

Categories Contained in the Road Network

The Design Manual for Roads and Bridges (DMRB) is a document issued and updated from time to time to describe how specific structures and roads (or highways) should be designed and is the design standard for the 4 overseeing Roads Authorities. In the DMRB various road designs are identified.

Roads Surface

For the purposes of the valuation and treatment of the Roads asset it is seen as one network.

From the DMRB, various road standards that exist in the Motorway and the Trunk Road Network are identified. The standards cover both how the road should appear to how it should be constructed. From those standards the various Road Types used in valuation models are defined. As the designs from the DMRB are always being refined the road types identified are the modern equivalent replacement rather than the road that was actually built.

In addition to the standards, road types are broken further, to differentiate between the urban and rural situation. The differentiation between urban and rural is based on speed limits.

There are about 40 different road types, which range from a single lane with passing places (only rural) to Dual 5 lanes motorways (both rural and urban). Roads are further analysed according to the method of construction, by whether the road is rigid (Concrete) or flexible (Asphalt). This last differentiation is used specifically with respect to the level of maintenance required as a rigid carriageway does not deteriorate whilst a flexible one does.

In order to be able to identify a specific location on the trunk road network, the network is split up into first links and then those links are further sub-divided into sections. In general a link covers from a major junction on the trunk road to the next major junction; they can be of any length. Sections go from junction to junction, with the proviso that a section cannot exceed 9.999km in length. In practice the largest section is about 5km long. A point on the Trunk Road can then be described as A link number (10105) a section number (04) and a chainage along the section (34m)

Structures

Structures can be one of 4 different types:

Bridges

Bridges are again split into a number of types. The first taxonomic feature relates to what the bridge does for the Trunk Road Traffic and whether the traffic goes over or under the bridge. Each category is further sub-divided by the number of spans in the Bridge. For example a 2 span overbridge.

Culvert

Culverts are split into a number of different types. The first taxonomic feature relates to the material from which the culvert is made and the next relates to the size of the culvert.

Walls

Walls are split into a number of types of wall based on the material of the wall and how the wall is formed.

Gantries

There are 4 gantry types based on their heights

Communications Equipment

Various types of communications equipment are considered in the make up of the Communications Asset. Examples of these are:

- Variable Message Signs
- Emergency Telephones
- Ice Alert Equipment

Each asset type is given a modern replacement cost based on the type of asset.

Land

Each Road type identified above has in addition to the land taken under the road a recommended footprint from the DMRB.

Special Structures

Within the valuation there are a number of structures that do not conform to the standards that we have used above.