

Process for the Technical Approval of Highway Structures

Introduction

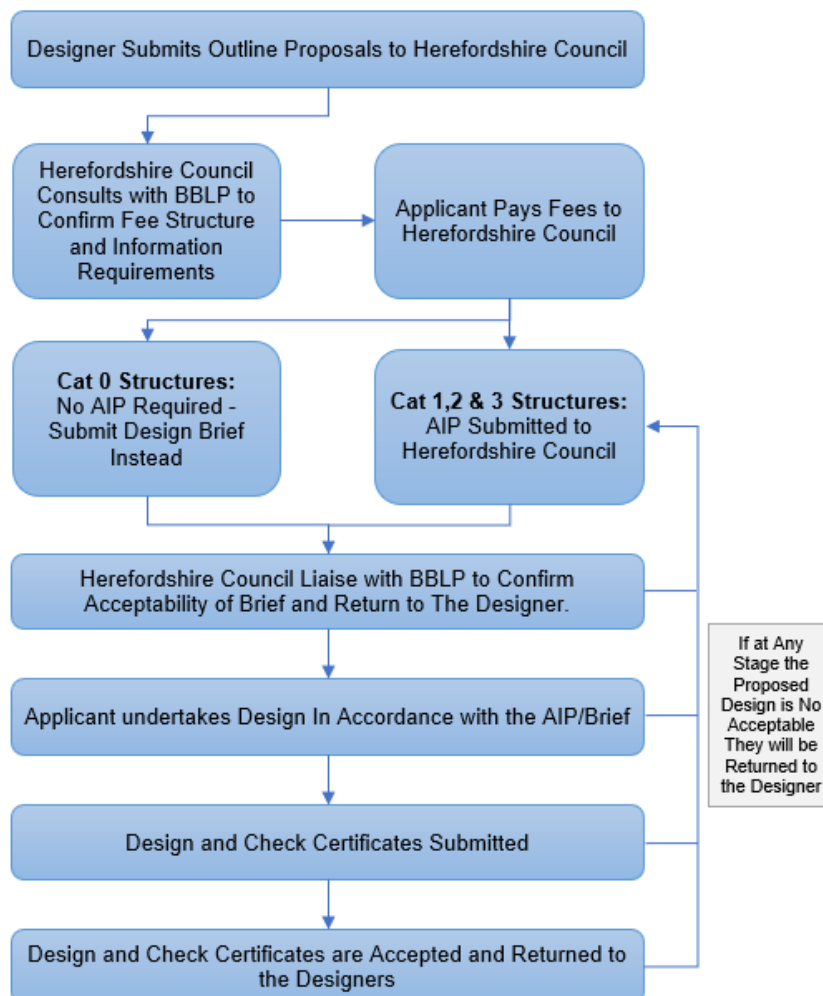
This section explains the requirements for the Technical Approval of Highway Structures and provides guidance for developers and their designers on the Technical Approval procedures within the County of Herefordshire.

The Technical Approval process applies to the design of all structures located over, under or adjacent to the public highway. The term “design” shall include the assessment, strengthening, alteration or repair of existing structures.

The objectives of the Technical Approval procedures are to ensure, as far as reasonably practicable, that highway structures are safe and serviceable in use and fit for their intended function.

The Herefordshire Council operates a self-certification scheme for the design and checking of highways structures. Technical Approval (TA) procedures are applied in accordance with the Design Manual for Roads and Bridges standard, CG 300 – Technical Approval of Highway Structures.

The process for documentation is dependent on the category of the structure. These categories are graded from 0 to 3 depending on the complexity of the structure as defined in CG 300. Before the Technical Approval procedure can commence payment is required to cover all costs likely to be incurred. This cost may increase if submissions require regular revision or contain insufficient information, so developers are strongly encouraged to review CG 300 prior to submission. The current fee structure can be found in Appendix 1.



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Figure 1: Technical Approval Process

The category parameters are set out in Appendix 2 to assist developers in preparing their submissions.

Balfour Beatty have been appointed by Herefordshire Council to undertake the role of reviewer and approver for the Technical Approval Process and may utilize a sub-contractor where appropriate.

The Technical Approval process is administered by Herefordshire Council who undertake liaison with the relevant project teams in BBLP. Contact should be made via the Council website's [contact page](#).

Design Requirements:

The technical requirements for the design of highway structures shall generally comply with the relevant standards and advice notes in the Design Manual for Roads and Bridges and be constructed in accordance with the Specification for Highway Works. Other standards etc. proposed shall be agreed with Balfour Beatty (Herefordshire Council's service provider) through the Technical Approval process.

The structural design and checking procedure shall be carried out by professional qualified engineers with chartered membership status from the ICE or IStructE; familiar with highway structures, who will specify the proposed documents to be adopted.

Generally, all structures should be designed to the relevant structural codes which are in operation across the highways industry. The design of temporary structures and those containing departures from established standards and criteria will be classified as either Category 2 or 3 (BS:5975)

Along with the relevant structural drawings and calculations the applicant is to provide a location plan showing the footprint of the proposed structure (hatched) in relation to the highway and surrounding areas. A scale of 1:500 should be adopted as appropriate.

The Design Documentation should address and specify how the key engineering issues for the type of structure and site-specific factors associated with the structure are to be addressed.

Approval in Principle (AIP):

The AIP submission shall be a record of all matters agreed at the Proposals stage. This shall generally include the Technical Approval Schedule, location plan, general arrangement drawing, relevant parts of the geotechnical report, documents relating to consultation and any other relevant information.

When to Apply for Approval in Principle (AIP)

For Permanent and Temporary Works

- At commencement of project initial application made in advance of starting on site – submit Approval in Principle for review and approval.
- At detailed design – submit Design and Check Certificates for acceptance.

Notes:

- (i) A load assessment will need to be undertaken for existing structures that are to be retained and incorporated in the building without modification.
- (ii) Commencement of works prior to receiving technical approval (acceptance of Design and Check

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Certificates) is carried out at the developers own risk and may be subject to change in order to comply with Herefordshire Councils requirements, incurring cost and programme delays.

Duration of Technical Approval Process:

Herefordshire Council and its consultants will aim to provide an initial response within 3-4 weeks. It is largely dependent on the complexity of the structure under consideration. Acceptance of the AIP can take up to 3 months but can take longer in exceptional cases, or in cases where the information submitted is not appropriately detailed to complete the process. The quality of the AIP submission and the designers understanding of highway codes and practices is critical to providing a response within the timescales indicated. Should no return correspondence be received within two months of our responses, we shall close your current application and assume that you no longer have a requirement for Technical Approval on this occasion.

Construction Checking Certification:

The designer is required to provide a final check of the works delivered. This check refers to the construction of the structure and provides certification that the design has been implemented correctly. This Construction Checking Certification shall be signed to declare satisfactory completion of the work etc. and forwarded to Balfour Beatty. These certificates shall refer to the relevant AIP / Design Brief by Balfour Beatty, reference number and date of agreement of the AIP/ Design Brief.

Please note that these procedures only grant approval under the Highways Act. Additional approvals may be required in accordance with all relevant legislation such as the Town and Country Planning Act, Construction Design Management Regulations and the Building Regulations Act.

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Appendix 1 - Current Fee Structure

Fee Levels and Payment:

The total fee (for all stages) + VAT shown on the below schedule shall be paid in advance to Herefordshire Council once the category of the structure has been agreed, and prior to the commencement of the technical approval application process.

- 1) **Fee level 1A** Approval In Principle (no departures from standard): The Approval in Principle (AIP) is required for all structures (including temporary structures), regardless of Category.
- 2) **Fee Level 1B** Approval In Principle (with departures from standard): Category 2 & 3 structures which contain departures from established standards and criteria shall require an AIP charged at the appropriate fee level plus an hourly rate.
- 3) **Fee Level 2** Technical Approval: This stage shall consist of the approval role up to and including certification.
- 4) **Fee Level 3** Site Inspection: Periodic site visits will be required through the duration of the works. These fees are payable regardless of the number of inspections undertaken. Operations requiring inspection shall be agreed prior to commencement on site. A minimum of 48 hours' notice is required. For Category 3 structures, the fee will be based upon an hourly rate.

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BD 2/12 DESIGN & CHECK CATEGORY	CATEGORY 0	CATEGORY 1	CATEGORY 2	CATEGORY Y
STAGE 1 FEE LEVEL Initial Assessment (Standards)	£353.00	£435.00	£435.00	TBA (see note)
STAGE 1(B) FEE LEVEL Initial Assessment (with departures)	Not Applicable	Not Applicable	£765.00	TBA
STAGE 2 FEE LEVEL Processing Technical	£560.00	£1,060.00	£1,545.00	TBA
STAGE 2 FEE LEVEL Technical Approval (with departures)	Not Applicable	Not Applicable	£1,905.00	TBA
STAGE 3 FEE LEVEL Visits /Meetings / Liaisons / Administration	£373.00	£373.00	£373.00	TBA
TOTAL FEE (Standards)	£ 1,286.00 + VAT	£ 1,868.00 + VAT	£ 2,353.00 + VAT	TBA
TOTAL FEE (with departures)	Not Applicable	Not Applicable	£ 3,043.00 + VAT	TBA
VAT is applicable to the above fee schedule.				

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Appendix 2 – Structure Categories from CG300 – Technical Approval of Highway Structures

This section sets out the categories for the technical approval of highway structures. The list is developed from the content of CG 300 from the Design Manual for Roads and Bridges.

Category 0 Structures

- Single-span structures with span of less than 5m.
- Buried concrete boxes, buried rigid pipes and corrugated steel buried structures of less than 3m.
- Clear span/diameter and having more than 1 m cover.
- Multi-cell buried structures, where the cumulative span is less than 5m, and having more than 1m cover.
- Earth retaining structures with an effective retained height of greater than 1.5m but less than 2.5m.
- Minor structures listed below and not situated at a very exposed site as defined in CD 354.
 - Cantilever mast for traffic signal and/or speed camera.
 - Lighting column.
 - High mast of more than 20 m in height, i.e., the vertical distance from top of post to bottom of
 - Flange plate, for lighting.
 - Mast for monitoring equipment. i.e., camera, radio and telecommunication transmission equipment.
 - Catenary lighting support system.
 - Noise barrier.
 - Traffic sign/signal posts of more than 7m in height, i.e., the vertical distance from top of post to
 - Bottom of flange plate or top of foundation, whichever is the lesser; other 'mast type' structures identified by the TAA as requiring technical approval.
 - 'Fence type' structures, including environmental barriers, visual screens and fencing, identified by the TAA as requiring technical approval.
- High masts 25 m or less in height and not situated at a very exposed site as defined in CD 354.
- Noise barriers less than 7m high and without overhangs.
- Masonry arches with span of less than 6.5 m (for assessment only); and,
- Portal and cantilever sign and/or signal gantries compliant with a generic AIP.

Category 1 Structures

Unless otherwise indicated by Herefordshire Council the following structures shall be category 1:

- Structures with a single simply supported or integral span of 5m or greater but less than 20m and having less than 25° skew.
- Buried concrete boxes, buried rigid pipes and corrugated steel buried structures with a clear span/diameter of 8m or less.
- Earth retaining structures with an effective retained height of 2.5m or greater but less than 7m.
- Minor structures outside the limits of those listed within the Category 0 list or situated at a very exposed site as defined in CD 354.
- High masts greater than 25 m in height or situated at a very exposed site as defined in CD 354.
- Noise barriers 7m or more in height or with overhangs; and,
- Portal and cantilever sign and/or signal gantries with a span of less than 20m.

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Category 2 Structures

Structures not included within the parameters of categories 0, 1 or 3 shall be category 2.

Category 3 Structures

Complex structures which require sophisticated analysis or have any one of the following features shall be category 3:

- High structural redundancy.
- Unconventional, novel or esoteric design aspects.
- Any span exceeding 50m.
- Skew exceeding 45 degrees.
- Difficult foundation problems.
- Movable bridges.
- Movable inspection access gantries, gantry rail and gantry support systems.
- Bridges with suspension systems.
- Steel orthotropic decks.
- Post-tensioned concrete structures.
- Earth retaining structures with an effective retained height of 14 m or greater.
- Rock anchorages and anchorages forming part of a structure.
- Portal sign and/or signal gantries with a span greater than 50m.
- Structures with hidden or difficult to inspect critical elements; or,
- Structures with cathodic protection systems installed in accordance with CD 370.