



the ukpms user manual



Volume 2

Visual Data Collection for
UKPMS
Chapter 9: Footway Network
Survey (FNS)





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1 Introduction

The UKPMS Footway Network Survey (FNS) records measured areas or lengths, variable by defect length. The defects collected for FNS are generally defined to ensure broad consistency between DVI and FNS. A single FNS defect is normally equivalent to a number of DVI defects.

It is intended that FNS is used as a network condition tool where more detailed information is required to support and validate treatment decisions and scheme identification; it may also be used on a cyclical basis to identify those parts of the network where a more detailed assessment is required.

The FNS is one of the UKPMS visual surveys which is variable chainage-related, i.e. the lengths of a feature which are affected by a defect are defined by the actual start and end chainages. The FNS is also section-related, which means that for any given defect the maximum defect length that can be recorded is the length of the section.

The FNS is intended to allow rapid assessment of the network, by assessing a limited range of broadly defined defects, and by optionally recording “lateral” extents, rather than measurements of defect dimensions.

2 Overview of FNS Survey Procedure

The FNS is carried out on foot and will normally be carried out by two surveyors, although it may be possible for a single surveyor to carry out the survey where local health and safety guidelines permit. As it is a walked survey, productivity is much lower than that for a CVI survey but research has shown an increase in productivity compared with DVI surveys with typical outputs between 6 and 12km per day.

Kerb defects are not included in the FNS, except to the extent to which they form part of the walking surface of a footway, in which case they should be included as part of the assessment of that footway.

For FNS, the footway is categorised into one of four condition levels as described in Table 1 below.

Condition Level	Condition Label
1	As New
2	Aesthetically Impaired
3	Functionally Impaired
4	Structurally Unsound

Table 1 Footway Network Survey Condition Levels



Surveys are designed to be carried out on a “linear” basis, by a single surveyor walking along a footway, referenced to chainages within a UKPMS section. The surveyor will normally use a continually-recording measuring wheel to determine chainage.

Where footways are present they are recorded as having a condition level (even when there are no defects, which removes the need for a basic inventory for analysis purposes, as required for deriving BV187 data from DVI, or to record “not defective”). The condition levels are described below. It is intended that inspectors “toggle” between the condition levels as they traverse the footway. The expectation is that the survey will generally be carried out using hand-held Data Capture Devices (DCDs) and that the toggle will be facilitated within the software, in order to minimise inspector interaction and the number of key presses.

The condition level is taken as indicative of the whole footway width on the basis that, at the coarse level at which the survey is designed, the condition level will generally be consistent across a footway and in any case treatments, except on very wide footways, will generally apply to the whole width of the footway. Where condition does vary across the footway, surveyors are instructed to record the “worst” condition level that applies, on the basis that this will generally be the determinant for treatment.

Optionally, for condition levels 3 and 4, the extent of the width of the footway that is affected can also be recorded, as 25%, 50% or 100%.

The condition levels apply to all types of footway construction, although the detailed definitions and guidance for inspectors that relate to each condition level do vary. This has benefits in terms of survey simplicity and productivity (in that inspectors do not have to record changes in construction over short lengths) and in allowing performance, condition and need for treatment to be reported independently of footway construction.



3 Frequently Asked Questions

Q1. Can FNS Surveys be carried out from a moving vehicle?

No.

Q2. Should Kerbs be collected with a FNS Survey?

Kerb defects are not included in the FNS, except to the extent to which they form part of the walking surface of a footway, in which case they would be considered as part of the assessment of that footway.

Q3. What is the minimum defect length to be recorded?

1m, if a defect exists within 1m then the surveyor should keep the defect running.

Q4. What are the requirements for audit on a FNS Survey?

Auditing should be carried out in accordance with Chapter 4 *Quality Assurance and Audit* of Volume 2 of this UKPMS User Manual.

The auditor should be accredited in accordance with Chapter 2 *Inspector Accreditation* of Volume 2 of this UKPMS User Manual.

Q5. Are grass verges included within a FNS Survey?

Grass Verges are not included in the standard FNS Survey, however a paved verge should be considered if it forms part of the footway surface.

Q6. For a linear defect, what is the maximum gap between defects to allow the defect to be kept running?

2m.



4 Detailed FNS Listing

Footways (Unknown, Bituminous, Concrete, Flag and Block)

As New	Brand new footway, Recently reconstructed	F(U,B,C,F,K)AN*	100%	Equivalent to the existing 'not defective' CVI & DVI codes One FNS defect must be running at all times
Aesthetically Impaired	Sound footways with patching, Modular footways with sound bituminous patches, Modular footways with elements of different colour/age/material, Faded bituminous materials (especially coloured bituminous). Graffiti / Spray paint	F(U,B,C,F,K)AI*	100%	No equivalent in other UKPMS surveys, used for asset management and determining Service levels One FNS defect must be running at all times
Functionally Impaired	Cracked but level flags/blocks, Missing Filler Minor surface deterioration/fretting/fatting, Including the appearance of moss. Minor cracking, minor scaling and moderate local settlement/subsidence from 10 to 30mm	F(U,B,C,F,K)FI*	25, 50 & 100%	This defect is equivalent to DVI minor defects One FNS defect must be running at all times
Structurally Unsound	Cracked and/or depressed flags or blocks exceeding 13mm. Depressed or missing blocks. Major fretting and potholing. Major cracking, Major scaling, Poor shape, severe local settlement/subsidence creating a difference in level greater than 30mm. Trips exceeding 13mm	F(U,B,C,F,K)SU*	25, 50 & 100%	This defect is equivalent to DVI major defects One FNS defect must be running at all times

* The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)



Verge (Unknown, Bituminous, Concrete, Flag and Block)

As New	Brand new footway, Recently reconstructed	V(U,B,C,F,K)AN*	100%	Equivalent to the existing 'not defective' CVI & DVI codes One FNS defect must be running at all times
Aesthetically Impaired	Sound footways with patching, Modular footways with sound bituminous patches, Modular footways with elements of different colour/age/material, Faded bituminous materials (especially coloured bituminous). Graffiti / Spray paint	V(U,B,C,F,K)AI*	100%	No equivalent in other UKPMS surveys, used for asset management and determining Service levels One FNS defect must be running at all times
Functionally Impaired	Cracked but level flags/blocks, Missing Filler Minor surface deterioration/fretting/fatting, Including the appearance of moss. Minor cracking, minor scaling and moderate local settlement/subsidence from 10 to 30mm	V(U,B,C,F,K)FI*	25, 50 & 100%	This defect is equivalent to DVI minor defects One FNS defect must be running at all times
Structurally Unsound	Cracked and/or depressed flags or blocks exceeding 13mm. Depressed or missing blocks. Major fretting and potholing. Major cracking, Major scaling, Poor shape, severe local settlement/subsidence creating a difference in level greater than 30mm. Trips exceeding 13mm	V(U,B,C,F,K)SU*	25, 50 & 100%	This defect is equivalent to DVI major defects One FNS defect must be running at all times

* The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)



5 FNS Defect Definitions and Photographs

Footways (Unknown, Bituminous, Concrete, Flag & Block)

<i>Defect Description</i>	<i>As New</i>
<i>Defect Code</i>	F(U,B,C,F,K)AN* * The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)
<i>Recorded As</i>	<i>Percentage Defectiveness (100%)</i>
<i>Definition</i>	Brand new footway, Recently reconstructed
<i>Notes</i>	Equivalent to the existing ' <i>not defective</i> ' CVI & DVI codes One FNS defect must be running at all times




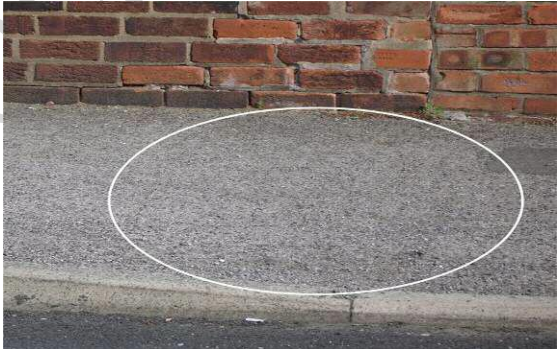


Footways (Bituminous, Concrete, Flag & Block)

Defect Description	Aesthetically Impaired
Defect Code	F(U,B,C,F,K)AI* * The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)
Recorded As	Percentage Defectiveness (100%)
Definition	Sound footways with patching, Modular footways with sound bituminous patches, Modular footways with elements of different colour/age/material, Faded bituminous materials (especially coloured bituminous). Graffiti / Spray paint
Notes	No equivalent in other UKPMS surveys, used for asset management and determining Service levels One FNS defect must be running at all times



Footways (Bituminous, Concrete, Flag & Block)

<i>Defect Description</i>	<i>Functionally Impaired</i>
<i>Defect Code</i>	F(U,B,C,F,K)FI* * The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)
<i>Recorded As</i>	<i>Percentage Defectiveness (25, 50 & 100%)</i>
	
	
<i>Definition</i>	Cracked but level flags/blocks, Missing Filler Minor surface deterioration/fretting/fatting, Including the appearance of moss. Minor cracking, minor scaling and moderate local settlement/subsidence from 10 to 30mm
<i>Notes</i>	This defect is equivalent to DVI minor defects One FNS defect must be running at all times



Footways (Bituminous, Concrete, Flag & Block)

Defect Description	Structurally Unsound
Defect Code	F(U,B,C,F,K)SU* * The second letter of the code denotes the construction Unknown (U), Bituminous (B), Concrete (C), Flag (F), Block (K)
Recorded As	Percentage Defectiveness (25, 50 & 100%)
Definition	Cracked and/or depressed flags or blocks exceeding 13mm. Depressed or missing blocks. Major fretting and potholing. Major cracking, Major scaling, Poor shape, severe local settlement/subsidence creating a difference in level greater than 30mm. Trips exceeding 13mm
Notes	This defect is equivalent to DVI major defects One FNS defect must be running at all times