

Facts sheet 3: Widths and headroom. (Are they too narrow)?

The track width for a train is 4 feet 8.5 inches. It is derived from the carts being dragged by pit ponies 150 years ago. However, bridge abutments, tunnels and viaducts on double track railways offer a clear width seldom less than 7.3m (24 feet) - the same as the carriageway width required for a two-way trunk road. Elsewhere double-track railways offer a level width of 8.5 m (28 feet) on tangents and more on bends. Single-track railways offer 13 feet between bridge abutments but many were built on double track formations. Hence the widths of most railways would accommodate carriageways the same width as those for new (single carriageway) trunk roads but not the 3m verges that form part of the design standard for green field construction. However, effective verges are generally absent on most ordinary roads and would serve little or no purpose on railway alignments.

The European carriageway width for a two-way road is 7m and at one time the standard for Scottish Trunk Roads was 5.5m (18 feet). It may also be noted that there are many "A" roads 6m wide where lorries and coaches operate without difficulty.

As to headroom, clearances above rail top are normally 4.16m (13 feet 8 inches) increased to 4.77m (15ft 8 inches) where there is overhead electrification. Road level would be 300mm (1ft) below rail top. Hence, without altering tunnels and bridges, the clearances available are 4.46m up to 5.07m. In many parts of the world the required headroom is 4.5m

Although car transporters in the UK are often 4.9m high nearly most container lorries are less than 4.3m high. Further, the standard height for international transport is 4m. Double deck buses range in height from 3.9m to 4.44m. A headroom clearance above the vehicles of 200mm is adequate.

Against that background the notion that railways are too narrow or lack adequate headroom should be dismissed.

A sensible standard for conversion would offer 3.5m lanes and 4.5m of headroom. Marginal strips could flank the carriageways where existing widths enabled that. Departures from standards (e.g. a reduction in lane width to 3m) should be allowed where the full standard may impose unacceptable costs.

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(The source for the railway widths cited above is British Railways).