



# Technical Approval for Highway Structures



**Blackburn with Darwen  
Borough Council**

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## **Issue and Revision Record**

<b>Revision</b>	<b>Date</b>	<b>Originator</b>	<b>Purpose/Nature of change</b>
<b>A</b>	<b>12th May 2021</b>	<b>M. Berry</b>	<b>Document Created</b>
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## **Glossary of Abbreviations and Acronyms**

AIP	- Approval in Principle
BwD BC	- Blackburn with Darwen Borough Council
TAA	- Technical Approval Authority
TA	- Technical Approval
TAS	- Technical Approval Schedule

## **Introduction**

This document and its procedures and guidelines are intended for the use of Developers (and their Design Consultants) who are intending to submit proposals to construct or alter any structure associated with the Highway. Any other persons intending to construct private works for which the approval of the Highway Authority may be required can also use this document.

These procedures and guidelines shall apply when the Developer wishes the Highway Authority to adopt the structure under Sections 38 and 278 of the Highways Act 1980.

The procedures shall also apply if adoption is not required but the design requires the consent of the Highway Authority under Section 167 of the Highways Act 1980.

It is a requirement that TA procedures are followed for the design and construction of all new or modified highway structures in accordance with Highway England's Standard CG 300 'Technical Approval of Highway Structures'

For the purpose of this guidance the Highway Authority shall be BwD BC and the TAA shall be BwD BC's Highway Structures Department.

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## **Definition of a Highway Structure**

For this purpose, the term 'Highway Structure' shall include 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 which affects the support of that Highway and/or the safety of the public using the Highway.

Technical Approval from BwD BC will be required for:

- a) Any bridge or culvert that carry the Highway having a clear span or internal diameter greater than 0.9 meters.
- b) Any bridges that span over the Highway.
- c) Any structures irrespective of height supporting the Highway or retaining land or property from the Highway.
- d) Any structures irrespective of height within 3.66 metres of the edge of the Highway.
- e) Any structures outside the Highway boundary as defined above that are proposed for adoption by BwD BC.

The term 'Highway' includes the carriageway, footway or verges, byways and other designated public rights of way adjacent to the structure which are maintainable at public expense or, for which the Developer is seeking adoption of under Section 38 or 278 of the Highways Act 1980.

## **Technical Approval Policy**

The Technical Approval procedures ensures, as far as reasonable practicable, that all structures associated with the highway are safe, durable, fit for their intended function and, in the case of structures proposed for adoption, designed in accordance with the current codes of practice and with overall buildability and minimum future maintenance in mind.

The Highway Authority will only consider adopting structures which either carry the highway or support it. Any structure spanning over the highway will not be adopted unless the structure itself carries a highway, or forms an integral part of the highway, such as a footbridge or traffic sign gantry.

Whether proposed to be adopted or not all structures built in the highway, or built wholly or partly within 3.66m (4 yards) of the highway boundary, or which otherwise may structurally affect the highway or its support, will be subject to these guidelines.

Where a structure is to be adopted by the Highway Authority this will be specifically written into the Section 30, 38 or 278 Agreement together with an agreed commuted sum figure for its future maintenance which the Developer is to pay to the Highway Authority.

For new highway structures, whether adopted or un-adopted, an easement strip/area adjacent to the structure will be required for future maintenance/reconstruction and inspection activities. It is recommended this easement is typically to have a clear width of 5m however, this can be adjusted practicably for structures of varying sizes, complexities and heights in site specific situations. i.e. a typical arrangement for a retaining wall retaining from 0.5m to 4m over a length of 200m would require an easement practicable for its maintenance/replacement which may range from 1m where there is a 0.5m retain to 5m where there is a 4m retain.

Walls (including wall toes) supporting private land adjacent to the highway will not be adopted and these walls must be totally founded on private land.

The Highway Authority will only adopt walls constructed to support the highway if an embankment is not a practicable solution. Gabions and crib walls will also only be considered in particular circumstances due to their experienced short life expectancy.

Where a structure is not to be adopted, a Maintenance Agreement will be required. Developer must demonstrate that they can meet the following criteria:

- a) They are the landowner of the site.
- b) They will have an income stream from the site sufficient to meet the maintenance obligations (i.e. a charge is levied for the use of the development).

The key to the successful adoption of a highway structure is early engagement between the TAA and the developer (or the developers design consultants) via BwD BC's Highway Structures Department

**Note: Structures will not be adopted if the procedures set out in this document have not been followed.**

## **Notification of proposed works and Form of Agreement**

The Developer must firstly complete and sign the Form of Agreement (Appendix 1) and submit it to the TAA for consideration along with outline proposals of the works e.g. concept sketches/drawings.

Upon receipt of the signed Form of Agreement the Developer will be advised of the estimated Technical Approval costs (excluding legal fees) and the category of the structure/s

The Developer (or Developers Consultant) shall be a Chartered Civil or Structural Engineer competent in the design of Highway Structures.

No part of the approval process will be commenced until the signed Form of Agreement has been received and accepted.

## **Structure Category**

Proposals will fall into one of four Categories 0, 1, 2 or 3 according to the criteria set out below and as further detailed in Highway England's Standard CG 300 'Technical Approval of Highway Structures'. The category boundaries are not fixed and in cases of doubt the category is to be decided in consultation with the TAA having a regard to the potential consequences of failure, design complexity and whole life costs.

The structures class will determine the need for AIP, the form of check to be applied and the certificates to be prepared.

- **Category 0 structures**

Minor structures that conform in all aspects of design, assessment and execution to DMRB and MCHW standards and contain no departures from standard and which also conform to one of the following:

- a) Single span simply supported structures with a span of less than 1.5m
- b) Buried structures with less than a 3m clear span/diameter and having more than 1m cover
- c) Multi-cell buried structures, where the cumulative span is less than 5m and having more than 1m of cover
- d) Earth retaining structures with an effective retained height of up to 1.5m

- **Category 1 structures**

Simple structures that can be analysed by static methods and where all aspects of the design and construction are in accordance with DMRB and MCHW standards for example:

- a) Structures with a single simply supported span of 5m or greater but less than 20m and having less than 25°
- b) Buried concrete box and corrugated steel buried structures with a span or diameter less than 8m.

c) Earth retaining structures with an effective retained height of up to 7m

- **Category 2 structures**

Intermediate structures which are not included within categories 0, 1 and 3 and may contain departures from standard.

- **Category 3 structures**

Complex structures which require sophisticated analysis or with any one of the following features:

- a) Any span exceeding 50m
- b) Skew exceeding 45°
- c) Difficult foundation issues
- d) Post tensioned structures
- e) Earth retaining structures with an effective retained height of up to 14m or greater
- f) Ground anchorages
- g) Structures with hidden or difficult to inspect elements
- h) Structures with cathodic protection installed.

### **Approval in Principle (AIP)**

Following acceptance of the Notification terms, the Developer (or Developers Consultant) is to submit a completed AIP document (Appendix 2) to the TAA for endorsement.

The AIP document outlines the concept for the design of the structure and incorporates the TAS, which lists all the current codes of practice and documents relevant to the design of the proposed highway structure.

The AIP should contain a location plan, a general arrangement drawing, relevant parts of the geotechnical investigation report and any other relevant information or reports. Calculations and detailed drawings need not form part of the submission.

The AIP along with the TAS can be completed and submitted electronically. It is recommended a draft unsigned copy of the AIP is sent to the TAA for comment prior to the formal submission. To complete the formal submission a copy of the signed AIP is to be submitted to the TAA. Once approved a copy of the endorsed AIP will be returned to the Developer (or Developers Consultant).

The AIP should be endorsed by the TAA and received by the Developer (or Developers Consultant) before the detailed design begins.

The endorsed AIP is valid for a period of three years from the TAA's acceptance date. If the design and check certificates have not been received within this three year period the AIP will have lapsed and a re-submission will be required.

## **Detailed Design**

Following endorsement of the AIP the detailed design of the proposed highway structure can commence.

Upon completion of the detailed design a Detailed Design Package, including drawings, calculations, specifications and testing requirements etc. is to be submitted to the TAA or the independent checker as identified in the AIP for the relevant checking.

If an independent checker is being used an additional copy of the Detailed Design Package is also to be submitted to the TAA for maintenance records and Reviewing purposes. This Durability and Maintenance Review is to ensure that the long-term maintenance implications and durability of the structure have been considered in the design and detailing and that it is in accordance with the TAA's requirements.

For Category 0 structures the TAA requires a location plan, a complete and fully detailed General Arrangement drawing, a copy of any calculations and a Design and Check certificate signed by the appropriate engineers from the design organisation.

For Category 1, 2 and 3 structures the TAA requires an AIP and TAS schedule along with detailed engineering drawings, a copy of the calculations, specifications and testing requirements along with a Design and Check certificate.

All costs associated with the appointment of an independent checker are to be met by the developer.

## **Design and Check Certificates**

Following the detailed design check and the TAA's Maintenance Review the Developer (or Developers Consultant) is to submit the relevant Design and Check Certificates (Appendix 3) certifying that the Highway Structure has been designed and checked in accordance with the AIP.

Category 0 and 1 structures require a combined Design and Check Certificate. In this case the complete design package requires checking by another engineer who can be from the same design or assessment team.

Category 2 and 3 structures require a separate Design and Check Certificate and are subject to a more rigorous checking regime which should be agreed by consultation with the TAA.

A signed copy of the Design and Check Certificates along with the associated documents from the Detailed Design Package (drawings, calculations, specifications and testing requirements) are to be submitted to the TAA for endorsement. A copy of the endorsed Design and Check Certificates will be returned to the Developer (or Developers Consultant). Design and Check Certificates can be submitted electronically.

Once accepted by the TAA a copy of the endorsed Design and Check Certificates will be returned to the Developer (or Developers Consultant).

The Design and Check Certificates are valid for a period of three years from the TAA's acceptance date. If works have not commenced and are substantially underway within this three year period the Design and Check certificates will have lapsed and a re-submission will be required.

**Note: If the procedures above have not been followed and endorsed by the TAA construction will not be permitted. In cases where the proposed structure is to be adopted approval for adoption will also not be granted.**

## **Construction and Supervision**

The construction work may not commence until any legal agreements are signed (if appropriate) and the Developer (or Developers Consultant) is in receipt of the Design and Check Certificates endorsed by the TAA. The Developer must notify the TAA of the programmed start and completion dates, prior to any works commencing on site.

The TAA is to be permitted access to the works at any time during construction for audit or supervision checking purposes. This will be undertaken at intervals that reflect the size and complexity of the works and will include important aspects of the construction work such as excavations, foundations, reinforcement etc. The TAA shall be advised in advance and be regularly updated of the key operations and their dates in the construction programme so site visits can be appropriately planned.



Immediately prior to the end of the maintenance period, for adoptable structures, the TAA will undertake an inspection of the structure and report any recommendations to the Developer for action.

### **Supply of As Built Information**

Upon completion copies of the As Built information along with the Operation and Maintenance Manual/Health and Safety File for the structure are to be submitted to the TAA for acceptance.

Along with the Operation and Maintenance Manual/Health and Safety File the As Built Information is to include, as a minimum, the As-Built drawings, final calculations, the works specification, final bending schedules, information on all materials used and components, records of statutory undertakers plant locations along with any legal agreements (such as land plans, licenses, easements and land ownerships)

### **Construction Compliance Certificate**

Once the content of the As Built information has been confirmed to be satisfactory the Developer (or Developers Consultant) is to prepare and submit a Construction Compliance Certificate (Appendix 4) certifying that the structure has been constructed in accordance with the approved Detailed Design Package.

The As Built records for a particular structure are to be submitted to the TAA within 4 weeks of its substantial completion and not of the scheme as a whole.

Once approved by the TAA a copy of the endorsed Construction Compliance Certificate will be returned to the Developer (or Developers Consultant).

**Approval for adoption will not be given by the TAA until the As-Constructed Records and Certificate of Construction Compliance have been received, approved and accepted by the TAA.**

## Example Fees and Timescales

Example fees chargeable for the different categories of submission are as listed in the table below.

The Developer will be advised of the actual estimated Technical Approval costs upon receipt of the signed Form of Agreement and notification of works (Appendix 1)

<b>Task</b>	<b>Fee £</b>	<b>Notes</b>
Early Engagement Pre-Submission	500	Optional early engagement meeting
Category 0 and others deemed 0 or below	1000	Fee covers AIP and Design and Check Certificates as required and durability / compliance check.  Additional costs incurred such as, but not limited to, review of additional information, site visits, meetings etc. are not covered.
Category 1 and 2 structures	2,600	
Category 3 structures	3,800	
Hourly Rate (as required)	100	For inspections, supervision, site visits and information reviews etc.

- 1) The estimated fees listed above are sufficient for up to two reviews by the TAA (or its Consultant) for each package, document or drawing submitted. If further reviews are required the TAA will request further fees to be paid before the process resumes.
- 2) Reviews will not commence until fees are paid in full.
- 3) Meetings and site visits are assumed to last a maximum of 1 hour, beyond this, the fee stated above may be increased.
- 4) All efforts shall be made to close out submissions within a timescale of six months.
- 5) Where Developers take longer than six months to close out submissions the TAA reserves the right to charge additional fees and restart the submission process.

## **Appendix 1**

### **Notification of Proposed Works Form of Agreement**

## **Appendix 2**

### **Approval in Principle Template**

## **Appendix 3**

### **Design and Check Certificates**

## **Appendix 4**

### **Construction Compliance Certificate**