



Hampshire
County Council

Economy, Transport and Environment Department

Technical Guidance Note TG25 - Fences, Noise Barriers and Demarcation of the Highway Boundary

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1. Policy / Approach

- 1.1. This guidance note is to assist designers proposing to include barriers/fences within highway works and provides advice on the demarcation of the Highway Boundary in Hampshire.
- 1.2. When new or improvement works are undertaken on the Highway it is important that the Highway Boundary is clearly defined on the ground to enable maintenance workers to easily identify the extent of the highway and therefore any maintenance requirements.
- 1.3. However, it is also important that the method of demarcation of the Highway Boundary does not in itself become a maintenance liability to the Highway Authority.
- 1.4. Generally installation of fencing within the Highway should be avoided unless absolutely necessary. This is to avoid unnecessary street clutter, creation of barriers for wildlife, needless use of materials and excessive maintenance liabilities. **Where fencing is required to enclose private property from the Highway, the fence shall be installed on the edge of the private property and be owned and maintained by the property owner.** Where there isn't a clear fence/wall/boundary between private property and the Highway, demarcation markers shall be installed on the edge of the Highway (refer to Section 4).
- 1.5. An accurate Highway Boundary is fundamental part of the highway design process. To establish the accurate extent of the existing Highway Boundary, please contact the ETE Status and Searches team to obtain a Highway Extents plan. External developers/consultants should use the [Highway Extent Search Request](#). HCC officers can contact the Asset Information mailbox. HCC officers shall **not** base designs on the Highway Boundary information in GIS.
- 1.6. Fencing/barriers adopted by HCC shall be subject to Commuted Sums where indicated in the [Commuted Sums Policy](#).
- 1.7. For guidance regarding vehicle restraint systems refer to [TG14 - Collision Risk Assessment, VRS and Passive Street Furniture](#).

2. Definitions & Abbreviations

ETE	Economy, Transport and Environment Department within Hampshire County Council
GIS	HCC's Graphical Information System
HCC	Hampshire County Council
MCHW	The Department for Transport Manual of Contract Documents for Highways Works
VRS	Vehicle Restraint System

3. Fencing

3.1. General Requirements

3.1.1. All fencing within the Highway shall be in accordance with:

- HCC's [Highway Construction Standard Details](#) and the associated [Notes for Guidance](#)
- HCC's [Model Contract Specification](#) (specifically Appendices 0/2 and 3/1)
- Series 300 of the Manual of Contract Documents for Highways Works ([MCHW](#))
- The [H series of the Highway Construction Details](#) (HCDs) within the MCHW
- British Standard BS 1722

3.1.2. Where types of fencing are not covered within this TG, the fencing shall be in accordance with HCC's Model Contract Specification Appendix 3/1, Series 300 of the MCHW and Series H of the HCDs.

3.1.3. Timber and timber-based products shall be sourced from Sustainable, or Forest Law Enforcement Governance and Trade (FLEGT) licensed sources.

3.2. Temporary Fencing

3.2.1. For temporary fencing associated with temporary traffic management refer to [TG22 – Temporary Traffic Management](#)

3.2.2. Where Heras fencing, or an approved equivalent is used, the fence shall be 3.4m x 2.0m with suitable bases for the ground conditions. Care shall be taken to ensure the bases do not pose a hazard (e.g. for pedestrians or cyclists) or impact on working widths/clearances in terms of temporary traffic management.

3.2.3. Where Chestnut Pale fencing is specified, the fence shall be Cleft Chestnut Pale fencing in accordance with MCHW Clause 303 and HCD drawing number H2 Type 3.

3.2.4. Refer to Appendix 3/1 of HCC's Model Contract Specification, Series 300 MCHW and the HCDs.

3.3. Post and Rail Fencing

3.3.1. All fencing rails for post & rail fencing shall be cut and nailed at each and every post (unless the fence isn't in the vicinity of motorised traffic).

3.3.2. Where the fence is to be installed alongside or within 0.5m of a cycleway – then the rails shall be installed on the cycleway side and cut at every post. This is to minimise the risk of the cyclist's handlebar catching on the vertical posts causing the cyclist to lose control.



- 3.3.3. Where the fence is located immediately adjacent to a vertical drop and there is risk of a pedestrian leaning on the rail and the rail fixing failing, the designer shall consider in their CDM design risk assessment whether this presents a higher risk than the risk of impalement by the rails should a motor vehicle collide with the fence (see 3.3.4). If this risk is higher, the rails should be installed on the carriageway side and cut at every post. At least 0.5m clearance between the post footings and any embankment slope/ditch shall be provided. A greater distance may be required depending on the soil conditions, drop depth and angle of drop.
- 3.3.4. In all other situations (unless specified otherwise by the Highway Authority), post and rail fencing shall be erected with the rails mounted on the non-trafficked face of the post (i.e. away from the carriageway). This is to minimise the risk of impalement by the rails should a motor vehicle collide with the fence.
- 3.3.5. The following table details when the different HCC standard construction post and rail type fencing details should be used:

Drawing Number	Drawing Title	Notes
HCC11/C/150	Timber Post and Rail Fence Details	Options for 3, 4 or 5 rails with 3 rails being the preferred option. Post footings excavated and backfilled. This detail should be used in the majority of locations. Should stock fencing be required, a scheme specific detail should be developed.
HCC11/M/200	Typical Post and Rail Fencing	Generally only to be used for maintenance / replacement of existing fencing of this type and primarily in the New Forest area. Comprises driven posts.
HCC11/M/045	Concrete Post & Tubular Steel Pedestrian Fencing	Generally only to be used for maintenance / replacement of existing fencing of this type. Used in preference to timber when in proximity to water to minimise maintenance & risks due to wood rot.
HCC11/M/050	Tubular Steel Pedestrian Fencing	Generally only to be used for maintenance / replacement of existing fencing of this type. Used in preference to timber when in proximity to water to minimise maintenance & risks due to wood rot.

3.4. Post and Wire Fencing

- 3.4.1. Post and wire fencing should not generally be required within the adopted Highway. Where the fencing is for an adjacent landowner (e.g. accommodation works associated with a scheme), a scheme specific detail should be developed to suit the particular site/landowner's



requirements (including appropriate stock-proofing requirements), with the fence remaining the responsibility of the adjacent landowner to maintain. Standard Detail [HCC11/M/205](#) should only be used for maintenance / replacement of existing fencing of this type, primarily in the New Forest area.

3.5. Environmental Barriers (also known as Acoustic Fencing or Noise Barriers)

- 3.5.1. Wherever possible, the use of environmental barriers in the form of fencing/noise barriers should be avoided. The preference should be to provide natural features such as bunds with planting/trees and/or earthwork cuttings, providing a more natural environment, increased landscaping/tree provision (thereby reducing carbon and providing better heat absorption), improved natural habitats for flora & fauna and also minimising maintenance liabilities.
- 3.5.2. Where environmental barriers cannot be avoided but are required to protect a new development, the environmental barriers shall remain the responsibility of the development rather than being included within the area to be adopted as Highway.
- 3.5.3. Where environmental barriers are provided as part of highway improvement works to mitigate increases in noise levels associated with the highway improvement, the barriers shall be within the Highway Boundary with suitable access provided to enable inspection and maintenance activities to be undertaken safely.
- 3.5.4. Environmental barriers are specified under Appendix 25/4 Environmental Barriers in the HCC Model Contract Specification. The Design Manual for Roads and Bridges provides guidance for the design and technical requirements in LD 119 - Roadside Environmental Mitigation and Enhancement
- 3.5.5. Environmental Barriers are deemed to be Structures and therefore an Approval in Principle will need to be submitted and approved by HCC Structures team. Refer to [Technical Guidance Note TG7 – Adoption of Structures](#).

3.6. Birdlip Fencing

- 3.6.1. Standard Detail [HCC11/M/055](#) covers Birdlip fencing and its use should be limited to maintenance / repair of existing birdlip fencing. This type of fencing has in the past been used as low level boundary markers to deter pedestrians from leaving a footpath or footway for whatever reason including taking short cuts across verge areas. Use of such fencing in new designs should be avoided with designs ensuring that footpaths/footways are provided on desire lines and sharp corners designed out. This avoids unnecessary street clutter and helps to minimise maintenance costs.

- 3.6.2. Bollards and dragons teeth are more effective at deterring motorists; for guidance on the use of bollards and dragons teeth refer to [TG12 – Signs and Bollards](#).

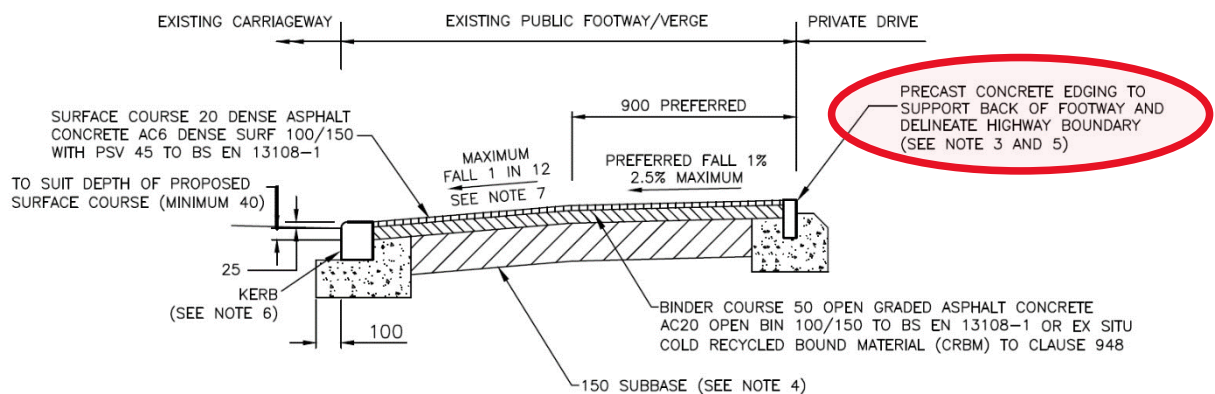
4. Demarcation of the Highway Boundary

4.1. General

- 4.1.1. Demarcation of the highway boundary is generally provided by clear features such as fencing, walls, edges/centre lines of streams etc. Such features are the responsibility of the neighbouring landowner to maintain.
- 4.1.2. However, where a clearly identifiable boundary line can't be provided (i.e. between Highway land and adjacent Open Space or at the transition from public to private carriageway) the methods detailed in 4.2 to 4.4 should be used.

4.2. Highway Edging Kerb

- 4.2.1. In urban areas, the back edge of the footway is often also the Highway Boundary. Where the highway Boundary is in the verge in urban areas, concrete edgings shall also be used. Refer to Standard Detail [HCC11/C/045](#). However, where there are roots present that need to be protected, timber edgings may be specified (use of timber edgings shall be kept to an absolute minimum).
- 4.2.2. Where there is a private drive, edging kerbs shall also be used to delineate the extent of the highway as indicated in the extract of Standard Detail [HCC11/M/040](#) shown below.



4.3. Demarcation Studs for Private Roads

- 4.3.1. To demarcate the boundary between a private access road (i.e. new development road which is to remain private) and the Highway Boundary it is important that nothing is introduced in the carriageway that could become a maintenance issue such as a channel block or flush kerb across the carriageway at the transition from Highway to private road.
- 4.3.2. Demarcation studs shall be installed in the channel line either side of the carriageway at the transition. Studs should be low profile with an anti-slip



finish and a root to securely install the studs in the surfacing. Example studs are:

[Low Dome Anti-Slip SS Demarcation Stud, 40mm dia,](#)

[Road Stud Circular Ribbed Aluminium, 100mm dia](#)

[FinePoint Stainless Steel Demarcation Stud](#)

4.4. Highway Boundary Marker Block

- 4.4.1. In rural areas, Highway Boundary Marker Blocks are to be used in verge to delineate the Highway Boundary where there is not another obvious feature such as fencing, walls or the back edge of a footway. The Marker Blocks shall be installed every 5m in the verge and at all changes in direction of the Highway Boundary line. This shall include visibility splays where the splays form the Highway Boundary line. Refer to Standard [Detail HCC11/C/026](#).



5. Easements and Restricted Covenants

- 5.1. All features to be maintained by the Highway Authority should be positioned within the Highway Boundary; **this includes all visibility splays**. However, there are some occasions where this may not be possible requiring either Easements or Restricted Covenants to be secured to enable the Highway Authority to undertake its highway duties.
- 5.2. **The use of Easements and Restricted Covenants shall be avoided if it is at all possible**. Where they are proposed, they must be agreed with HCC in advance.
- 5.3. Only in the following situations shall such arrangements be permitted:
- Easements for drainage.
 - Easements of 1m around street light columns located within private land. Such easements shall extend from the edges of the 1m strip to the Highway (perpendicular to the Highway Boundary).
 - A 1m easement strip on the ends of carriageway stubs, where connecting to private carriageway, shall be required. Where the carriageway construction to formation level is greater than 1m deep, the width of the easement strip shall be increased to match.
 - A restricted covenant for the additional width to cycleways, where additional width is required to ensure the “effective width” is not compromised (e.g. 0.5m for vertical barriers above 0.6m high) and it is not possible to include this width within the Highway Boundary (either grassed or paved depending on location). Approval from Asset Management is to be sought prior to using a restricted covenant in this situation.
 - A restricted covenant for visibility splays (including forward visibility splays) **but only where the splay crosses public open space/parish owned land AND it is not possible to dedicate the splay area as Highway**. This shall only be by agreement with the Asset Management team in advance; generally these too should be dedicated as Highway.
- 5.4. Restricted covenants are not required to ensure that landscaping/vegetation does not encroach on visibility splays. However planting shall be set back as detailed in [Technical Guidance Note TG15 – Trees, Landscape & Ecology](#) to avoid encroachment due to growth.
- 5.5. Embankments should generally be dedicated as Highway.
- 5.6. Any structures within the Highway (bridges, culverts, retaining walls) shall have at least a 2m strip between the edge of the structure and the Highway Boundary to enable inspections and maintenance to be carried out from within the Highway (a wider strip may be required depending on the particular site constraints).
- 5.7. Retaining walls for retail estates/hotels/private carparks/undercrofts etc) that support any part of the Highway but are located outside of the



Highway Boundary shall remain private. They shall be subject to the Approval in Principle process in accordance with the timeframes detailed in [Technical Guidance Note TG7 – Adoption of Structures](#).



6. Further Support

- 6.1. Should you have a specific query or feedback about any of the content of this Technical Guidance Note, please send an email to Technical.Guidance@hants.gov.uk with the start of the email title as "TG25 – " .
- 6.2. Should you have a query about applying this to your particular project, please contact:
- the Design Check Engineer dealing with your S278 or S38 application (if you are a Developer or Developer's Consultant)
 - the Technical Guidance Note Specialist(s) (if you are a working within Hampshire County Council)
- 6.3. Associated Technical Guidance Notes:
- TG7 – Adoption of Structures
TG12 – Signs and Bollards
TG14 – Collision Risk Assessment, VRS and Passive Street Furniture
TG15 – Trees, Landscape & Ecology