

The Highland Council

Agenda Item	20
Report No	ECI/26/2024

Committee: Economy and Infrastructure

Date: 2 May 2024

Report Title: Management of Sub-Standard Structures Policy

Report By: Executive Chief Officer Infrastructure, Environment & Economy

1 Purpose/Executive Summary

- 1.1 This report presents a new Management of Sub-Standard Structures Policy for Members to approve.
- 1.2 This policy replaces the existing policy “Management of Non-Assessed and Assessment ‘Failures’ Bridges.”

2 Recommendations

- 2.1 Members are asked to **approve** the Management of Sub-Standard Structures Policy as contained in Appendix 2, as a replacement for the existing policy.

3 Implications

- 3.1 **Resource** - There are no resource implications arising from this Policy.
- 3.2 **Legal** - Highland will adhere to relevant legal requirements
- 3.3 **Community (Equality, Poverty, Rural and Island)** - There are no direct implications arising from this Policy.
- 3.4 **Climate Change / Carbon Clever** - There are no additional climate or carbon implications as a result of this policy.
- 3.5 **Risk** - This policy will define how The Highland Council will manage the risk posed by road structures deemed to be sub-standard, until such a time that works to repair or replace the structure can be carried out.
- 3.6 **Health and Safety (risks arising from changes to plant, equipment, process, or people)** – There are no known health and safety risks arising from this Policy.
- 3.7 **Gaelic** - There are no implications arising from this Policy.

4 Introduction

- 4.1 The Highland Council has a duty under the Roads (Scotland) Act 1984 to manage and maintain their adopted roads, ensuring that they are safe for use and fit for purpose.
- 4.2 The current policy covering the Management of Sub-Standard Structures “Management of Non-Assessed and Assessment ‘Failures’ Bridges” with **Appendix 1** was approved by the Roads and Transport Committee on 27 August 1997.

5 Policy Amendments

- 5.1 The UK national standard for management of sub-standard structures is currently set out in the document following documents:-
- CS 470 “Management of sub-standard highway structures”
 - CS 454 “Assessment of highway bridges and structures”
- 5.2 Both documents provide guidance on managing risks and maintaining a safe and operational network. The Highland Council will follow their principles.
- 5.3 The proposed policy document is contained within **Appendix 2**.
- 5.4 The guidance will be applied using a risk-based approach and a new management process.

6 Roads Improvement Project

- 6.1 This new Policy supports one of the aims of the Roads Improvement Project, to compile a programme of policy renewal. Further policies will be brought to this Committee for approval, as they are finalised.

Designation: Executive Chief Officer Infrastructure, Environment & Economy

Date: 26 March 2024

Author: Simon Farrow, Principal Engineer (Structures Section)

Background Papers: None

Appendices: Appendix 1 – Current Policy 1997
Appendix 2 – Proposed Management of Sub-Standard Structures
Draft Policy 2024

Management of Sub-Standard Structures Policy – Current Policy 1997

ROADS AND TRANSPORT

**MANAGEMENT OF NON-ASSESSED AND
ASSESSMENT “FAILURES” BRIDGES**

The Council’s Policy on the Management of Non-Assessed and Assessment “Failures” Bridges was endorsed at a meeting of the Roads and Transport Committee on 27th August 1997 following consideration and recommendation by the Roads and Transport Strategy Group on 19th June 1997.

1.0 Management of Non-Assessed Bridges

1.1 The initial stage of the Council’s Bridges Load Assessment Programme has been a reconnaissance exercise to confirm the location, form and condition of all bridges. This includes photographic records of each structure with details of the structure being recorded on a computer database.

1.2 A “capacity appraisal” of Non-Assessed Bridges would be carried out as a first phase. This would involve a review of the capacity and safety of the bridges. The capacity appraisal would not be as satisfactory as a formal assessment but would give a reasonable indication of the structure’s load capacity. This appraisal would be carried out by experienced engineers familiar with the assessment programme, the Code and Standards. The appraisal would show that despite a lack of funds to progress formal arrangements the Council had made a reasonable attempt to review the capacity and safety of all its bridges.

1.3 Continue to assess bridges on a formal basis and conclude assessments for as many as possible within available resources.

2.0 Management of Assessment “Failures”

2.1 Bridges are assessed in accordance with the Assessment Code BD21/97. The result of an assessment is in terms of the capacity of the bridge to carry full highway loading. If a bridge cannot carry this loading it is determined to have “failed” the assessment.

2.2 The Assessment Code gives very clear guidance on what should be done in the case of a “fail” in the interim before the bridge is strengthened. These Interim Measures give options to apply lane or weight restrictions, to prop the bridge or close it. Monitoring is available as an additional measure where it is considered that despite a lane or weight restriction or propping, the structure may continue to deteriorate.

2.3 The dilemma facing the Council is how to manage the assessment failures. The available choices are to either

- play safe and adopt the Interim Measures given in the Code at the cost of disruption to the road network;

or

- take a more pragmatic approach, considering the needs of the network and limit the implementation of the Interim Measures at some possible risk to public safety.

The situation becomes more complicated where a bridge may be the only access to an area and restricting the bridge may seriously affect the residents in that area, and their ability to live normally or carry out commercial operations.

It is noted that both strategies have been employed in the past depending on the individual circumstances.

2.4 It is estimated that to upgrade all the Council's bridges and retaining walls to the required standards the costs would be in the order of £60 million. With the limited funds available it must therefore be noted that any Interim Measure applied to a structure is unlikely to be of a short-term nature.

2.5 As stated the Assessment Code details the Interim Measures. There is no formal guidance for the second pragmatic strategy. However given that this is a national issue, appropriate advice has been forthcoming from other Councils and organisations. The current ideology is that this approach should be a rigorous documented "Risk Assessment". This risk assessment would include the following steps:

- assess the risk of full, partial or non-application of Interim Measures
 - assess the impact of implementation of Interim Measures
 - select and implement full, partial or non-Interim Measures
 - implement special inspections and monitoring of all assessment failure bridges
 - set priorities on a score based on the above
 - programme strengthening works to match available funding
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- review first stage assessments in light of probable duration of continued use prior to strengthening.

Thus a decision would be made based on a balance between the risk of collapse of the bridge and the effects of the restriction to the bridge. It is noted that the recommendation from steps 1 and 2 may be the implementation of the full Interim Measures required under the Assessment Code.

Members accepted that this was the appropriate strategy.

2.8 Members noted that a decision to implement an order restricting vehicles over a specified weight to a location which has no alternative access provision, requires consent of the Secretary of State for Scotland. Such consent is unlikely to be forthcoming without a Public Inquiry.

Management of Sub-Standard Structures Policy

Roads and Infrastructure

Infrastructure, Environment and Economy

Approval

	Name	Date
Prepared By:	E Maciver/J Kaczmaryn/ M McLeod	26/03/24
Approved By:	T Urry	

Responsible Officer:	Head of Roads and Infrastructure
Committee:	Economy and Infrastructure
Approval Date:	TBC

Document Control

Version Number	Date	Comments
1.0	August 1997	
2.0	February 2024	Complete revision of policy to bring in line with current standards.

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1.0 Introduction

- 1.1. The Highland Council has a duty under the Roads (Scotland) Act 1984 to manage and maintain their adopted roads, ensuring that they are safe for use and fit for purpose. The Highland Council will comply with this duty by ensuring a policy is in place for the management of sub-standard structures which form part of the adopted road and are maintained by them.
- 1.2. The UK national standard for structures that cannot carry the full traffic loading is currently set out in CS 470 Management of sub-standard structures. The Highland Council position is to follow the principles of CS 470, adapted where necessary as set out in this policy to suit the needs of The Highland Council road network.
- 1.3. A sub-standard structure is defined in CS 470 as a structure that is unable to meet the carriageway loading requirements specified in CS 454 Assessment of highway bridges and structures. A structure can also be classified as sub-standard for other reasons such as accidental damage, structural deterioration or scour.
- 1.4. A provisionally sub-standard structure is defined as a structure that has been considered to be sub-standard without undertaking a structural assessment, or the assessment is not complete.
- 1.5. Structures may be identified as provisionally sub-standard or sub-standard by either an inspection, as a result of an incident, or by a structural assessment.

2.0 Scope

- 2.1. This policy shall apply to:
 - All structures including bridges, retaining walls and any other road structures subject to highway loading on adopted roads for which The Highland Council is the local roads authority.
- 2.2. This Policy does not include structures owned by third parties. Other parties may include, but are not limited to, Network Rail, Scottish Canals, and private landowners.

3.0 Policy

- 3.1. The Highland Council, while acknowledging the need to avoid unnecessary delays and restrictions to motorists, recognises the need to assess the risks of potentially sub-standard structures and sub-standard structures to public safety.
- 3.2. We will:
 - Take cognisance of the guidance in CS 470 Management of sub-standard highway structures and CS 454 Assessment of highway bridges and structures.

- Apply the guidance using a risk based approach by following the management process as outlined in Appendix A.

4.0 Implementation and Compliance

- 4.1. The Technical Approval Authority (TAA) shall be responsible for the management of sub-standard structures. The TAA role is fulfilled by The Highland Council Structures Section.
- 4.2. By default, all Highland Council adopted road structures are treated as standard until they are deemed sub-standard by this process.
- 4.3. A sub-standard structure does not necessarily present an immediate risk to road users. Sub-standard elements and potential modes of failure are identified as part of the structural assessment process. This information is then used to inform the requirements of an appropriate risk based interim measures regime.
- 4.4. We will use a risk based analysis to allow prioritisation of the structures that present the greatest risk to road users, whilst taking into consideration budget constraints.
- 4.5. We may use interim measures, because it is not always possible to implement strengthening or replacement in a short timeframe.
- 4.6. Interim measures may have to be imposed by The Highland Council and could include weight and/ or speed restrictions, carriageway width restriction, or propping. Depending on the nature of the defect identified, it may be appropriate to monitor the structure. Where structures are classified as high risk, immediate closure will be considered.
- 4.7. The Highland Council's Structures Section (Technical Approval Authority) will be responsible for the day to day management of potentially sub-standard and sub-standard structures. The Structures Section will liaise with the relevant Area Road Operations Managers to review interim measures.
- 4.8. The Highland Council's Technical Approval Authority will be responsible for keeping up to date with any changes in legislation and guidance in relation to the management of sub-standard structures.

5.0 Appendix A – Management Process

