

Design and Approval of Highway Structures

1. Overview

The Technical Approval (TA) process applies to all new structures within the highway boundary and those outside of the highway boundary that would affect the safety or stability of the highway. This includes works undertaken by third parties, such as housing developers and private individuals, regardless of whether the structure will be adopted by us. It also applies to temporary structures and temporary works during construction, as well as the modification or assessment of existing structures.

The process is there to give assurance that structural works are designed and constructed in a safe and appropriate manner, to minimise the risks posed to highway users as far as reasonably practicable. It also helps to ensure that new structures will perform satisfactorily in service, are economical to maintain and have due regard for environmental and sustainability requirements.

Full details of the TA process are set out in a document called [CG 300](#), which forms part of the Design Manual for Roads and Bridges produced by National Highways. We will act as the Technical Approval Authority (TAA) to review submitted TA applications.

We have made some amendments to CG 300 to make it more suitable for the type of structures found on our highway network. Details of these requirements can be found in our [NYC Application Annex to CG 300](#).

Further details of our requirements for the design and specification of adoptable structures can be found in our Design Guide for Highway Structures.

Developers and designers should consult with us at an early stage to agree our requirements for adoptable structures and how the TA process will be applied to the project, including to confirm the structure category.

To arrange an initial discussion, please contact us at: bridges@northyorks.gov.uk

2. Scope

In general, the TA process applies to all structures that have an impact on the highway. This includes those passing over or that could fall onto the highway, and those supporting the highway with either a clear span or internal diameter greater than 0.9m or a retained height greater than 0.5m. Full details of the types and size of structures within the scope of the TA process are given in CG 300 and the NYC Application Annex.

Typically, a structure outside of the highway boundary, such as a retaining wall, would be deemed to have an impact on the highway if it intercepts an influence line at 45° up or down from the nearest point on the highway boundary.

Structures are split into 4 categories within the TA process, based on their complexity and level of risk. These categories have different requirements on how the design of the structure

will be undertaken. A summary table is provided below for the categorisation of typical structure types.

Insert Table

Full details of the structure categories can be found in CG 300 and the NYC Application Annex. The TAA may require a higher or lower category, where deemed appropriate.

3. TA Process

The TA process can be split into 3 key phases, which are used to formally conclude the relevant stage of a project. These are as follows, for a Category 1 - 3 structure:

Preliminary Design Phase

- Initial discussions with the TAA will help guide the development of the scheme and ensure our requirements are met by the proposed structure.
- When sufficient detail has been established on the structural form and intended approach to the design, the Approval in Principle (AIP) can be drafted and submitted to the TAA for review.
- Once the AIP has been agreed by the TAA, the project can move into the detail design phase without the risk of abortive work.

Detailed Design Phase

- The detailed design must be undertaken in accordance with the details set out in the AIP.
- When the design drawings have been completed, the independent check can take place working from the drawings and AIP only.
- After the independent check has been completed, the design and check certificates can be submitted to the TAA for review, along with supporting design documentation such as the construction drawings.
- Once the certificates have been agreed by the TAA, the project can move forward to the construction phase.

Construction Phase

- Once construction begins, the work on site will be independently inspected by the works examiner. Usually this is a representative from the organisation who undertook the design.

- On completion of the construction work, the works examiner will provide the certificate of construction compliance to the TAA, along with supporting documentation such as as-built drawings, bar schedules and the Health and Safety File.
- In most cases, the TAA will arrange for a pre-opening inspection to be undertaken before agreeing the certificate of construction compliance.
- A structure cannot be opened for public use until the certificate of construction compliance has been agreed by the TAA.
- The TAA will not agree a certificate of construction compliance that has been submitted without all of the required supporting documentation.
- We will not adopt a structure until it has an agreed certificate of construction compliance.

Flow diagrams that outline the TA process can be found here:

- [Category 1-3 Structures](#)
- [Category 0 Structures](#)
- [Drainage Chambers](#)

4. Drainage Chambers

A simplified application process is available for drainage chambers (oversized manholes) constructed from proprietary precast concrete rings, using a template [Outline AIP](#) form.

This process is for chambers with an internal diameter between 1.25m and 3.00m only. Further details are shown in Clause 25.4.11 of our [Design Guide for Highway Structures](#).

5. Application Submission

To make a formal TA application, the following documents should initially be submitted to us:

For Category 0 Structures:

- Design and Check Certificate - As per CG 300 Appendix I.
- 1:10,000 scale location map and the Ordnance Survey grid reference for the proposed structure.
- General arrangement and construction detail drawings.

(An AIP does not need to be submitted for a Category 0 structure.)

For Category 1, 2 & 3 Structures:

- AIP - As per CG 300 Appendix A.
- 1:10,000 scale location map and the Ordnance Survey grid reference for the proposed structure.
- General arrangement drawings.

For Drainage Chambers:

- Outline AIP - As per the NYC template.
- 1:10,000 scale location map and the Ordnance Survey grid reference for the proposed site.
- Site layout plan with all chambers clearly numbered.
- Schedule of chamber numbers, size/type and coordinates.
- Drawings showing the construction details of the chambers.

6. Costs and Timescales

We charge an application fee and an hourly rate for the time taken to review submissions. We will provide an estimate of these costs upon receipt of preliminary details for a scheme, following an initial discussion with the TAA.

[Find out more about our fees and charges](#)

We aim to provide initial feedback on a submission within four weeks of payment of the application fee.