

**Cymdeithas  
Syrfewyr Sirol  
Cymru**



**County  
Surveyors' Society  
Wales**

**Highway Asset Management  
Planning:  
National Minimum Standards:  
Inspection and Repair Regimes 2019**



## Document Information

<b>Title</b>	National Minimum Standards: Inspection and Repair Regimes
<b>Author</b>	exp consulting
<b>Description</b>	This document provides information to supports the completion of Task 4 Performance and Risk Review of the CSSW HAMP Recommended Practices. It provides recommended National Minimum Standards for inspection and repair regimes

## Document History

<b>Version</b>	<b>Status</b>	<b>Date</b>	<b>Author</b>	<b>Changes from Previous Version</b>
1.0	DRAFT	June 2019	exp	n/a
2.0	draft	Oct 2019	exp	Formatting Updated
1	Final	Oct 2019	exp	NA

## Document Control

<b>Version</b>	<b>Status</b>	<b>Date</b>	<b>Authorised for Issue by CSSW HAMP Steering Committee</b>
1	Final	Sept 2019	CSSW Main Group Meeting Sept 2019

## Associated Documents

### The following documents are associated with this standard

1. **RP1 –Highway Asset Risk Review:** A spreadsheet that authorities are recommended to use to record a risk review.
  2. **Risk Based Approach: Method:** A document providing a detailed description of the approach to accompany the spreadsheet RP1.
  3. **Risk Based Approach: Method Summary:** A document providing a summary explanation of the method intended for use by authorities to brief managers, members, risk managers etc.
  4. **Template Maintenance Manual Content:** A template document that authorities can use to record hierarchy and inspection and repair regimes derived using the risk-based approach and their methods of updating the same.
  5. **Highway Inspection Defect Recording Manual:** A manual designed to give guidance to inspectors on what defects to record and what records should be taken about each defect. Intended to be used as the reference document for inspector training.
  6. **Committee Paper Template/Report of Outcome of Highway Risk Review**
    - a. A template initial paper that advises the new method, references the CoP and recommends changes to hierarchy, inspection and repair regimes.
    - b. A template report paper for subsequent reviews that focuses on reporting changes to risk and resultant recommended changes to hierarchy, inspection and repair regimes
  7. **National Minimum Standards:** A statement of minimum standards recommended by CSSW for intervention level and associated response times for defects.
  8. **Rationale Behind the Approach:** Sets out the rationale that was adopted in developing that approach.
-

# 1. Minimum Standards

## Purpose

To provide national minimum standards for inspection and repair regimes for local authority highways.

## CSSW Recommended Risk-Based Approach

CSSW has developed a recommended risk-based approach in response to the Code of Practice for Highways (2016). The approach is detailed in the document “CSSW Risk-Based Approach Method, 2019”. The method recommends that authorities undertake highway asset risk reviews at least every 2 years. CSSW HAMP Recommended Practices have been updated to include a highway risk review. This document is a reference to be used in that review.

## Scope

The risk review method involves evaluation of risk with specific reference to:

- Network Hierarchy
- Inspection Regime
- Repair Regime

Minimum standards for inspection and repair regimes are included in this document. It is recommended that risk reviews are reported to a management and/or member forum within the council such that decisions about the management of the asset and the funding allocated to maintenance of asset are made with information about the associated risks of such choices in hand.

## Adoption of Minimum Standards

It is expected that all authorities will reference the minimum standards contained within this document when carrying out risk reviews. The reason for the adoption of these standards is given in the document “Rational Behind the Approach<sup>(9)</sup>”. Authorities may choose to exceed the standards in some or all areas. If an authority adopts a standard below the recommended minimum it is recommended that they document their own risk assessment to support their choice.

## Application of National Standard

Adoption of a national standard will provide a consistent standard for users across Wales, allow ongoing review and refinement via annual updating or risk assessments and assist authorities to manage 3<sup>rd</sup> party claims by demonstrating consistency of approach

## Review and Updating

The CSSW HAMP steering committee will review this method regularly and advise any recommended changes to CSSW for approval.

---

## 2. Inspection Regime

### Minimum Inspection Regime

The following minimum inspection regime is recommended

Carriageway Hierarchy	Minimum Inspection Interval
CHSR	Monthly
CH1	Monthly
CH2	Every 3 months
CH3	Every 6 months
CH4	Annually (poor or unknown condition) Every 2 years (good condition)
CH5	Reactive

Footway Hierarchy	Minimum Inspection Interval
FHVHU	Monthly
FH1	Monthly
FH2	3 months
FH3	6 months
FH4	Annually (poor or unknown condition) Every 2 years (good condition)
FH5	Reactive

It is expected that in future the inspection regime may be refined by reference to elements of the asset that are known to be in good condition and pose low risk. This approach is already embedded into many authorities' approach to structures inspection. It is therefore recommended that authorities implement the CSSW Visual Assessment Methods that were created for use on carriageways and footways.

### Inspection Tolerances

A tolerance should be included to allow for unavoidable incidences such as bad weather, inspector sickness etc. It is recommended that the tolerance applied to each inspection frequency is 50% of the inspection interval or 3 months (whichever is the least).

---

### 3. Repair Regime

The following minimum standards are recommended for defect categories, response times and investigatory levels.

#### Defect Categories and Response Times (Carriageways)

Defect Categories	Description	Response Time
Critical Defect	A situation where the inspecting officer considers the risk to safety high enough to require immediate action, e.g. collapsed cellar, missing utility cover, fallen tree, unprotected opening, <ul style="list-style-type: none"> <li>➤ Requiring an immediate response to make the site safe</li> </ul>	2 Hours#
Safety Defect	Defects that pose an imminent risk of injury to road users, <ul style="list-style-type: none"> <li>➤ Requiring a response as soon as possible to remove a potential risk of injury to users</li> </ul>	By End of Next Working Day (CHSR, CH1, CH2)
Safety Defect	Defects that pose an imminent risk of injury to road users, <ul style="list-style-type: none"> <li>➤ Requiring a response as soon as possible to remove a potential risk of injury to users</li> </ul>	Within 5 Working Days (CH3, CH4, CH5**)
Maintenance Defect	Defects that warrant treatment to prevent them deteriorating into a safety defect prior to the next scheduled inspection, <ul style="list-style-type: none"> <li>➤ Requiring a response to prevent them becoming a safety defect</li> </ul>	1 month (CHSR, CH1, CH2) 3 months (CH3, CH4, CH5**)
Programmed Repairs	Defects that warrant treatment, in order to prevent them deteriorating to such an extent that additional works or costs are incurred.	As per the local works programme

# response time for critical defects refers to the time to attend site, make safe or repair will then be asap thereafter

\*\*Defect triggers on CH5 roads are to be considered an investigatory level. An investigatory level does not automatically trigger a response. It will be incumbent upon the inspector to assign an appropriate response to each defect based upon its type, size, location and the level of use of the road. CH5 roads are low use roads and defects will frequently present low risk to users and can be responded to accordingly.

## Defect Categories and Response Times (Footways)

Defect Categories	Description	Response Time
Critical Defect	<p>A situation where the inspecting officer considers the risk to safety high enough to require immediate action, e.g. collapsed cellar, missing utility cover, fallen tree, unprotected opening,</p> <ul style="list-style-type: none"> <li>➤ Requiring an immediate response to make the site safe</li> </ul>	2 Hours#
Safety Defect	<p>Defects that pose an imminent risk of injury to road users,</p> <ul style="list-style-type: none"> <li>➤ Requiring a response as soon as possible to remove a potential risk of injury to users</li> </ul>	By End of Next Working Day (FHVHU, FH1, FH2)
Safety Defect	<p>Defects that pose an imminent risk of injury to road users,</p> <ul style="list-style-type: none"> <li>➤ Requiring a response as soon as possible to remove a potential risk of injury to users</li> </ul>	Within 15 Working Days (FH3, FH4, FH5)
Maintenance Defect	<p>Defects that warrant treatment to prevent them deteriorating into a safety defect prior to the next scheduled inspection,</p> <ul style="list-style-type: none"> <li>➤ Requiring a response to prevent them becoming a safety defect</li> </ul>	<p>1 month (FHVHU, FH1, FH2)</p> <p>No set response time (FH3, FH4, FH5)</p>
Programmed Repairs	Defects that warrant treatment, in order to prevent them deteriorating to such an extent that additional works or costs are incurred.	As per the local works programme

# response time for critical defects refers to the time to attend site, make safe or repair will then be asap thereafter

### Critical Defects

Asset Type	Defect Type	Hierarchy	Dimensional Criteria	
			Depth/Height	Extent
All	<b>Examples:</b> Major debris or spillage on the highway; Carriageway / footway / cycleway collapse with high risk of accidents / loss of control; Critically unstable overhead wires, trees or structures; Exposed live wiring; Isolated standing water with high risk of loss of control; Missing or seriously defective ironwork with high probability of injury to highway users	All	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size	Not Applicable. Critical defects are defined by their potential to cause immediate injury not by defect size

### Safety Defects

Asset Type	Defect Type	Hierarchy	Dimensional Criteria	
			Depth/Height	Extent
Carriageways	Pothole	CHSR, CH1 and CH2	> 50mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5**	>75mm	Maximum horizontal dimension greater than 150mm
Footways	Pothole, trip, rocking slab	All	> 40mm	Maximum horizontal dimension greater than 75mm

\*\*Defect triggers on CH5 roads are to be considered an investigatory level.



## Maintenance Defects

	Defect Type	Hierarchy	Dimensional Criteria	
			Depth/Height	Extent
Carriageways	Pothole	CHSR, CH1 and CH2	> 40mm	Maximum horizontal dimension greater than 150mm
	Pothole	CH3, CH4 and CH5**	> 50 mm	Maximum horizontal dimension greater than 150mm
	Crowning / Depression	All	> 100mm	< 2M Length
Footways	Pothole, trip or rocking slab	All	25mm - 40mm	Maximum horizontal dimension greater than 75mm
	Badly cracked or damaged ironwork	Any		N/A

\*\*Defect triggers on CH5 roads are to be considered an investigatory level.

## Programmed Repairs

A national minimum standard has not been prescribed for programmed repairs.

## Standards are a Guide

The standards are a guide only. Reference should be made to CSSW Defect Recording Manual. It is an essential part of all authorities' inspection regimes that inspectors are appropriately trained. In doing so inspectors can complement application of the standard with their own assessment of individual defects.