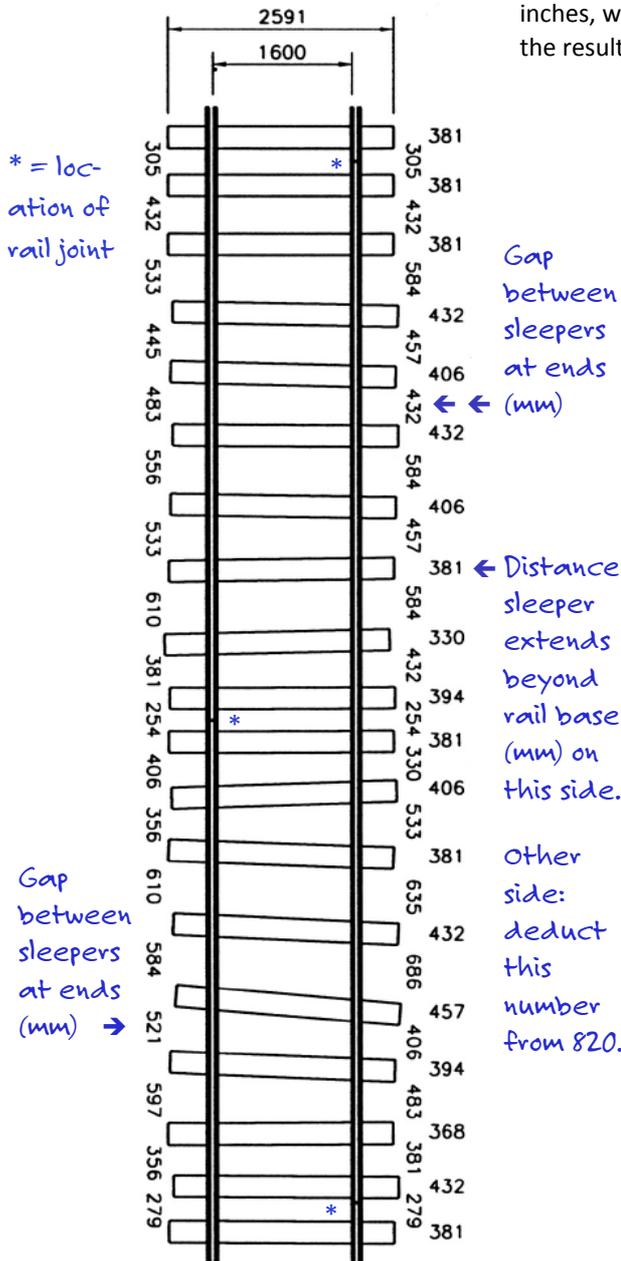# SAR 1600 mm broad gauge track – well-kept secondary mainline measured near Blyth, 1980

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 495 mm; average sleeper centre lines 750 mm.

Section through formation.

Features of this drawing

The track was well-kept secondary mainline. Rail was in 12.2 metre lengths. Joints were staggered.

Because of the short rail lengths and staggered joints there was an almost 50–50 mix of large and small gaps between sleepers. As shown, the two sleepers either side of joints had gaps of 179 to 432 mm and others ranged from 356 to 686 mm. Distances from rail base to sleeper end ranged from 330 to 457 mm.

Sleeper size (timber): 2590 mm x 254 mm x 127 mm thick. Sleepers were very bleached.

Rail weight: 60 pounds/yard (= 30 kg/m = code 55 in HO).

Ballast was clean: 50% white limestone and 50% blue, up to 50 mm in size with most being 20–50 mm. Ballast 300 mm thick above sub-grade; flush with sleeper tops; shoulder fairly sharp.

Rust stains extend out 150 mm either side of rails.

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 "2591". 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%.