



Guidance

Definition of Asset Management Responsibilities: Bridges and Structures

Department for Transport/ADEPT/UKRLG/National
Highways

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Notice

This document and its contents have been prepared and are intended solely for information of the Department for Transport and use in relation to the Definitions of Asset Management Responsibilities: Bridges and Structures.

This document has 28 pages including the cover.

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Introduction

This document provides guidance for Local Highway Authorities and National Highways to assist the agreement of Operational and Maintenance Boundaries for bridges and other structures at points of interface between local roads and the Strategic Road Network. There is also some guidance on ownership adjacent to private property for retaining walls.

Figure 1 below illustrates a typical modern highway bridge and its elements.

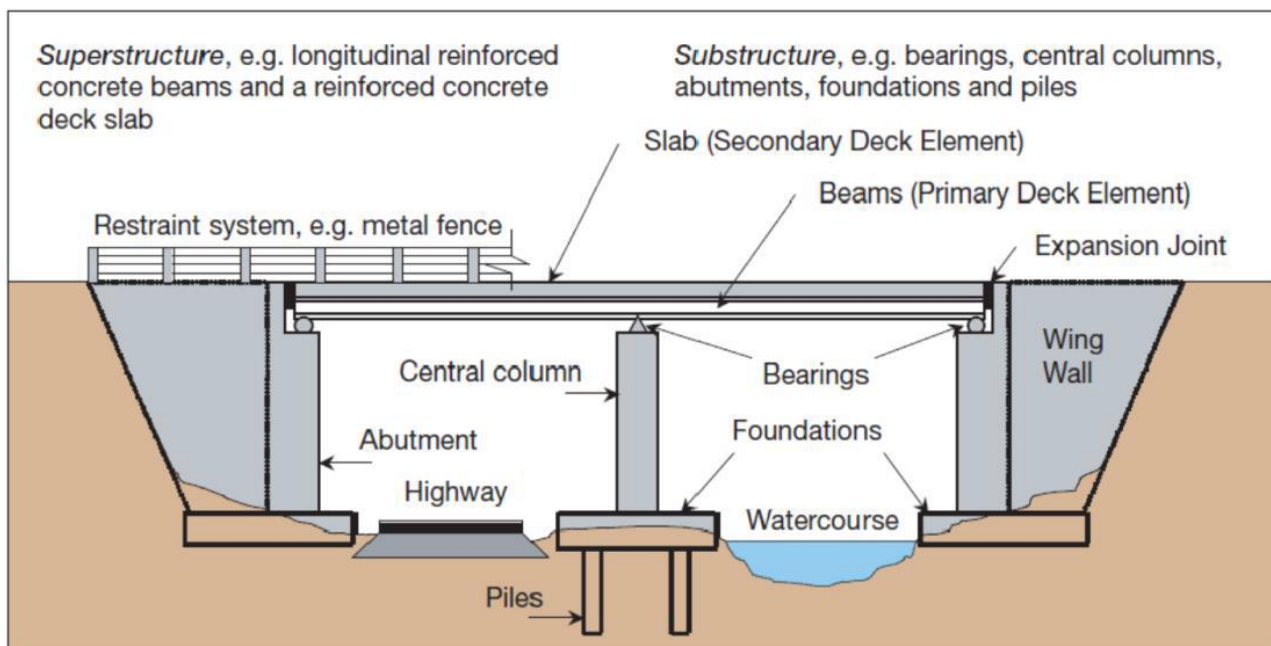


Figure 1 Typical modern highway bridge and its elements

Executive summary

The identification and agreement of asset management responsibilities at the boundaries between local highways and the Strategic Road Network (SRN) has been an uncertain aspect of network management and has resulted in a variety of local solutions to resolve maintenance issues as they have occurred.

This Guidance seeks to standardise the process of agreeing Operational and Maintenance Boundary issues related to Bridges and other Structures in England, and is provided for the use by all parties involved in the process. It is jointly owned, by the Department for Transport (DfT), National Highways, ADEPT and the UK Road Liaison Group (UKRLG).

This document aims to define the roles and responsibilities of all parties involved in resolving boundary and interface issues. It outlines typical issues for identified structure asset types and makes clear recommendations for the operational and maintenance approach and responsibility to be applied.

The sections of the document differentiate between new and existing structures. Appendix A provides a quick-reference guide to detailed responsibilities and background, complementing the main sections of the document.

Whilst this Guidance moves the approach to boundary issue resolution forward, by providing a reasoned consistent framework, some issues will not easily conform, or one or more parties may still be in dispute. The approach to managing and resolving these issues should be led at a suitable management level and where necessary be supported by appropriate legal advice. Cases of this nature should also be shared so that this guidance can be updated to reflect the current, agreed position and support all parties to progress towards network-wide uniformity of approach.

It is recognised that responsibility for asset maintenance at the boundary between authorities will not always be clear cut and public safety could potentially be compromised if each party simply assumes ownership by the other. To avoid any misunderstandings or omissions it is important that maintenance responsibility at boundaries, particularly for discrete assets, are compared and agreed at the earliest opportunity. If any doubts over responsibilities arise, both parties have a duty to ensure they are clarified and the provisions of this Guidance are designed to assist this process.

1. Purpose of the Guidance

1.1. Purpose

1.1.1. The purpose of this Guidance is to set out the roles and responsibilities for the provision of inspections and maintenance of bridges and their associated infrastructure, subways, retaining walls and other structure features, that provide points of interface between the Strategic Road Network (SRN) with adjacent Maintaining Highways Authorities (MHA). There is also some guidance on ownership of retaining walls adjacent to private property.

1.1.2. This Guidance does **not** identify how those responsibilities are to be discharged.

All references to the Strategic Highways Company (SHC) within this Guidance are inclusive of their Agents and Service Providers. The SHC is responsible for the Strategic Highway Network (SRN), essentially the motorway and trunk roads in England.

All references to the Maintaining Highways Authority are inclusive of any parties that provide points of interface with the SRN (excluding the SHC) and are involved in the establishment of Operational and Maintenance Boundaries for bridges and other structures.

1.2. Background

1.2.1. Issues arising at adjacent MHA boundaries due to poorly defined asset management responsibilities often result in unnecessary risks, protracted negotiations, safety critical risks not being managed, and costs to the stakeholders involved.

1.3. Risks

1.3.1. There is a statutory obligation placed on highway authorities under the 'Highways Act 1980' to maintain the public highway. MHA's, and the SHC, are under a legal duty to safeguard the users of their networks and take all reasonable actions to minimise any safety risks to the users, including the risks associated with roads crossing the SRN.

1.3.2. Evidence of unacceptable risk to safety on the SRN, local highway network or adjacent property from the SRN, local highway network or adjacent property, should be reported immediately to the owner of the affected network or property for investigation, monitoring and action. Should for any reason the owner not undertake mitigating actions, where there is a risk to the SRN, the SHC must provide interim mitigating measures in accordance with relevant technical documents, and where there is a risk to the MHA network, the MHA must provide interim mitigating measures in accordance with relevant technical documents.

1.4. Structure of the Document

1.4.1. The sections of this note are divided as follows:

- Section 2 Provides a general summary of responsibilities for newly constructed Bridges and other Structures.
- Section 3 Provides a general summary of responsibilities for existing Bridges and other Structures.
- Section 4 Provides guidance on communication procedures.
- Appendix A is a tabulated overall summary of responsibilities.
- Appendix B is a glossary of structures' terms

2. General Summary of Responsibilities for Newly Constructed Bridges and other Structures

2.1. Newly Constructed Bridge (including Footbridges) spanning across the SRN

- 2.1.1. A proposed bridge constructed on a route which crosses the SHC network is the responsibility of the Proposer, with all the operation, maintenance and renewal costs. Where the proposed works impinge on the SHC's safe and effective operation of the SRN during construction or later, then the Proposer must seek agreement from the SHC through the appropriate legislation (Planning Act, Highways Act or similar as appropriate) or other formal agreement. At the completion of the works, the responsibility for the structure will be as described in sections 3.2 and 3.3 of this document. Associated costs will be captured by commuted sums. A record of that transfer should be documented.

2.2. Newly Constructed Bridge supporting the SRN and spanning across an MHA network

- 2.2.1. A proposed bridge constructed on a route which crosses the MHA network is the responsibility of the Proposer, with all the operation, maintenance and renewal costs. Where the proposed works impinge on the MHA's safe and effective operation of the MHA network during construction or later, then the Proposer must seek agreement from the MHA through the appropriate legislation (Planning Act, Highways Act or similar as appropriate) or other formal agreement. At the completion of the works, the responsibility for the structure will be as described in section 3.4 of this document. Associated costs will be captured by commuted sums. A record of that transfer should be documented.

2.3. Newly Constructed Retaining Walls

A proposed retaining wall constructed on a boundary between the SRN and MHA network is the responsibility of the Proposer, with all the operation, maintenance and renewal costs. Where the proposed works impinge on the SHC or MHA's safe and effective operation of the SRN or MHA network during construction or later, then the Proposer must seek agreement from the SHC or MHA through the Planning Act (Section 278 of Highways Act 1980 or similar) or other appropriate formal agreement. At the completion of the works, the responsibility for the structure will be as described in Section 3.6 of this document. Associated costs will be captured by commuted sums. A record of that transfer should be documented.

2.4. Changes to Highway Bridges spanning across the SRN

- 2.4.1. The cost of changes to a Bridge or other Structure owned by the SHC, proposed by the adjacent MHA shall be the responsibility of the MHA. For example, the conversion of a verge to a cycleway on or adjacent to a bridge over the SRN, including any agreed changes to the parapet height or any changes affecting the structural integrity of the bridge (i.e. strengthening or widening) is the responsibility of the MHA. Please note that any traffic management and SHC's facilitating costs are also the liability of MHA. In some cases, a sharing agreement with the SHC in accordance with Section 4 of the Highways Act 1980 may be acceptable. The above principles would also all apply to works proposed by the SHC, i.e. the costs of changes to a bridge or other structure owned by the MHA, proposed by the SHC shall be the responsibility of the SHC.

Managing Network Occupancy – Boundaries on Structures

- 2.4.2.** The MHA shall also be responsible for notifying and seeking approval from the SHC of its proposal, so that the SHC can assess safety, ongoing maintenance implications and other criteria.
- 2.4.3.** In the case of the renewal of parapets or VRS by the SHC, for example as part of a maintenance programme, any extra cost for the addition above standard, requested by the MHA, shall be borne by the MHA. However, should the SHC perceive parapets as substandard and wish to upgrade those to their minimum current standard, any extra cost for such upgrade shall be borne by the Proposer.
- 2.4.4.** The commuted lump sum for maintenance of existing highway bridges spanning across the SRN affected by the works shall be calculated based on the cost of maintaining the network created or improved as a result of the works over an agreed period. However, commuted lump sum for maintenance is not payable where the cost of maintaining the improved asset would be the same as or less than the cost of maintaining the existing asset.
- 2.4.5.** The principles and requirements in this section would also apply to works on bridges undertaken by the SHC on bridges owned by the SHC that may affect the MHA highway, (or vice versa), with all responsibilities resting with the proposer.

3. General Summary of Responsibilities for Existing Bridges and other Structures

3.1. General Comments

- 3.1.1. The existence of Special Agreements should be investigated for any boundaries queries, as this may provide a precedent for an agreement which is different to that stated in this document. If existent, a copy of the agreement should be issued to each party.
- 3.1.2. It is recommended that in the preparation of any agreed boundary policy for a structure, this should be defined at an elemental level, where possible, in accordance with the Summary of Responsibilities table in Appendix A

3.2. Typical Highway Bridge spanning across the SRN (Overbridge)

3.2.1. General

Except for structures with specific special agreements, all highway bridges spanning across the SRN are the responsibility of the SHC. This includes all structural elements, beams, deck, waterproofing, bearings, parapets, parapet supporting elements, abutments, approach slabs and wingwalls. The responsibility for backfill to the abutment is as described in section 3.9. Specific elements where other detail specific conditions should be stated and are as described in the following sections.

3.2.2. Pavement

It is accepted that for highway bridges spanning across the SRN and carrying a non-SRN road, a MHA is liable for the operation and routine maintenance of pavements laid over decks of such bridges. This shall stand unless otherwise stated in a Special Agreement.

In order to minimise disputes for damage to the SRN structure, the MHA should notify the SHC of any proposal to repave on the bridge and seek agreement to the materials and working practices to be deployed. The MHA is responsible for maintaining the quality of the road pavement to a standard as required by the MHA standards. Should the MHA standard be different from the Design Manual for Roads and Bridges, the consideration to the effect of such selection on adjacent bridge elements shall be submitted to the SHC for approval, for example, to avoid failure of joints due to inappropriate surfacing depth or material.

Should the bridge pavement become defective due to poor condition of a bridge element (i.e. failure of a waterproofing; or failure / settlement of fill immediately behind the bridge ballast walls/abutments; or inadequate pavement surfacing depth placed under the guidance of the SHC), the SHC shall liaise with the MHA and take the responsibility for undertaking defect mitigating works. This includes rectifying any underlying problems causing pavement defects, maintaining or replacing all bridge joints and provide pavement commensurate with the requirements of the specific joints, road markings, studs, etc.

As replacement of waterproofing layer implies consequential resurfacing works, such works shall be undertaken at the expense of the SHC, and be agreed with the MHA. This includes waterproofing, and any protective layer.

Should pavement surfacing be combined with waterproofing, as one product, it would be impractical to treat the two elements independently. The SHC is responsible for maintaining pavement surfacing if it is combined with the waterproofing system. Binder course is not considered a combined product.

Whether the surfacing is integral with the waterproofing or not, the MHA is responsible for undertaking safety inspections associated with the pavement surfacing, and reporting any defects to the SHC. The MHA is also responsible for undertaking winter maintenance (e.g. gritting), if applicable within their Winter Service strategy.

3.2.3. Road Markings, Kerbs and Studs

Other than in the case of pavement failure, road markings, kerbs, edge stones and studs are the responsibility of the MHA.

3.2.4. Footway

As for pavements, unless there is a failure due to an underlying issue with the bridge, the responsibility for the footway and footway fill material on the bridge remains with the MHA.

3.2.5. Drainage

All drainage items (including kerb drainage, pipework and catchpits collecting bridge drainage, but not including normal kerbs) associated with the bridge are the responsibility of the SHC. As part of the Cyclic Maintenance, the SHC should ensure that the correct operation, maintenance and inspection activities (e.g. checking for and rectifying, where necessary, issues associated with misplaced drainage gratings or covers; and replacement of missing or defective items) are undertaken on the drainage system associated with the bridge. Should works take place on the MHA's network, the SHC will be required to liaise with the MHA regarding access requirements, traffic management, etc. Should the bridge drainage discharge into the MHA embankment drainage, a reasonable demarcation should be agreed, usually considered to be the extent of the wingwalls.

3.2.6. Expansion Joints

As expansion joints form part of the bridge, the responsibility for maintenance, repair and replacement of these is with the SHC, who will be required to liaise with the MHA over possessions and access, traffic management, etc., should works take place on the MHA's network.

3.2.7. Street Furniture

The attachment of street furniture or equipment to an existing deck or parapet of highway bridges owned by the SHC and spanning across the SRN shall be undertaken by and at the expense of the Proposer once approved by the SHC. Any maintenance to an anchorage or fixing systems employed to attach the street furniture to the structure is the responsibility of the SHC. Associated costs for fixings could be captured by commuted sums.

The supply, erection, continuing responsibility and maintenance of the street furniture or associated equipment (excluding the anchorage or fixing system) is the responsibility of the MHA and/or the Proposer.

Any specific item that is attached to the bridge or its parapet (e.g. CCTV and ANPR), provided by or on behalf of the SHC, is the SHC's responsibility. Where an item is proposed by others and agreed to by the SHC (e.g. Traffic Master), the responsibility for operation and maintenance of the item lies with the Proposer and includes electricity costs for the powering of any electrical equipment associated with the item.

The installation of fixed street furniture on bridges will require Technical Approval by the SHC through the development of the Approval in Principle (AIP) prior to installation of the street furniture to ensure that structural integrity of the bridge is not compromised.

Records of Special Agreements should be held for all items affixed to the structure by both the SHC and the Proposer.

3.2.8. Street Lighting and Cabling

It is assumed that in the majority of cases a streetlight would only be placed above the bridge deck due to a local road lighting requirement and therefore all associated electrical infrastructure would also be part of the MHA's responsibility. Unless the lighting columns, lanterns and associated electrical infrastructure can be identified as owned by the SHC or covered by a Special Agreement, then responsibility remains with the MHA.

3.2.9. VRS: General

VRS (in any form) on the approaches to and/or departures from the bridge that are not forming part of the structure, are considered as a part of the MHA network. If installation of new bridge parapets requires new VRS on the approaches and departures, then the SHC is responsible for installing the VRS, but once installed, the responsibility should transfer to the MHA for the ongoing maintenance.

Ownership of approach VRS rests with the MHA. There will however be an agreement by the SHC to contribute to renewal or replacement of approach VRS (including temporary protection) where the MHA is promoting a scheme. This could be from either deterioration or through impact damage.

Should the purpose of the installed VRS be to act as secondary safety fencing to protect the SHC parapet, the SHC is responsible for this VRS.

Specific examples of likely scenarios are given in **Appendix A.2**

3.2.10. Parapets

Parapets and connections to parapets are deemed to be part of the structure and are therefore the responsibility of the SHC. Temporary measures to protect damaged/inadequate bridge parapets to SHC's bridges are also the responsibility of the SHC.

Except for changes to the parapet and supporting structural elements resulting from MHA proposals (such as speed limits or cycling upgrades, where costs will be the responsibility of the MHA), any associated changes resulting from maintenance works, upgrades or changes to the parapet or to footway arrangements and any necessary mitigating measures (e.g. warning signs) to protect any part of the bridge structure or parapet would be the responsibility of the SHC.

3.2.11. Utility Ducts

The SHC shall review proposed method statements and oversee any consequential works on utility ducts to ensure appropriate construction methods are utilised and risks to the bridge and/or SRN below the bridge are managed. Where reinstatement works is in the surfacing, these works should remain the responsibility of the MHA. Should however the ducts form part of the concrete/steel fabric of the structure then these would be the responsibility of the SHC.

3.3. Typical Footbridge spanning across the SRN

3.3.1. General

Except for structures with specific special agreements, all footbridge spanning across the SRN are the responsibility of the SHC. This includes all structural elements, beams, deck, abutments, bearings, joints, parapets, abutments, utility ducts, street furniture, drainage, approach slabs, stairs and wingwalls. The responsibility for backfill to the abutment is as described in section 3.9. Specific elements where other detail specific conditions should be stated are as described in the following sections.

3.3.2. Footbridge Surfacing

Footbridge surfacing typically consists of combined waterproofing and anti-slip layer. Therefore, it would be impractical to treat footbridge surfacing in the same manner as typical bridge road surfacing. The SHC is responsible for maintaining surfacing across footbridges, if the surfacing is integral with the waterproofing system, otherwise the responsibilities will revert to the appropriate MHA.

Whether the surfacing is integral with the waterproofing or not, the MHA is responsible for undertaking safety inspections associated with the surfacing risks of slips and trips, reporting any defects to the SHC and undertaking of remedial works. The MHA is also responsible for undertaking winter maintenance (e.g. gritting), if applicable within their winter service strategy.

In the case of footbridges that do not carry a path that is part of the MHA network, complete responsibility will remain with the SHC.

3.3.3. Street Lighting

Where lighting is limited to the extent of the footbridge, or is integral to a system of street lighting on the SRN, then the lighting system will be maintained by the SHC. Where the lighting is not limited to the extent of the footbridge, or is not integral to a system on the SRN, and is continuous with a MHA system extending beyond the SRN boundary, then the lighting in the footbridge will be maintained by the MHA

3.4. Typical Bridge supporting the SRN and spanning across MHA network (Underbridge)

3.4.1. General

Except for structures with specific special agreements, all structures supporting the SRN are the responsibility of the SHC. This includes all structural elements, beams, deck, abutments, bearings, joints, parapets, abutments, utility ducts, street furniture, and deck drainage. Specific elements where other detail specific conditions should be stated are as described in the following sections.

3.4.2. Wingwalls and Backfill

Wingwalls and associated backfill are the responsibility of the SHC. If however these extend perpendicular to the SRN then responsibility should extend to the SRN boundary and the limit of retained fill supporting the SRN. In practical terms, a convenient break point in the wall might need to be agreed. Anchorage systems should be in accordance with Section 3.6.1

3.4.3. Drainage

Where the drainage for the highways or footway forms or is intended to be part of the SRN drainage system or is required to enable structural integrity of the bridge, it is the SHC responsibility to provide and maintain the drainage system. However any crossed-route drainage passing under the bridge (but not connected to it), is the responsibility of the MHA.

3.4.4. VRS

All VRS protecting the SRN is the responsibility of the SHC. On the MHA highway, should the purpose of VRS be to safeguard the public from colliding with bridge sub-structure elements (for example intermediate piers), the MHA is responsible for this VRS. However, if the VRS is provided to safeguard a deficiency in the structure, e.g. inadequate impact resistance, then the SHC is responsible.

3.4.5. Street Lighting

Where lighting is limited to the extent of the bridge, or is integral to a system of street lighting on the SRN, then the lighting system will be maintained by the SHC. Where the lighting is not limited to the extents of the bridge, or is not integral to a system on the SRN, and is continuous with a MHA system extending beyond the SRN boundary, then the lighting in the bridge will be maintained by the MHA.

3.4.6. Carriageway surfacing, road markings, street lighting, ducting and kerbing to MHA Highway.

All infrastructure adjacent to the MHA (surfacing, kerbing, road markings, street lighting and ducting) is the responsibility of the MHA.

3.5. Typical Accommodation Bridge

3.5.1. General

Accommodation bridges are structures that facilitate the movement between two areas of land, which were under common ownership, but separated when a highway was constructed. Types of usage include, but not limited to farm access, private use, such as for a golf club, or use within a Motorway Service Area (MSA).

The SHC is responsible for all Accommodation bridges and structures over the SRN in their entirety, unless specified otherwise in a Special Agreement, such as in the case of bridges linking MSA's on each carriageway.

The cleanliness of each Accommodation bridge and its approach and trailing is the responsibility of the private landowner or relevant authority, dependant on ownership, as defined in the Environmental Protection Act.

The SHC is not responsible for maintaining any part of the approach (leading and trailing) to accommodation crossings either over or under the SRN beyond the greater of the 3 metre (10 feet) limit from the back of the abutment (perpendicular to the strategic highway). This is independent of whether the land beyond this point is within SHC ownership or not.

3.5.2. Accommodation Bridge

The SHC generally accepts responsibility for the maintenance of the approach (leading and trailing) embankments to a point of 3m (10ft) measured from the back of the bridge abutment (i.e. the limits up to which land is normally acquired by the SHC in order to provide the Accommodation bridge).

To safeguard the structure of Accommodation bridges, in all cases the SHC also maintains the surface of the bridge and on the approach (leading and trailing) to a point of 3m (10ft) on either side measured from the back of the bridge abutment.

Each Accommodation bridge should also be examined on an individual basis, with the exact boundary decided from review of the Accommodation Bridges General Arrangement drawings and any legal documentation. Agreement should then be sought with the individual land owners.

The bridge user, whom the Accommodation bridge was constructed for, should be consulted prior to the commencement of any works, including the surfacing works, within 3m (10ft) from the back of the abutment. In the case of commercial bridges carrying private roads over the SRN, e.g. associated with quarries or mines, the bridge structure is still the responsibility of the SHC. In these circumstances, the structure and the embankments to the 3m (10ft) from the back of the abutment are the responsibility of the SHC. For existing private accesses, including farms and combinations with foot, cycle and bridle routes, the SHC accepts responsibility for the provision of up to 3m (10ft) of pedestrian restraint systems as measured from the back of the abutment or from the ends of the parapets where these extend beyond the abutment. Should the usage of the Accommodation bridge change, associated risks to the bridge and to the safety of the SRN below must be reassessed. If necessary, representations should be made to the external party and the Planning Authority to mitigate any possible risks, and the proposer will need to design and install any changes in accordance with SHC standards.

3.5.3. Accommodation Underpasses

Accommodation underpasses under the SRN, including any structural wing walls, shall be maintained by the SHC. However, the SHC does not accept responsibility for maintenance of the pavement through and on the approach (leading and trailing) to the underpass, except for the underpasses of a 'box' construction form. These are matters of the party, for whom the private means of access was provided. Where the underpass incorporates a public

footpath, bridleway, or cycleway, the responsibility may lie with the external party who would have a duty to maintain it to a standard suitable for its intended use.

3.6. Retaining Wall

3.6.1. Retaining Walls supporting/above Private Property

Generally, the responsibility for a retaining wall property and its foundations supporting/above private are defined by the legal land boundary. In other words, a retaining wall and its foundations are the responsibility of those who own the land on which it is present. However, where the failure of a retaining wall would present a significant risk to the SRN (because it is adjacent to the SRN), for practical reasons the SHC shall undertake any necessary maintenance. Where it is hard to ascertain the wall thickness or foundation sizes reasonable judgements should be taken and investigations considered.

The maintenance boundary in the case of retaining walls supporting adjoining property is taken as the legal land boundary. It is however possible that for the health and safety purposes a fence is erected at the top of the wall or retained fill; such fence (Figure 2) and this should not be construed as the boundary until verified by the General Arrangement drawing(s) and/or Special Agreement(s).

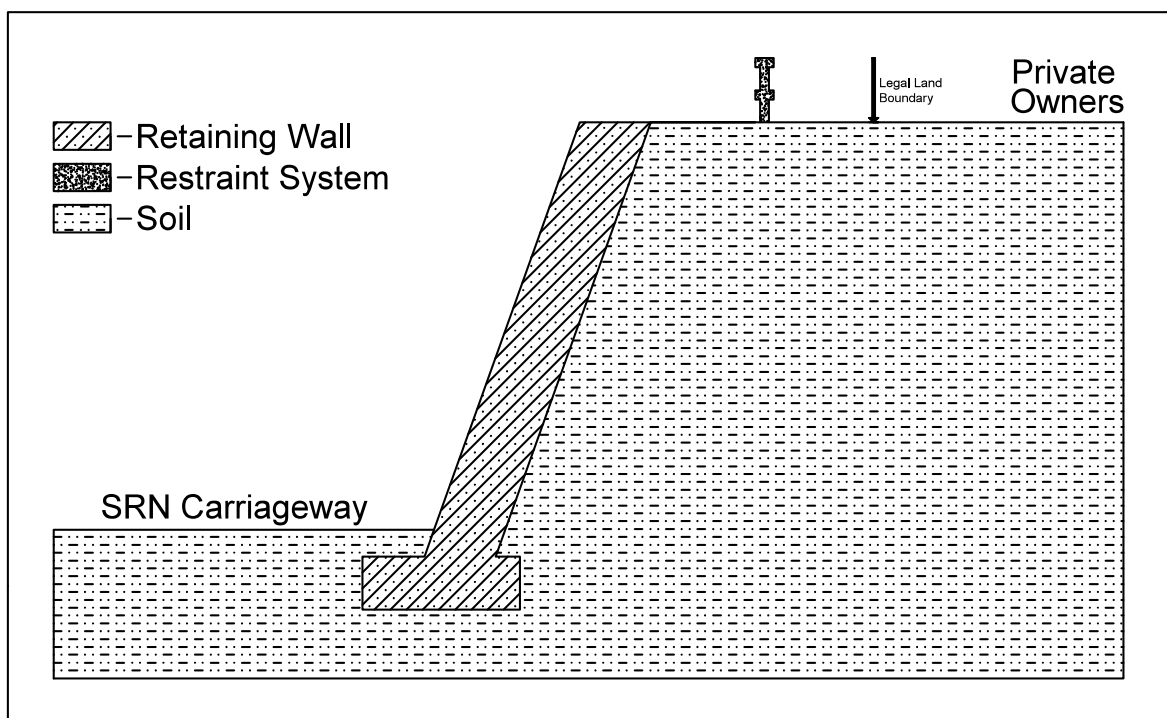


Figure 2 Cross-section of a typical retaining wall

The retained fill included in the slip surface circle of the embankment may or may not extend beyond the legal land boundary. If the slip circle exists outside the legal land boundary, then this should be noted for future maintenance duties, however ownership is still that of whoever owns the land that the retaining wall is present on.

Where a retaining wall uses an anchorage system, the anchorage system may or may not extend beyond the legal land boundary. If the anchorage system exists outside the legal land boundary, then this should be noted for future maintenance duties, however ownership is still that of whoever owns the land that the retaining wall is present on. It is accepted that easements may be needed in this case.

The SHC may need to agree access with the private land owner, dependent on the position of the legal land boundary.

3.6.2. Retaining Walls supporting the SRN

Where a retaining wall supports the SRN, with the MHA network below, then the retaining wall is owned by the SHC in all cases. It should be noted that costs associated with original construction for new walls remains with the proposer.

Any work undertaken by the MHA or other party should be approved by the SHC prior to its commencement. If agreement cannot be attained, then arbitration should be sought.

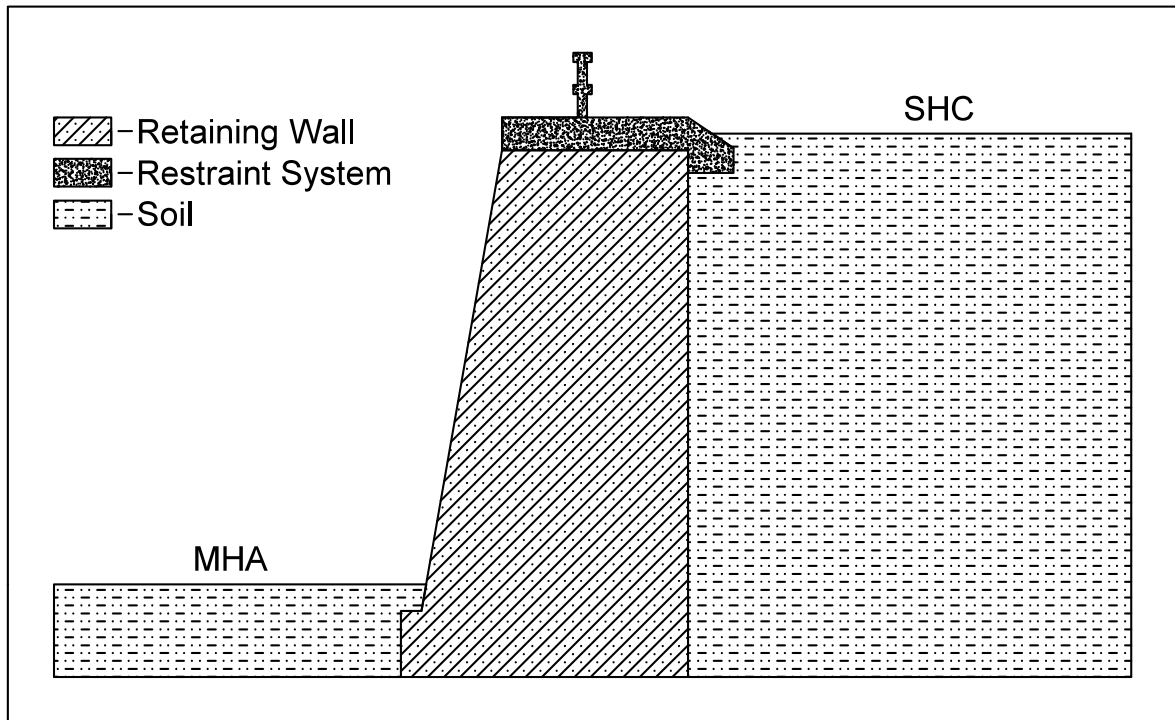


Figure 3 Cross-section of a typical retaining wall supporting the SRN

3.6.3. Retaining walls supporting the MHA

Where a MHA road is supported by a retaining wall, with the SRN below, then the retaining wall shall be the responsibility of the original proposer

Where a retaining wall is supporting the MHA and the embankment/highway is MHA owned but surrounded by general non-highway land, then the retaining wall is the responsibility of the MHA. This is regardless of the ownership of the original land. It should be noted however that costs associated with original construction for new walls remains with the proposer.

3.7. Typical Subway

3.7.1. General

Subways facilitate pedestrian and cycling movements under a SHC road or junction. The SHC is responsible for the maintenance of the structural elements of a subway and any adjoining retaining walls, including any wing walls. Where pedestrian and cycling movements are only associated with the MHA, the MHA is responsible for the pavement surfacing. Subways under any part of the MHA are the responsibility of the MHA

3.7.2. Subway Substructure Drainage

Subway substructure drainage, inclusive of pumping equipment, should be maintained and monitored, if applicable, by the organisation that owns the subway.

3.7.3. Lighting

Where subway lighting is limited to the extents of the subway, or is integral to a system of street lighting on the SRN, then the lighting system will be maintained by the SHC. Where the lighting is not limited to the extents of the subway, or is not integral to a system on the SRN, and is continuous with a MHA system extending beyond the SRN boundary, then the lighting in the subway will be maintained by the MHA.

3.7.4. Subway Surface Finishes

Responsibility for subway surface finishes shall be with the party benefiting from the special/decorative finishes. If both the SRN road and the MHA users benefit, the SHC is responsible. If the special/decorative finishes are of a high specification due to local interest, such as a community project, then this should be the responsibility of the benefiter/sponsor of the special/decorative finish. Maintenance responsibility for special/decorative surface finishes may come under a Special Agreement. Graffiti removal (if required), is the responsibility of the structural element owner.

3.7.5. Street Furniture

For any street furniture, the fixings or anchorage system into SHC owned subways are the responsibility of the SHC. The street furniture itself, including any brackets etc, is the responsibility of the MHA

3.8. Environmental Barriers

3.8.1. General

On the MHA network approaching a bridge crossing over the SRN the responsibility for environmental barriers lies with the Proposer. Any barrier attached to the parapet is the responsibility of the SHC.

Environmental barriers on the SRN are the responsibility of the SHC.

Any combination of environmental barriers with a VRS, ownership of the environmental barrier is with whoever owns the VRS that it is attached to.

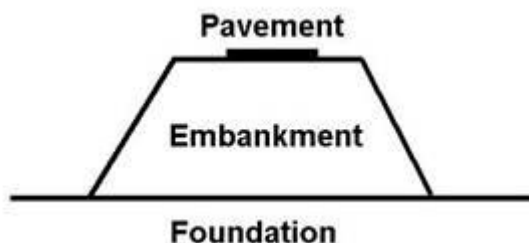
The installation of any environmental barrier to be attached to a retaining wall is the responsibility of the proposer. Responsibility is then transferred to those who have ownership of the retaining wall as described in section 3.6 of this document. Associated costs will be captured by commuted sums.

If the MHA proposes a new screen on a SRN bridge or retaining wall, then the costs of all agreed works will be rechargeable to the Proposer, including any traffic management costs and SHC facilitating costs.

3.9. Embankments adjacent to Structures

3.9.1. General

The definition of a typical embankment shall mean the man-made soil construction below the asphalt pavement layer, but above the original ground foundation, as shown in the diagram below. This definition includes reinforced/strengthened soil without hard facings



The responsibility for embankments and associated culverts that are formed greater than 3m (measured in a direction parallel to the road over) from the back of the abutments or wingwalls of an SHC owned bridge crossing the SRN, lies with the MHA. This includes vegetation maintenance. If the approach slab is longer than 3m then the end of this slab would constitute the change of responsibility.

The MHA shall consult with the SHC prior to the commencement of any embankment related works, and vice versa.

Settlement to an embankment immediately behind the back of an abutment or wingwall face of a highway bridge spanning across the SRN and carrying a non-SRN road, is the responsibility of the SHC, but only up to 3m (measured in a parallel direction to the road over). This is subject to the defect being caused by consolidation of the structural backfill or underlying ground within the 3m. If the failure is the result of the MHA owned embankment beyond the boundary or any asphalt pavement defect, then the MHA shall be responsible for corrective action.

Responsibility for failures of embankments and foundations further back than the 3m shall be the responsibility of the MHA. Where the SHC retains ownership of the foundation land and it can be proved that there is a failure of the foundation itself the corrective action shall be the responsibility of the SHC. Where there is clear failure of embankments due to drainage or settlement this is the responsibility of the MHA. Where there is a dispute or combined failure of both embankment and foundation this will require SHC and MHA to agree a fair apportionment of investigation and remedial works costs.

Should MHA embankments encompass separate structures, culverts etc within the body of the embankment, then these will be the responsibility of the MHA.

The exception to the guidelines above is for all new construction and up to the end of the scheme defects liability period of the Contract or 5 years whichever is the longer, the responsibility for corrective actions for all new embankments shall be with the scheme proposer. In other circumstance (for example integral bridges) the extent of structural backfill required for soil/structure interaction may be defined in an agreement as greater than 3m, and this will take precedent.

3.10. Cuttings adjacent to structures

3.10.1. General

The responsibility for cuttings on the approach roads to a SHC owned bridge that are formed greater than 3m (measured in a direction parallel to the road over) away from the abutments or wingwalls, lies with the MHA.

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The MHA shall consult with the SHC prior to the commencement of any cutting related works, and vice versa.

Slip failure to a cutting immediately adjacent to an abutment or wingwall face of a highway bridge carrying the SRN and over a non-SRN road, is the responsibility of the SHC, but only up to 3m (measured in a parallel direction to the road under). This is subject to the defect being caused by a defect in the SHC asset. If the failure is the result of the MHA owned cutting beyond the boundary or any drainage defect outside of the SHC boundary, then the MHA shall be responsible for corrective action.

Responsibility for failures of cuttings and foundations further back than the 3m shall be the responsibility of the MHA, even when the SHC retains ownership of the foundation land.

Should MHA cuttings encompass separate structures, footbridges etc over or within the body of the cutting, then these will be the responsibility of the MHA.

The exception to the guidelines above is for all new construction and up to the end of the scheme defects liability period of the Contract or 5 years whichever is the longer, the responsibility for corrective actions for all new cuttings shall be with the scheme proposer.

4. Communication Procedures

Section 3 of this document defines responsibilities for elements of bridges and structures where responsibilities can be clearly defined and identifies interfaces where Special Agreements are needed to cover known non-standard situations. For elements of bridges and structures that cannot be so clearly defined, or are unclear, and where negotiations are likely to be required, these negotiations are to be documented by both parties in their structures information management systems, e.g. currently IAMIS for the SHC. It is accepted that there are other unknown or unique situations not covered in the Section 3 above.

Appendix A. Summary of Responsibilities

A.1. Summary of Responsibilities

The following table describes the responsibility of an MHA at existing structures owned by the SHC, as recorded within the SHC’s Integrated Asset Management Information System (IAMIS)

It is important that ownership of the structure is confirmed, if there is any doubt, in order to inform discussions with the adjacent MHA over operational and maintenance boundaries and duties.

Table 4-1 Summary of responsibilities for typical existing structures owned by the SHC

Bridge Element	Proposed Responsibility
Typical Highway Bridge spanning across the SRN (Overbridge)	
Bridge structure (clause 3.2.1)	The SHC
Carriageway Pavement (clause 3.2.2)	MHA, including all associated waterproofing, red sand etc damaged as part of any works. If failure due to waterproofing or protective layer then the SHC is responsible for pavement and all associated works If failure is due to inadequate depth of pavement defined at assessment stage as a BD21 requirement then the SHC is responsible for all associated works.
Road markings, kerbs & studs (clause 3.2.3)	MHA If failure due to waterproofing or protective layer then the SHC is responsible for pavement
Footway construction (clause 3.2.4)	MHA If failure due to waterproofing or protective layer, then the SHC is responsible for pavement If failure is due to inadequate depth of pavement defined at assessment stage as a BD21 requirement then the SHC is responsible
Footway kerbing / edge stones (clause 3.2.3)	MHA
Footway fill material (clause 3.2.4)	MHA
Waterproofing (clause 3.2.1)	The SHC
Drainage: repairs (clause 3.2.5)	The SHC
Drainage: maintenance (clause 3.2.5)	The SHC
Expansion joints (clause 3.2.6)	The SHC
Street furniture (clause 3.2.7)	Anchorage or fixing systems to structure SHC. Street furniture itself MHA.

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Street lighting and cabling (clause 3.2.8)	MHA
VRS approach and departure (clause 3.2.9)	MHA –See Appendix A2
Parapets (clause 3.2.10)	The SHC
Parapet / VRS connection (clause 3.2.10)	The SHC
Utility ducts (clause 3.2.11)	The SHC responsible for approving utility working method statements and overseeing works MHA responsible for reinstatement within surfacing
Typical Accommodation Bridge	
Accommodation bridge (clause 3.5)	The SHC for whole structure including pavement for a distance of 3m beyond bridge abutments
Typical Footbridge spanning across the SRN	
Footbridge (clause 3.3)	As per Typical Highway Bridge spanning across the SRN but the SHC is responsible for pavement if a combined waterproofing and surface layer is installed
Typical Bridge supporting the SRN and spanning across MHA network (Underbridge)	
Bridge structure (clause 3.4.1)	The SHC
Carriageway and footway construction beneath bridge (clause 3.4.6)	The MHA
Kerbing beneath bridge (clause 3.4.6)	The MHA
Road markings and studs beneath bridge (clause 3.4.6)	The MHA
Street lighting beneath bridge (clause 3.4.5)	The MHA
Utility ducts beneath bridge (clause 3.4.6)	The MHA
Drainage associated with the carriageway beneath bridge (clause 3.4.3)	The SHC, if it forms a part of SRN drainage system or is required to enable structural integrity of a bridge. MHA, if it forms a part of MHA drainage system. Similar for pumped systems.
Drainage associated with the bridge (clause 3.4.3)	The SHC, if it forms a part of SRN drainage system or is required to enable structural integrity of a bridge. MHA, if it forms a part of MHA drainage system. Similar for pumped systems.

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VRS (clause 3.4.4)	The SHC is responsible if VRS is intended to protect from impact on piers/abutments. MHA is responsible if VRS is intended to safeguard the general public from colliding with the bridge. If both above, then SHC.
Retaining Wall	
Retaining wall structure supporting/above private property (clause 3.6.1)	Land owner on which retaining wall constructed, unless failure poses risk to SRN, then SHC.
Retaining wall structure supporting the SRN (clause 3.6.2)	The SHC
Retaining wall structure supporting the MHA (clause 3.6.3)	The MHA
Anchorage systems (clause 3.6.1)	Owner of wall, easements may be necessary
Typical Subway	
Structure (clause 3.7.1)	The SHC. Subways under the MHA are the responsibility of the MHA.
Pavement (clause 3.7.1)	MHA where pedestrian and cycling movements only associated with the MHA.
Drainage (clause 3.7.2)	Whoever owns the subway
Lighting (clause 3.7.3)	The SHC or MHA depending who is benefiting from the provision of lighting. If both parties, then The SHC is responsible.
Surface finishes (clause 3.7.4)	As for subway lighting, responsibility is dependent on who benefits from the decorative finishes.
Street furniture (clause 3.7.5)	Anchorage or fixing systems to structure SHC. Street furniture itself MHA.
Environmental Barriers	
Environmental Barriers (clause 3.8)	On MHA network approaching bridge responsibility is with proposer. On SHC responsibility is SHC. If combined with VRS responsibility is same as VRS When attached to retaining wall, responsibility with wall owner
Embankments Adjacent to Structures	
Embankments greater than 3.0m from back of abutments (clause 3.9.1)	The MHA

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Reinforced Earth walls greater than 3.0m from back of abutments (clause 3.9.1)	The MHA
Embankments and embankment settlement up to 3.0m behind abutments (clause 3.9.1)	The SHC
Side Road Structures (clause 3.9.1)	The MHA
Cuttings Adjacent to Structures	
Cuttings greater than 3.0m from back of abutments (clause 3.10.1)	The MHA
Reinforced Earth walls greater than 3.0m from back of abutments (clause 3.10.1)	The MHA
Cutting slip failure to 3.0m behind abutments (clause 3.10.1)	The SHC
Side Road Structures (clause 3.10.1)	The MHA

A.2. Vehicle Restraint Responsibility - Examples

These examples are intended to provide clarity about parapets on overbridges over the SRN and VRS on the approaches to those bridges. They set out a number of scenarios identifying technical responsibilities and demarcation points for those responsibilities and associated financial accountability. In all cases if there is an over-riding legal special agreement or previously agreed local arrangements it will take precedence. 'Compliant' as used in this Appendix means compliant with the current appropriate and relevant standards called up from the National Highways Design Manual for Roads and Bridges, or otherwise.

Generally, the SHC has agreed to make reasonable contributions to the finance of the agreed maintenance or upgrade of (typically) the 30m approach length of VRS to overbridges over the SRN. The demarcation point for technical responsibility between SHC and MHA is at the end of the connection between parapet and VRS, furthest away from the bridge.

Two underbridge scenarios are also included.

Scenarios:

New overbridge over SRN promoted by SHC. The parapet and compliant compatible approach VRS, will be designed and constructed by the SHC with any departures to the VRS agreed by the MHA. After completion of the scheme the VRS will be the responsibility of the MHA and be managed in accordance as 'existing overbridge – compliant parapet and VRS' scenario'. The parapet and VRS connection will remain the responsibility of the SHC.

New overbridge over SRN promoted by MHA. The compliant compatible approach VRS, will be designed and constructed by the MHA with any departures to the VRS agreed by the MHA and any departures to the bridge parapet agreed by the SHC. After completion of the scheme the VRS will be the responsibility of the MHA and be managed in accordance with 'existing overbridge – compliant parapet and VRS' scenario. The parapet and VRS connection will become the responsibility of the SHC.

Existing overbridge over SRN – compliant parapet and VRS. In this instance the responsibility for inspection and maintenance of the bridge parapet (including the connection) would be the SHC and inspection and routine maintenance of the approach VRS (including the transition) would be the MHA.

Existing overbridge over SRN – no safety fence on approaches, no end protection to parapets. In this circumstance the MHA would be responsible for the risk of a missing approach VRS (protection to the embankment and run off from the MHA highway) and the SHC would be responsible for the risk of inadequate/untested impact to the end of the parapet (through lack of transition and connection). Any scheme would be prioritised according to each authority's management procedures. SHC will fund agreed reasonable costs of up to 30 metres approach VRS required by standards (including temporary protection).

Existing overbridge over SRN – inadequate or substandard safety fencing on approaches. In this circumstance the MHA would be responsible for the risk of a missing approach VRS (protection to the embankment and run off from the MHA highway) and the SHC would be responsible for the risk of inadequate/untested impact to the end of the parapet (through substandard transition or connection). Any scheme would be prioritised according to each authority's management procedures, with the promotor funding the scheme (except as below). Any departures to the VRS would be agreed by the MHA and any departures to the parapet would be agreed by the SHC. The SHC will contribute reasonable costs to renewal or replacement of the approach VRS (including temporary protection) where the MHA is promoting a scheme.

Existing overbridge over SRN – substandard parapets. In this circumstance the SHC would be responsible for the risk of inadequate/untested impact to the parapet. This will be prioritised according to SHC's management procedures and funded by the SHC. Should this result in new parapets the responsibility would be as 'New bridge promoted by SHC'. Should this result in additional safety fencing in front of the existing parapet (known as 'secondary safety fencing'), then this would be the responsibility of the SHC in its entirety and managed as 'Existing overbridge -

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Secondary Safety Fencing'. Any departures to the VRS would be agreed by the MHA and any departures to the parapet would be agreed by the SHC.

Existing overbridge – Secondary safety fencing. If secondary safety fencing (i.e fencing in front of a parapet and continuing over the length of the structure) is installed the technical and financial responsibility for this system, including terminals and transitions is with the SHC. The risk of an impact to the parapet, including connections, remains with the SHC. The risk of vehicle run-off from the embankment remains with the MHA.

Existing overbridge – Upgrade for change of use by pedestrians, cyclists or equestrians. This would be funded by the promotor in its entirety, with departures, if applicable, agreed by the responsible party owner. Final responsibility will be as 'New overbridge' above.

Existing overbridge – impact damage to parapets. Responsibility for repair of impact damaged parapets would be the SHC. Any required departures to the approach VRS would be agreed with the MHA.

Existing overbridge – impact damage to approach VRS. Responsibility for repair of impact damaged approach VRS would be the MHA. Any required departures to the approach VRS would be agreed with the MHA. It is of note that there will be an agreement by the SHC to contribute to renewal or replacement of approach VRS (including temporary protection) where the MHA is promoting a scheme. The SHC will contribute funding for approach lengths required by manufacturers for the additional length in advance of the parapet system concerned (generally up to 30m or less).

Existing underbridge – SHC promoted safety fence scheme on the SHC road – In these circumstances the SHC would be responsible for all aspects of the scheme

Existing underbridge – MHA promote safety fence scheme on local road – In these circumstances the MHA would be responsible for funding the scheme in its entirety, except where this is provided as high containment to piers etc. for impact protection, where the SHC is responsible for all barrier (including approaches) required for protection of the structure. (Refer to 3.4.4)

Appendix B. Glossary of Terms

B.1. Definitions of Structure Types

Structure	A construction that supports itself and carries load.
Highway structure	Any bridge or other structure that impinges in any way within the footprint of the highway or that materially affects the support of the highway or land immediately adjacent to it and that meets the dimensional criteria defined below or elsewhere in the Guidance.
Bridge	A structure with a span of 1.5m or more spanning and providing passage over an obstacle, e.g. watercourse, railway, road, valley. This category also covers subways, footbridges and underpasses.
Cantilever road sign	A structure with a single support that projects over the highway in order to carry a traffic sign.
Cellar and vault	An underground room or chamber with a maximum plan dimension of 1.5m or more.
Culvert	A drainage structure with a span of 1.5m or more passing beneath a highway embankment that has a proportion of the embankment, rather than a bridge deck, between its uppermost point and the road running courses. Culverts are normally rectangular or circular in cross section.
Retaining wall	A wall associated with the highway where the dominant function is to act as a retaining structure. This definition includes reinforced/strengthened soil with hard facings. Bridge managers should be aware that Section 167 of the Highways Act 1980 gives highway authorities special powers in relation to highway retaining walls of height greater than 4'6" (approximately 1.35m).
Road tunnel	A tunnel with an enclosed length of 150 metres or more through which a road passes.
Sign/signal gantry	A structure spanning the highway, the primary function of which is to support traffic signs and signalling equipment.
Overbridge	In the context of this report, when the MHA road passes over the SHC
Underbridge	In the context of this report, when the MHA road passes under the SHC

B.2. Definitions of elements

Several useful diagrams explaining some of the following terms can also be found in:

1. Bridge Condition Indicators Volume 2: Guidance Note on bridge Inspection Reporting, County Surveyors Society, April 2002
2. Addendum to bridge Condition Indicators Volume 2, County Surveyors Society, August 2004
3. Bridge Management in Europe, BRIME, March 2004
4. Inspection Manual for Highway Structures – Volume 1, TSO, May 2007

Abutment	Part of the substructure that supports the extreme ends of the superstructure and transfers the loads to the foundations or ground. Abutments generally retain or support the approach embankment and bearings. An abutment should provide adequate clearance between the superstructure and obstacle crossed.
Approach slab	A slab positioned below the road surface on the approach to a bridge, the end of which normally rests on the back of the abutment. The purpose of the approach slab is to provide a smooth transition for traffic from the road to the bridge and vice versa. Approach slabs are normally made of reinforced concrete.
Arch	A curved beam or slab that functions primarily in compression and produces both vertical and horizontal reactions at its supports.
Bearing	A component that provides the connection between the superstructure and substructure, the purpose of which includes all or some of the following:
Bridge deck	The component of a bridge superstructure that directly supports the running surface and traffic. It is normally defined as a secondary load bearing component because it transfers the traffic loads to the primary load bearing components, e.g. main beams, although the deck may be the primary load bearing element if it is a slab bridge, i.e. the slab is the bridge deck.
Embankment	Fill material used on the approach to the structure to take the highway above original ground level. For the purpose of the document this includes reinforced/strengthened soil/fill structures without hard facings.
Joints	Joints in the bridge construction that allow movement and/or are a feature of the construction form. Joints may be open (allow water/debris to pass through) or closed (do not allow water/debris to pass through).
Parapets	A wall/rail/fence that runs along the outside edges of the bridge deck, or retaining wall, parallel to the direction of traffic flow. The purpose of the parapet is to prevent users from accidentally falling off the bridge.
Pier	Part of the substructure that provides intermediate support to the superstructure on multi-span bridges. Piers transfer loads to the ground/foundation and may be of column, wall or frame construction. A pier, as with the abutment, should provide adequate clearance between the superstructure and the obstacle crossed.
Slab	A two-dimensional component that directly supports the running surface and traffic and, in many construction forms, is referred to as the bridge deck. Slabs are normally designed to support load in bending.

Superstructure	The horizontal components of a structure, generally above the bearings, that directly support the traffic loads (e.g. bridge deck and longitudinal beams) and transfer the loads to the substructure.
Substructure	The vertical components of a structure (e.g. piers, columns and foundations), generally below the bearings, that support the superstructure and transfer the loads to the supporting ground.
Waterproofing	A protective coating placed between the road construction and the bridge deck in order to protect the bridge deck from the ingress of water and harmful agents, e.g. chloride ions.
Wing wall	A retaining wall immediately adjacent to the abutment forming part of the approach embankment.

B.3. Other definitions

Legal Land Boundary	A line, which is not visible on the ground that divides one's land from another. It is an exact line having no thickness. It is rarely identified with any precision either on the ground or in the deeds.
Maintaining Highways Authority	Adjacent network operator that is not the SHC. This includes, but is not exclusively Local Highway Authorities.
Operation & Maintenance Boundary	A point of interface between SHC and MHA, at which liability for operation and maintenance of an asset is transferred from one party to the other.
Proposer	A party, either the Strategic Highways Company, the Maintaining Highways Authority or a third party, which suggests maintenance, renewal or improvement works.
Special Agreement	Written agreement stored on the Structures Database detailing the responsibilities with regard to operations and maintenance activities for a named asset between the SHC and a Maintaining Highways Authority or Third Party.
The Strategic Highways Company	A network operator in a form of a government-owned company with responsibility for managing the Strategic Road Network in England. It is currently known as National Highways and is formerly known as Highways England, and earlier The Highways Agency.
Third Party	An adjacent party that is not a Maintaining Highways Authority. This may include non-network operators, private individuals etc.