APPROACH PRINCIPLES COLLABORATION DEVELOPMENT

# the Kent design guide

## making it happen - **highways (structures)**

# overview

This part of making it happen includes advice, guidance and information about highway structures for residential and industrial developments.


structures

## General

For work in environmentally sensitive areas, early joint discussions with the local District Planning Authority are essential to achieve acceptable design solutions.

All highway structures must be designed in accordance with the latest relevant Standards, Codes of Practice, Highways Agency Technical Memoranda and local standards adopted by us.

Due to the important design, safety, inspection and maintenance considerations involved, the technical approval process for all highway structures must be fully adhered to. Full details of the approval procedures are available from us.

The need for a highway structure must be identified at the outset of a scheme proposal and discussed with us as Technical Approval Authority (TAA) to confirm its acceptability.

Generally, the need for a highway structure should be avoided wherever possible, but where a highway structure is deemed necessary you must provide adequate justification in the design brief statement.

Particular regard must be given to the following issues:

- retaining walls will generally not be accepted adjacent to the highway. Where proposed, the initial concept must be agreed with the TAA before planning permission is granted by the local District Planning Authority, otherwise the layout of the site must be amended to design out the retaining wall;
- private structures over the highway; and
- the location of large Statutory Undertakers' services within the highway with regard to future inspections, maintenance and replacement of the services and the related impact on the users of the highway.

## Definition of a Highway Structure

**A highway structure is any bridge, subway, culvert, pipe, tunnel, manhole, chamber, wall, reinforced soil embankment, piece of street furniture, building or other structure built in, over, under or adjacent to any part of the highway and which materially affects the support of that highway and/or the safety of the travelling public.**

The highway, for which we are responsible, may include the carriageway, footways, footpaths, visibility areas, verges, byways and other designated public rights of way.

Miscellaneous structures affecting the highway include:

- buildings projecting into or spanning over the highway (Highways Act Section 177);
- pipe and service gantries / bridges over the highway (Highways Act Section 178);
- service tunnels under the highway (NRSWA Section 50);
- environmental barriers;
- cattle grids;
- highway furniture, including (high mast lighting columns (>20m), portal and cantilever sign / signal gantries and associated foundations); and
- other communication and CCTV masts as identified by the Divisional Manager.

## Technical Approval

Technical approval is required from us for the design, detailing and construction of all miscellaneous highway structures. This applies without exception and regardless of who the promoter is, and could include us, Network Rail or another Transport Authority, the District Planning Authority, the Parish Council, or a private individual or private company (including Statutory Undertakers under the NRSWA) etc.

## The Approval Procedure for Highway Structures and works affecting the highway

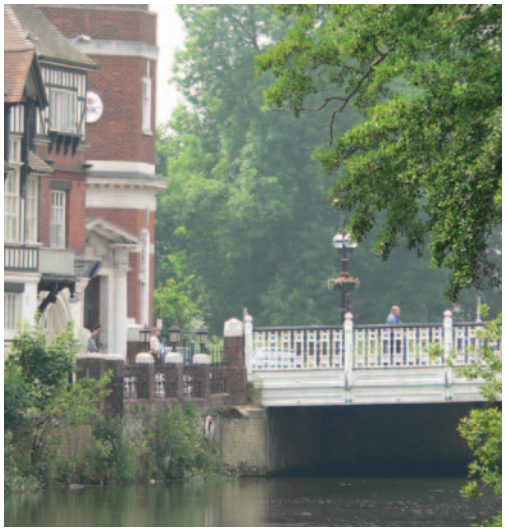
The Divisional Manager is the Project Manager for all schemes and works affecting the highway and will involve other specialists as required, or when appropriate.

The "Technical Approval Procedure for Highway Structures", which we have adopted, is currently based on the Highways Agency Standard BD 2/05 "Technical Approval of Highway Structures" with local amendments. The process is outlined on page 6**.**

This approval process must be followed for the construction or alteration of all highway structures, whether to be adopted by us or not, for which we act as the Technical Approval Authority (TAA).

Where a highway structure is to be adopted by us, this must be specifically written into the appropriate agreement, together with the agreed commuted sum payment required for future maintenance.

Where a highway structure will not be adopted by us and does not belong to a statutory undertaker, a Maintenance Agreement or Licence may be required.



*Structures in the highway can enhance an area's sense of place. Attractive and functional layouts can incorporate public art but this needs to be carefully located.*

The approval procedure consists of:

### 1. Endorsement

You must first complete and sign an endorsement, and submit it to the TAA. No part of the approval process will be commenced until this has been received and accepted by the TAA.

If you fail to comply with this requirement or any of the other terms and conditions we reserve the right to either reject the works or upgrade the works to the standard required by us and to reclaim all the costs incurred.

Your consultant must be a Chartered Civil or Structural Engineer, competent in bridge works and approved by the TAA. If the consultant is not approved, the TAA will not approve the design or any subsequent construction.

### 2. Approval in Principle (AIP)

The Approval in Principle document sets out the concept for the scheme, together with the design approach and standards to be used. The endorsement of an AIP in no way infers acceptance of any of the details. These are accepted by the endorsement of the design and check certificates, following the design check and maintenance audit.

### 3. Structure Details

Following the receipt of the endorsed AIP document, the design of the structure may commence.

On completion of the design, the structure details must be submitted to the independent checker, identified in the AIP, for the design check and to the TAA for the maintenance audit.

The maintenance audit is required to ensure that aspects affecting the on going inspection and maintenance of the structure are to the TAA's approval.

### 4. Design and Check Certification

Following resolution of any issues raised during the design check and maintenance audit, your consultant is to complete and issue a Design Certificate certifying that the structure has been designed in accordance with the AIP.

The checking consultant is also to complete and issue a Check Certificate certifying that the structure has been checked in accordance with the AIP.

The construction work must not commence until all legal agreements are signed (where appropriate), the consultant is in receipt of the TAA endorsed Design and Check Certificates and your site supervision arrangements are agreed by the TAA.

You must notify the TAA of the programmed start and completion dates, prior to any works commencing on site.

Supervision of the works is your responsibility and must be carried out by a competent consultant, independent of the contractor and approved by the TAA.

In addition, the TAA is to be permitted access to the works at any time during construction for audit supervision checking.

*Where the street scene dictates, it may be appropriate for structures to overhang. Overspanning structures are not however permitted over the highway, but they may be appropriate above private accesses.*

## As Constructed Record Requirements

During the construction phase your consultant must prepare the record information, in accordance with the requirements specified in the Technical Approval Procedure.

Upon completion of the works your consultant must submit the records to the TAA for comment.

Once these have been accepted by us, your consultant must complete and issue a Certificate of Construction Compliance, certifying that the structure has been built in accordance with the approved drawings and specification.

Approval for adoption WILL NOT be given until the Certificate of Construction Compliance has been endorsed by the TAA.

## Headroom and Structures Over the Highway.

We do not accept structures spanning the highway, however we may consider an application where buildings overhang the highway (not a spanning structure), in a Conservation Area where the new structure is in keeping with the historic surroundings.

You must speak to the Divisional Manager regarding architectural features over the highway. We will determine if the concept of a structure at a specific location is acceptable. Any decision and subsequent approval is separate and independent of any planning or building control approvals.

All projecting structures will require technical approval as set out in this section. The structure may be formally approved by the inclusion of additional clauses in the relevant agreement, or by way of a S.176, S.177 or S.178 Licence under the highways Act 1980, as appropriate.

The agreement or licence will require for regular inspections, reporting and ongoing maintenance obligations for which you are liable.

Any agreed related protective measures placed in the highway will be adopted by us upon payment of a commuted sum for their future inspection, maintenance and eventual replacement

Overhanging structures may be designed to building design codes rather than to our requirements for highway structures, provided the structure does not carry public vehicular or pedestrian traffic.

Where an overhanging structure is permitted, the minimum vertical clearances over the highway (carriageway, adjacent footway or verge) must be 5.7m. You must check with the Divisional Manager, whether the route is to be used by buses and other high sided vehicles to ensure suitable clearance is provided.

The minimum vertical clearance over a pedestrian route (footway, footpath or cycleway) must be 2.6m.

Guidance regarding minimum headroom over the highway for industrial and commercial roads is included in 'Designing for Deliveries', published by the Freight Transport Association. Any height must not be less than the criteria included in this section.

## Reinforced Earthworks and Strengthened Embankments

If reinforced earthworks or strengthened embankments are proposed as structures, the Divisional Manager must be consulted. A commuted sum may be required for adopting such features.