



An Roinn Iompair,  
Turasóireachta agus Spóirt  
Department of Transport,  
Tourism and Sport

# Bridge Asset Management Project

Orla Malone

12<sup>th</sup> September 2019

Cavan County Council  
Experience

# The Before – Managing our Bridge Asset



## Data collection

- Locating Bridge
- Site Visit
- Initial Inspection
- Bridge Condition Rating
- Take Photos
- Uploading info

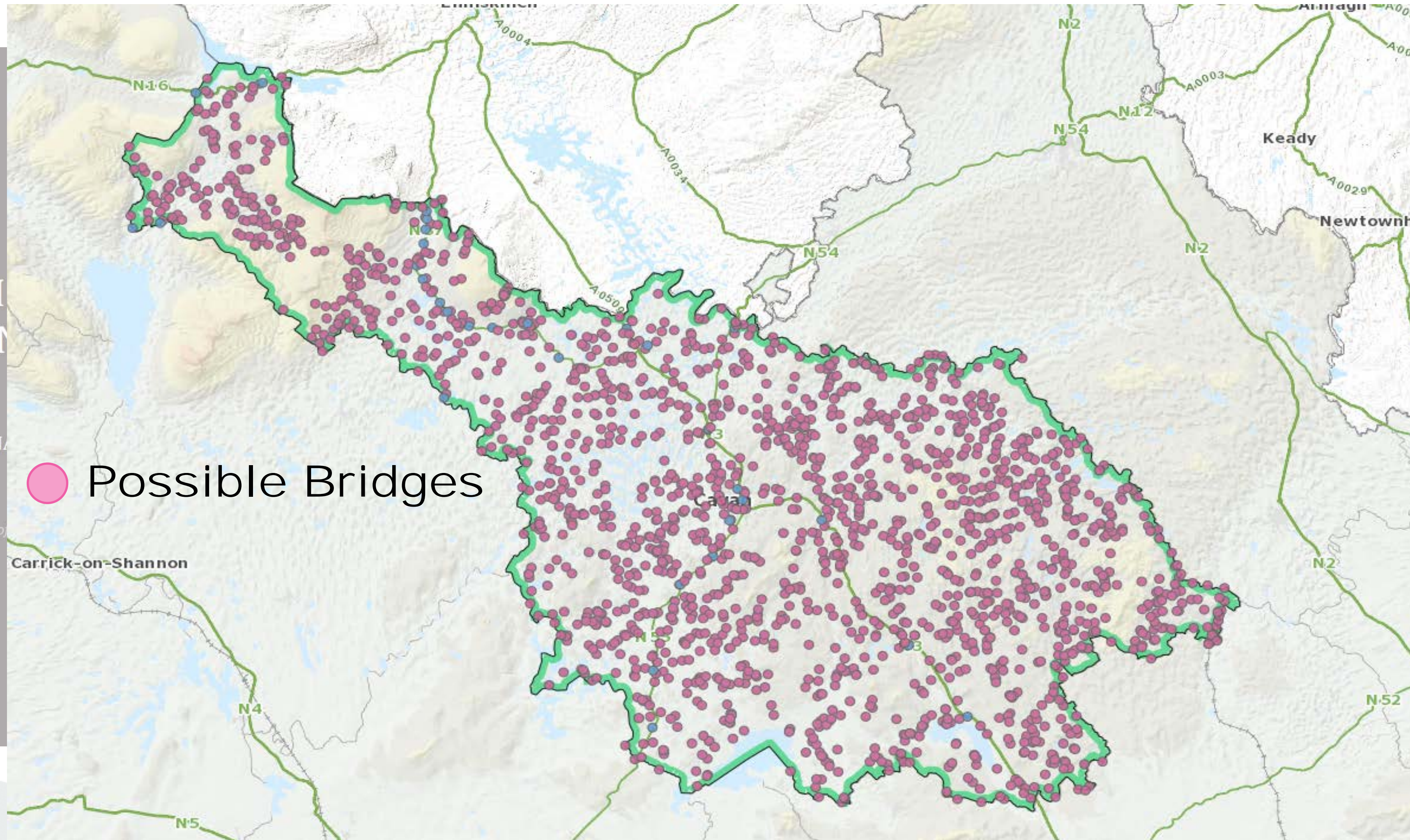
No.	BRIDGE_ID	BRIDGE_Name_	Road_Number	X	Y	Date_of_Survey	No_of_Span	MAX_Span	Overall_Width	Principal_Type_of_Constr	Defects	Severity	Condition_Ratin
1	CN-L1002-001	GUBAVEENY 1	L1002	202105.32	333308.48	20091027	1	8.4	4.2	STONE SLAB	NO DEFECTS	REMOVE VEG	1
2	CN-L1002-002	GUBAVEENY 2	L-1002	203131.55	335583.54	20091027	1	3.4	3.8	SLAB	NO DEFECTS	REMOVE VEG	1
3	CN-L1020-003	ALTCROCK BRIDGE	L1020	214003.42	321704.38	20091008	1	9	3.7	MASONRY ARCH	PARAPETS IN BAD R	REMOVE VEG	2
4	CN-L5573-001	RAILWAY BRIDGE	L-5573	232142.67	303847.4	20090910	1	27	2.8	Masonry Arch	remove veg	pinning to parapet v	2
5	CN-L 1507-001	DERRYHOO BRIDGE	L-1507	235906.66	313149.1	20090909	1	3.7	6.4	Masonry Arch	overgrown with veg	no major defects	2
6	CN-L1000-001	KILLYCARNEY BRIDGE	L1000	204440.92	336959.34	20091027	2	5.5	4.8	MASONRY ARCH	POINTING TO PARA	REMOVE VEG	2
7	CN-L1001-001	ROO BRIDGE	L1001	203318.02	336019.68	20091027	1	15.8	4.5	STONE SLAB	PIPE UPPER SIDE	OVERGROWN VEG	1
8	CN-L1003-001	CORRARD BRIDGE	L1003	199545.21	328887.02	20091027	1	2.7	5.76	MASONRY ARCH	REPOINTING REQUIR	OVERGROWN VEG	2
9	CN-L1003-002	MONEEN BRIDGE	L1003	199841.03	329625.33	20091027	1	3.5	5.5	SLAB	NO DEFECTS	REMOVE VEG	1
10	CN-L1006-001	KILDUFF LOWER BRIDGE	L-1006	196951.15	326645.06	20091027	1	18.2	5.5	MASONRY ARCH		COVERED WITH VEG	0
11	CN-L1008-001	CORRATOBER UPPER BRIDGE	L1008	202104.07	328880.01	20091028	3	19.5	2.5	METAL BRIDGE	NO DEFECTS	REPAIRED RECENTLY	1
12	CN-L1009-001	TULLYANTANTY BRIDGE	L1009	202735.66	329297.76	20091028	1	4	5.3	CONC .SLAB	NEEDS ATTENTION	REMOVE VEG	2
				330139.28									2
				324723.56									1
				333348.6									1
				332800.66									1
				331026.01									1
				329570.11									1
				328792.73									1
				333142.53									1



# Guidelines

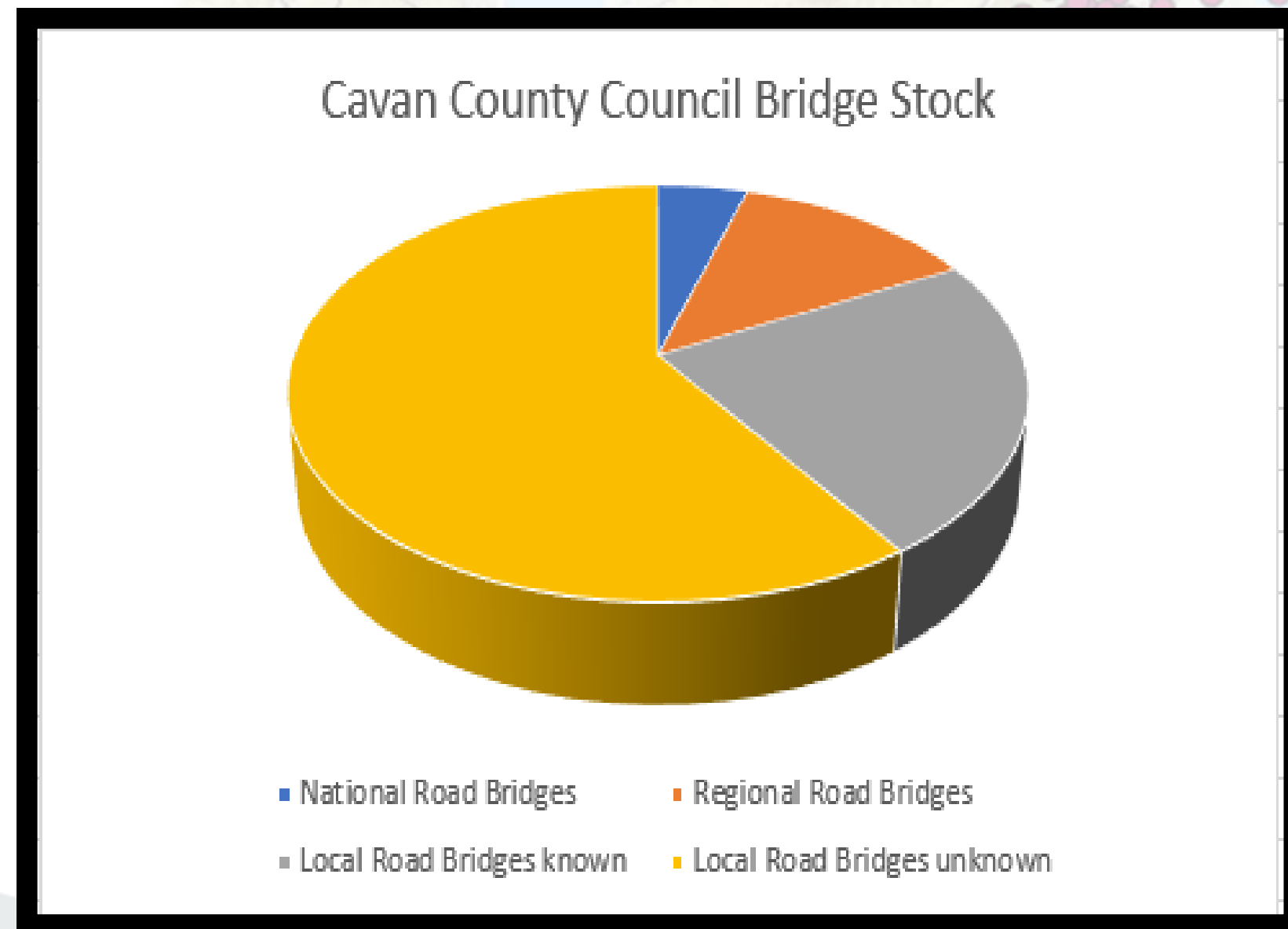


BRI  
MAN  
FOR REGION  
Guidelines for the creation of





- Potential Bridges in the County of Cavan – 1,166 No.
- Regional & Local Road Length of Network – 2,880 km
- 1 structure per 2.5 km road network



➤ How many bridges in your County?



# The App



← Maintenance Inspection SAVE AS DRAFT SAVE AND UPLOAD DISCARD

**Structure Number (calculated)**  
CN-L3508-B-000

**Structure Name (plate)**  
\_\_\_\_\_

**Structure Name (alias)**  
Doughty's bridge

**Location Description**  
also. scouring evident at abutments. parapet walls in reasonable condition with with minor cracking visible. masonry wingwalls collapsed also

**Inspector Name**  
sobrien

**\* Element Maintenance Rating**

Parapets	A	Change Rating
Access and Egress	A	Change Rating
Vegetation	A	Change Rating
External walls	A	Change Rating
Abutments and Piers	R	Change Rating
Deck or Arch	R	Change Rating

**Overall Maintenance Rating** R

**Additional Comments**  
\_\_\_\_\_

■ BIS Bridge Inventory Survey

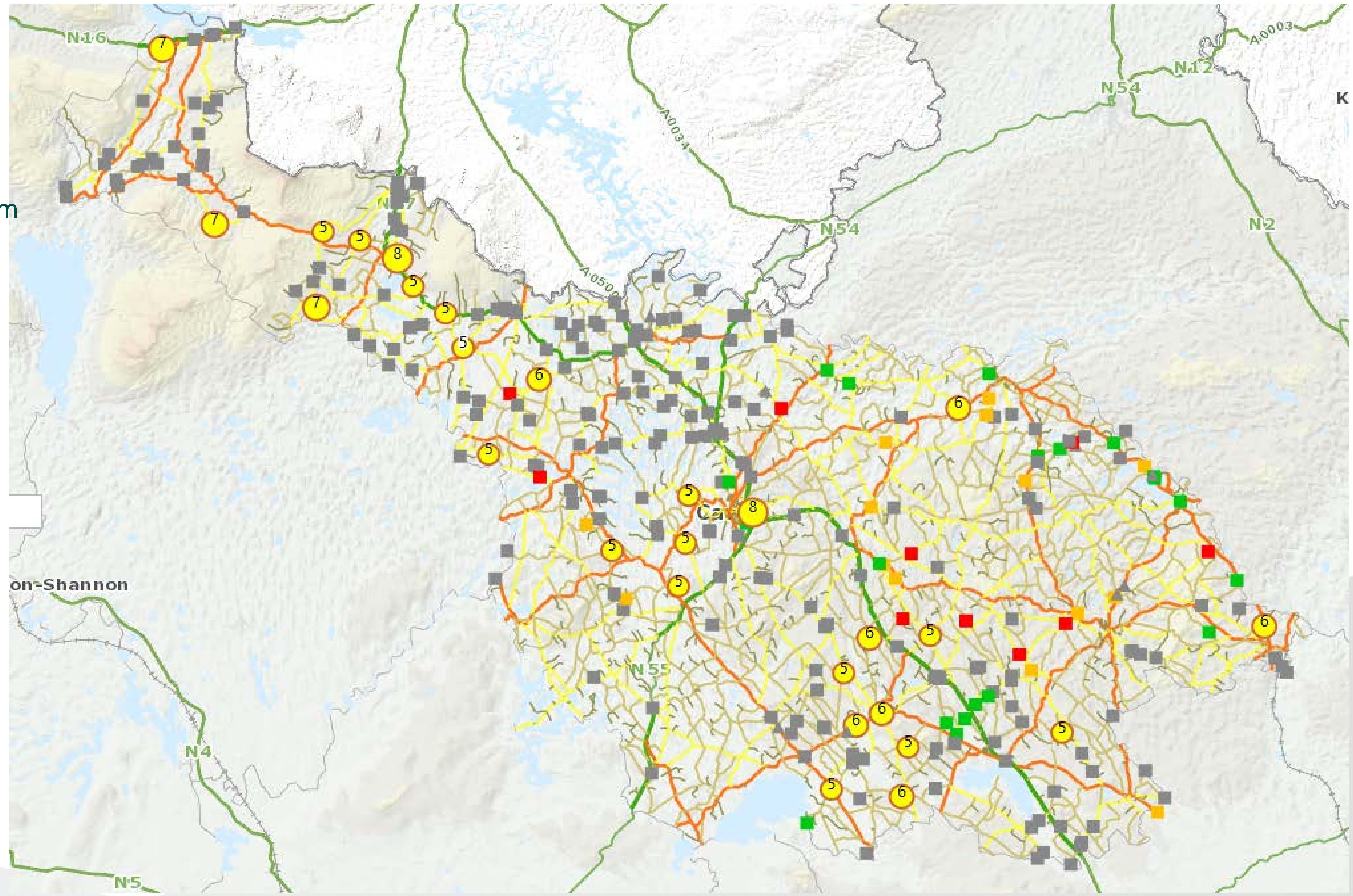
MI Maintenance Inspection

The **RED**, **AMBER**, **GREEN** Rating System

Bad indication ■

Moderate indication ■

Good indication ■



# Table 4.2 Maintenance Inspection Rating Guide



BRIDGE ASSET MANAGEMENT SYSTEM GUIDELINES

Main Element	RED	AMBER	GREEN	NOT APPLICABLE	
<b>Parapets</b>	Part or all of parapet or safety rail missing, collapsed or significantly displaced.	Some damage - nuts missing, corrosion, deformation, cracking, vegetation causing disturbance, tilting, sliding, missing masonry.	Minor defects or vegetation growth only.	<b>Select this if it is obvious the Structure never had a parapet.</b>  If unsure, please select <b>RED</b>	Non-structural
<b>Access and Egress</b>	Dangerous high risk <b>DO NOT ENTER</b>	Some hazards and risk.  Risk assessment required.	Easy and safe.		
<b>Vegetation</b>	Heavy growth  and/or  Invasive species.	Appreciable growth clearance required, includes some Ivy, small saplings, brambles.	None or minor growth only.		
<b>External walls</b>	Significant cracks, bulging, leaning, rotation, missing masonry, or a collapse. Significant exposed reinforcement and/or corrosion.	Some cracks, bulging, leaning, rotation, minor missing masonry, exposed reinforcement, corrosion.	No evidence of or minor defects present.	Structure doesn't have external walls  Or  Couldn't access.	Structural
<b>Abutments and Piers</b>	Severe scour holes below walls, Significant areas of missing masonry or failure. Significant rusting of steel members, buckling or steel missing.	Some scour in bed, pier or abutment. cracks, leaning, bulging, missing stones, exposed reinforcement, or rusting of steel members.	Minor or no evidence of scour in bed. Minor or no evidence of defects in pier or abutment.	Couldn't access.	
<b>Deck or Arch</b>	Large cracks, severe sagging, spalling, deformation, missing elements, arch separation. Severely exposed reinforcement, corroded or missing steel on struts, ties, beams or failure.  Holes.	Some: cracks, sagging, spalling, missing elements, exposed rebar or rusting of steel, struts, ties, beams or corrugated or other jack arch elements.	None or minor cracks, sagging, spalling, or any other minor defect.	Couldn't access.	
<i>Overall Rating determined by worst rating of the three structural components</i>					

**Bridges List**

Name	Code	Plate	Is Culvert	Type	Total Span	Height Re	Engineering Area	MI Date	MI Rating	EI Date	EI Rating
Derrindrehid BRIDGE	B1040	CN-L1520-001	No	Arch	15	0	Cavan-Belturbet	10-01-2019	Alert		Unrated
Lurganboy bridge	CN-L6102-B-000		No	Arch	1.2	0	Bailieborough-Cootehill	27-08-2019	Alert		Unrated
one tree cross bridge	CN-L1518-B-010		No	Arch	16	0	Bailieborough-Cootehill	31-07-2019	Alert		Unrated
greaghnafarna bridge	CN-L7595-B-000		No	Arch	1.2	0	Bailieborough-Cootehill	04-03-2019	Alert		Unrated
Derry bridge	CN-L3520-B-000		No	Arch	1.25	0	Bailieborough-Cootehill	09-08-2019	Alert		Unrated
Greaghadosan bridge	CN-L3547-B-000		No	Arch	9.4	0	Bailieborough-Cootehill	15-08-2019	Alert		Unrated
Doughty's bridge	CN-L3508-B-000		No	Composite	4	0	Bailieborough-Cootehill	20-08-2019	Alert	04-09-2019	Unrated
clontygrigny bridge	CN-L5061-B-000		No	Arch	1.35	0	Cavan-Belturbet	26-08-2019	Alert		Unrated
moher bridge	CN-L7504-B-010		No	Arch	1.2	0	Bailieborough-Cootehill	29-08-2019	Alert		Unrated
Parkers bridge	CN-L3544-B-000		No	Arch	8.3	0	Bailieborough-Cootehill	29-08-2019	Alert		Unrated
Drummuck bridge	CN-R165-B-010		No	Slab	2.7	0	Bailieborough-Cootehill	04-09-2019	Warning		Unrated
Tirlahode bridge	CN-R165-B-020		No	Arch	1.25	0	Bailieborough-Cootehill	04-09-2019	Warning		Unrated
RAILWAY BRIDGE	B1004	CN -L5573-001	No	Arch	7.915	0		03-12-2018	Warning		Unrated
Larah river bridge	CN-L2026-B-000		No	Arch	6	0	Bailieborough-Cootehill	27-08-2019	Warning		Unrated
Long bridge	CN-L2017-B-010		No	Arch	1.7	0	Bailieborough-Cootehill	27-08-2019	Warning		Unrated
Mullagh bridge	CN-R194-B-040		No	Arch	3.5	0	Ballyjamesduff	29-08-2019	Warning		Unrated
Cornacarrow bridge	CN-L2000-B-000	CN-L2000-002.00	No	Arch	13.2	0	Bailieborough-Cootehill	29-08-2019	Warning		Unrated
Paddock bridge	CN-L1512-B-000		No	Arch	1.35	0	Cavan-Belturbet	26-08-2019	Warning		Unrated
	CN-R162-B-080		No	Arch	1.2	0	Cavan-Belturbet	09-08-2019	Warning		Unrated
Lawsonsford bridge	CN-L2017-B-000		No	Arch	15	0	Bailieborough-Cootehill	21-08-2019	Warning		Unrated
	CN-Unknown_roa...	univet entrance bri...	No	Composite	4	0		31-07-2019	Warning		Unrated
entrance private residence	CN-Unknown_roa...		No	Composite	4.5	0		31-07-2019	Warning		Unrated

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Standard Tools | Works Tools | Speed Limits | Surface Inventory Tools | Road Schedule | Footways | Bridges

Layers: Base Layers (OSI aerial, premium, discovery, OpenStreetMap, Grey Background, Google Hybrid, Blank Map), Road Layers (Road Schedule, Road Junctions, Road Classes, TII Road Network), Boundaries, Network Editing, 3rd Party Datasets, Works, Roads Programmes, Speed, Bridges (Maintenance Inspection, Engineering Inspector, Weight Restriction, Height Restriction, Years Since Maintenance, Prime2 Bridges), Road Intersections Layers (Road Intersections, Water Intersections, Stream Intersections, Rail Intersections), MapRoad Layers, Surveys

Bridge - CN-L3508-B-000

**General** | Non-Site Data | Maintenance Inspections | Engineering Inspections | History | Files

Bridge Type\*: Composite | Principle Function\*: Public Road  
Number (calc.): CN-L3508-B-000 | Name (Plate): The structure name on plate  
Name (alias): Doughty's bridge  
Road Number: L3508  
Is in Skew?  | Skew Angle: 45 | Is Flood Relief?  | Number of Openings:   
Height Restriction:  | Is Signage Present?  | Height Restriction (on signage):   
Weight Restriction?  | Weight Restriction (on signage):   
Bridge Over: Watercourse | Bridge Under:  | Services Evident?

Dimensions  
Length\*: 6 | Width\*: 7.7 | Height: 1.9  
Number of Spans\*: 1 | Total Span\*: 4 | Max. Span\*: 4 | Min. Span\*: 4

Materials\*  
 Masonry |  Concrete |  Metal |  Timber |  Plastic

Access Hazards  
 Steep Banks |  Deep Water |  Fast Water |  Very Tall Structure  
 Unstable Bed |  Vegetation |  IAPS |  Restricted by Fencing  
 Illegal Dumping |  Livestock |  Traffic |  Services

Comment  
masonry abutments with concrete slabs deck supported by steel cross members. steel members exposed and corroded at deck soffit. seepage witnessed through deck also. scouring evident at abutments. parapet walls in reasonable condition with with minor cracking visible. masonry wingwalls collapsed also

Delete Bridge | Export Bridge | Zoom to Bridge | Update Bridge | Cancel



Standard Tools | Works Tools | Speed Limits | Surface Inventory Tools | Road Schedule | Footways | Bridges | Gazetteers

Layers: Base Layers (OSi aerial, OSi premium, OSi discovery, OpenStreetMap, Grey Background, Google Hybrid, Blank Map), Road Layers (Road Schedule, Road Junctions, Road Classes, TII Road Network), Boundaries, Network Editing, 3rd Party Datasets, Works (Roads Programmes, Speed, Bridges), Road Intersections Layers (Road Intersections, Water Intersections, Stream Intersections, Rail Intersections), MapRoad Layers, Surveys.

**Bridge - CN-L3508-B-000**

Date	Surveyor	Parapets	Access And Egr	Vegetation	External Walls	Abutments And	Deck Or Arch
20/08/2019	sobrien	Good	Warning	Good	N/A	Warning	Alert

**Bridges List**

Name	Code
Derrindrehid BRIDGE	B1040
greaghnafarna bridge	CN-L7
Lurganboy bridge	CN-L6
one tree cross bridge	CN-L1
Derry bridge	CN-L3
Greaghadossan bridge	CN-L3
Doughty's bridge	CN-L3
clontygrigny bridge	CN-L5
moher bridge	CN-L7
Parkers bridge	CN-L3
Tunnyduff bridge	CN-L7

**MI Rating**

MI Rating	EI Date	EI Rating
Alert		Unrated
Alert		Unrated
Alert		Unrated
Alert		Unrated
Alert		Unrated
Alert		Unrated
Alert	04-09-2019	Critical
Alert		Unrated
Alert		Unrated
Alert		Unrated
Alert		Unrated

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Buttons: Delete Bridge, Export Bridge, Zoom to Bridge, Update Bridge, Cancel



# Cavan Co. Co. Potential Bridges for 2020



Ber

Number	Bridge ID	Bridge Name	Municipal District	Road	BIS completed	Parapets	Access & Egress	Vegetation	External walls	Abutments & piers	Deck or Arch	Final rating
1	CN-L2017-B-000	Lawsonsford Bridge	Bailieboro/Cootehill	L2017	✓	Good	Warning	Good	Good	Warning	Good	Warning
2	CN-L5061-B-000	Clontygrigny Bridge	Cavan/Belturbet	L5061	✓	Alert	Good	Alert	Alert	Warning	Warning	Alert
3	CN-R194-B-040	Mullagh Bridge	BallyJamesduff	R194	✓	Warning	Good	Good	Warning	Good	Warning	Warning
4	CN-L7081-001	Dalys Bridge 1	BallyJamesduff	L7081	✓	Good	Good	Warning	Warning	Good	Warning	Warning
5	CN-L6532-B-000	Cloggy Bridge	BallyJamesduff	L6532	✓	Warning	Good	Alert	Warning	Good	Good	Warning
6	CN-L2000-002.00	Cornacarrow Bridge	Bailieboro/Cootehill	L2000	✓	Good	Good	Warning	Warning	Warning	Good	Warning
7	CN-L3547-B-000	Greaghadosan Bridge	Bailieboro/Cootehill	L3547	✓	Warning	Good	Good	Good	Alert	Warning	Alert
8	CN-L6102-B-000	Lurganboy Bridge	Bailieboro/Cootehill	L6102	✓	Alert	Warning	Alert	Warning	Warning	Alert	Alert
9	CN-R191-B-020	Latully Bridge	Bailieboro/Cootehill	R191	✓	N/A	Warning	Alert	Warning	Warning	Warning	Warning
10	CN-L1512-B-000	Paddock Bridge	Cavan/Belturbet	L1512	✓	Warning	Good	Warning	Warning	Warning	Warning	Warning
11	CN-L7555-B-000	Lavagilduff Bridge	Bailieboro/Cootehill	R162	✓	Warning	Good	Good	Good	Good	Good	Good
12	CN-L2017-B-010	Long Bridge	Bailieboro/Cootehill	L2017	✓	Warning	Alert	Warning	Warning	Warning	Warning	Warning
13	CN-L7595-B-000	Greaghnafarna Bridge	Bailieboro/Cootehill	L7595	✓	Alert	Warning	Alert	Alert	Alert	Warning	Alert
14	CN-L2026-B-000	Larah Bridge	Bailieboro/Cootehill	L2026	✓	Alert	Warning	Warning	Good	Warning	Warning	Warning
15	B3	Narracks Bridge	Cavan/Belturbet	R212	✓	Good	Warning	Alert	Good	N/A	N/A	Good
16	CN-R192-B-000	Knappagh Bridge	Bailieboro/Cootehill	R192	✓	Good	Warning	Alert	Good	Good	Good	Good
17	CN-L2032-B-000	Old bridge road bridge	Bailieboro/Cootehill	L2032	✓	Alert	Warning	Good	Good	Good	Good	Good
18	CN-L20083-B-000	Ardglushin Bridge	Bailieboro/Cootehill	L20083	✓	Alert	Warning	Warning	N/A	Good	Good	Good
19	CN-R194-C-030	Derrylea Culvert 2	BallyJamesduff	R194	✓	N/A	Good	Good	N/A	N/A	N/A	N/A
20	CN-R194-C-020	Derrylea Culvert 1	BallyJamesduff	R194	✓	Good	Good	Warning	Warning	N/A	N/A	Good
21	CN-L3544-B-000	Parkers Bridge	Bailieboro/Cootehill	L3544	✓	Warning	Good	Warning	Warning	Warning	Alert	Alert
22	CN-L7504-B-010	Moher Bridge	Bailieboro/Cootehill	L7504	✓	N/A	Good	Warning	Warning	Alert	Good	Alert
23	CN-R191-B-000	Leiter Bridge	Bailieboro/Cootehill	R191	✓	Good	Good	Good	Warning	Good	Good	Warning
24	CN-L7066-C-000	Garryross Bridge	BallyJamesduff	L7066	✓	Alert	Good	Good	Good	Good	Good	Good
25	CN-R162-B-080	Mullaghard Bridge	Bailieboro/Cootehill	R162	✓	Alert	Good	Good	Warning	Good	Good	Warning
26	CN-L3015-001	Rasuddan Bridge	BallyJamesduff	L3015	✓	Warning	Warning	Good	Warning	Good	Good	Warning
27	CN-L7081-B-000	Ross Bridge	BallyJamesduff	L7081	✓	Warning	Good	Warning	Good	Good	Good	Good
28	CN-L1518-B-010	One tree cross Bridge	Bailieboro/Cootehill	L1518	✓	Alert	Warning	Warning	Warning	Alert	Warning	Alert
29	CN-R212-B-030	Treehoo Cross Bridge	Bailieboro/Cootehill	R212	✓	Warning	Warning	Warning	Good	Good	Good	Good

Before

After



