagong (Main Line)	Act No. 25 of 1914
Goulburn	Crookwell	*
Bungendore Junction	Captains Flat	Act No. 23 of 1930
Cooma	Bombala	Act No. 23 of 1908
Galong	Boorowa	Act No. 2 of 1912
Gundagai	Tumut	*
Gilmore	Batlow	Act No, 20 of 1919
Stockinbingal	Forbes	Act No. 10 of 1911
Temora	Griffith-Hillston	Act No. 89 of 1902 & Act No. 44 of 1915
Hillston	Roto	Act No. 38 of 1929
Temora	Lake Cargelligo-Wyalong	Act No. 50 of 1901 & Act No. 76 of 1912
Wyalong	Wyalong Central	*
Barmedman	Rankin's Spring	Act no. 46 of 1915
Ungarie	Naradhan	Act No. 46 of 1923
West Wyalong	Burcher	Act No. 47 of 1923
Yanco	Griffith	Act No. 14 of 1919
Wagga Wagga	Tumbarumba	Act No. 18 of 1911
Uranquinty	Kywong	Act No. 33 of 1930
The Rock	Oaklands	*

Henty	Rand	Act No. 63 of 1916
Culcairn	Holbrook	*
Jerilderie	Finley	*
Finley	Tocumwal	Act No. 3 of 1912
Yanco	Griffith	Act No. 14 of 1919
Mudgee	Gwabegar	Act No. 35 of 1906, Act No. 12 of 1911 Act No. 12 of 1913
Tarana	Oberon	Act No. 8 of 1919
Craboon	Coolah	Act No. 50 of 1915
Koorawatha	Grenfell	*
Cowra	Eugowra	Act No. 17 of 1908 to Canowindra & Act No. 48 of 1915
Talbragar	Coonamble	*
Troy Junction	Merrygoen	Act No. 18 of 1913
Nevertire	Warren	*
Nyngan	Cobar	*
Byrock	Brewarrina	*
Molong	Dubbo	Act No. 59 of 1916
Parkes	Condobolin	*
Condobolin	Broken Hill	Act No. 64 of 1912
Goobang Junction	Narromine	Act No. 14 of 1911 to Peak Hill & Act No. 13 of 1907
Bogan Gate	Tottenham	Act No. 88 of 1902 to Tullamore & Act No. 13 of 1911
Stockinbingal	Forbes	Act No. 10 of 1911
Roto	Hillston	Act No. 8 of 1929
Whittingham	Mt Thorley	Act No. 51 of 1975
Muswellbrook	Sandy Hollow	Act No. 11 of 1911
Sandy Hollow	Merriwa	Act No. 11 of 1911
Sandy Hollow	Gulgong	Act No. 27 of 1927
Maitland	South Grafton	Act No. 18 of 1906
Binnaway	Werris Creek	Act No. 18 of 1912
Mudgee	Gwabegar	Act No. 35 of 1906, Act No. 12 of 1911 Act No. 12 of 1913
West Tamworth	Barraba	*
Narrabri	Walgett	*
Burren	Pokataroo	*
Narrabri	Moree	*
Moree	Mungindi	Act No. 10 of 1909
Moree	Inverell	*
Camurra	Boggabilla	Act No. 49 of 1923
Maitland	South Grafton	Act No. 18 of 1906
Glenreagh	Dorrigo	Act No. 39 of 1910
Casino	Kyogle	Act No. 18 of 1908 & Grafton-Kyogle-Sth Brisbane Agt. Ratification Act No. 20 of 1924

Note: The uncompleted line from Gulgong to Maryvale was commenced under Act No. 27 of 1927.
