EXTENT OF THE

TRUNK ROAD NETWORK

Transport Scotland
Buchanan House
58 Port Dundas Road
GLASGOW
G4 0HF

EXTENT OF THE NETWORK

PREFACE

1.1 INTRODUCTION

1.1.1 The purpose of producing a document of this nature is to establish, in descriptive and diagrammatic form, concepts that can be used throughout the Trunk Road Network when considering the maintenance interfaces between the Trunk Road and other transport links.

1.1.2 A document of this nature, whilst providing guidance on how to assess the interfaces of maintenance responsibilities, does not set out to change or in any way amend any legal definitions that relate to any part of the road network.

1.2 GENERAL NOTES ON THE 'LIMITS'

1.2.1 In very general terms the 'extent of the network' is known; in that particular roads have start and end points (longitudinally extent), however, less easily determined in some locations (particularly at junctions and interchanges) is the lateral extent.

1.2.2 The Roads (Scotland) Act 1984, requires that a road is maintained by the roads authority in whose domain it lies, and that the road (from side to side) extends from boundary to boundary. This is equally applicable whether the road under consideration is a Trunk Road or a Local Road.

1.2.3 The Side Road Orders and the Lists of Public Roads consider the local roads to abut the carriageway of the major/Trunk Road.

1.2.4 Considering the above, the limit of the carriageway of a side road will extend to the channel line of the Trunk Road, however this may not be the interface when the peripheral elements of the road (verges etc) are considered. A fuller description of the way this separation of boundaries may be considered, is investigated in the various sections within the respective parts of the document.

1.3 LAYOUT OF THE DOCUMENT

1.3.1 This document is set out in so that the 'roads' are considered in a progressive way, generally from the centre-line outward to the verges and then the boundaries themselves. Hence the first element is the surfacing and the last is the boundary treatment.

1.4 RURAL TRUNK ROADS – CONTENTS

1.0 Preface and Contents

A general Introduction and Notes section that sets the scene for the scope and layout of this document that relates to the limit of the trunk roads network in the rural situation.

2.0 Carriageway running surfaces

This section illustrates the position of the interface between the local road surface and the trunk road surface. This takes the legal boundary, as referred in paragraph 1.2.3 and applies it to the various junction types that are encountered throughout the rural trunk road network.

3.0 Road Markings

Primarily, all white lining on the surfacing of the trunk road is considered in this section, in addition, the road markings on the side roads at junctions and at roundabouts is also addressed.

4.0 Kerbs

As part of the carriageway construction kerbs are addressed separately to clearly establish maintenance responsibility at particular locations.

5.0 Footways and Grass Strips

This section establishes those elements of pedestrian rights of way, cycleways and/or bridlepaths that are part of the trunk road network and sets down parameters that can be applied where the maintenance responsibilities are uncertain.

6.0 Roadside Furniture

Most features that are present, both on and under the grass strips adjacent to the running surface of the trunk road, can be considered as being linear or non-linear in nature. This section considers; safety barriers, pedestrian fencing, drainage, lighting etc. These features are all linear in nature.

7.0 Road Signs and Traffic Management Systems

This section deals specifically with road signs of various types (non-linear features) in all locations, and with the maintenance aspects of traffic signals.

8.0 Structures

This section covers the maintenance issues relating to;

1. Overbridges
2. Underbridges
3. Underpasses
4. Culverts
5. River Crossings

6. Railway Bridges, and
7. Gantries

9.0 Earthworks and Retaining Structures

This section contains a general description of the maintenance responsibilities that should normally be applied to natural and man-made slopes that are features of the trunk road.

10.0 Boundary Walls and Fences

Clarification of which fences and/or walls are to be maintained as part of the trunk road is contained in this section.

11.0 Appendix A

Sketches to illustrate particular items of the text.

2.0 CARRIAGEWAY RUNNING SURFACES

2.1 Interchanges

2.1.1 In considering a typical interchange arrangement, where the TR passes over or under a local road, the mainline and the slip roads will be part of the TRN.

2.1.2 At the limit of the slip road the interface with the local road should be considered in the same manner as for a simple T-junction. Therefore, the carriageway surfacing of the slip-road will extend to meet the local road at the channel line, with the associated kerbing also being maintained by the Trunk Road Operator (see item 4.3.). Sketch No. SE/EOTN/001 refers.

2.2 Simple T-junction

This scenario will provide the basis for many other situations. It should be kept as simple as possible. It should be based on the broad principles that any 'road' incorporates the verges, footways carriageway etc. between the lateral boundaries, but in this section only the surfacing is being considered.

2.2.1 The interface, between the areas of surfacing only, is to be the channel line across the junction, parallel to the centre-line of the TR and a continuation of the front face of the mainline kerb (where one is present). As shown in Sketch No. SE/EOTN/002 in Appendix A.
Therefore the area of the surfacing in the junction, that will be maintained by the local roads authority, includes the area of the bellmouth. Where more complex arrangements of junction layout exist there are additional criteria to be considered when deciding where maintenance interfaces, of the surfacing, should be (see items 2.3.1 to 2.3.3).

Note: It must be recognised by those maintaining the trunk road that when works are being carried out on any of the main-line elements and features there must be full co-ordination of these works with the local authority with whom there is a boundary. Further, should there be any minor remedial works or repairs required to any area within a junction, then these if requested by the local authority so to do, are to be carried out whilst road closures and other works are effected.

2.3 T-junction with Acceleration/Deceleration lanes or tapers

2.3.1 As a general statement the acceleration/deceleration lanes and tapers at interchanges, as elements of the major road slip-roads are all considered as part of the TRN (item 2.1 above). The same philosophy can be applied at complex T-junctions.

2.3.2 Where there is a deceleration lane into a left turn off the TR and an acceleration taper or large radius out onto the TR, there is a need to establish the hierarchy of the elements of the junction. Placing the highest ranking at the top, this is;

- Trunk Road
- Side Road
- Deceleration lane, taper etc

Hence, the deceleration lane/taper etc, will interface with the local road, which in turn interfaces with the TR. This is the same regime as exists at an interchange, as described in item 2.1 above, except there is no direct local road/TR interface in the interchange.

2.3.3 Therefore the area of the surfacing in the junction in these cases, that will be maintained by the local roads authority, includes that area that lies between the projected channels of the local road and the channel of the TR. Refer to Sketch No. SE/EOTN/003 in Appendix A.

Note: It must be recognised by those maintaining the trunk road that when works are being carried out on any of the main-line elements and features there must be full co-ordination of these works with the local authority with whom there is a boundary. Further, should there be any minor remedial works or repairs required to any area within a junction, then these if requested by the local authority so to do, are to be carried out whilst road closures and other works are effected.

2.4 Roundabouts

2.4.1 Each entry and exit will be considered as 'simple T-junctions'. This approach to the maintenance of surfacing will clarify which elements of white-lining, kerbing etc should be maintained by whom and where the winter maintenance duties lie.

2.4.2 Where the roundabout forms part of a through Trunk Road (i.e. there are two, or more, trunk road links involved at the roundabout), the circulatory carriageway(s) will be considered as being part of the TRN.

2.4.3 Where the roundabout forms part of an interchange, where Trunk and Local roads are grade-separated, the slip-roads will be part of the TRN (as in item 2.1.1 above). The slip-roads will terminate at the channel line of the circulatory carriageway, with the circulatory carriageway itself forming part of the side road. In this arrangement the maintenance responsibility for the roundabout lies with the local roads authority. Refer to Sketch No. SE/EOTN/004 in Appendix A.

Note: As with 2.3.3 above, where planned works to a local authority owned circulatory carriageway are being undertaken full consultation with Transport Scotland and their contractors must be maintained and any minor repairs carried out as other works are executed.

2.5 Private Accesses

2.5.1 Where an access is provided into private property directly off the trunk road, then the construction of this will be agreed with the Operating Company on behalf of the Executive and to Scottish Executive standards. The future maintenance of the running surface of such accesses, within specific limits e.g. to the 'line of the back of verge', will be the responsibility of the Operating Company. This will ensure that the entry to the access is maintained in an acceptable condition in terms of road safety etc. i.e. the access will not be allowed to deteriorate to an extent where loose material or excessive water can introduce a safety hazard onto the Trunk Road. Refer to Sketch No. SE/EOTN/005 in Appendix A.

3.0 ROAD MARKINGS

3.1 General

3.1.1 All white road markings on the carriageway of the Trunk Road, will be maintained as part of the TRN.

3.2 'Give Way' markings at Trunk Road/Local Road interface

3.2.1 Currently, there are two layouts for the 'Give Way' markings, both of which are considered in the following text. For illustration purposes reference can be made to Figures 5.3(a) and 5.3(b) within Chapter 5 of the 1985 edition of the Traffic Signs Manual. These figures show the layout of markings where the trunk road has, or does not have white edge lines.

3.2.1 For both situations the white double-dashed marks (to Diag.1003) at a local road/trunk road interface are located wholly on the local road surfacing and will be the maintenance responsibility of the local roads authority.

3.2.2 The centre-line markings (to Diag. 1004) and the inverted triangle (to Diag. 1023), are located wholly on the local road surfacing and are therefore the maintenance responsibility of the local roads authority

3.2.3 For both the above line arrangements, if the trunk road operator is carrying out routine white line 'refreshing' works, he will also 'refresh' the road markings of the local road that are 'directly associated with' the 'Give Way'.

3.2.3 For both arrangements, discussed in items 3.2.1 to 3.2.3 above, there may be occasions when the markings on the local road are affected in some way by works carried out as part of trunk road maintenance. If damage occurs, due to overlay work or carriageway reconstruction operations, then the affected white lining will be replaced as part of these works.

3.2.4 Where there are deceleration lanes with 'Give Way Lines' at the interface with the local road then, since these markings are on the surfacing of the deceleration lane or taper, (which is the maintenance responsibility of the trunk road operator) they shall be maintained as part of the trunk road network.

3.2.5 The general concept of the above items is that the authority on whose surfacing the road markings lay shall carry out the maintenance of those markings.

3.2.6 Where the road markings described above are accompanied by a 'Give Way' road sign (to Diag. 602) then this sign, if located within the verge or grass strip that is maintained as part of the trunk road, will also be maintained by the trunk road operator.

4.0 KERBS

4.1 General

4.1.1 It is considered that road kerbs should be regarded as 'belonging' (for maintenance purposes) to those who have the maintenance responsibility for the adjacent carriageway surfacing. In general terms all the road edge and central reserve kerbing within the boundary of the trunk road will be maintained by the trunk road operator, except where part of the construction of a local road, see item 4.3.

4.2 At Splitter Islands

4.2.1 Kerbs to local road splitter islands should be maintained by the same authority as maintains the adjacent carriageway surfacing, i.e. the local roads authority.

4.3 At Junctions

4.3.1 At a simple T-junction, refer to item 2.2.1 regarding the surfacing, the interface will be at the common tangent point at the trunk road end of the entrance/exit radius (this being the interface of the two areas of surfacing).

4.3.2 At complex junctions the kerbing, to be maintained by the trunk road operator, will extend to the limit of the surfacing to be maintained by the trunk road operator. In some locations this will mean that the trunk road kerb will terminate at the tangent point on the local road.

4.4 Damage or other necessary modification work

4.4.1 Should either party damage kerbs of the other then repairs shall be carried out to make good. This applies to all cases and may be the result of activities involved with road reconstruction, resurfacing or other carriageway realignment works.

5.0 FOOTWAYS & GRASS STRIPS

5.1 General

In general the footways, cycleways, grass strips, road cuttings and embankments, associated with a road and lying within the trunk road boundary, are part of the trunk road. In some locations, where a footway/footpath/cycleway is part of a network of local authority 'rights of way' and is short in length, it appears prudent that maintenance of this should be with the one authority throughout. This exception will not affect the maintenance of any other part of the road on which the feature may lie (see items 5.2.3 and 5.2.4). If a grass strip is created between a footway and the TR kerb and is within the TR boundary, then this grass strip will be part of the TRN, however the footway itself in this area may be considered differently.

5.2 Footways

5.2.1 Where there is a footway immediately adjacent to the trunk road then this will be part of the TRN.

5.2.2 The trunk road footpath is not always parallel to the trunk road centreline, eg at a junction where the path may 'wrap-around' into the local road. Refer to Sketch No. SE/EOTN/006 in Appendix A.

5.2.2.1 Where the footway deviates from the general alignment of the trunk road and there is no connection to a local authority footway then the maintenance of this footway will remain with the trunk road operator.

5.2.2.2 If there is a connection to a local authority footway, then it will be necessary to establish a practical location for the interface that is appropriate for both parties. This interface may be at the point where the two footways meet, or, if this is further than, say 5 metres, beyond the trunk road boundary, than the boundary of the trunk road should be the limit of the trunk road footway.

5.2.3 Where a footway/footpath etc is located within the trunk road boundary it is likely that it will be maintained by the trunk road operator. There will be situations where this not the case.

e.g. Where a local authority path utilises an underpass to cross directly under, or an overbridge to pass over, a trunk road.
If the footpath/footway is part of a local authority network of paths, then the length located within the trunk road boundary, shall be maintained by the local road authority.
[This alleviates a potential interface problem that could arise. Where a local authority 'path' passes through the trunk road boundary / crosses a grass strip / enters an underpass / crosses a grass strip / leaves the trunk road, there are potentially two maintenance interfaces within the trunk road boundary and four interfaces in total. A similar situation would occur where a path crosses the trunk road via an overbridge.]

5.2.4 The following notes 5.2.4.1, 5.2.4.2 and 5.2.4.3 consider the practicalities of the maintenance responsibilities for footways etc that are associated with the different road hierarchies.

5.2.4.1 Where a footway/footpath that connects two lengths of local authority footway, that are interrupted by a trunk road roundabout, then the connecting footpaths should be maintained by the local authority (see Sketch No. SE/EOTN/ 006 in Appendix A). If this route requires that the footpath utilises a splitter island or central reserve when crossing the trunk road, the section of path on the island should be maintained by the trunk road authority.

5.2.4.2 Where a footway/footpath, follows the route of the trunk road, it should be maintained by the trunk road operator. If this path does not connect with a local roads authority footway, then it shall be maintained throughout by the trunk road operator, except where it may utilise a splitter island or central reserve on the local road. This section, at the central reserve or splitter island, should be maintained by the local roads authority.

5.2.4.3 Where there is a link to a trunk road footway of any sort, at a roundabout where other footways are present, then all the paths at the roundabout, connected to that footway, will be considered as maintainable by the trunk road operator, and the other criteria referred above will be used.

6.0 'VERGES' & ROADSIDE FURNITURE

6.1 General

Roadside furniture, including the above and below ground features, that are located within the boundary of the trunk road, will generally be the maintenance responsibility of the trunk road operator. There are some exceptions to the general rule and these are investigated in the following paragraphs. There will also be some factors that may increase the scope of maintenance of some features and these too are addressed in the following paragraphs.

6.2 Safety Fencing and Pedestrian Guardrails at junctions and at structures.

6.2.1 Generally, Safety Barriers installed at 'at-grade' junctions, shall be part of the TRN. The integrity of the barrier within the TR boundary must be maintained, and hence a maximum distance of 30 metres beyond the trunk road boundary (see item 5.2.1) may be considered. If another feature interrupts this length then this should be considered as the limit.

6.2.2 Where a pedestrian guardrail is installed this will be maintained by the authority that is responsible for its associated footway. Where the pedestrian barrier is part of the TRN and it continues, without interruption, beyond the trunk road boundary, the limit of this guardrail should be only of sufficient length to maintain the integrity of the rail in question. This limit could be at a pedestrian crossing (see item 5.2.2.3)

6.2.3 At structures, the Parapet guardrail will be considered as part of the structure, and hence maintained as part of the TRN. In cases where there is a short length of tensioned or untensioned safety barrier (that is an extension of that related to an interchange slip-road) that is connected to such a parapet then this barrier, including the connection itself, is to be maintained as part of the TRN. Where safety barriers are adjacent to side roads that pass over the TR, and no carriageway connection to the TR is made, then these barriers (except for the 30 metre 'lead-in' and 7.5 metre 'tail-out') are to be maintained by the local road authority. The connection between the safety barrier and the parapet (or the two parts of 'shared barrier') will be part of the TRN. Refer to Sketch No. SE/EOTN/007 in Appendix A.

6.3 Drainage

6.3.1 Underground drainage pipework should be considered as a 'linear' feature. The maintenance of it as part of the TRN should extend to the last manhole prior to the point of discharge, even if this is beyond the boundary of the TRN. If this manhole has a common function i.e. it is part of more than one drainage system, then responsibility for the maintenance of the common manhole will lie with the TRN. This responsibility will remain until the point of discharge to a watercourse or other conveying system, at which point the ownership/maintenance responsibility will move on to the next riparian owner. Refer to Sketch No. SE/EOTN/008 in Appendix A.

6.3.2 Where the outfall manhole is located within the boundary of the TRN, the maintenance shall be as in item 6.3.1 above. If the local roads authority drainage also uses this manhole then they shall have access to maintain their apparatus.

6.3.3 Open ditches etc shall follow the same general principles as those for piped systems.

6.3.4 Gullies are to be maintained by the authority in which they are located e.g. those that are within the bell-mouth of a 'simple T-junction' are the maintenance responsibility of the local roads authority. Where a gully is located in surfacing that is maintained by the trunk road operator then this will also be maintained by the trunk road operator. In all cases the gully tail should be considered as part of the gully.

6.4 Lighting (including lighting circuits)

6.4.1 Whilst lighting columns are discrete features, the power circuits that supply them should be regarded as 'linear' items, however the situation may be complicated by the location and power origin for the control pillars.

Normally, the TRN operator will be responsible for the maintenance of the whole lighting system that is necessary for the illumination of the Trunk Road and associated local road carriageways required for the safe movement of vehicular traffic along, as well as to and from, the TR. Generally the limit of the lighting, provided and maintained as part of the TR, will be the trunk road boundary. However, at junctions in remote areas where there is an absence of local roads authority lighting, the TR lighting network is extended into the local road to ensure a safe level of illumination at the junction.

6.4.2 Illuminated bollards mounted on kerbed splitter islands will usually take their power from the nearest lighting column. These bollards and ducting should be the responsibility of the local roads authority. The cabling to such bollards from the terminals within the column will be the responsibility of the local roads authority. This will provide a discrete location at which maintenance can change from one party to the other. However, it must be recognised that it will be necessary to isolate the power supply at the control pillar, prior to effecting any repair work that may be required at the bollard locations.

6.4.3 All lighting on local roads that pass over or under the TR is the responsibility of the local roads authority. This should be extended to include the one or two columns on the ends of slip-roads (where appropriate), since these are only present where the side road itself is illuminated. (It should be the responsibility of the TRN to provide this lighting at the 'ends' of the slip-roads at Motorway interchanges since Motorway Regulations are applicable to the slip-roads themselves).

6.4.4 In the simplest case the TR lighting will be supplied in isolation from a control pillar located within the TRN boundary. More complex situations are probably the norm, and in such cases the Health & Safety aspect of how maintenance can be carried out will play the major part in determining the strategy for such work.

It should be possible to establish a standard and safe working principle that can be adopted throughout the road network that facilitates maintenance operatives from different units/authorities etc having access to, and working on, a control panel without endangering the wellbeing of a second party, ('The 3-padlock system'). If it is not feasible to accommodate this way of working safely, then a system for passing over possession of the panel in a controlled manner, must be established to ensure that no part of the electrical system is energised whilst maintenance work is ongoing.

7.0 ROAD SIGNS & TRAFFIC MANAGEMENT SYSTEMS

7.1 Signs

7.1.1 The signs that are located within the verge of the TR will be maintained as part of the TRN, unless they are 'third-party' signs, which are the responsibility of the appropriate third party. It will be necessary to identify these as individual items at each location.

7.1.2 Where these third-party signs, mounted within the boundary of the TRN, are damaged by collision or are otherwise found to be in a dangerous condition, then they will be 'made safe' by the TRN operator. Thereafter, the condition of these signs is to be reported to those responsible, for permanent repair to be made.

7.1.3 Advance signs, 'White and Black' (Non-Primary Route Directional Signs), that may have been installed as part of the works in constructing a new TR, but which are located on the verge of the side road are to be maintained by the local roads authority.

7.1.4 Advance signs, 'Green & White' (Primary Route Directional Signs), that have been installed as part of works relating to the trunk road and located on the verge of the side road, but complying with the requirements of the current legislation, will be maintained by the trunk road operator.

7.1.5 Note: There are local roads within the network that have been de-trunked from their previous trunk road status. Where 'green and white' signs remain on such roads in advance of junctions, the maintenance of such signs will be the responsibility of the local roads authority. The onus is with these authorities to replace such signs with appropriate 'White and black' versions with the new road designations thereon.

7.1.6 Signs, other than 'third-party' signs, located on splitter islands are to be maintained by the same party as is responsible for the maintenance of the island.

7.2 Traffic Signals

7.2.1 At all signal-controlled junctions the whole system is the maintenance responsibility of the TRN. In some of the cities the City Council operates a management system to monitor the apparatus and performance at signalised junctions. Information is relayed to the TRN operator in the event of some form of failure, so that speedy repairs/action can be undertaken. This reporting system is provided as a service to the TRN operator.

7.2.2 At all signal-controlled pedestrian crossings the whole system falls within the maintenance responsibility of the TRN.

8.0 STRUCTURES

8.1 General

8.1.1 Generally the structures that are encountered as part of the TRN fall into the following categories.

1. Overbridges - these support another road* over the TR,
2. Underbridges - these support the Trunk Road where another road* passes under,
3. Underpasses - these support the Trunk Road where a private access passes under
4. Culverts - allow water to pass below the TR
5. River Crossings - allow water to pass below the TR
6. Railway Bridges - structures at grade-separated crossings of roads and railways
7. Gantries - for the support of road signs, lights or VMS units, adjacent to or over the TR,

* where 'road' is used above, this may be an adopted local authority road or a private access road. It may also be a footpath, cycleway or bridlepath.

8.2 Overbridges

8.2.1 The whole structure comprising the foundations, abutments including the structural backfill, bridge deck structure including the edge-beams and the structural waterproofing, and the bridge safety parapet are part of the TRN.

8.2.2 Any lighting columns located on the overbridge, as an extension to or part of the local road lighting system, are in the ownership and the maintenance responsibility of the local roads authority. If these columns are 'attached' to the structure then the integrity of the fixing between the structure and the columns themselves will be the responsibility of the trunk road operator.

8.2.3 Where the structure supports an element of a local roads authority road, that authority is responsible for the verges (hard and soft), the pavement and kerbs for the whole of the local road.

8.2.4 If the road supported is a private access road, the trunk road operator is responsible for the surfacing, kerbs and verges that are on this road, and these responsibilities extend for a distance of 3 metres beyond the end of the structure in each direction, to ensure that the integrity of the structure is maintained. The private user is responsible for the maintenance of the remainder of the private access.

8.3 Underbridges

8.3.1 As above, the whole structure comprising the foundations, abutments including the structural backfill, bridge deck structure including the edge-beams and the structural waterproofing, and the bridge safety parapet are part of the TRN. The pavement, including the verges supported by the structure, along with all other features that are necessary for the functional stability of the TR are also part of the TRN.

8.3.2 The local roads authority is responsible for the verges (hard and soft), the pavement and kerbs for the whole of the local road, and for its associated lighting.

8.4 Underpasses

8.4.1 The general principle is similar to that for underbridges. Where these are however provided for accommodation accesses, then the maintenance of the 'running surface' etc is by the private user.

8.5 Culverts

8.5.1 These are pipes below the carriageway between 0.9 and 3.0 metres in diameter. The whole of the structure is part of the maintenance of the TRN, to preserve the structural and functional integrity of the TR.

8.6 River Crossings

8.6.1 Similar principles apply to these structures as are utilised at overbridges, with the additional parameter that the integrity of the channelled watercourse must be preserved, to safeguard the foundations of the structure itself. Hence the side restraints to the watercourse through the structure, and for some distance up and downstream of the structure, will be maintained as part of the TRN.

8.7 Railway Bridges

8.7.1 These naturally fall into two categories; those that carry the TR over the railway, and those that carry the railway over the road.

8.7.2 Where the TR is supported over a railway the whole of the structure, comprising foundations, abutments including structural backfill, embankments where appropriate, bridge deck structure including the edge-beams and the structural water-proofing, and the bridge safety parapet are part of the TRN. The envelope of the rail tracks including their structural support, the associated services enclosures and support mechanisms, shall be the responsibility of the rail operating company.

8.7.3 In the situation where the railway passes over the TR, the TRN responsibility does not include the structure or any of the supported items, these being the full responsibility of the rail operating company. Therefore the TRN is limited through the structure to the width between the abutments at ground level and the structural stability of the TR itself.

8.8 Gantries

8.8.1 Within the limits of the TRN boundaries the maintenance of these will be with the TRN operator.

8.8.2 The TRN operator will be responsible for the foundations and the structure itself including the signs that are mounted upon it. Where the signs are illuminated then this will also be part of the TRN maintenance regime.

9.0 EARTHWORKS AND RETAINING STRUCTURES

9.1 Earthworks General

9.1.1 All earthworks, whether cutting or embankment, that are required for the structural integrity of the Trunk Road shall be maintained as part of the TRN.

9.1.2 It is likely that such earthworks will have drainage works attached to them and it will be necessary for these also to be maintained as part of the network.

9.2 Embankments

9.2.1 Embankments are required when the levels of the road as constructed are above the general levels of the original ground profile. These embankments and their associated drainage are to be maintained as part of the Trunk Road Network.

9.2.2 Where a structural embankment has been constructed as part of the building of the Trunk Road, and the side slopes to this embankment have been relaxed to enabled the land to be returned to the original farmland, then the limit of the structural embankment will be outside the final TR boundary. Regardless of this the boundary fence will indicate the limit of the trunk road.

9.3 Cuttings

9.3.1 Cuttings are produced when the levels of the road as constructed are below the general ground levels of the original ground profile. They may be formed in normal ground conditions where the side slopes are generally in the order of 1 on 3, are permeable and hence there may be ground water emanating from the slope. They may be formed in rock. In these situations the slopes are usually considerably steeper but are dependent on the orientation of the strata in the rock mass (slopes of 12 on 1 being possible). Water may also be a factor to be recognised in these slopes. In all situations, the slopes and their associated drainage requirements (at top and/or bottom of the slope) are to be maintained as part of the Trunk Road.

9.4 Retaining Structures

9.4.1 Generally retaining walls of various types of construction, used to reduce the landtake requirement that would be necessary if natural cuttings or embankments were utilised. These will normally be within the boundary of the Trunk Road and will be maintained as part of the trunk road network.

9.4.2 Where a retaining wall itself forms the effective boundary of the trunk road and it supports the 'road' it will be the responsibility of the trunk road authority to maintain it.

9.4.3 Where the wall retains land outside the road corridor, the wall will be the responsibility of the adjacent landowner.

10.0 BOUNDARY WALLS AND FENCES

10.1 General

10.1.1 Most boundary walls and fences, constructed as part of the works for a Trunk Road scheme in a rural situation, will revert to the adjacent landowner after construction. Therefore these items become the maintenance responsibility of the landowner/tenant at the end of the satisfactory completion of the maintenance period.

Fences that are within the Trunk Road boundaries, constructed for specific reasons that relate to road safety, will be maintained as part of the Trunk Road.
These include

- Anti-glare
- Noise barrier
- Snow fence
- Fences around landscape areas

10.2 Boundaries to Special Roads

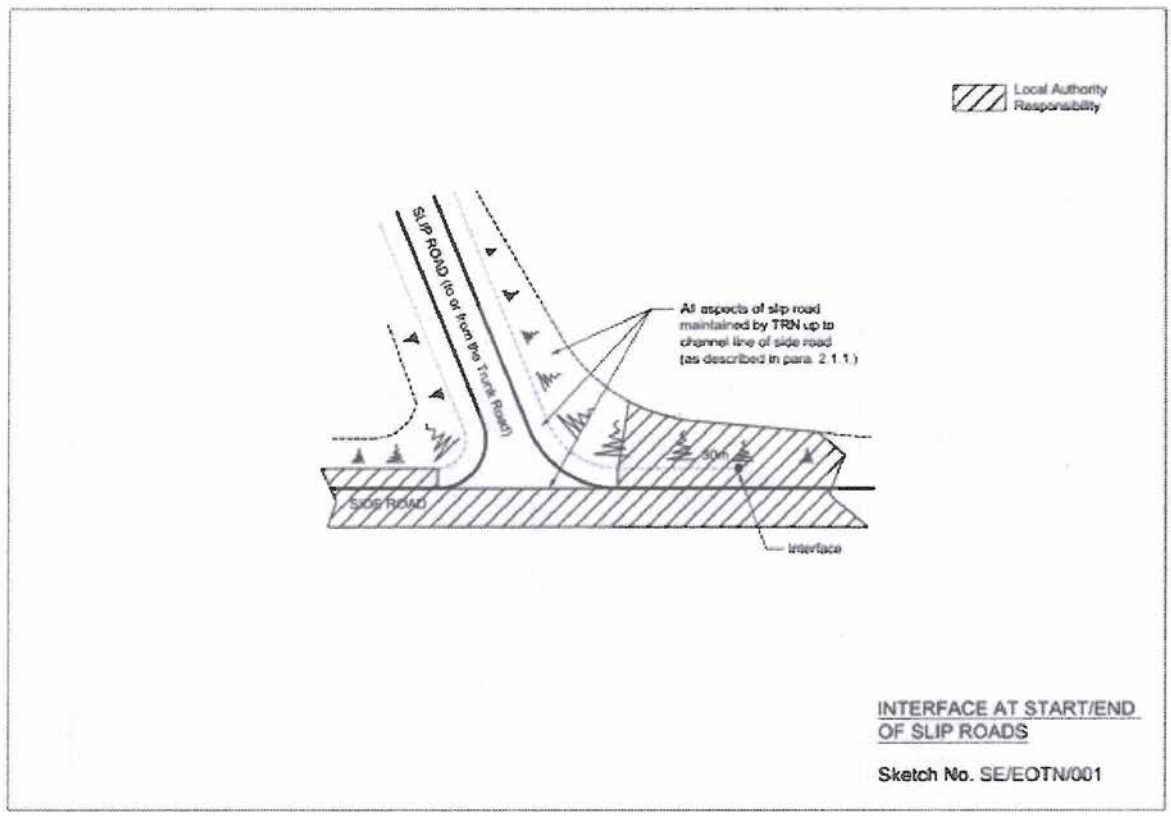
10.2.1 Where boundary walls and/or fences are part of a Special Road then the long term maintenance of these may be the responsibility of the road authority or of the landowner and this responsibility should be made clear and recorded when the construction of the scheme is completed.

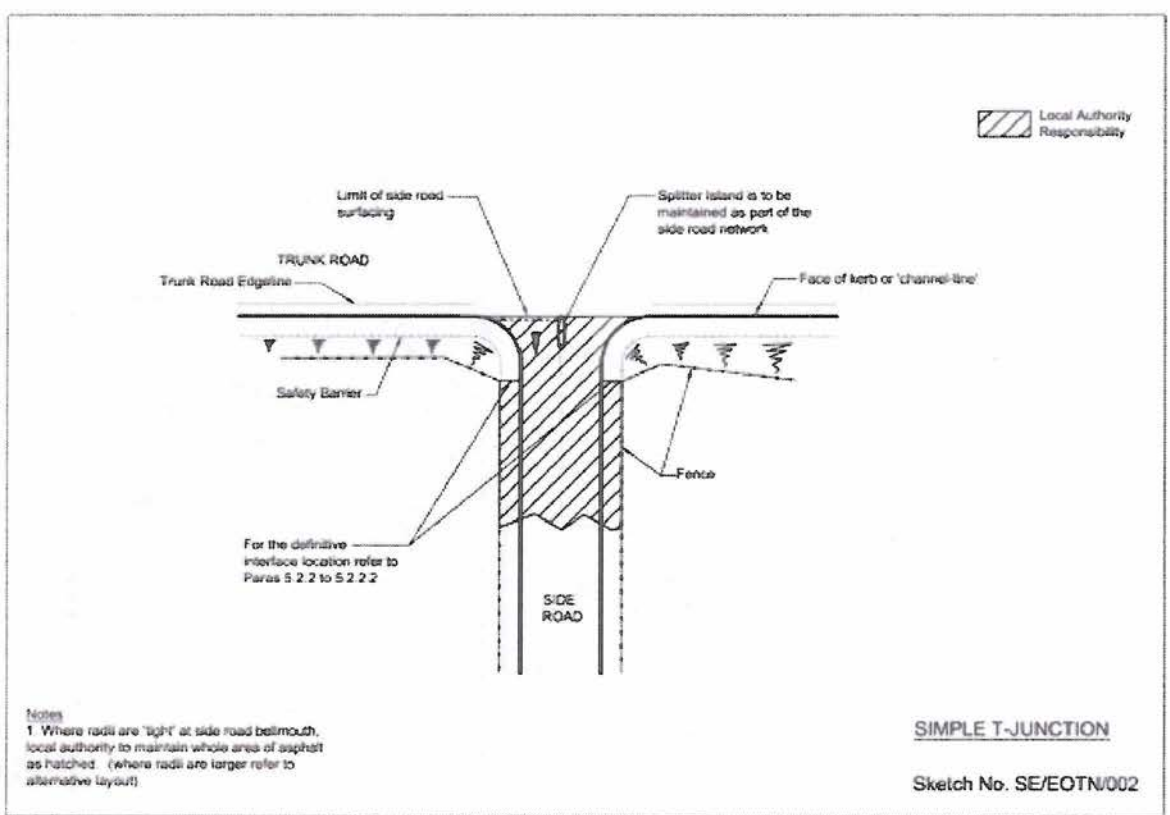
10.2.2 Should the boundary be the limit of a Motorway then these will be maintained as part of the trunk road network. This will be referred to in the section of the documentation covering Motorways.

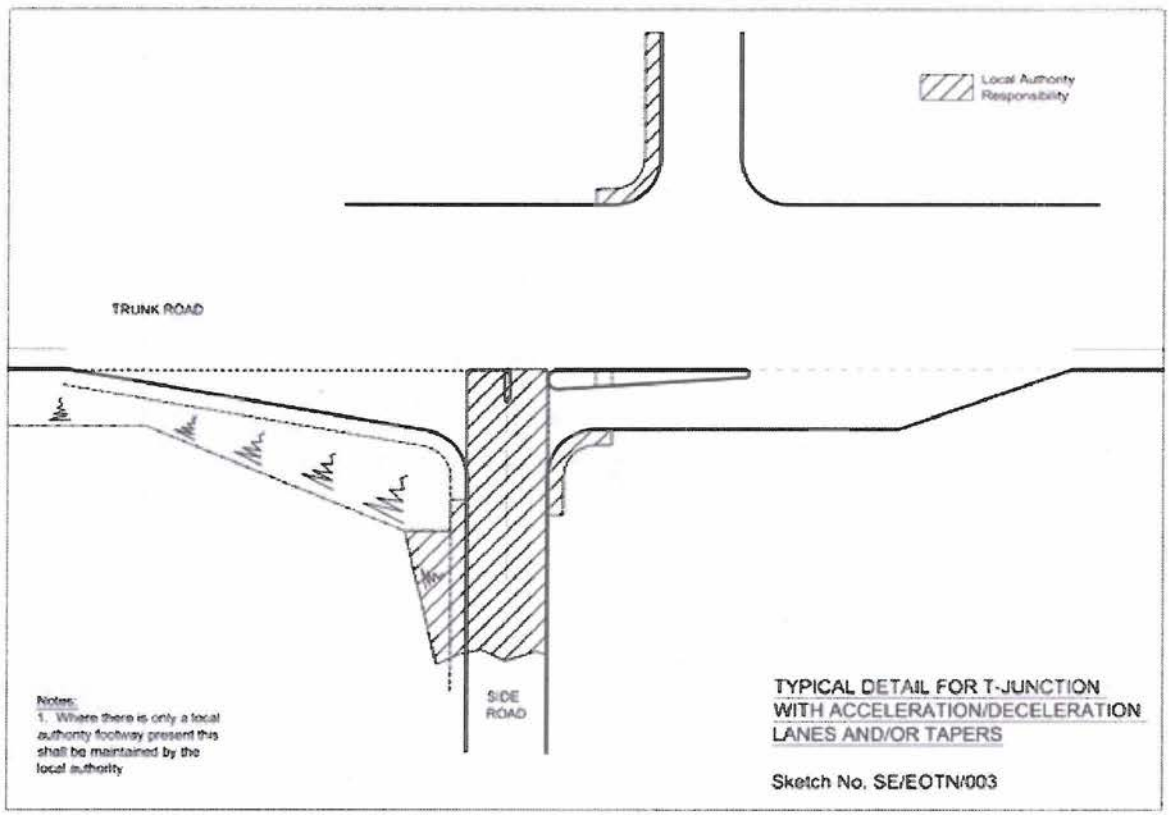
11.0 APPENDIX A

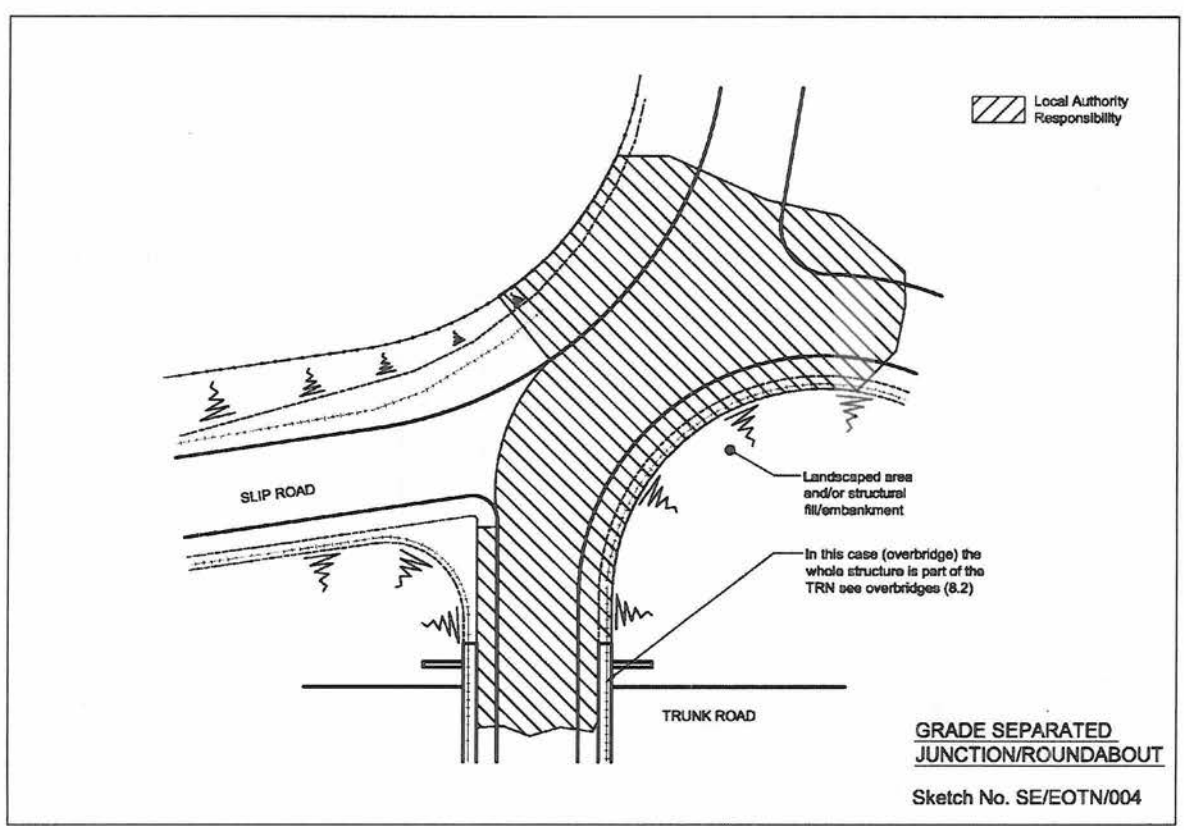
ILLUSTRATIONS

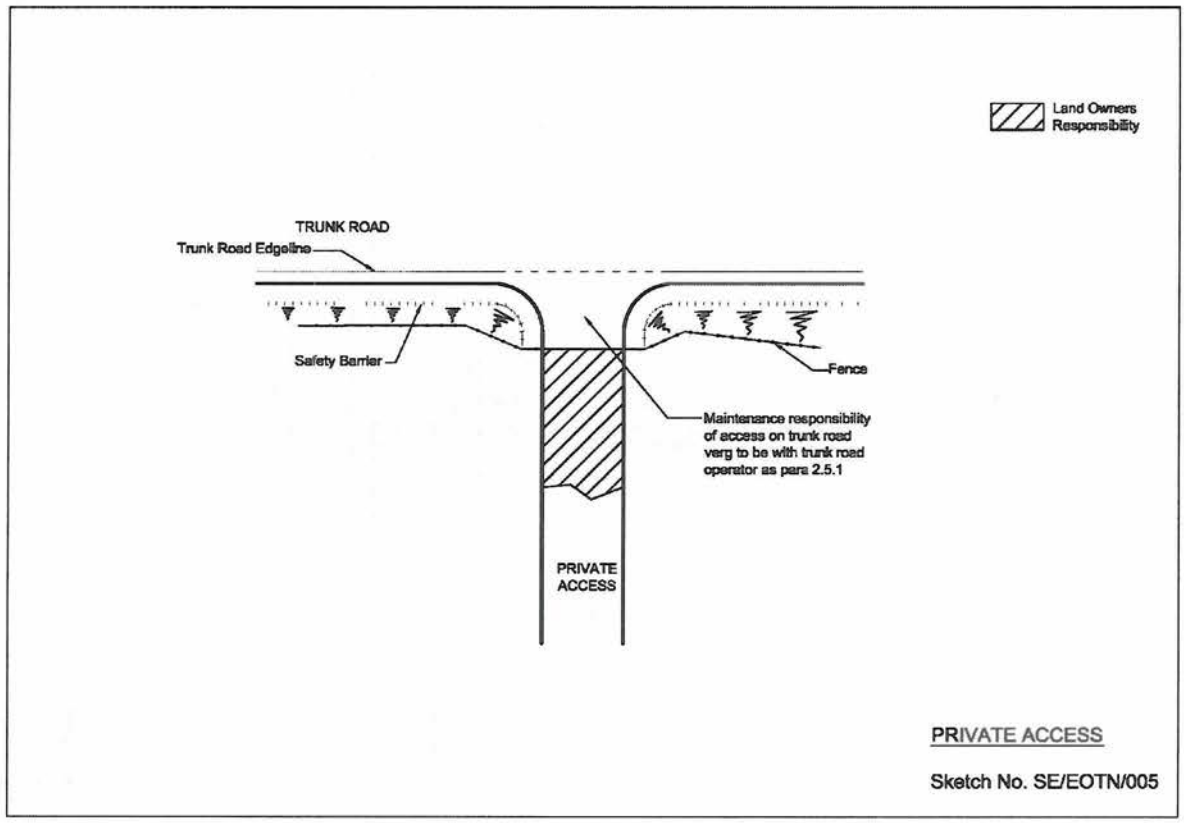
Sketch Number	Title
SE/EOTN/001	Interface at Start/End of Slip Roads
SE/EOTN/002	Simple T-Junction
SE/EOTN/003	Typical detail for T-Junction with Acceleration/Deceleration Lanes and/or Tapers
SE/EOTN/004	Grade Separated Junction/Roundabout
SE/EOTN/005	Private Access
SE/EOTN/006	Extent of Trunk Road Footway at a Side Road
SE/EOTN/007	Typical Local Road Over Trunk Road
SE/EOTN/008	Drainage at Junctions
SE/EOTN/009	Grade Separated Junction, Trunk Road over Local Road
SE/EOTN/010	Grade Separated Junction, Trunk Road under Local Road

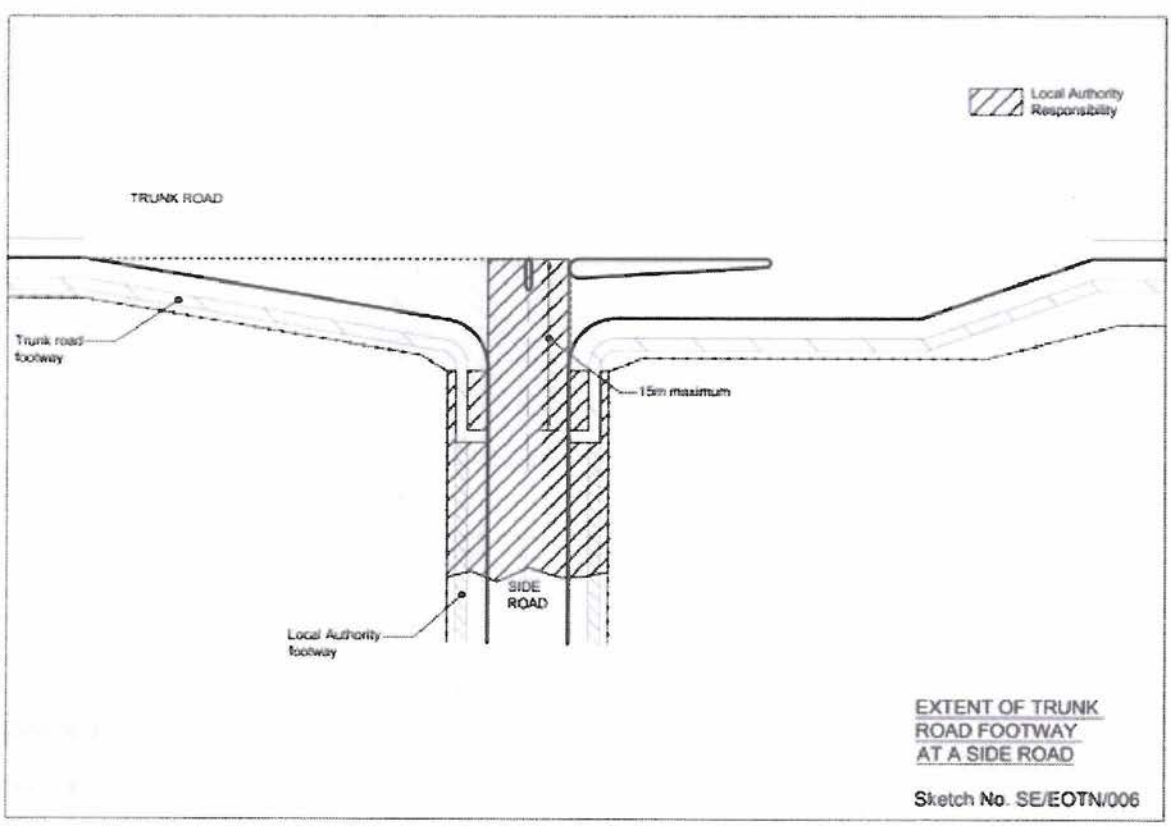

Local Authority Responsibility
SLIP ROAD (to or from the Trunk Road)
All aspects of slip road maintained by TRN up to channel line of side road (as described in para. 2.1.1.)
50m
SIDE ROAD
Interface
INTERFACE AT START/END OF SLIP ROADS
Sketch No. SE/EOTN/001

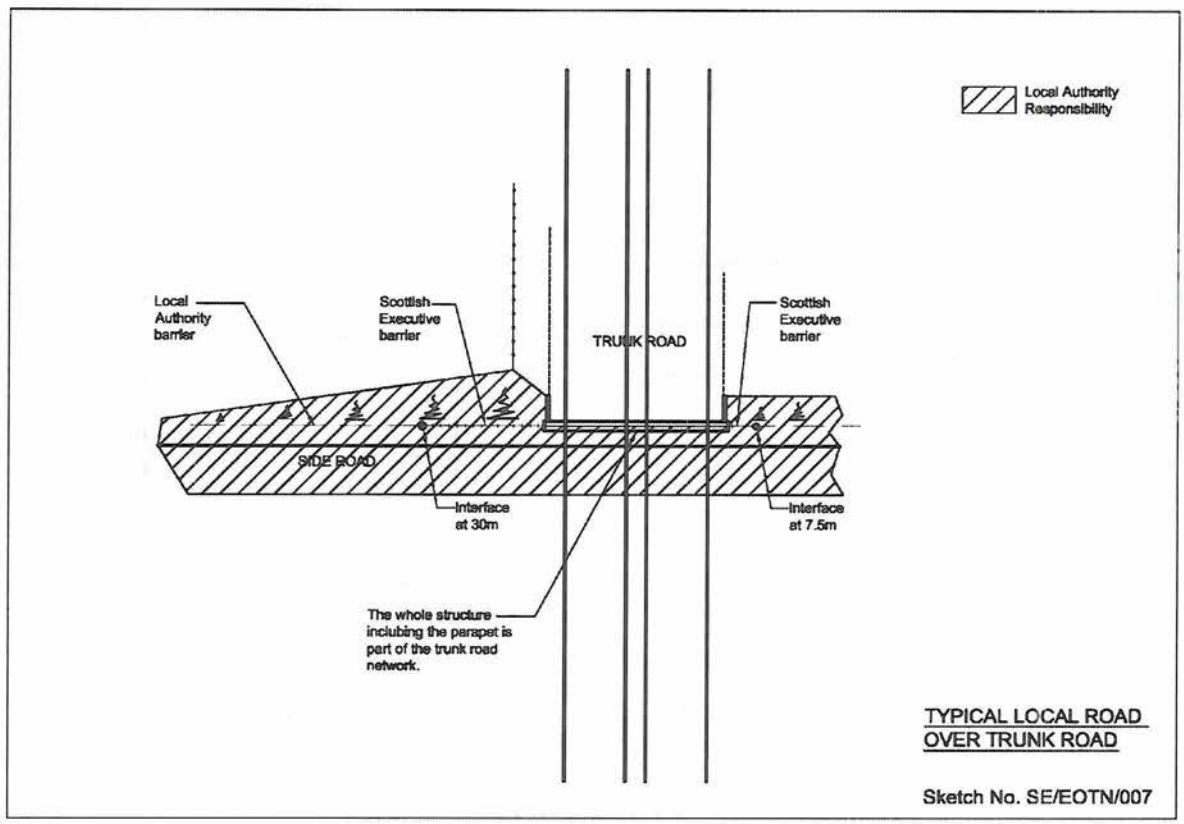

Local Authority Responsibility
Limit of side road surfacing
Splitter island is to be maintained as part of the side road network
TRUNK ROAD
Trunk Road Edgeline
Face of kerb or 'channel-line'
Safety Barrier
Fence
For the definitive interface location refer to Paras 5.2.2 to 5.2.2.2
SIDE ROAD
Notes
1. Where radii are 'tight' at side road bellmouth, local authority to maintain whole area of asphalt as hatched. (where radii are larger refer to alternative layout)
SIMPLE T-JUNCTION
Sketch No. SE/EOTN/002

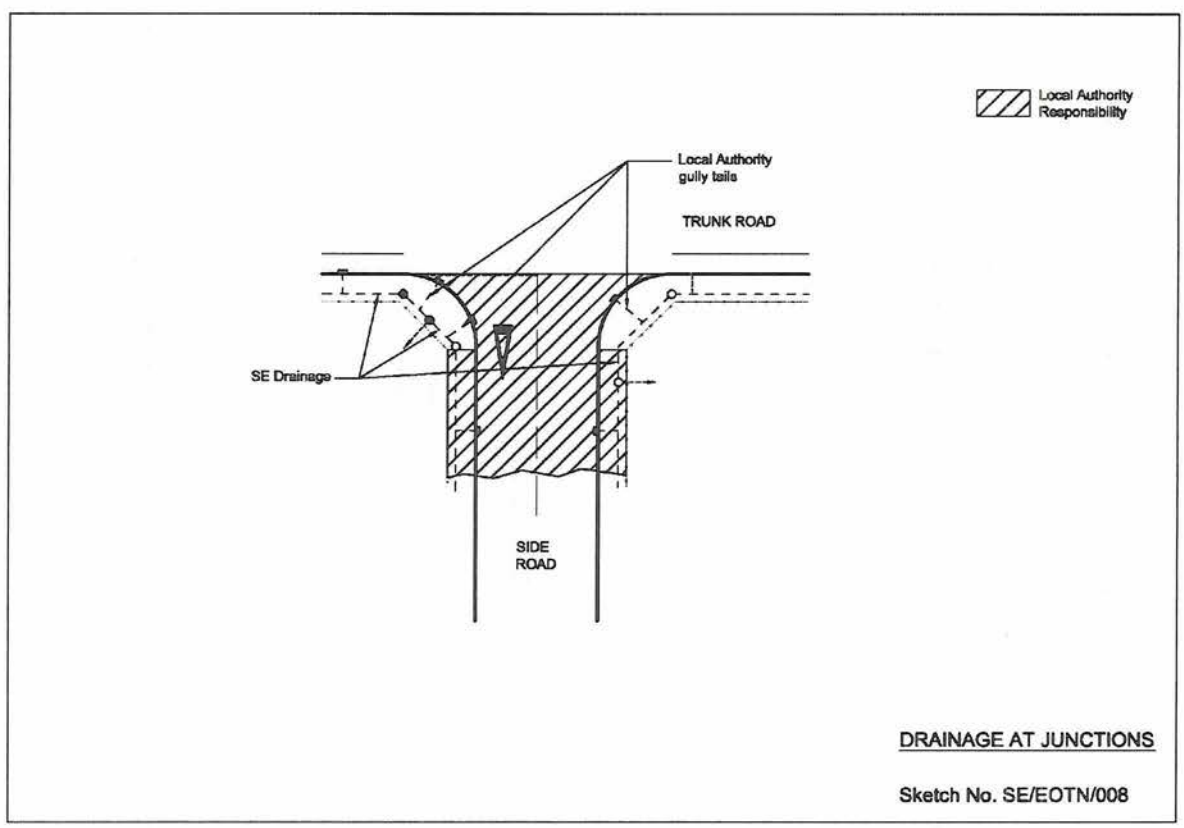

Local Authority Responsibility
TRUNK ROAD
SIDE ROAD
Notes:
1. Where there is only a local authority footway present this shall be maintained by the local authority
TYPICAL DETAIL FOR T-JUNCTION WITH ACCELERATION/DECELERATION LANES AND/OR TAPERS
Sketch No. SE/EOTN/003

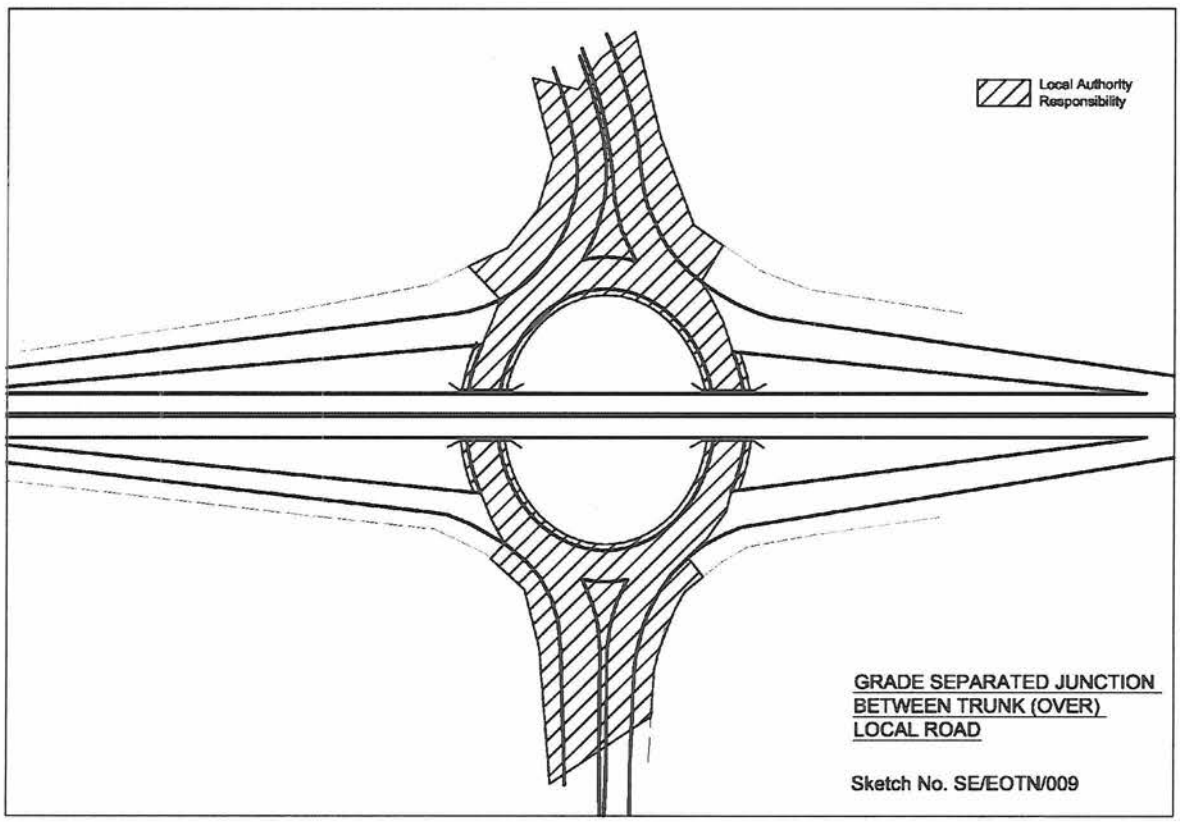

Local Authority Responsibility
SLIP ROAD
Landscaped area and/or structural fill/embankment
In this case (overbridge) the whole structure is part of the TRN see overbridges (8.2)
TRUNK ROAD
GRADE SEPARATED JUNCTION/ROUNDABOUT
Sketch No. SE/EOTN/004

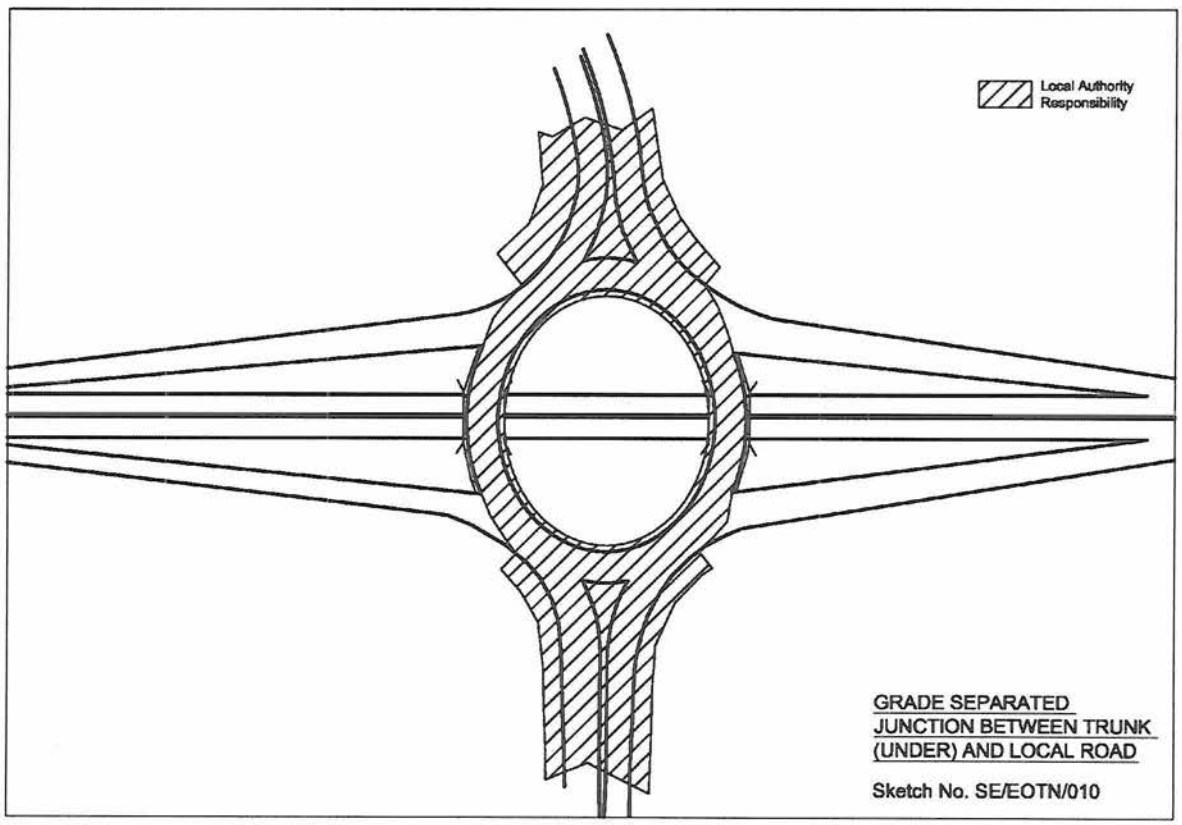

Land Owners Responsibility
TRUNK ROAD
Trunk Road Edgeline
Safety Barrier
Fence
Maintenance responsibility of access on trunk road verg to be with trunk road operator as para 2.5.1
PRIVATE ACCESS
PRIVATE ACCESS
Sketch No. SE/EOTN/005


Local Authority Responsibility
TRUNK ROAD
Trunk road footway
15m maximum
SIDE ROAD
Local Authority footway
EXTENT OF TRUNK ROAD FOOTWAY AT A SIDE ROAD
Sketch No. SE/EOTN/006


Local Authority Responsibility
Local Authority barrier
Scottish Executive barrier
TRUNK ROAD
Scottish Executive barrier
SIDE ROAD
Interface at 30m
Interface at 7.5m
The whole structure including the parapet is part of the trunk road network.
TYPICAL LOCAL ROAD OVER TRUNK ROAD
Sketch No. SE/EOTN/007


Local Authority Responsibility
Local Authority gully tails
TRUNK ROAD
SE Drainage
SIDE ROAD
DRAINAGE AT JUNCTIONS
Sketch No. SE/EOTN/008


Local Authority Responsibility
GRADE SEPARATED JUNCTION BETWEEN TRUNK (OVER) LOCAL ROAD
Sketch No. SE/EOTN/009


Local Authority Responsibility
GRADE SEPARATED JUNCTION BETWEEN TRUNK (UNDER) AND LOCAL ROAD
Sketch No. SE/EOTN/010