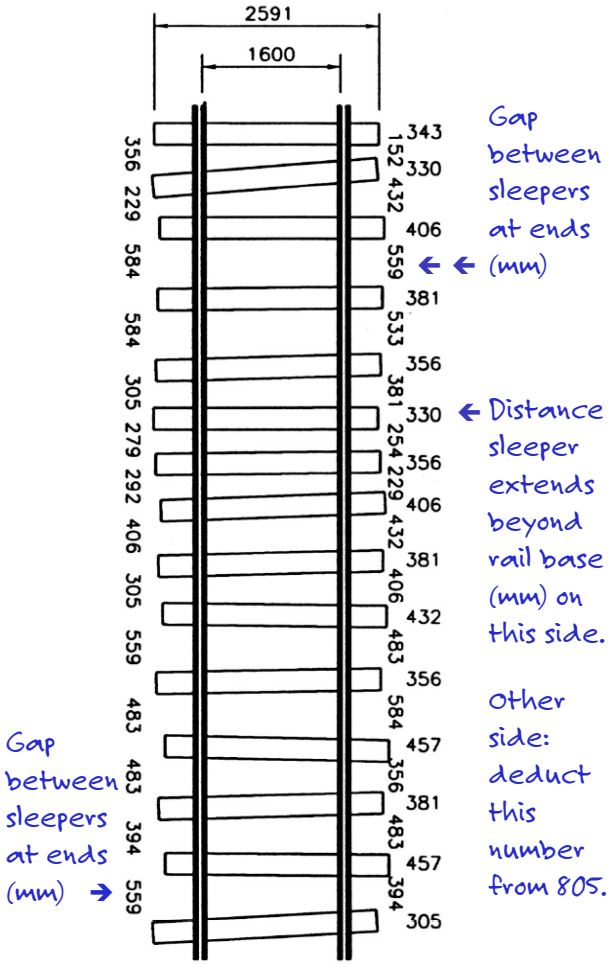
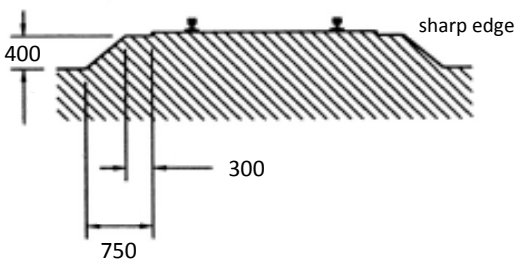
SAR 1600 mm broad gauge track – primary mainline measured south of Mallala, 1980

These data sheets are downloadable free from http://www.sap4group.org.au/downloads_and_links.html

Dimensions shown are millimetres, full size. (Measurements were taken in inches, with a tolerance of about ± half an inch; the mm figures shown are simply the result of metric conversion without rounding.)



Excluding sleepers adjacent to rail joints: average gap between sleepers 420 mm; average sleeper centre lines 675 mm.



Section through formation.

Features of this drawing

This track had welded rail, most likely 73 metres. Therefore, the sleeper spacing shown does not incorporate the closer spacing adjacent to rail joints. Rail joints were perpendicular/square.

Despite the track being the well-maintained main line linking Adelaide to Port Pirie and Western Australia, considerable variation in sleeper placement was measured: as shown, gaps between sleepers ranged from 152 mm to 559 mm and distances from rail base to sleeper end ranged from 305 mm to 457 mm.

Sleeper size (timber): 2590 mm x 254 mm x 127 mm thick.

Weight of rail: 94 pounds per yard (= 47 kg/m, about code 70 in HO).

Ballast was clean: 80–90% pink and white limestone and 10–20% blue. Ballast 400 mm thick; flush with sleeper tops; shoulder sharp, as drawn.

Rust stains extend out 150 mm either side of rails. A few weeds and oil stains.

Ensure this drawing is the right size

Having an exact-scale drawing is especially useful when making a jig to ensure accuracy of sleeper spacing. The original was drawn to HO scale (1:87.1). However, your computer and printer may not reproduce it at this scale exactly. You can easily correct this.

After printing this page, measure the actual length of the line labelled "259l". It should be 29.75 mm long at 1:87.1 scale. Calculate the percentage setting needed to correct it and reprint or photocopy the page at this new setting.

Simulating broad gauge at 16.5 mm

This drawing is for 1600 mm broad gauge track. In HO scale that equates to a gauge of 18.37 mm. If you want to retain a gauge of 16.5 mm but give the impression of broad gauge, simply set your printer or photocopier to 90% (i.e., 16.5 ÷ 18.37). Modelling your track at 90% of HO scale in all components will ensure it has broad gauge proportions, which the eye picks up far more readily than actual sizes. If you do that, however, remember to write new values (x 0.9) for all HO dimensions.

Broad gauge can also be simulated by reproducing this sheet in N scale at 49% and O scale at 174%.