Gladstone Regional Council Roads Maintenance Guideline

November 2023

GLADSTONE REGIONAL COUNCIL

DOCUMENT CONTROL

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				Initials	Signature	Date
1	Draft	T Pattillo & A Clifford	C Faulkner			
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Contents

1 MAINTENANCE AND DELIVERY

1.1 Introduction

The Gladstone Regional Council Maintenance Guidelines provides technical information to be used for road maintenance on Gladstone Regional Council's controlled Road Network.

Council designs, constructs and maintains roads, drains, footpaths and other public infrastructure throughout the region. The Gladstone Region incorporates 409km of asphalt streets and roads, 556km of bitumen seal roads and a total of 1408km of gravel roads.

Council has direct responsibility for the maintenance of its road network however the Department of Transport and Main Roads (DTMR) are responsible for several roads that pass through the region. In other instances, Council maintains roads on behalf of the Department of Transport and Main Roads.

Capital funding is allocated each year for road resurfacing and re-sheeting to extend the life of sealed and unsealed roads. Road reconstruction and upgrades are required at times due to the road reaching its designed life. Roads are assessed based on condition and predicted traffic increases and then prioritised for future capital works programs.

Road conditions differ across the region. Pavement structures, materials of construction, traffic and climate are all important variables that need to be considered when selecting Intervention Level and Response Time (IL/RT). In addition, a balance is required between a safe, efficient road network and responsible maintenance / environmental practice. For these reasons, there are no absolute solutions. The aim of this guideline is to assist the maintenance delivery teams to apply sensible and appropriate risk-based methods to carry out the necessary maintenance actions as per the Intervention Level and Response Time (IL/RT) criteria.

For Council to be sustainable with a constrained budget, defects must be prioritised as per Intervention Level/Response Time criteria and repaired in order to restore an asset to its operational condition.

1.2 Purpose

The intention of this document is to provide technical guidance that will assist Council maintenance delivery teams to consider the various aspects of road maintenance priorities and the use of an effective maintenance program to manage road user safety, road usability, road deterioration, environmental and legislative requirements.

The purpose of the guidelines is to provide required technical standards and guidance to deliver consistent maintenance across the region. As such these guidelines will contribute to the management of processes, to achieve value for money maintenance delivery, and to make informed business decisions.

1.3 Scope

The procedures and requirements for the following types of maintenance are described in this guideline:

- *Preventative Maintenance* - The regular and routine inspection and work on assets in order to keep them operating in a specified condition and prevent any costly unplanned downtime from unexpected failure.
- *Corrective Maintenance* - Work carried out after fault or failure detection to effect restoration of an asset as per intervention levels and response times.
- *Reactive Maintenance* – Work carried out immediately to restore a critical service or address a hazardous issue. They are typically defects or failures that constitute an immediate danger or hazard to traffic, road users, or other members of the public.
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2 ROAD NETWORK HIERARCHY

The Gladstone Regional Council Road Network (GRCRN) hierarchy categorises roads based on their function and capacity.

The road hierarchy also guides the way roads are constructed, used and managed. The road hierarchy considers the function of the road and the land uses it connects. The classification does not always depend on the traffic carrying capacity or speed limit of the road.

Types of roads that make up the road hierarchy

- Arterial
- Distributor Road
- Collector
- Local
- Road Reserve

Arterial and sub-arterial roads
Arterial and sub-arterial roads are the major connecting roads across Queensland. They include highways, freeways and motorways. On an average day, they handle large volumes of freight and passenger vehicles.

Distributor and collector roads
Distributor and collector roads are the roads that connect communities to the major sub-arterial and arterial roads in Queensland. Typically, they allow for the transport of agricultural goods and the like, to major highways for transport to markets. Similarly, in an urban environment they tend to be the roads connecting suburbs to the major freeways.

Local roads
Local roads are largely the neighbourhood street system. These roads are relatively free of through traffic and mostly handle local traffic. The challenge in these areas is to provide a high level of safety and adequate access to neighbourhood services and facilities. Local roads are typically maintained by the local authority.

Council's roads are allocated to a southern, western and central region. Throughout the region, asset inspectors continually inspect roads, footpaths, car parks, drainage structures, bridges, boat ramps and jetties. The workforce consists of a combination of crews to deal with reactive and programmed maintenance and capital works. Reactive road maintenance involves response to repairs created by unexpected events such as car accidents and weather damage.

Council's road categorisation is outlined in the following tables -

- Table 1 – Urban: Road Hierarchy Levels and Objectives
- Table 2 – Rural: Road Hierarchy Levels and Objectives

Note this guideline does not set the Road Hierarchy however has been included for easy reference and application to the Maintenance Guideline.

2.1 Urban Roads

2.1.1 Road Hierarchy Levels And Objectives – Urban Areas

Table 1 – Urban: Road Hierarchy Levels and Objectives

<table>
<tr><th colspan="6">Level 1: Purpose</th></tr>
<tr><td colspan="3">Road</td><td colspan="3">Street</td></tr>
<tr><td colspan="3">• To carry through traffic</td><td colspan="3">• To provide local property access
To collect local traffic</td></tr>
<tr><th colspan="6">Level 2: Function</th></tr>
<tr><td colspan="2">Arterial Road</td><td>Sub Arterial Road</td><td>Collector Street</td><td colspan="2">Local Street</td></tr>
<tr><td colspan="2">• through traffic movements across town;
• longer distance strategic traffic movements;
• primary connection between suburbs and employment, economic, education or entertainment centres;
• line haul public transport task;
• primary freight and dangerous goods routes;
• regional cycle movements.</td><td>• through traffic between arterial roads;
• connections between local areas and arterial roads;
• access to public transport;
• through movement of public transport;
• regional – local cycle movements;
• pedestrian movements.</td><td>• carry traffic having a trip end within the specific area;
• direct access to properties;
• access to public transport;
• pedestrian movements;
• local cycle movements.</td><td colspan="2">• direct access to properties;
• pedestrian movements;
local cycle movements.</td></tr>
<tr><th colspan="6">Level 3: Management</th></tr>
<tr><td colspan="2">Arterial Road</td><td colspan="2">Distributor Road</td><td colspan="2">Collector Street</td><td colspan="2">Local Street</td></tr>
<tr><td>Arterial</td><td>Sub Arterial Road</td><td>4 Lane Distributor</td><td>2 Lane Distributor</td><td>Industrial</td><td>Residential / Commercial</td><td>Residential Access Street</td><td>Residential Access Place[2]</td></tr>
<tr><td>1U</td><td>2U</td><td colspan="2">3U</td><td colspan="2">4U</td><td colspan="2">5U</td></tr>
<tr><td>Longer distance traffic movements between suburbs and other centres</td><td>Connection of local areas to arterial roads.</td><td>Connection of local areas to arterial roads;
Through movements between arterial roads.</td><td>Connection of local areas to arterial roads;
Access to properties (certain cases).</td><td>Connection of local and/or industrial streets;</td><td>Connection of local streets with traffic carrying roads.
Access to grouped/ commercial properties and community facilities.</td><td>Access to individual properties;
Connection to other local streets.</td><td>Access to individual properties</td></tr>
<tr><th colspan="6">Level 4: Design</th></tr>
<tr><td colspan="6">• According to relevant guidelines and codes including Gladstone Regional Council Corporate Policy, AUSTROADS Guides, Queensland Streets, AMCORD, Australian Standards.</td></tr>
</table>

2.2 Rural Roads

2.2.1 Road Hierarchy Levels And Objectives – Rural Areas

Table 2 – Rural: Road Hierarchy Levels and Objectives

Level 1: Purpose				
Road		**Street**		**Reserve**
• To carry through traffic		• To provide local property access • To collect local traffic		• To service property/ forestry only
Level 2: Function				
Arterial Road	**Sub Arterial Road**	**Collector Street**	**Local Street**	**Road Reserve**
• through traffic movements across town; • longer distance strategic traffic movements; • primary connection between suburbs and employment, economic, education or entertainment centres; • line haul public transport task; • primary freight and dangerous goods routes; • regional cycle movements.	• through traffic between arterial roads; • connections between local areas and arterial roads; • access to public transport; • through movement of public transport; • regional – local cycle movements; • pedestrian movements.	• carry traffic having a trip end within the specific area; • direct access to properties; • access to public transport; • pedestrian movements; • local cycle movements.	• direct access to properties; • pedestrian movements; • local cycle movements.	• provides fire management protection or access • primarily 4 wheel drive vehicles • may be seasonally closed
Level 3: Management				
Arterial Road		**Distributor Road**	**Collector Street**	**Local Street**	**Reserve**
Arterial	**Sub Arterial Road**	**Distributor**	**Residential / Commercial**	**Rural Access**	**Unformed Track**
1R	**2R**	**3R**	**4R**	**5R**	**6R**
Longer distance traffic movements between suburbs and other centres	Connection of local areas to arterial roads.	Connection of local areas to arterial roads; Through movements between arterial roads; Access to properties (certain cases).	Connection of local streets with traffic carrying roads. Access to grouped/ commercial properties and community facilities. Connection of local and/or industrial streets;	Access to individual properties; Connection to other local streets.	Unformed road or track

Level 4: Design
• According to relevant guidelines and codes including Gladstone Regional Council Corporate Policy, AUSTROADS Guides, Queensland Streets, AMCORD, Australian Standards.

NOTE: It is usual practice not to post regulatory or advisory speeds on unsealed roads. The onus is on the driver of the vehicle to operate at a speed appropriate to the prevailing conditions present at the time.

2.2.2 Preventative Maintenance Inspection Program – Rural Areas

Table 6 – Rural: Preventative Maintenance Inspection Program

Criterion	Arterial Road		Distributor Road	Collector Street	Local Street	Road Reserve
	Arterial Road	**Sub Arterial Road**	**Distributor**	**Collector**	**Access**	**Unformed Road or Track**
	1R	**2R**	**3R**	**4R**	**5R**	**6R**
	Examples: Fingerboard Road, Monto Road	Examples: Landing, Coast, Round Hill, Hills Roads	Examples: Reid , Blackmans Gap, Taragoola Roads & Haddock Drive	Examples: East End, Awoonga Dam, Tablelands (Calliope), Murphy (AW), Glenlyon, Hughes, Mt Larcom-Bracewell & Lowmead roads	Examples: Baker (Calliope), Davies (AW), Mt Rollo, Hooke, Darts Creek & Mt Alma roads	
Maintenance Characteristics - Rural						
1. All maintenance	Weekly Bi-Weekly	Subject to Operations budget allowance				N/A
2. Proactive general road maintenance inspections		6 month rotation program	9 month rotation program	12 month rotation program	12 month rotation program	N/A
3. Proactive road condition assessments		5 year rotation program				N/A
4. Routine road drainage structure inspections		12 months rotation program for large structures only >6m2. Structures <6m2 inspected only as required				N/A
5. Proactive bridge inspections		Level 1 inspection annually Level 2 inspection every 5 years or as determined from Level 1 inspection Level 3 inspections determined from Level 1 and 2 inspection outcomes				N/A
6. Reseals – Bitumen roads & streets		Generally 10 - 15 year rotation program subject to condition assessments				N/A
7. Asphaltic concrete overlay (bitumen asphalt)		Rural roads generally consist of bitumen seal pavement surfaces however in the event, 15 - 20 year rotation program subject to condition assessments				N/A
8. Routine footpath general maintenance inspections.		12 month rotation program **Note:** Footpaths generally not applicable in rural areas				N/A

9. Routine footpath condition assessments.		5 year rotation program **Note:** Footpaths generally not applicable in rural areas		N/A
10. Stormwater CCTV inspections		N/A **Note**: Urban areas only		N/A
11. Proactive open drains by location inspection (rural)		Annual inspection program		N/A
12. Grading - heavy shoulder grade (sealed road)		As required		N/A
13. Grading - routine light grade "gravel surface"		12 month rotation program	18 month rotation program	N/A
14. Grading heavy formation grade "gravel surface"		12 monthly rotation (segments) subject to condition inspection	18 monthly rotation (segments) subject to condition inspection	N/A
15. Gravel re-sheeting "gravel surface"		Generally 10 - 12 year rotation program	Generally 10- 15 year rotation program	N/A
16. Road side mowing / slashing / herbicide spraying		External to 60 km zones generally 3 times annually or intervention level - Grass height exceeds 700mm within 2.4m of edge of roadway or invert of table Within 60km speed zones "Urban" intervention level is >200 mm and are maintained by Parks Management **Note:** All Rural Roads slashed and maintained by Road Services Note:- Gravel roads generally not slashed unless considered safety risk		N/A
Street Sweeping – Rural				
17. Street sweeping by location		No specific street sweeping program in Rural Areas Gravel roads – Not applicable Sealed roads – As required		N/A
- Sealed rural residential road with kerbs		As required		N/A
- Sealed rural road intersections with or without kerbs		As required		N/A

3 DEFECTS, MAINTENANCE ACTIVITIES AND ROAD INSPECTIONS OVERVIEW

3.1 Defects

Council collects defect information from three sources -

- Our Community through Customer Service Requests;
- Informal inspections; and
- Formal inspections.

A defect refers to the visible evidence of an undesirable condition in the road infrastructure asset. The defect may affect the safety, serviceability, structural capacity or appearance of the asset. Road defects that are identified as per the maintenance Intervention Level and Response Time (IL/RT) are considered as reactive or corrective maintenance defects in this guideline. Further information about defects is available in Section 4 and Section 5 of this guideline.

Defects are required to be prioritised as directed by the routine maintenance IL/RT criteria in terms of their importance for maintenance action. The basis used by the Council for prioritisation of defects is explained in Section 5.

3.2 Corporate Priorities

The Defect Priority listing has been assembled into five groups. These groups are intended to represent the maintenance priorities and the basic order in which Works should be undertaken. These groups are in order of priority as given below:

Priority 1 [P1]

Defects that can cause immediate threat/danger or create a hazardous situation to road users or likely to damage road asset. Defects that constitute an immediate danger or hazard to traffic, road users, or other members of the public. [*All Road Hierarchy*]

Alternative emergency action: Contact Emergency Agency.

Priority 2 [P2]

Defects that constitute a safety problem for the road user where the intervention level is reached without significant warning; or required to be repaired by legislation.

Activities performed in response to unsafe operation of asset for limited period that negatively impacts community or can cause serious physical injury, partial failure of a critical service, legislative breach, or substantial complaints received from community. [*All Road Hierarchy*]

Priority 3 [P3]

Defects that require identification, isolation and fault repair in order to restore asset to operational condition.

Activities performed in response to the development of a deficiency that negatively impacts the safe and efficient operation and / or future integrity of the asset. [*Sub priority: Road Hierarchy*]

Priority 4 [P4]

Defects that if treated will reduce asset's rate of deterioration.

Cost effective treatments that preserves the asset, retards future deterioration and maintain or improves the condition of the asset. Extend life of the asset.
[*Sub priority: Road Hierarchy*]

Priority 5 [P5]

Defects that are considered a nuisance or unsightly.

May also include preventative maintenance – work performed on a routine basis to maintain and preserve the condition of the asset or respond to specific conditions and events that restore the asset to an adequate level of service. [*Sub priority: Road Hierarchy*]

IL/RT criteria in Section 5 contains the list of Defects that is expected to be repaired, with a two digit alpha code descriptor used to identify each particular defect and five digit code descriptor to identify each sub-defect for ease of reporting.

3.3 Road Inspection and Inspection Frequency

Regular road inspection is an essential part of delivering Maintenance. Therefore, road inspections are carried out by Council Asset Inspectors based on agreed inspection frequency for asset type. Carrying out road inspections is critically important in order to capture and prioritise defects, as per the IL/RT criteria, on the road Network.

The Roads Maintenance Strategy provides overarching direction on how roads are maintained to ensure deliverability and affordability. This strategy is currently under development and due to be completed in December 2023.

3.4 Defect Log

Defects that are captured as per IL/RT requirements during regular preventative maintenance inspections are logged in Council's maintenance management system (Reflect) whilst in the field. All defects that have reached their initial intervention level must be logged. No defects that are below initial intervention level should be logged unless the defect is in the monitoring stage.

3.5 Defect Backlog

Remaining defects entered in the database that are not fixed during the relevant response time is called Defect Backlog. Unavailable funding and availability of specialised skills and equipment are the primary reasons for defect backlog. However, permitting other work programs to rectify the defects later in order to have cost effective maintenance delivery could also be a reason for the defect backlog. The defects making up the backlog must be revisited every inspection cycle in order to confirm the priority as the defect may have deteriorated since last inspection.

4 DEFECTS REGISTER

This section provides technical background on all defects. Clear understanding about the defect and cause for the defect is very important to select the appropriate maintenance activity or work program for the rectification.

Table 7 –Defects Register

Defect Code	Defect Name	Image + Description	Possible Causes
SD - road **CD - carpark**	Isolated Depressions and Bumps in Bituminous Surface	  Localised depressed sections within a pavement. The depression not necessarily limited to wheel paths and may extend to entire lane width. Depressions are clearly visible after a rain when they fill with water. Bumps is a localised upward movement in a pavement.	Settlement of widening trenches. Poorly compacted isolated sections of subgrade or base. Volume changes in subgrade materials due to various reason such as drying out due to tree roots or change in moisture content of expansive soil. Settlement or failure of utility assets underneath the pavement. Poorly treated abandoned mining holes/ditches underneath/next to the pavement. Settlement due to the instability of embankment.
SH - road **CS - carpark**	Shoving of Pavement or Asphalt	 	Untreated crocodile cracking permitting to loss the surface course. Moisture ingress to pavement layers through a cracked surface. Disintegration of base due to heavy loading. Loss/damage surfacing layer due to binder adhesion to tyres.

Defect Code	Defect Name	Image + Description	Possible Causes
		Irregular bowl-shaped cavity extending into pavement layers. Small, bowl-shaped cavity in the pavement surface that penetrate all the way through the surfacing layer down to the base course.	
SR - road **CS - carpark**	Ruts in Bituminous Surface	  Ruts in pavements are channelised depressions in the wheel paths, generally appears in long sections due to consolidation or lateral movement of pavement or subgrade due to traffic action.	Pavement age, frequent presence of overloaded vehicles and/or heavy vehicles on the pavement. Inadequate pavement layer thickness. Inadequate compaction in surfacing or base layers. Inadequate strength in surfacing or base layers.
SP - road **CP - carpark**	Potholes in Bituminous Surface	  Loss of a large, discrete area of the surfacing layer. Surfacing layer separation from the below layer is clearly visible In most situations.	Poor bond between upper surfacing layer and layer below due to inadequate cleaning or inadequate tack coat before placement of upper surfacing layers Weakening of the bond between surfacing layer and the below layer due to various reasons such as water ingress, traffic action. Loss/damage surfacing layer due to binder adhesion to tyres.

Defect Code	Defect Name	Image + Description	Possible Causes
SP - road **CP - carpark**	Delamination in Bituminous Surface	  Loss of a large, discrete area of the surfacing layer. Surfacing layer separation from the below layer is clearly visible In most situations.	Poor bond between upper surfacing layer and layer below due to inadequate cleaning or inadequate tack coat before placement of upper surfacing layers Weakening of the bond between surfacing layer and the below layer due to various reasons such as water ingress, traffic action. Loss/damage surfacing layer due to binder adhesion to tyres.
CC - road **CR - carpark**	Crocodile Cracking in Bituminous Surface	  Small irregular shape polygons formed generally in wheel paths. Plate/cell sizes are normally less than 150 mm. Crocodile cracking is load-related and it normally starts in the wheel path as longitudinal cracking and ends up as crocodile cracking after severe distress.	Insufficient pavement layer thickness. Brittle base or wearing course due to age or cemented base. The failure can be due to weakness in the surface, base or sub grade or poor drainage.
SC	Bituminous Surface Cracks General		

Defect Code	Defect Name	Image + Description	Possible Causes
SC - road **CG - carpark**	Block Cracks	  Block cracks generally form large, interconnected rectangles on the pavement. Block cracks are not due to traffic loading. Block size and the shape generally reflect the joints of the base layer cause for the cracks.	These cracks are primarily due to shrinkage and fatigue of underlying cemented materials. Shrinkage of the asphalt pavement due to temperature cycles over the time. Joints in underlying base layer.
SC - road **CG - carpark**	Transverse Cracks	 Unconnected cracks run laterally across the pavement. Transverse cracks are non-related cracks.	These cracks are primarily due to shrinkage of the surfacing layer or reflection of shrinkage cracks or joints in underlying base layer.

Defect Code	Defect Name	Image + Description	Possible Causes
SC - road **CG - carpark**	Diagonal Cracks	 Unconnected cracks run diagonally across a pavement.	Shrinkage of the surfacing layer or reflection of shrinkage cracks or joints in underlying base layer. Differential settlements between embankments, cuts or structures or any other. Tree roots. Service installation.
SC - road **CG - carpark**	Longitudinal Cracks	 Crack running longitudinally along the pavement. Longitudinal cracks are non-load related and can happen singly or as series of almost parallel cracks. Some limited branching may occur.	These cracks are primarily due to contraction and shrinkage of the surfacing layer or reflection from the underlying base layer joints, poorly constructed surfacing layer joints or subgrade settlement.

Defect Code	Defect Name	Image + Description	Possible Causes
SC - road **CG - carpark**	Meandering Cracks	 Non-load related unconnected irregular cracks on the pavement usually singly and varying in direction.	Reflection of a shrinkage crack in underlying pavement base material (cemented or fine granular materials). Weakening of the pavement edge through moisture entry. Differential settlements between embankments, cuts or structures. Tree roots.
SE - road **CE - carpark**	Edge Break in Bituminous Surface	  Edge of the bituminous surface fretted, broken or irregular.	Inadequate pavement width. Alignment which encourages drivers to travel on pavement edge. Inadequate edge support. Edge drop-off. Weak seal coat, loss of adhesion to base.

Defect Code	Defect Name	Image + Description	Possible Causes
SO - road **CO - carpark**	Edge Drop-off in Bituminous Surface	  The vertical distance from the surface of the seal at the edge to the surface of the shoulder.	Inadequate pavement width. Shoulder material with inadequate resistance to erosion and abrasion. Resurfacing of pavement without resurfacing of shoulder.
SO - road **CO - carpark**	Edge Rollover in Bituminous Surface	 The vertical distance from the new overlay / resealed pavement surface to the existing sealed pavement layer.	Inadequate new overlay / resealed pavement surface width. New overlay / resealed pavement not replaced over full width of existing pavement. New overlay edge has not appropriately constructed to make safe transition to previous surfacing layer or shoulder.

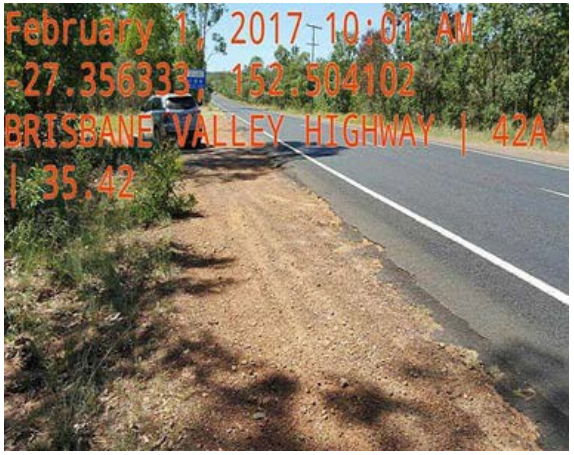
Defect Code	Defect Name	Image + Description	Possible Causes
SF - road **CF - carpark**	Flushing, Bleeding Seal	  Presence of excess bitumen in the pavement surface layer which creates patches with low skid resistance due to inadequate tyre- to-stone contact.	Excessive application rate of binder, with respect to stone size. Excessive prime coat being incorporated into the seal. Excess binder in underlying patch or flushed area. Penetration of aggregate into low strength base. Primer seal covered before volatiles in primer binder have evaporated.
SS - road **CT - carpark**	Ravelling Seal	 Initially fine aggregate breaks loose and leave small patches in the pavement surface. That leads to progressive disintegration of the pavement surface by loss of both binder and aggregates.	Insufficient adhesion between the asphalt and the aggregate. Deterioration of binder and/or stone. Inadequate compaction or construction during wet or cold weather. Hydrophilic aggregates used during the constructions.

Defect Code	Defect Name	Image + Description	Possible Causes
SS - road **CT - carpark**	Stripping Seal	  Removal of the coarse aggregate of a sprayed seal leaving the binder exposed to tyre contact - can happen at the loss of individual stones, or as the complete loss of stone in a localised area.	Low binder contents. Poor binder to stone adhesion (dirty or hydrophilic aggregates, without effective precoating with adhesion agent or wet stone etc.). Aging or absorption of binder. Stone deterioration. Incorrect blending of binder. Inadequate rolling before opening the seal to traffic.
SS - road **CT - carpark**	Polishing Seal	 Smoothing and rounding of the upper surface of the roadstone, usually occurs in the wheel tracks. Identified partly by relative appearance and feel of trafficked and un-trafficked areas. Polished areas will feel relatively smooth and will sometimes be noiceably shiny.	Inadequate resistance to polishing of surface aggregates, particularly in areas of heavy traffic movements, or where high stresses are developed between surface and tyres (e g corners, grades). Use of naturally smooth uncrushed aggregate (e.g. water-worn gravel).

Defect Code	Defect Name	Image + Description	Possible Causes
SL - road **CL - carpark**	Loose Stones or Debris on Sealed Roadway	  Debris / foreign material / loose stones on roadway.	Wind, water, vehicle or road user made transportation of loose stones or debris onto or away from the roadway surface.
SG - road **CV - carpark**	Grass on Sealed Roadway	 Vegetation growth around kerb and channel, along fence lines and on the road pavement that create unsafe road condition.	Lack of vegetation control measures in place.

Defect Code	Defect Name	Image + Description	Possible Causes
SX - road **CX - carpark**	Service Pit Covers, Rough Manhole Covers and Grates (Rough Service access facility)	 Manhole cover or Grates which are not vertically align with the road surface.	Damage to service pit covers, manhole covers and grates caused by environmental issues, lack of maintenance or a range of light, medium & heavy class vehicles travelling on Roadway. Pavement repairs or surface correction around the manhole covers or grates. Excavation for new and/or existing services.
UC	Insufficient (Adverse) Crossfall in Unsealed Shoulder	 Insufficient camber or slope of the unsealed shoulder from the edge line.	Initial Insufficient crossfall during the construction. Lack of shoulder maintenance.

Defect Code	Defect Name	Image + Description	Possible Causes
UC	Excessive Crossfall in Unsealed Shoulder	 Excessive camber or slope of the unsealed shoulder from the edge line.	Erodible shoulder surfacing materials. Excessive pavement thickness. Inadequate compaction in sub-base or subgrade. Inadequate strength (Stability) in sub-base or subgrade.
UL	Lateral Scour Channels in Unsealed Shoulders	 Steep, irregularly sided, relatively linear feature, commonly in the direction of maximum slope or along a wheel path.	Erodible surfacing materials. Concentration of water flows owing to: a) blocked or inadequate road drainage system b) rutting and corrugations.

Defect Code	Defect Name	Image + Description	Possible Causes
UH	Hazardous Dry Loose Material in Unsealed Shoulders	 Unbound fine or coarse gravel materials on the pavement surface. Can occur as a variable thickness layer (sheet) over the whole surface, or in narrow continuous mounds between wheel paths or lanes, or between the outer wheel path and table drains.	Ravelling of weakly bound pavement materials owing to environment composition (e g grading, plasticity) or lack of compaction. Wind or water transportation of materials onto or away from the roadway surface.
UR	Ruts in Unsealed Shoulders	 Longitudinal and relatively smoothly shaped deformation on the shoulder. Wet weather ruts tend to be steep sided and reflect the impression of the tyre into the road surfaces.	Inadequate wet strength of subgrade or pavement layer. Wear by attrition due to traffic or erosion of surface material. Excessive loose material. Traffic compaction of pavement or subgrade.

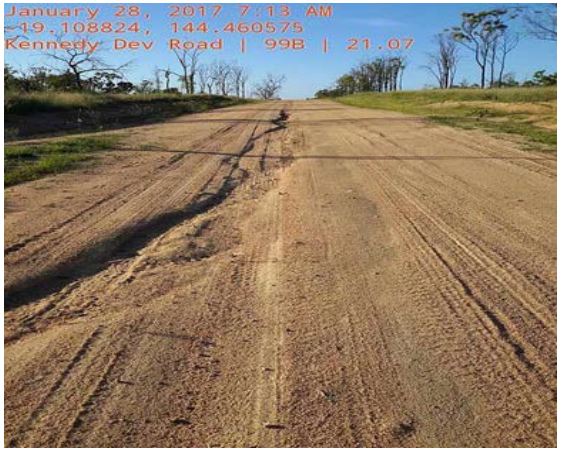
Defect Code	Defect Name	Image + Description	Possible Causes
UD	Debris on Unsealed Shoulder	  Foreign material or debris on unsealed shoulder. Bulge of very coarse aggregate or rock (particle size usually greater than 75 mm) from the shoulder surface, some loose on surface.	Wind, water or manmade transportation of debris onto or away from the shoulder surface. Attrition or erosion of coarse pavement material. Accumulation of foreign materials or debris on the shoulder
UW	Reduced Shoulder Width in Unsealed Shoulders	  Inadequate shoulder width to accommodate road user safety or pavement integrity.	Inadequate initial compaction. Variable quality of paving materials. Reduction of shoulder design width.

Defect Code	Defect Name	Image + Description	Possible Causes
UP	Potholes in Unsealed Shoulder	 A bowl-shaped depression in the unsealed shoulder. Potholes can have steep or gently sloping sides and be of irregular shape.	Ponding of water. Blocked or inadequate road drainage system. Excessive weakening of pavement by moisture. Inadequate initial compaction. Variable quality of paving materials.
GR	Wheel Ruts in Unsealed Roadways	  Longitudinal and relatively smoothly shaped deformation at the wheel paths. Wet weather ruts tend to be steep sided and reflect the impression of the tyre into the road surfaces.	Inadequate wet strength of subgrade or pavement layer. Wear by attrition due to traffic or erosion of surface material. Excessive loose material. Traffic compaction of pavement or subgrade.

Defect Code	Defect Name	Image + Description	Possible Causes
GE	Shoving in Unsealed Roadways	 Plastic bulging of pavement surface commonly occurring in association with depression or rutting.	Plastic deformation of pavement or subgrade.
GP	Potholes in Unsealed Roadways	  A bowl or irregular shaped cavity extending into the pavement layers.	Ponding of water. Excessive weakening of pavement by moisture, traffic action or environmental actions. Inadequate initial compaction.

Defect Code	Defect Name	Image + Description	Possible Causes
GG	Pavement Defects	  Subgrade visible with little or not gravel.	Erodible surfacing materials. Variable quality of paving materials. Wear by attrition due to traffic or erosion of surface material. Traffic compaction of pavement or subgrade.
GF	Crossfall in Unsealed Roadways	  *Insufficient* camber or slope from the crown of the road to sides of the road. *Excessive* camber or slope from the crown of the road to sides of the road.	*Insufficient*: Erodible surfacing materials. Inadequate initial compaction. Variable quality of paving materials. Poor drainage system allowing water to flow on the road. *Excessive*: Excessive pavement thickness due to design and/or construction failure. Inadequate compaction in sub-base or subgrade. Inadequate strength (Stability) in sub-base or subgrade.

Defect Code	Defect Name	Image + Description	Possible Causes
GW	Loss of Pavement Width / Running Course	  Loss of pavement width due to traffic or environmental actions.	Erodible surfacing materials. Insufficient pavement thickness. Inadequate compaction in sub-base or subgrade. Inadequate strength (Stability) in sub-base or subgrade.
GC	Corrugations	  Transverse undulations, closely and regularly spaced on the pavement.	Inadequate quality of base material for prevailing climatic and traffic conditions. Inadequate compaction in pavement layers. Most common in dry conditions.

Defect Code	Defect Name	Image + Description	Possible Causes
GS	Scour Channels	  Steep, irregularly sided, relatively linear feature, commonly in the direction of maximum slope or along a wheel path.	Erodible surfacing materials. Concentration of water flows owing to: a) blocked or inadequate road drainage system b) rutting and corrugations.
GD	Loose Stone/Material	 Unbound fine or coarse gravel materials on the pavement surface. Can occur as a variable thickness layer (sheet) over the whole surface, or in narrow continuous mounds between wheel paths or lanes, or between the outer wheel path and table drains.	Loosening of weakly bound pavement materials due to environmental or traffic actions. Wind or water transportation of materials onto or away from the roadway surface.

Defect Code	Defect Name	Image + Description	Possible Causes
GD	Coarse Surface	 Protrusion of very coarse aggregate or rock (particle size usually greater than 75 mm) from the pavement surface, some loose on surface.	Attrition or erosion of fines from coarse pavement material. Exposure of rock subgrade.
DT	Surface Drain / Table Drain Defects	  Blocked or defect of surface drain causing or likely to cause flooding to the roadway or private property.	Blocked or defect of surface drain which restricts flow or causes grade change.

Defect Code	Defect Name	Image + Description	Possible Causes
CD	Catch Drain Defects	 Blocked or defect of surface drain causing or likely to impact infrastructure or flood roadway.	Blocked or defect of surface drain which restricts flow or causes grade change.
BI	Drain Obstruction	  Any drainage obstruction creating water ponding and not free draining on pavement edge or on shoulder (free draining means water disperses without action of traffic)	Damaged or missing sections of drain. Blocked by debris, stones, roots and branches caused by environmental or human intervention. Culvert blocked by debris, stones, roots and branches caused by environmental or human intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
DS	Silt or Debris on Floodway Sections	 Any silt or debris encroaching into floodway sections of roadway.	Wind, water or manmade transportation of silt or debris onto or away from the floodway surface.
PF	Pit Defects	  Damaged or missing drainage pit lids, surrounds, grates, in pedestrian areas or traffic lanes.	Pit lids, surrounds, grates moved or damaged due to heavy flows or manmade actions. Pipe, Culvert, Pit, Floodway and associated drainage works not constructed / installed in accordance with approved design. Proper Inspections during construction & maintenance period not carried out.
DC	Culvert Headwall & Apron, Pipe & Floodway Defects		

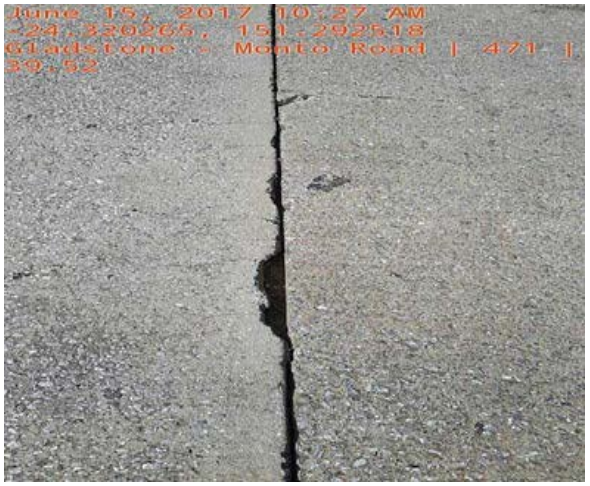
Defect Code	Defect Name	Image + Description	Possible Causes
DC	Cracking in culvert components or visible movement	    Cracking > 5 mm in culvert components or visible movement. Cracking in end structures.	Traffic, environmental or manmade actions on the culvert or culvert components. Inspections during construction & maintenance period not carried out.

Defect Code	Defect Name	Image + Description	Possible Causes
DC	Misalignment/ separation of culvert components	  Misalignment and /or separation of culvert components.	Settling or movement of the culvert components due to traffic loading, environmental actions or aging. Culvert and associated drainage work not constructed / installed in accordance with approved design. Inspections during construction & maintenance period not carried out.
DC	Corrosion/ loss of section of steel components (including reinforcement in concrete structures)	 Corrosion/ loss of section of steel components. Peeling off the reinforcement cover in concrete structures.	Peeling off concrete cover due to extended cracking in the culvert components. Pipe, Culvert, Pit, Floodway and associated drainage works not constructed / installed in accordance with approved design. Proper inspections during construction & maintenance period not carried out.

Defect Code	Defect Name	Image + Description	Possible Causes
DC	Scouring around culvert components	 Scouring around culvert components.	Culvert blocked by debris, stones, roots and branches caused by environmental or human intervention. Outlet not free flowing.
CR	Cracks in Concrete Roadway		
CR	Block Cracks	 Interconnected cracks forming a series of blocks, approximately rectangular in shape, commonly distributed over the full pavement. Cell sizes are usually greater than 1 m.	Generally a combination of traffic loading and loss of support. Insufficient slab thickness. Loss of sub-base or subgrade support. Subgrade settlement.

Defect Code	Defect Name	Image + Description	Possible Causes
CR	Longitudinal Cracks	 Unconnected crack running longitudinally along the pavement. Can occur singly or as series of almost parallel cracks.	Generally a combination of traffic loading and loss of support. Differential settlement. Lateral shrinkage associated with excessive slab width. Longitudinal joint too close to traffic lane. Longitudinal joint too shallow. Insufficient slab thickness.
CR	Transverse Cracks	 Unconnected crack running transversely across the pavement/slab.	Normal shrinkage. Shrinkage of slab during curing, associated with excess slab lengths or joints sawn too late. Insufficient slab thickness. Rocking of slab.

Defect Code	Defect Name	Image + Description	Possible Causes
CR	Corner Cracks	 A crack that intersects the slab joints near the corner. A crack extending diagonally from a longitudinal edge to a transverse joint.	Severe corner stresses caused by load repetitions combined with a loss support, poor load transfer across the joint. Insufficient slab thickness. Loss of sub-base or subgrade support.
CR	Spalling of Joints - Concrete Pavement	 Cracking, breaking or chipping of joint/crack edge.	Reduces slab contact area and provides incompressible materials fill the joint or crack. Severe corner stresses caused by load repetitions combined with a loss support, poor load transfer across the joint. Corrosion of reinforcing or dowel bars. Misalignment of dowel bars. Sub-base movement. Poor quality concrete aggregate.

Defect Code	Defect Name	Image + Description	Possible Causes
CR	Joint Sealant Defects in Concrete Pavement	 Loss and/or cracking of the seal resulting in foreign material in the joints. Extrusion of sealant leaving mound at the joint.	Ageing and weathering of sealant. Poor preparation or quality of sealant (for example, overheating of poured sealant). Lack of adhesion of sealant to joint wall. Poor cyclic tension and compression properties. Too much sealant in the joint. Poor shape of sealing joint. Insufficient sealant in the joint. Pumping. Slab rocking.
CR	Sunken Concrete Pavement Slab (Stepping)	 A difference in elevation across a joint or crack. Usually, the approach slab is higher than the leave slab due to pumping.	Stepping is commonly due to slab settlement, slab pumping, curling and warping. Poor compaction of sub-base layers. Poor subgrade support. Differential settlement of subgrade. Loss of fines from sub-base or subgrade through pumping.

Defect Code	Defect Name	Image + Description	Possible Causes
CP	Potholes in Concrete Pavement	 An area of pavement that has been replaced with new material to repair the existing pavement.	Previous localised pavement deterioration that has been removed and patched. Correction of surface or structural deficiencies. Reinstatement after excavation for services.
LT	Litter and Gross Pollutant Trap Defects	  Any non-functional, blocked or inoperable decayed element of the trap system causing reduced flow capacity or drainage integrity.	Blocked by soil, stones, roots and any other caused by environmental or human intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
DS	Subsoil Drain Defects	 Any non-functional, blocked or inoperable decayed element of the subsoil drainage system causing reduced flow capacity or drainage integrity.	Damaged or missing sections of subsoil drain. Blocked by soil, stones, roots and any other caused by environmental or human intervention.
DD	Detention/Retention Basin Defects	  Silted or unserviceable basin facilities.	Basins not acting in accordance with design. No proper periodic maintenance program in place.

Defect Code	Defect Name	Image + Description	Possible Causes
DD	Sediment Pond Defects	 Silted or unserviceable sedimentation pond facilities.	Sediment pond not acting in accordance with design. No proper periodic maintenance program in place.
DL	Concrete Lined Open Drain Defects	  Silted or unserviceable concrete lined open drain facilities.	Concrete lined open drain not acting in accordance with design. No proper periodic maintenance program in place.

Defect Code	Defect Name	Image + Description	Possible Causes
DO	Open Earth Drain Defects	  Unserviceable open earth drain facilities.	Open earth drain not acting in accordance with design. No proper periodic maintenance program in place.
VL	Large Trees and Shrubs Close to Roadway	 Unattended trees grown in road reserve close to the trafficked lanes.	Ongoing maintenance not carried out in accordance with departmental requirements & standards.

Defect Code	Defect Name	Image + Description	Possible Causes
VL	Large Tress or Limbs likely to Fall on Roadway	 Trees, branches, and vegetation that intrudes in the traffic envelope. Vegetation that impacts the normal operation of vehicles (including cycles) or may impact vehicles.	Ongoing maintenance not carried out in accordance with departmental requirements & standards.
VP	Declared Plants	 Identification of plants declared under the legislation have been ranked on the basis of: declared status, propensity for dispersion through the road Network and feasibility of treatment.	Declared Plants allowed to propagate throughout the Network.

Defect Code	Defect Name	Image + Description	Possible Causes
VG – road **CU - carpark**	Grass, Trees And Shrubs In Sight Line, In Drain Or Obstructing Roadside Furniture	  Any vegetation obscuring sight distance, minimum stopping distance or obstructing road furniture or drainage system.	Ongoing maintenance not carried out in accordance with departmental requirements & standards. Roadside vegetation not maintained and encroaches into the road reserve.
VN	Grass not in sight line	 Excessive roadside vegetation not in the sightline however may impact on drainage system and/or may create fire hazard in rural and urban areas.	Roadside vegetation not maintained and encroaches into the road reserve.

Defect Code	Defect Name	Image + Description	Possible Causes
VM – road **CU - carpark**	Grass Growth on Medians	 Visible grass growing in medians that has impact on road usability or aesthetic performance.	Ongoing vegetation maintenance not carried out in accordance with departmental requirements & standards. Sweeping and maintenance on road side medians not carried out appropriately.
AS	Unauthorised Signs	  Unauthorised signs erected within the road corridor.	Signs installed by unauthorised person or persons without proper approval.

Defect Code	Defect Name	Image + Description	Possible Causes
AB	Unstable Batter/ Embankment, Missing Material	 Cut or Embankment with cracks, erosion or instability that may create dangerous or unsafe road environment.	Material of poor quality, insufficient compaction of material, material scoured away due to excessive water run-off. Unstable batter or cut due wet weather conditions.
AC	Damaged Concrete or Paving Blocks	 Damaged, displaced concrete or paving blocks in pedestrian areas, road environment.	Damage to concrete or pavement block caused by environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
RR	Litter on Road / Road Reserve and Footpath	 Litter dumped on the road, road reserve or footpath.	Person or persons leave or abandon litter and/or rubbish within the road, road reserve or footpath.
AG	Graffiti	 Any graffiti considered offensive and highly visible to public. Graffiti affects road signs legibility.	Person or persons graffiti signs, buildings, fences, structures, vehicles with highly visible or offensive material.

Defect Code	Defect Name	Image + Description	Possible Causes
AV	Abandoned Vehicles	  Abandoned vehicle or equipment in road reserve.	Person or persons leave or abandon vehicle in road reserve.
RA	Deceased Animals/ Straying Stock on Roads and Footpaths	 	

Defect Code	Defect Name	Image + Description	Possible Causes
RF – road **CF - carpark**	Safety Fencing	  Missing or damaged Transport and Main Roads fencing in road reserve.	Fencing is missing or damaged due to environmental, human or vehicular intervention. No proper periodic maintenance program in place. The damage to the fence due to environmental effects.
RB	Damaged or Unserviceable Bus Shelters	   Bus shelter is unserviceable or damaged.	Bus Shelter is unserviceable or damaged due to environmental, human or vehicular intervention. No proper periodic maintenance program in place.

Defect Code	Defect Name	Image + Description	Possible Causes
ST	Traffic Signal and School Zone Lights Defects	  Flashing Yellow: • Confusing signal displays; Loss of displays • Misaligned lantern causing confusing signal displays • Damaged or open door on lantern • Damaged lantern or lantern parts at risk of falling • Twisted & non confusing lantern arrangement • Missing or damaged hardware (i.e. missing pole and/or associated hardware) • Lamp outages; Visors, cowls, louvers or target boards missing or damaged • Poor lantern aiming • Pit marker post missing	Broken or operationally degraded traffic signal controller due to one or a number of internal components being compromised. Access compromised as a result of vandals. Broken or operationally degraded signal lanterns. Electrical faults or damage of the traffic signal Broken or missing traffic signal hardware.
AZ – road **CA - carpark**	Streetscape Defects	 	Streetscape is damaged due to environmental, human or vehicular intervention.

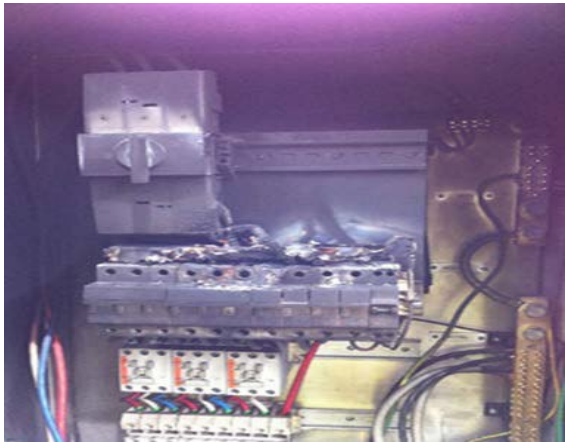
Defect Code	Defect Name	Image + Description	Possible Causes
RW	Retaining Wall Defects	  Examples of Retaining walls	Retaining walls are damaged by environmental, human or vehicular intervention.
RS - road **CW- carpark**	Missing, Damaged or Dirty Regulatory, Warning or Hazard Sign	  Missing, damaged or dirty signs.	Signage has become dirty due to environmental issues, damaged by environmental, human or vehicular intervention and/or missing due to human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
RS	Missing or Defective Guide Sign	 Any Guide sign dirty or damaged beyond repair or if after cleaning, sign is still not legible.	Signage is missing, dirty or damaged due to environmental, human or vehicular intervention.
RS – road **CW- carpark**	Sign Misalignment	  Sign is on a noticeable lean, inclined to line of sight or reflecting glare from vehicles lights at night.	Signage has become misaligned due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
RG	Guide Post or Delineator Defects	  Any missing guide posts in a hazardous location. The post is on a noticeable lean or there is an inability at night to see delineators ahead due to guide post location or any missing delineators on guardrail installation. (Above relates to observation after cleaning the post and delineator, on low beam).	Guide post or delineators is missing or damaged due to environmental, human or vehicular intervention.
CB	Guardrail, Fencing and Concrete Barrier Structural Defects	  Damaged and/or missing guardrail, guardrail components, fencing or concrete barriers.	Guardrail, Fencing or Concrete Barrier is missing or damaged due to environmental, human or vehicular intervention.

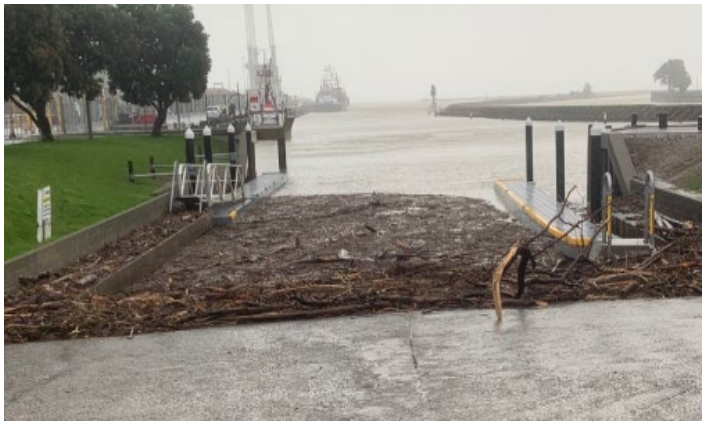
Defect Code	Defect Name	Image + Description	Possible Causes
CB	Guardrail, Fencing and Concrete Barrier Appearance Defects	  Appearance damage to guardrail, guardrail components, fencing or concrete barriers.	Guardrail, Fencing or Concrete Barrier is missing or damaged due to environmental, human or vehicular intervention.
KD – road **CK - carpark**	Kerb or Channelling Defects	  Continuous kerbing damaged or missing.	Kerb is missing or damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
MD - road **CB - carpark**	Semi Mountable Kerb and Paved Median Defects	  Kerb displacement.	Kerb or paved median is missing or damaged due to environmental, human or vehicular intervention.
RL - road **CM- carpark**	Missing or Faded Painted Road Lines and Markings	  Road marking are faded, missing, incomplete or unsatisfactory.	Road Lines and Markings are missing or damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
RL	Raised Pavement Marker Defects	  Loss of, or loss of reflectivity (%) of markers or any consecutive markers are missing.	Raised Pavement Marker is missing or damaged due to environmental, human or vehicular intervention.
LS – road **CY - carpark**	Lighting Switchboard Defects	 Unsafe, unrestricted, broken and/or operationally degraded lighting switchboard. (e.g. failure of switchboard, door open or pillar cover dislodged).	Lighting switchboard is missing or damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
LH – road **CH - carpark**	Lighting Hardware Defects (Council Owned Lights Only)	   Unsafe, missing, broken and/or operationally degraded lighting hardware. (e.g. pole knocked down, luminaire visor/diffuser not secure/hanging Or light is displaced/ re-aligned).	Lighting hardware is missing or damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
LG – road **CZ - carpark**	Lighting General Defects	 Failed navigation lights connected to a public lighting switchboard. Vegetation shading road lighting. Individual road lighting defect regarding luminaire or mounting e.g. outreach not correctly aligned/ perpendicular, luminaire not horizontal or a single lamp failure (excluding flag or stand-alone emergency stopping bay lighting). Any graffiti, vandalism or unauthorised banners.	Wind damage, vegetation obstruction.
BD	Bridge Defects	  Debris on bridges that is likely to interrupt the drainage facility, operation of expansion joints or affect the usability of the bridge. Debris on overpass that can be used as projectiles that can be hazardous to travelling public or pedestrians.	Bridge defects caused by environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
BR	Boat Ramp/Jetty Defects	  Debris that is likely to affect the usability of the jetty/ramp.	Boat Ramp/Jetty defects caused by environmental, human or vehicular intervention.
FS	Footpath Surface Defects	 	Footpath / Lane Surface is missing or damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
		  Accumulation of loose stones, sand or debris on the footpath. Potholes / delamination / isolated slab failure on the footpath. Shoving, depressions, rutting, lumps or ridges on the footpath	
FE	Footpath Edge Defects	  Edge Cracks travel along the inside edge of a pavement surface.	Poor drainage conditions and lack of support at the pavement edge weakening underlying base materials. Heavy vegetation along the pavement edge and heavy traffic can also be the instigator of edge cracking.

Defect Code	Defect Name	Image + Description	Possible Causes
FV	Footpath Vegetation Defects	  Trees, overhanging branches or broken limbs most likely to fall on footpath to be a hazard. Unwanted trees and shrubs or grass obscures in sightlines.	Ongoing maintenance not carried out in accordance with departmental requirements & standards.
FR	Footpath Pram Ramp Defects	  Pram Ramp is non-compliant with current standards, and existing footpath geometry and surroundings would enable a compliant Pram Ramp to be constructed.	Ongoing maintenance not carried out in accordance with requirements & standards.

Defect Code	Defect Name	Image + Description	Possible Causes
FD	Footpath Drainage Defects	  Culverts, pipes and pits defects likely to impact on the integrity of the unit. Obstructed drainage cause water ponding on or adjacent to footpath or private property.	Drainage system not acting in accordance with design. Periodic maintenance not carried out in accordance with departmental guidelines.
FB	Footpath Pedestrian Bridge and Elevated Walkway defects	  Debris on footpath bridges that is likely to interrupt the drainage facility, operation or expansion joints or affect the usability of the bridge.	Footpath bridge defects caused by environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
FF	Footpath Signage and Safety Defects	  Damaged footpath fencing creates unsafe environment to pedestrians. Missing or defective regulatory, warning or guide signs.	Footpath is damaged due to environmental, human or vehicular intervention.
FX	Service Pits	  Damaged service pit creates unsafe environment to pedestrians.	Service Pit is damaged due to environmental, human or vehicular intervention.

Defect Code	Defect Name	Image + Description	Possible Causes
FA	Footpath Property Access Defects	  Property access is the responsibility of the Property Owner. Property access to be constructed in accordance with Council building regulations.	Property access not constructed in accordance with regulations. Vehicles accessing properties using non-access area. Property access is missing or damaged due to environmental, human or vehicular intervention.

5 MAINTENANCE INTERVENTION LEVEL AND REPONSE TIME (IL|RT)

5.1 IL/RT model parameters

5.1.1 Road Categories

Road Categories are utilised to distinguish a risk of a defect based on higher maintenance is required where there is higher usage of the road. From a road management perspective, the same defect represents a higher risk on a high traffic road than a low traffic road. Therefore it is logical to have a higher maintenance standard for road sections where the traffic volumes are higher.

The adoption of road categories will ensure:

- Improved consistency across areas
- A transparent, rigorous and rational process for ranking roads for routine maintenance purposes
- Provide an ability to develop strategies, funding distributions, condition analysis and reporting for roads of similar importance
- Ease in developing intervention standards, prioritisation and funding flow
- Tighter intervention standards for high end roads
- Improved layout and ease in understanding, and
- Ease in comparison.

Urban Roads

Road Category	Road Function		Road examples
1U	Arterial Road	Arterial	Bruce Highway, Dawson Highway, Benaraby Gladstone Road Generally State Controlled Roads
2U		Sub Arterial	Kirkwood, Glenlyon, Red Rover, Hansen Roads, Don Young Drive
3U	Distributor Road	4 Lane Distributor	Chapman Drive, Toolooa Street
		2 Lane Distributor	Sun Valley Road, Dixon & Dalrymple Drive, Shaw Street, Col Brown Avenue
4U	Collector Street	Industrial	Bested Road, Callemondah & Pioneer Drives
		Residential	Penda Avenue & Harvey Road
5U	Local Street	Residential Access Street	Sharyn Drive
		Residential Access Place	Cul-de-sac

Rural Roads

Road Category	Road Function		Road examples
1R	Arterial Road	Arterial	Fingerboard, Monto Roads
2R		Sub Arterial	Landing, Coast, Round Hill, Hills Roads
3R	Distributor Road		Reid , Blackmans Gap, Taragoola Roads & Haddock Drive
4R	Collector Street		East End, Awoonga Dam, Tablelands (Calliope), Murphy (AW), Glenlyon, Hughes, Mt Larcom-Bracewell & Lowmead roads
5R	Local Road	Access	Baker (Calliope), Davies (AW), Hooke, Darts Creek & Mt Alma Roads
6R	Road Reserve	Unformed track	Road reserves: Unformed Road or Track '6R' are not inspected or maintained.

The urban and rural road categories inform the stormwater and open drainage categories.

Drainage – Underground Stormwater

Underground Stormwater Category	Drainage Carrying Or Discharging Stormwater Flows From	ROAD HIERARCHY RELATIONSHIP			
		URBAN HIERARCHY	Road Function		Road Examples
1	All underground stormwater pipes, pits and drainage outlet structures that comprise the "Urban" underground stormwater network	1U	Arterial Road	Arterial	Example: Bruce Highway, Dawson Highway, Benaraby Gladstone Road. Generally State Controlled Roads
		2U		Sub Arterial	Example: Kirkwood, Glenlyon, Red Rover, Hansen Roads, Don Young Drive, Blain Drive, Palm Drive & Philip Street
		3U	Distributor Road	4 Lane Distributor	Example: Chapman Drive, Toolooa Street
				2 Lane Distributor	Examples: Sun Valley Road, Dixon & Dalrymple Drive, Shaw Street, Col Brown Avenue
		4U	Collector Street	Industrial	Examples: Bensted Road, Callenmondah & Pioneer Drives
				Residential	Examples: Penda Avenue & Harvey Road
		5U	Local Street	Residential Access Street	Example: Sharyn Drive
				Residential Access Place	Example: Cul-de-sac
2	All underground stormwater pipes, pits and drainage outlet structures that comprise the "Rural" underground stormwater network.	RURAL HIERARCHY	Road Function		Road Examples
		1R	Arterial Road	Arterial	Examples: Fingerboard Road, Monto Road
		2R		Sub Arterial	Examples: Landing, Coast, Round Hill, Hills Roads
		3R	Distributor Road		Examples: Reid, Blackmans Gap, Taragoola Roads & Haddock Drive
		4R	Collector Street		Examples: East End, Awoonga Dam, Tablelands (Calliope), Murphy (AW), Glenlyon, Hughes, Mt Larcom-Bracewell & Lowmead roads
		5R	Local Road (Access)		Examples: Baker (Calliope), Davies(AW), Mt Rollo, Hooke, Darts Creek & Mt Alma Roads
		6R	Road Reserve (unformed/ unmade/track)		Example: Road Reserves (not maintained)

Drainage - Open Drainage

Open Drainage Category	Open Drainage Containing, Controlling or Discharging Stormwater Flows
1	From or within Major Open Drain - Such as the Town Drains or concrete lined drains. Urban Areas.
2	From or within Minor Open Drain - Such as earth or concrete invert drains. Rural Areas.
3	From or within all Detention and Retention Basins "generally Urban Areas only"

5.1.2 Initial Intervention Level

The initial intervention level is a defect's minimum physical dimension or minimum severity, as given in the IL/RT model, that qualifies a defect as to be logged during the inspection cycle.

5.1.3 Upper Intervention Level

The upper intervention level is the maximum desirable physical dimensions or severity of a defect that can be left on the Network without rectifying unless the defect is a hazard. All the defects must be rectified before breaching the upper intervention level under unconstrained budget. In the case of a constrained budget, defects must be prioritised as per IL/RT criteria and rectified.

Upper Intervention Levels indicate the maximum undesirable condition for each defect requiring to be fixed prior to the defect breaching the upper intervention level. However, in some locations on the network, maintenance should be undertaken for obvious safety reasons before the Upper Intervention Level is reached. Hazardous defect in the IL/RT model is an example for that.

These defect intervention levels are set out in IL/RT model in Section 5.2. These intervention levels must be used for recording and rectifying the defects that will be subsequently included in our work planning.

5.1.4 Response Time

It is required that defects are logged once that defect's initial intervention level is reached and are fixed before breaching its upper intervention level. However, some defects may not be rectified due to a lack of funding or other practical reasons before breaching their upper intervention limit. Such defects are to be fixed within their Response Time.

Response time starts when a defect has reached its upper intervention limits. If a defect has reached its upper intervention limit between two inspection cycles, the response time starts from the latest inspection date. All response times are based on business working days.

5.1.5 Defect Code

Two-digit defect code is used to distinguish the routine maintenance defects in the IL/RT model. Below are examples for defect codes used in IL/RT model:

SP – Potholes/Delamination in Bituminous Surface
SF – Flushing, Bleeding Seal
BI – Drain Obstruction

5.1.6 Hazardous defects identification and management procedure

A defect deemed as a priority rating **P1 – Hazard**, is treated differently to all other defect priorities. These defects have been categorised as requiring an immediate response.

Step 1: Defect notification process

A. Contact Emergency Services as required – Call 000 for Ambulance, Police or Fire services
B. Contact Team Leader Operations Roads immediately
    - During office hours
        - First contact point is Administration Officer (Roads)
        - Second contact point is Team Leader Administration
        - Third contact point is Team Leader Operations Roads based on area (Central, Southern, Western)
    - After office hours
        - On Call contact list (Roads) based on area (Central, Southern, Western)

Step 2: Team Leader to attend site and make area safe
Step 3: Assess need for emergency action

A. Time allowed to assess need for emergency action
    - During normal working times
        - 5 minutes plus normal travel time to site
    - Outside normal working times
        - 10 minutes plus normal travel time to site

B. If emergency action required, a crew must be called out or reassigned as soon as possible
    - Mobilise a crew and start work on-site.

5.2 Maintenance Intervention Level and Response Time (IL/RT) criteria

Table 8 – Intervention Level/Response Time criteria

GRC Defect Intervention Level & Response Time(IL/RT) criteria for Routine Maintenance															
Defect No	**Defect Code**	**Defect Intervention Level Criteria / Description**	**Initial Intervention Level**	**Corporate Priorities**	**Upper Intervention Level / Response Time**	**Road Hierarchy**	**Upper Intervention Level / Response Time**	**Road Hierarchy**	**Upper Intervention Level / Response Time**	**Road Hierarchy**	**Upper Intervention Level / Response Time**	**Road Hierarchy**	**Upper Intervention Level / Response Time**	**Road Hierarchy**
* 1U, 1R: Refer to Department of Transport and Main Roads Specifications / Road Performance Contract (RMPC)															
Defect Category 1: Deformation and Potholes in Bituminous Surface Defects															
1	**SD**	**Isolated Depressions and Bumps in Bituminous Surface**													
	SD1-H	Size of pothole/depression/hump/rut/scour means the road becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure										
	SD1-S	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge exceeds upper intervention level in **SD1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SD1-C	**Depression/Bump**: Depression or bump area exceeds 75mm in height difference under straight edge and includes areas <50m2	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 3 months	4U, 4R	100mm 3 months	5U, 5R
	SD1-P	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge exceeds 50 mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	SD1-M	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge is less than 50mm		P5	Log the defect and monitor if depth exceeds 30mm									
	SD2-S	**Ponding**: Area of ponding of water (not free draining) in the wheel path the exceeds upper intervention level in **SD2-C** Free draining means water disperses without action of traffic.	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	SD2-C	**Ponding:** Area of ponding of water (not free draining) in the wheel path exceeds 3m2: (free draining means water disperses without action of traffic)	$3m^2$	P3	Refer to TMR*	1U, 1R	$5m^2$ 2 months	2U, 2R	$10m^2$ 3 months	3U, 3R	$10m^2$ 3 months	4U, 4R	$10m^2$ 3 months	5U, 5R
	SD2-M	**Ponding**: Area of ponding of water (not free draining) in the wheel path is less than 3m2: (free draining means water disperses without action of traffic)	$3m^2$	P5	Log the defect and monitor ponding is less than $3m^2$									
2	**SH**	**Shoving of Pavement or Asphalt**												
	SH1-H	Size of pothole/depression/hump/rut/scour means the road becomes untrafficable, as location is within wheel path or more than ½ lane, and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	SH1-S	**Shoving (Lateral measure)**: Height/depth of shove on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds the upper intervention level in **SH1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SH1-C	**Shoving (Lateral measure)**: Height/depth of shove on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 75 mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 3 months	4U, 4R	100mm 3 months	5U, 5R
	SH1-P	**Shoving (Lateral measure)**: Height/depth of shove on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	SH2-S	**Shove (Longitudinal measure)**: Height/depth of shove on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds the upper intervention level in **SH2-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SH2-C	**Shoving (Longitudinal measure)**: Height/depth of shove on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 2 months	4U, 4R	100mm 2 months	5U, 5R
	SH2-P	**Shoving (Longitudinal measure)**: Height/depth of shove on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
3	**SR**	**Ruts in Bituminous Surface**												
	SR1-H	Size of pothole/depression/hump/rut/scour means the road becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									

	SR1-S	**Depth of Rut**: Depth of rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds the upper intervention level in **SR1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SR1-C	**Depth of Rut**: Depth of rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 9 months	4U, 4R	100mm 9 months	5U, 5R
	SR1-P	**Depth of Rut**: Depth of rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	SR1-M	**Depth of Rut**: Depth of rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge is less than 50mm		P5	Log the defect and monitor if depth exceeds 30mm									
	SR2-S	**Ponding:** Area of ponding of water (not free draining) in the wheel path exceeds the upper intervention level in **SR2-C** Free draining means water disperses without action of traffic.	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SR2-C	**Ponding**: Area of ponding of water (not free draining) in the wheel path exceeds 3 m2. Free draining means water disperses without action of traffic.	3m2	P3	Refer to TMR*	1U, 1R	$5m^2$ 2 months	2U, 2R	$10m^2$ 3 months	3U, 3R	$10m^2$ 3 months	4U, 4R	$10m^2$ 3 months	5U, 5R
	SR2-M	**Ponding**: Area of ponding of water (not free draining) in the wheel path is less than 3 m2. Free draining means water disperses without action of traffic.	3m2	P5	Log the defect and monitor if ponding area is greater than 1m2									
	SR3-S	**Depressions Service Reinstatement:** Rough Trench depth of depression using a 1.2 m straight edge exceeds the upper intervention level in **SR3-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SR3-C	**Depressions Service Reinstatement**: Rough Trench depth of depression using a 1.2 m straight edge exceeds 75 mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 9 months	4U, 4R	100mm 9 months	5U, 5R
	SR3-P	**Depressions Service Reinstatement**: Rough Trench depth of depression using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	SR3-M	**Depressions Service Reinstatement**: Rough Trench depth of depression using a 1.2m straight edge is less than 50 mm		P5	Log the defect and monitor if depression depth exceeds 20 mm									
4	**SP**	**Potholes/ Delamination in Bituminous Surface**												

	SP1-H	Severe loss of bitumen seal within wheel path of vehicle. Road seal damaged in the vehicle wheel path and cars are taking evasive action Washout or pothole exceeding 100mm depth at approach to bridge, causeway or grid where pothole becomes unavoidable	NA	P1 Hazard	Hazardous defect procedure									
	SP1-S	**Dimension**: Plan dimension on sealed pavements exceeds the upper intervention level in **SP1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	SP1-C	**Dimension**: Loss of area on sealed pavements exceeds 300mm diameter	300mm	P3	Refer to TMR*	1U, 1R	500mm 4 weeks	2U, 2R	500mm 4 weeks	3U, 3R	500mm 6 weeks	4U, 4R	500mm 6 weeks	5U, 5R
	SP1-M	**Dimension**: Loss of area on sealed pavements is less than 300mm diameter	300mm	P5	Log the defect and monitor if plate size exceeds 50 mm									
	SP2-S	**Depth**: Depth on sealed pavements exceeds the upper intervention level in **SP2-C**	Upper IL	P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	SP2-C	**Depth**: Depth on sealed pavements exceeds 30mm	30mm	P3	Refer to TMR*	1U, 1R	40mm 4 weeks	2U, 2R	50mm 4 weeks	3U, 3R	60mm 6 weeks	4U, 4R	60mm 6 weeks	5U, 5R
	SP2-M	**Depth**: Depth on sealed pavements is less than 30 mm	10mm	P5	Log the defect and monitor if depth exceeds 10 mm									
Defect Category 2: Cracks in Bituminous Surface Defects														
5	**CC**	**Crocodile Cracking in Bituminous Surface**												
	CC1-H	Size of pothole/depression/hump/rut/scour means the road becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	CC1-S	Safety - Refer to Potholes defect	Upper IL	P2	Refer to **Potholes** - Category 1, Defect 4									
	CC1-P	Moisture is entering/leaving the pavement	NA	P4	Refer to TMR*	1U, 1R	9 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CC1-M	Plate size is less than 100mm	100	P5	Log the defect and monitor if plate size exceeds 50 mm									
6	**SC**	**Bituminous Surface Cracks General**												
	SC1-H	Severe loss of bitumen (seal) within wheel path of vehicle - cars are taking evasive action (swerving into opposing traffic lane)	NA	P1 Hazard	Hazardous defect procedure									
	SC1-S	Safety - Refer to Potholes defect	Upper IL	P2	Refer to **Potholes** - Category 1, Defect 4									
	SC1-C	Cracking on sealed pavements exceeds 5mm and frequent over >15% of lane km or road length	5mm	P3	Refer to TMR*	1U, 1R	9 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	SC1-M	Individual crack width less than 5mm		P5	Log the defect and monitor if crack exceeds 3mm									

Defect Category 3: Edge Defects Bituminous Surface Defects

7	**SE**	**Edge Break in Bituminous Surface**												
	SE1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	SE1-S	**Unsealed Shoulder:** From the average existing seal width, edge break exceeds the upper intervention level in **SE1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SE1-C	**Unsealed Shoulder**: From the average existing seal width, edge break exceeds 100mm	100mm	P3	Refer to TMR*	1U, 1R	250mm 3 months	2U, 2R	250mm 3 months	3U, 3R	300mm 6 months	4U, 4R	300mm 6 months	5U, 5R
	SE1-M	**Unsealed Shoulder**: From the average existing seal width, edge break is less than 100mm	100mm	P5	Log the defect and monitor if deviation exceeds 50mm									
	SE2-S	**Sealed Shoulder** (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds the upper intervention level in **SE2-C** or encroaching into the edge line of road lane	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SE2-C	**Sealed Shoulder** (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds 200mm or encroaching into the edge line of road lane	200mm	P3	Refer to TMR*	1U, 1R	250mm 3 months	2U, 2R	250mm 3 months	3U, 3R	300mm 6 months	4U, 4R	300mm 6 months	5U, 5R
	SE2-P	**Sealed Shoulder** (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds 150mm and less than 200mm and not encroaching into the edge line of road lane	150mm	P4	Refer to TMR*	1U, 1R	200mm 9 months	2U, 2R	200mm 9 months	3U, 3R	200mm 9 months	4U, 4R	200mm 9 months	5U, 5R
	SE2-M	**Sealed Shoulder** (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break is less than 150mm and not encroaching into the edge line of road lane		P5	Log the defect and monitor if deviation exceeds 100mm									
8	**SO**	**Edge Drop Off in Bituminous Surface**												
	SE3-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	SE3-S	**Unsealed shoulder**: Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds the upper intervention level in **SE3-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	SE3-C	**Unsealed shoulder**: Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 6 months	4U, 4R	100mm 6 months	5U, 5R
	SE4-S	**Sealed Shoulder** (at least 0.5 m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds the upper intervention level in SE4-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SE4-C	**Sealed Shoulder** (at least 0.5m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 8 months	4U, 4R	100mm 8 months	5U, 5R
	SE4-P	**Sealed Shoulder** (at least 0.5m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 12 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	SE4-M	Edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder is less than 50mm		P5	Log the defect and monitor if deviation exceeds 30mm									
Defect Category 4: Surface Texture Deficiencies Bituminous Surface Defects														
9	**SF**	**Flushing, Bleeding Seal**												
	SF1-H	Bleeding leads to bitumen pick up on vehicle tyres likely to result in complaints.	NA	P1 Hazard	Hazardous defect procedure									
	SF1-C	Any fatty strips is greater than 10m on a horizontal curve or approach to a curve or within an intersection or 15m on straights or 20% of lane km is fatty	10m 20%	P3	Refer to TMR*	1U, 1R	9 months	2U, 2R	9 months	3U, 3R	9 months	4U, 4R	9 months	5U, 5R
	SF1-M	Less than 20% of lane km is fatty	<20%	P5	Log the defect and monitor if less than 20%									
10	**SS**	**Ravelling or Stripping Seal**												
	SS1-H	Size of pothole/depression/hump/rut/scour means the road becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	SS1-S	Any ravelling or stripping on a horizontal curve or approach to or within an intersection exceeds 5m2	5m2	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SS1-C	Any stripping in an area exceeds 10m2	10m2	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R

	SS1-M	Any ravelling or stripping where the gravel pavement visibility exceeds 1m2		P5	Log the defect and monitor if stripping area exceeds 1m2									
Defect Category 5: Other Bituminous Surface Defects														
11	**SL**	**Loose Stone or Debris on Sealed Roadway / Sealed Shoulder**												
	SL1-H	**Debris**: Fallen trees/branches, large objects (fridge, water tank), displaced drain/manhole covers; sand/gravel (large amount; cement). **Travel Path**: Debris will affect the travel lane. Evasive action in a dangerous manner to avoid the debris/hazard required. **Travel Path**: Debris making the road slippery/ dangerous. **Fire or smoke:** Causing hazardous road conditions including trees/structures that may fall onto the roadway. **Sharps:** Needles, syringes etc located within the roadway creating a serious hazard.	NA	P1 Hazard	Hazardous defect procedure									
	SL1-S	Any verified defect (debris, foreign material, loose stones/material, litter, dumped tyres, waste/oil) identified located on a horizontal curve or approach to or within an intersection	Location	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SL1-C	**Kerb channels**: Any verified defect (debris, foreign material, loose stones, litter) accumulated build up exceeds 50mm in kerb channels	50mm	P3	Refer to TMR*	1U, 1R	100mm 4 weeks	2U, 2R	100mm 4 weeks	3U, 3R	100mm 4 weeks	4U, 4R	100mm 4 weeks	5U, 5R
	SL2-C	**Depth**: Any verified defect (debris, foreign material, loose stones, litter) accumulated build up exceeds 25mm depth of loose material, on road lane greater than 20m2	25mm	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	SL3-C	**Sealed Shoulder:** Any verified defect (debris / foreign material / litter on sealed surface) accumulated build up exceeds 25mm depth of loose material, on shoulder lane greater than 20m2	25mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
12	**SG**	**Grass on Sealed Roadway**												
	SG1-S	Control of vegetation growth around kerb and channel and on the road pavement that create unsafe road condition (encroachment on traffic lane)		P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	SG1-P	Control of vegetation growth around kerb and channel and on the road pavement exceeds 5m in length for road lane or kerb & channel	5m	P4	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	SG1-M	Control of vegetation growth around kerb and channel and on the road pavement is less than 5m in length		P5	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
13	**SX**	**Service Pit Covers, Rough Manhole Covers and Grates (Rough Service access facility)**												
	SX1-H	Popped manhole lid	NA	P1 Hazard	Hazardous defect procedure									
	SX1-S	Service pit cover is displaced or damaged; or Height or depth relative to surrounding ground exceeds the upper intervention level in SX1-C **Note**: Service Pit to be made safe by Council and referred to relevant authority or Council Section	Upper IL	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	SX1-C	Height or depth relative to surrounding ground exceeds 20 mm	20mm	P3	Refer to TMR*	1U, 1R	30mm 4 weeks	2U, 2R	30mm 4 weeks	3U, 3R	30mm 6 weeks	4U, 4R	30mm 6 weeks	5U, 5R
Defect Category 6: Unsealed Shoulder Defects														
14	**UC**	**Crossfall in Unsealed Shoulder**												
	UC1-S	**Insufficient Crossfall**: Area of ponding of water (not free draining) in the wheel path exceeds the upper intervention level in UC1-C Free draining means water disperses without action of traffic	Upper IL	P2	Refer to TMR*	1U, 1R	2 months	2U, 2R	3 months	3U, 3R	4 months	4U, 4R	6 months	5U, 5R
	UC1-C	**Insufficient Crossfall**: Area of ponding of water (not free draining) in the wheel path exceeds 3m^2 Free draining means water disperses without action of traffic	3m2	P3	Refer to TMR*	1U, 1R	10m2 4 months	2U, 2R	15m2 6 months	3U, 3R	20m2 8 months	4U, 4R	20m2 10 months	5U, 5R
	UC1-M	**Insufficient Crossfall**: The defect causing water ponding on pavement edge or on shoulder	1m2	P5	Log the defect and monitor if plan dimension exceeds 1m2									
	UC2-M	**Excessive Crossfall**: Pavement without superelevation: the crossfall of shoulders is less than 6%	6%	P5	Refer to TMR*	1U, 1R	10%	2U, 2R	10%	3U, 3R	10%	4U, 4R	10%	5U, 5R
	UC3-M	**Excessive Crossfall**: Pavement with superelevation: low side of pavements where the crossfall of shoulders is less than 6%	6%	P5	Refer to TMR*	1U, 1R	10%	2U, 2R	10%	3U, 3R	10%	4U, 4R	10%	5U, 5R
	UC4-M	**Excessive Crossfall**: Pavement with superelevation: high side of pavements, the difference between the crossfall of the shoulder and the crossfall of the adjacent pavement is less than 3%	3%	P5	Refer to TMR*	1U, 1R	7%	2U, 2R	7%	3U, 3R	7%	4U, 4R	7%	5U, 5R

	UC5-M	**Excessive Crossfall**: Pavement with superelevation: high side of pavements, the difference between the crossfall of the shoulder and the crossfall of the adjacent pavement is less than -1%	1%	P5	Refer to TMR*	1U, 1R	-5%	2U, 2R	-5%	3U, 3R	-5%	4U, 4R	-5%	5U, 5R
15	**UL**	**Lateral Scour Channels in Unsealed Shoulders**												
	UL1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	UL1-S	Where the seal width is less than 6, the depth exceeds the upper intervention level in **UL1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	6 weeks	2U, 2R	6 weeks	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	UL1-C	Where the seal width is less than 6m, the depth exceeds 40mm	40mm	P3	Refer to TMR*	1U, 1R	100mm 3 months	2U, 2R	100mm 3 months	3U, 3R	125mm 6 months	4U, 4R	125mm 6 months	5U, 5R
	UL1-P	Where the seal width is 6-8m, the depth exceeds 40 mm	40mm	P4	Refer to TMR*	1U, 1R	75mm 6 months	2U, 2R	100mm 12 months	3U, 3R	125mm 12 months	4U, 4R	125mm 12 months	5U, 5R
16	**UH**	**Hazardous Dry Loose Material in Unsealed Shoulders**												
	UH1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	UH1-S	Loose shoulder material depth exceeds the upper intervention level in **UH1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	1 month	2U, 2R	1 month	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	UH1-C	Loose shoulder material depth exceeds 40 mm	40mm	P3	Refer to TMR*	1U, 1R	75mm 6 months	2U, 2R	75mm 6 months	3U, 3R	100mm 9 months	4U, 4R	125mm 9 months	5U, 5R
17	**UR**	**Ruts in Unsealed Shoulders**												
	UR1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	UR1-S	Where the seal width is less than 6, the depth exceeds upper intervention level in **UR1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	1 month	2U, 2R	1 month	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	UR1-C	Where the seal width is less than 6m, the depth exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 9 months	4U, 4R	125mm 9 months	5U, 5R
	UR1-M	Where the seal width is less than 6m, the depth is less than 75mm	75mm	P5	Log the defect and monitor if depth exceeds 50 mm									
	UR2-P	Where the seal width is 6-8 m, the depth exceeds 75mm	75mm	P4	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	150mm 9 months	3U, 3R	200mm 12 months	4U, 4R	200mm 12 months	5U, 5R
	UR2-M	Where the seal width is greater than 8m, the depth exceeds 100mm	100mm	P5	Log the defect and monitor if depth exceeds 50 mm									
18	**UD**	**Debris on Unsealed Shoulder**												
	UD1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									

	UD1-S	Any debris on shoulder exceeds upper intervention level in UD1-C	Upper IL	P2	Refer to TMR*	1U, 1R	1 month	2U, 2R	1 month	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	UD1-C	Any debris on shoulder exceeds 40mm in height	40mm	P3	Refer to TMR*	1U, 1R	75mm 6 months	2U, 2R	75mm 6 months	3U, 3R	100mm 9 months	4U, 4R	125mm 12 months	5U, 5R
19	**UW**	**Reduced Shoulder Width in Unsealed Shoulders**												
	UW1-C	Reduction of shoulder design width in general vicinity exceeds 25% - Drainage encroached on shoulder area	25%	P3	Refer to TMR*	1U, 1R	30% 12 months	2U, 2R	30% 12 months	3U, 3R	30% 12 months	4U, 4R	30% 12 months	5U, 5R
20	**UP**	**Potholes in Unsealed Shoulder**												
	UP1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	UP1-S	Depth of isolated holes exceeds upper intervention level in UP1-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	UP1-C	Depth of isolated holes exceeds 60mm	60mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	125mm 9 months	3U, 3R	150mm 9 months	4U, 4R	150mm 9 months	5U, 5R
Defect Category 7: Unsealed Roadway Defects														
21	**GR**	**Wheel Ruts in Unsealed Roadways**												
	GR1-H	Deep scour across the road forcing vehicles to brake hard and affecting vehicle control	NA	P1 Hazard	Hazardous defect procedure									
	GR1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection or school bus route	Location	P2	Refer to TMR*	1U, 1R	6 weeks	2U, 2R	6 weeks	3U, 3R	6 weeks	4U, 4R	6 weeks	5U, 5R
	GR1-C	**Depth** of wheel ruts and shoves using a 1.2 m straight edge (measured valley to crest in case of shoves and ruts) exceeds 100mm	100 mm	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
22	**GE**	**Shoving in Unsealed Roadways**												
	GR2-S	Verified defect this is located on curve, bend or at an intersection.	Location	P2	Refer to TMR*	1U, 1R	6 weeks	2U, 2R	6 weeks	3U, 3R	6 weeks	4U, 4R	6 weeks	5U, 5R
	GR2-C	**Depth** of wheel ruts and shoves using a 1.2 m straight edge (measured valley to crest in case of shoves and ruts) exceeds 100mm	100 mm	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
23	**GP**	**Potholes in Unsealed Roadways**												
	GP1-H	Washout or pothole exceeding 100mm depth located at approach to bridge, causeway or grid where pothole becomes unavoidable	NA	P1 Hazard	Hazardous defect procedure									

	GP1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection; bridge, causeway or grid approach	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	GP1-C	Pothole Depth exceeds 100mm and diameter exceeds 500mm	100 mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	GP1-P	Any pothole less than 100mm	100 mm	P4	As part of programmed works - Maintenance grade									
24	**GG**	**Pavement Defects**												
	GG1-C	**Subgrade** visible with little to no gravel exceeding 100m of running surface	100m	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	GG1-P	**Subgrade** visible with little to no gravel exceeding 30m of running surface	30m	P4	Refer to TMR*	1U, 1R	100m 12 months	2U, 2R	100m 12 months	3U, 3R	100m 12 months	4U, 4R	100m 12 months	5U, 5R
	GG1-M	**Subgrade** visible with little to no gravel exceeding 25% of lane per kilometre	25%	P5	Log defect and monitor Refer to Capital Program									
25	**GF**	**Crossfall in Unsealed Roadways**												
	GF1-P	Any insufficient crossfall less than 3%	NA	P4	As part of programmed works - Maintenance grade									
	GF2-P	Any excessive crossfall on straight exceeds 8%	NA	P4	As part of programmed works - Maintenance grade									
26	**GW**	**Loss of Pavement Width / Running Course**												
	GW1-H	Loss of pavement width will affect the travel lane causing vehicles to take evasive action in a dangerous manner.	NA	P1 Hazard	Hazardous defect procedure									
	GW1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection or school bus route	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	GW1-C	Loss of pavement width is greater than 25%	25%	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	GW1-P	Any loss of pavement running course	NA	P4	As part of programmed works - Maintenance grade									
27	**GC**	**Corrugations**												
	GC1-H	Corrugations, slippery surface, loose surface – cannot travel road at more than 40km/hr (NOT in wet conditions)	NA	P1 Hazard	Hazardous defect procedure									
	GC1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection or school bus route	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	GC1-C	Corrugations depth exceeds 75mm for more than 250m of travel lane	75mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R

	GC1-P	Corrugation depth is less than 75mm	75mm	P4	As part of programmed works - Maintenance grade										
28	**GS**	**Scour Channels**													
	GS1-H	Deep scour across the road forcing vehicles to brake hard and affecting vehicle control	NA	P1 Hazard	Hazardous defect procedure										
	GS1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection or school bus route	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R	
	GS1-C	Cross road scour depth exceeds 75mm, width exceeds 150mm and across more than 30% travel lane	75mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	3 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R	
	GS1-P	Cross road scour depth is less than 75mm	75mm	P4	As part of programmed works - Maintenance grade										
29	**GD**	**Loose Stone/Material & Coarse Surface**													
	GD1-H	**Debris**: Fallen trees/branches, large objects (fridge, water tank) **Travel Path**: Debris will affect the travel lane. Evasive action in a dangerous manner to avoid the debris/hazard required. **Travel Path**: Debris making the road slippery/ dangerous. **Fire or smoke**: Causing hazardous road conditions including trees/structures that may fall onto the roadway.	NA	P1 Hazard	Hazardous defect procedure										
	GD1-S	Verified defect identified located on a horizontal curve or approach to or within an intersection or school bus route	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R	
	GD1-C	**Depth**: Any verified defect (debris, foreign material, loose stones, litter) accumulated build depth exceeds 100mm of loose material for more than 150m of travel lane	75mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	3 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R	
	GD1-P	Accumulated build depth is less than 75mm		P4	As part of programmed works - Maintenance grade										
Defect Category 8: Surface Drain Defects															
30	**DT**	**Table Drain**													

	DT1-H	Blocked surface drain causing flooding to the roadway or impacting infrastructure where water is not free draining ^. ^ Free draining means water disperses without action of traffic	NA	P1 Hazard	Hazardous defect procedure									
	DT1-S	Water or erosion encroaches 1.5m onto roadway	1.5m	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	DT1-C	Water ponds at a depth exceeding 150mm due to geometry of table drain, build-up of debris or significant erosion	150mm	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DT2-C	Table drain is silted and less than 200mm below road shoulder hinge point	200mm	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DT3-C	Scouring of drains encroaches on road shoulder or property boundary	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DT3-P	Scouring of drains exceeding 100mm deep and 200mm wide	NA	P4	Refer to TMR*	1U, 1R	9 months	2U, 2R	9 months	3U, 3R	9 months	4U, 4R	9 months	5U, 5R
	DT4-C	**Vegetation** causing ponding exceeding 150mm in drainage channel and not allowing water to freely drain*; Vegetation causing silting and table drain is less than 200mm below road shoulder hinge point; or Vegetation causing water stagnation exceeding 2 weeks^. ** Consultation with Environment and Conservation team for mature tree removal* *^ Consultation with Vector Control to determine appropriate action. This may result in adjusted response times.*	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DT4-M	**Vegetation** causing water ponding less than 150mm in the drainage channel or silting less than 200m below shoulder hinge point	NA	P5	As part of programmed works - Maintenance grade									
31	**CD**	**Catch Drain**												
	CD1-C	Scouring or silting causing overflow onto road laneway or impacting drain function	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
Defect Category 9: On Road Drain - Concrete Roadway, Culvert, Pipe, Pit & Floodway Defects														
32	**BI**	**Drain Obstruction**												
	BI1-H	Blocked surface drain causing flooding to the roadway or impacting infrastructure where water is not free draining ^. ^ Free draining means water disperses without action of traffic	NA	P1 Hazard	Hazardous defect procedure									

	BI1-S	Flood gate is jammed or blocked during forecasted seasonal rain	Rain event	P2	Refer to TMR*	1U, 1R	5 days	2U, 2R	5 days	3U, 3R	5 days	4U, 4R	5 days	5U, 5R
	BI1-C	Flood gates are not operating	NA	P3	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	BI2-C	Culvert obstruction exceeds 30% - silting or debris build up obstructs flow of stormwater	30%	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
33	**DS**	**Silt or Debris on Floodway Sections**												
	DS1-H	Any silt or debris encroaching into floodway sections of roadway causing traffic to take evasive action Floodway impassable due to silt or debris	NA	P1 Hazard	Hazardous defect procedure									
	DS1-S	Any silt or debris encroaching into floodway sections of roadway exceeding 50% of laneway		P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	DS1-C	Silt or debris build-up not obstructing flow of traffic	NA	P3	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
34	**PF**	**Pits**												
	PF1-H	Damaged or missing drainage pit lid, surrounds or grates, in pedestrian areas or traffic lanes	NA	P1 Hazard	Hazardous defect procedure									
	PF1-S	Grate/Manhole pit lid is missing but not in trafficable area	NA	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	PF1-C	Grate damaged; Gully pit concrete surrounds damaged; Manhole lid cover or surrounds damaged but not in trafficable area	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	PF2-S	Blocked grate will cause impact on infrastructure or traffic to take evasive action	NA	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	PF2-C	Grate or pit outlet pipe is obstructed/blocked with debris	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
35	**DC**	**Culvert Headwall, Apron & Pipes**												
	DC1-H	Compromised culvert structure carrying traffic on verge of collapse; visible movement of structure	NA	P1 Hazard	Hazardous defect procedure									
	DC1-S	Compromised culvert structure carrying traffic where culvert movement causes open holes beside pipes; loss of steel reinforcement components	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	DC1-P	**Cracking** exceeds 5mm in culvert components	5mm	P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	DC1-M	**Cracking** in end structures are less than 5mm wide and no forward movement	5mm	P5	Log the defect and monitor drainage performance									

	DC2-C	**Misalignment/separation** of culvert components exceeds 20mm including head wall separation	20mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	DC2-M	**Misalignment/separation** of culvert components less than 20mm including head wall separation	Visible	P5	Log the defect and monitor drainage performance									
	DC3-C	**Corrosion** steel components (including reinforcement in concrete structures)	Visible	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	DC4-C	**Scouring** around culvert components encroaches on travel path	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	DC4-M	**Scouring** around culvert components	NA	P5	Log the defect and monitor drainage performance									
	DC5-C	**Headwall/Apron** is displaced or broken	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	DC5-M	**Headwall/Apron** not installed	NA	P5	Log the defect and monitor drainage performance									
36	**CR**	**Cracks in Concrete Roadway / Floodway**												
	CR1-H	Compromised structure carrying traffic on verge of collapse; visible movement of structure	NA	P1 Hazard	Hazardous defect procedure									
	CR1-S	Any abrupt difference in height to adjacent slab or surface exceeds upper intervention level in **CR1-C**	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CR1-C	**Sunken Concrete Pavement Slab or Spalling Joints**: Any abrupt difference in height to adjacent slab or surface exceeds 40mm	40mm	P3	Refer to TMR*	1U, 1R	75mm 6 months	2U, 2R	75mm 6 months	3U, 3R	75mm 6 months	4U, 4R	75mm 6 months	5U, 5R
	CR1-M	**Sunken Concrete Pavement Slab or Spalling Joints**: Any abrupt difference in height to adjacent slab or surface is less than 40mm		P5	Log the defect and monitor if deviation exceeds 20mm									
	CR2-C	**Cracking** exceeds 5mm and frequency is over >15% of lane km or road length and moisture is penetrating the pavement	5mm	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CR3-C	**Joint sealant**: Percentage of missing sealant between concrete slabs exceeds 30%	30%	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
37	**CP**	**Potholes in Concrete Roadway**												
	CP1-H	Severe loss of surface within wheel path of vehicle. The road has been damaged in the vehicle wheel path – cars are taking evasive action (swerving into opposing traffic lane)	NA	P1 Hazard	Hazardous defect procedure									
	CP1-S	**Dimension:** Loss of area on concrete roadway exceeds the upper intervention level in **CP1-C**; or exposed mesh/reinforcement bar in road lane	Upper IL	P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	CP1-C	**Dimension:** Loss of area on concrete roadway exceeds 300mm	300mm	P3	Refer to TMR*	1U, 1R	500mm 4 weeks	2U, 2R	500mm 4 weeks	3U, 3R	500mm 6 weeks	4U, 4R	500mm 6 weeks	5U, 5R

	CP1-M	**Dimension:** Loss of area on concrete roadway is less than 300mm		P5	Log the defect and monitor if plate size exceeds 50 mm									
	CP2-S	**Depth** on concrete roadway exceeds the upper intervention level in **CP2-C**	Upper IL	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	2 weeks	3U, 3R	3 weeks	4U, 4R	4 weeks	5U, 5R
	CP2-C	**Depth** on concrete roadway exceeds 30mm	30 mm	P3	Refer to TMR*	1U, 1R	40mm 4 weeks	2U, 2R	50mm 4 weeks	3U, 3R	60mm 6 weeks	4U, 4R	60mm 6 weeks	5U, 5R
	CP2-M	**Depth** on concrete roadway is less than 30mm		P5	Log the defect and monitor if depth exceeds 10mm									
38	**LT**	**Litter and Gross Pollutant Trap**												
	LT1-S	Litter basket is blocked or full during forecasted seasonal rain Pollutant trap is overflowing and dispersing into waterway	Rain event	P2	Refer to TMR*	1U, 1R	5 days	2U, 2R	5 days	3U, 3R	5 days	4U, 4R	5 days	5U, 5R
	LT1-C	Litter basket is blocked or full (not during wet season)	NA	P3	Refer to TMR*	1U, 1R	6 weeks	2U, 2R	6 weeks	3U, 3R	6 weeks	4U, 4R	6 weeks	5U, 5R
	LT2-S	Structural or functional defect prior to wet season	Rain event	P2	Refer to TMR*	1U, 1R	6 weeks	2U, 2R	6 weeks	3U, 3R	6 weeks	4U, 4R	6 weeks	5U, 5R
	LT2-C	Structural or functional defect including cracking or damaged lid (not during wet season)	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
39	**DS**	**Subsoil Drain**												
	DS1-M	Any non functional or missing or decayed element of the subsoil drainage system including flush points and outlets cause reducing flow capacity or sub soil drainage integrity	NA	P5	Log the defect and monitor drainage performance									
Defect Category 10: Off Road Drain - Open Drain Defects														
40	**DD**	**Detention / Retention Basin & Sediment Ponds**												
	DD1-H	Basin or pond full and on verge of collapse; large cracks could cause basin/pond failure	NA	P1 Hazard	Hazardous defect procedure									
	DD1-S	Blocked waterway will cause impact to infrastructure during forecasted seasonal rain	Rain event	P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	DD1-C	Basin capacity reduced by more than 25% and de-silting required; Visible debris or litter resulting in likely restriction of basin function	25%	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DD2-C	Damaged structures or protective treatments	NA	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R

	DD3-C	**Vegetation**: Overgrowth of weeds, algae or moss; or required vegetation missing and impacting asset function* * *State Government legislation overrides Local Government documentation*	NA	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
41	**DL**	**Concrete Lined Open Drain**												
	DL1-H	Drain full and on verge of collapse; large cracks could cause drain failure	NA	P1 Hazard	Hazardous defect procedure									
	DL1-S	Blocked waterway will cause impact to infrastructure during forecasted seasonal rain	Rain event	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	DL1-C	Drain capacity reduced by more than 25%	25%	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DL2-C	Structural integrity of walls being compromised or major cracking/scours* * Design issue: Refer to Engineering Asset Solutions for investigation of short and long term solution, response time will extend dependant on solutions	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
42	**DO**	**Open Earth Drain**												
	DO1-H	Blocked waterway impacting infrastructure or adjoining property	NA	P1 Hazard	Hazardous defect procedure									
	DO1-S	Blocked waterway will cause impact to infrastructure during forecasted seasonal rain	Rain event	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	DO1-C	Drain capacity reduced by more than 25%	25%	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DO2-C	Structural integrity of walls or drain base has been compromised due to significant scour or erosion* *Design issue: Refer to Engineering Asset Solutions for investigation of short and long term solution, response time will extend dependant on solutions	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	DO3-C	Damaged structures or protective treatments (rock protection)	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DO4-C	**Vegetated stormwater drain**: Overgrowth of weeds, or required vegetation missing and impacting asset function* * State Government legislation overrides Local Government documentation	NA	P5	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R

	DO5-C	**Non-vegetated stormwater drain** Vegetation causing ponding exceeding 150mm in drainage channel and not allowing water to freely drain*; Vegetation causing silting and table drain is less than 200mm below road shoulder hinge point; or Vegetation causing water stagnation exceeding 2 weeks^. * Consultation with Environment and Conservation team for mature tree removal ^ Consultation with Vector Control to determine appropriate action. This may result in adjusted response times.	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	DO5-M	**Vegetation** causing water ponding less than 150mm in the drainage channel or silting less than 200m below shoulder hinge point	NA	P5	As part of programmed works									
Defect Category 11: Roadside Vegetation Defects														
43	**VL**	**Large Trees and Shrubs Close to Roadway / Trees or Limbs Likely to Fall on Roadway**												
	VL1-H	Trees, overhanging branches or broken limbs with foliage die back overhanging any portion of carriageway lane width, or large trees/branches close to roadway, which are considered to be a hazard**^** **^** In consultation with Environment & Conservation team or Parks Arborist as required	NA	P1 Hazard	Hazardous defect procedure									
	VL1-S	Vegetation restricting visibility of signs or site distance (e.g. intersections) causing safety concerns or causing damage to assets	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	VL1-C	**Clear Zones**: Tree removal within clear zones^ Less than 60km/hr = 4.5m 60-80km/hr = 5.5m 80-100 km/hr = 6.5 to 9.0m ^ Subject to funding for all areas	km/hr	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
44	**VP**	**Declared Plants**												
	VP1-S	Remove Noxious weeds and environmental weeds before they flower	NA	P2	Lodge CSR PMWEED and complete questionnaire Actioned by Pest Management team									
45	**VG**	**Grass, Trees and Shrubs in Sight Line or Obstructing Roadside Furniture**												

	VG1-H	Any vegetation obscuring critical traffic control sign ONLY if causing immediate threat/danger - someone being immediately hurt within short amount of time. Must identify issue - • Signs include – Stop, Give Way, Warning Sign • Damaged sign is on road in pathway of traffic; or footpath in area trafficked by pedestrians • Post bent into oncoming traffic • Sign is unreadable	NA	P1 Hazard	Hazardous defect procedure									
	VG1-S	Any vegetation obscures sight distance and minimum stopping sight distance	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	VG1-C	Vegetation obscures sight lines of accesses, intersections or sight distances of previously cleared areas; or any signs or guide posts	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	VG1-P	Vegetation causing damage to existing assets	NA	P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	VG2-C	**Sealed Roads only***:* Grass height exceeds 700mm within 2.4m of edge of roadway or invert of table	700mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	3 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
46	**VN**	**Grass Not in Sight Line**												
	VN1-M	**Sealed Roads only:** Vegetation ***not*** in sight lines exceeds 700mm within 2.4m of edge of roadway or invert of table	NA	P5	As part of programmed works - slashing or mowing schedule									
47	**VM**	**Grass Growth on Medians**												
	VM1-S	Grass height restricting visibility and site distance causing safety concerns	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	VM1-P	Urban areas growth exceeds 300mm in height	300mm	P4	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	VM1-M	Grass in urban areas	NA	P5	As part of programmed works									
Defect Category 12: Ancillary Road Defects														
48	**AS**	**Unauthorised Signs**												
	AS1-C	Any verified unauthorized sign identified by inspection, complaint or notification	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
49	**AB**	**Unstable Batter/ Embankment, Missing Material**												
	AB1-S	Unstable cut/embankment with visible scour, cracks, erosion or instability with potential of landslip^ ^ Cordon off site and program permanent repairs	NA	P2	Make Safe Refer to Engineering Asset Solutions for investigation - short and long term solution									
50	**AC**	**Damaged Concrete or Paving Blocks**												

	AC1-H	Damaged, displaced concrete or paving blocks in roadway or pedestrian areas that will cause immediate threat/injury	NA	P1 Hazard	Hazardous defect procedure									
	AC1-C	Damaged, displaced concrete or paving blocks	NA	P3	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	6 weeks	5U, 5R
51	**RR**	**Litter on Road, Road Reserve and Footpath**												
	RR1-H	Litter is biological in nature on road, road reserve or footpath	NA	P1 Hazard	Hazardous defect procedure									
	RR1-C	Litter on environmentally sensitive locations (e.g. waterways)* * *Dependant on type of litter - Consultation with Biosecurity & Environmental Health team required (e.g. oil, chemical, construction waste)*	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
		Illegal dumping	NA	P3	Lodge CSR EPDUMP Managed by Local Law Compliance team									
52	**AG**	**Graffiti**												
	AG1-H	Any graffiti considered offensive and highly visible to public	NA	P1 Hazard	Hazardous defect procedure									
	AG1-M	Any other graffiti	NA	P5	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
53	**AV**	**Abandoned Vehicles**												
		Any abandoned vehicle or equipment likely to be hazardous to travelling public or pedestrians	NA	P1 Hazard	Contact emergency services									
		Any other abandoned vehicle or equipment in road reserve	NA	P3	Lodge CSR LLABVC Managed by Local Law Compliance team									
54	**RA**	**Dead Animals on Roadway**												
		Dead animals on roadway that are hazardous	NA	P1 Hazard	Lodge CSR ANDEAD Managed by Waste Program Delivery team									
		Dead animals is located within pedestrian zone, cycleway or on a bend	NA	P2	Lodge CSR ANDEAD Managed by Waste Program Delivery team									
		Straying Stock: Located on DTMR Roads referred to Roadtek	NA	P1 Hazard	Refer to Roadtek * Except if located on Glenlyon Road, Glenlyon Street - Managed by Council, lodge CSR ANSTOC									
		Straying Stock: Locations that are highly visible to the public and/or pose a significant safety concern to the travelling public	NA	P2	Lodge CSR ANSTOC Managed by Biosecurity and Pest Management team									
55	**RF**	**Safety Fencing**												
	AF1-H	Fence damaged where people can fall to cause immediate threat/injury	NA	P1 Hazard	Hazardous defect procedure									

	AF1-S	Identified defect located within a designated pedestrian zone or cycleway	Location	P2	Refer to TMR*	1U, 1R	1 month	2U, 2R	1 month	3U, 3R	1 month	4U, 4R	1 month	5U, 5R
	AF1-C	Damage affecting purpose or effectiveness of the fence; pedestrians likely to gain unauthorised access to the road reserve	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	AF1-M	Poor aesthetics to travelling public or pedestrians	NA	P5	Log the defect and monitor									
56	**RB**	**Damaged or Unserviceable Bus Shelters**												
	RB1-H	**Item/s** found at the location that is creating a serious hazard (i.e. sharps/needles, syringes, cut or injury from broken glass) **Trip hazard** in location to be trafficked by pedestrians – e.g. Object lying across pedestrian pathway **Pole** lying across pedestrian pathway or on road **Seat** ripped apart/broken **Structure** (shelter or seats etc) has been damaged and is hazardous – object is at shoulder/head level for customers; loose panels	NA	P1 Hazard	Hazardous defect procedure									
	RB1-S	Bus shelter glass panel damaged	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	RB1-C	Damaged shelter or shelter components, bus signage, advertising signage, regulatory signage or tactiles	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	RB1-P	Cleaning of bus shelter and surrounds		P4	As per programmed schedule									
	RB2-C	Trip hazard exceeding 15mm located within pedestrian pathway in or around bus shelter/stop area	30mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	RB3-C	Line marking loss or reflectivity or colour exceeds 50% of bus stop zone	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
57	**ST**	**Traffic Signals and School Zone Lights**												

		• All traffic lights not working, creating confusion • Whole intersection flashing amber • Major pole damage i.e. hazard/structurally unsound/wires exposed. • Lantern out of alignment and thus can be seen by the opposing traffic. • Two or more lamps are blown for a given colour or movement. • Operation of the lights has been affected such that significant congestion or risk taking is occurring – intersection blocked by traffic	NA	P1 Hazard	Notify Police Refer to RMPC Team Leader									
		Pole: Damage that is NOT hazardous/structurally unsound/wires exposed **Lamp**: Not working however other lamps can be seen and traffic is still functioning safely **Operation** of the lights needs attention but not requiring an urgent response	NA	P3	Lodge CSR LITRAF Managed by RMPC team									
	ST1-P	Electrical and operation of signal infrastructure	NA	P4	As part of programmed works									
58	**AZ**	**Streetscape Defects**												
	AZ1-H	Defect will affect the travel lane and evasive action in a dangerous manner to avoid the debris/hazard required	NA	P1 Hazard	Hazardous defect procedure									
	AZ1-S	Identified defect located within a designated pedestrian zone or cycleway	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	AZ1-C	Assets and/or components are damaged or broken and pose a potential risk to both vehicle and pedestrian traffic	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	AZ1-P	Surface (e.g. decks; seating; railings) requires repainting/resealing	NA	P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	AZ2-C	Assets are no longer fit for purpose**^** **^** Subject to funding for all areas	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
59	**RW**	**Retaining Walls**												
	RW1-H	Retaining wall collapsed into trafficable or pedestrian area	NA	P1 Hazard	Hazardous defect procedure									
	RW1-S	Retaining wall structure considered to be on the verge of collapse and poses a potential risk to both vehicle and pedestrian traffic ^ ^ Cordon off site and program permanent repairs	NA	P2	Make Safe - Cordon off site within 5-10 days Refer to Engineering Asset Solutions for investigation of short and long term solution									

	RW1-C	Asset or components are damaged or broken (e.g. wall damaged, posts missing) and poses no immediate threat	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
Defect Category 13: Traffic Sign Defects														
60	**RS**	**Signage**												
	RS1-H	Critical traffic control sign ONLY if causing immediate threat/danger - someone being immediately hurt within short amount of time. Must identify issue - • Signs include – Stop, Give Way, Warning Sign • Damaged sign is on road in pathway of traffic; or footpath in area trafficked by pedestrians • Post bent into oncoming traffic • Sign is unreadable	NA	P1 Hazard	Hazardous defect procedure									
	RS1-S	**Regulatory signs (R1, R2, R3 and R4 series)** missing, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible from 150m at night with lights on low beam in rural areas or legible within 2.5 secs of travel at the operational speed in urban areas	NA	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	RS1-C	**Regulatory signs (R5 Series e.g. parking limits)** missing, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible from 150m at night with lights on low beam in rural areas or legible within 2.5 secs of travel at the operational speed in urban areas	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	RS2-C	**Hazard, guide or warning signs** missing, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible from 150m at night with lights on low beam in rural areas or legible within 2.5 secs of travel at the operational speed in urban areas	NA	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	RS3-C	**Any Other Sign:** Any sign is on a noticeable lean, greater than 15 degrees OR twisted from line of sight by more than 30 degrees. Sign is missing, damaged or damaged components.	15˚	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	RS4-C	Sign is reflecting glare from vehicles lights at night back to the motorist	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
Defect Category 14: Traffic Furniture Defects														

61	**RG**	**Guide Post or Delineators**												
	RG1-H	Guideposts are damaged such that guidance is not provided on section of road that may cause injury	NA	P1 Hazard	Hazardous defect procedure									
	RG1-S	Any guide posts or delineators missing on a bend or crest exceeds 25%. A single post or delineator missing at a culvert or hazard.	Location	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	RG1-C	Any missing guide posts, or the post is on a lean (15 degrees), or there is an inability at night to see at least two delineators ahead (both red, both white, or red and white) from a guide post location, or any missing delineators on guardrail/bridge installation. ^Above relates to observation after cleaning the post and delineator, on low beam	NA	P3	Refer to TMR*	1U, 1R	1 month	2U, 2R	2 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
62	**CB**	**Guardrail, Fencing and Concrete Barriers**												
	CB1-H	Guardrail/s or Guardrope/s are damaged such that it provides no protection or a hazard to vehicles impacting travel path of traffic (on road)	NA	P1 Hazard	Hazardous defect procedure									
	CB1-S	Damaged rail is on a bend, side edge drop off or bridge approach	NA	P2	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CB1-C	Guardrail panel is bent, exceeding 300mm out of alignment	300mm	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	CB1-M	Aesthetic appearance decreased by accumulation of dirt, peeling paint etc.	NA	P5	Log the defect and monitor									
	CB2-C	Guardrail, fencing or concrete barrier facility has a loss of structural integrity	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
63	**KD**	**Kerb or Channelling**												
	KD1-H	Damaged, misaligned kerbing or median noses extend into travel lane causing vehicles to take evasive action	NA	P1 Hazard	Hazardous defect procedure									
	KD1-S	Damaged, misaligned kerbing or median noses exceeds the upper intervention level in **KD1-C** that interrupted longitudinal drainage flow, tripping hazards	Upper IL	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	2 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	KD1-C	Kerb vertical displacement exceeds 60mm and/ or horizontal displacement exceeds 120mm to a maximum of 12m in kerb length	60mm	P3	Refer to TMR*	1U, 1R	100mm 9 months	2U, 2R	100mm 9 months	3U, 3R	100mm 9 months	4U, 4R	100mm 9 months	5U, 5R

	KD2-C	Kerb is silted or obstructed (e.g. concrete, hot mix, steel plates) and restricting stormwater flow exceeding 50mm	50mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	KD3-C	Kerb trip hazard exceeding 30mm adjacent to bus stops, pedestrian crossings or taxi ranks	30mm	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
64	**MD**	**Semi Mountable Kerb and Paved Median**												
	MD1-H	Damaged, misaligned kerbing or median noses extend into travel lane causing vehicles to take evasive action	NA	P1 Hazard	Hazardous defect procedure									
	MD1-S	Damaged, misaligned kerbing or median noses exceeds the upper intervention level in MD1-C that interrupted longitudinal drainage flow, tripping hazards	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	MD1-C	Kerb vertical displacement exceeds 100mm and/or horizontal displacement exceeds 200mm to a maximum of 20m in kerb length	100mm	P3	Refer to TMR*	1U, 1R	200mm 3 months	2U, 2R	200mm 3 months	3U, 3R	200mm 3 months	4U, 4R	200mm 3 months	5U, 5R
	MD2-C	Artificial turf displaced or has surpassed design life		P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	NA	5U, 5R
Defect Category 15: Traffic Marking Defects														
65	**RL**	**Missing or Faded Painted Road Lines and Markings**												
	RL1-H	Stop or give way solid line or pedestrian crossing lines are extremely faded (not visible)	NA	P1 Hazard	Hazardous defect procedure									
	RL1-S	Any verified defect that is within intersection, pedestrian zone, cycleway, school zone or on a bend	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	RL1-C	50% of the traffic management 'longline' marking has lost reflectivity or is discoloured over a lane km or 100 metres of footpath length	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	RL2-C	50% of the pedestrian crossing marking has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	RL3-C	50% of the Disabled Parking or Line Marking stencil has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	RL4-C	50% of holdlines, directional lines and traffic island delineation marking has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
66	**RL**	**Raised Pavement Markers**												
	RL5-S	Any verified defect that is within intersection, pedestrian zone, cycleway, school zone or on a bend	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	RL5-C	25% of raised pavement markers are missing or defective over a curve 50% of raised pavement markers are missing or defective over a straight (lane km)	25% curve 50% straights	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
Defect Category 16: Public Lighting, Streetlight & Electronic Sign Defects														
67	**LS**	**Lighting Switchboard**												
	LS1-H	Any reported electrical switchboard or mains failure Switchboard door open, insecure or unlocked, cover dislodged, accessible to public	NA	P1 Hazard	Hazardous defect procedure									
68	**LH**	**Lighting Hardware**												
	LH1-H	Major pole damage - structurally unsound, exposed accessible wiring Lighting pole knocked down Signs of imminent danger - pole falling, significant swaying, leaning, major soil erosion at footing, or pole dented >20% pole diameter Visibly loose nuts at the base of the pole Unsecured outreach bracket; light cover dislodged	NA	P1 Hazard	Hazardous defect procedure									
	LH1-C	Missing or damaged components but no immediate danger to pedestrians or traffic - including shade cowl installation causing glare nuisance to resident; solar panel defects	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LH1-P	Minor lighting pole damage with cut/tear or dent <20% of pole diameter with NO visible imminent danger	NA	P4	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LH1-A	Loss of galvanisation and or surface rust; paint damage	NA	P5	Log defect and monitor									
69	**LG**	**Lighting General**												
	LG1-C	Individual light damaged - light smashed, lamp failure or displacement/ re-alignment of lamp is causing glare to traffic; streetlight hanging down but wiring not accessible by public	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LG1-M	Any graffiti, vandalism, unauthorised banners	NA	P5	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	LG2-C	Light continuously on or light cycling (intermittent switching on and off)	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									

	LG3-C	Vegetation is shading or interfering with lighting	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	LG4-C	Road Closure Information Signs (RCIS) lighting defects - Fingerboard Road and Roundhill Road only	NA	P3	Lodge CSR RDFURN Managed by RMPC team									
	LG5-C	Electronic Flood Warning Signs lighting defects - Hills Road and Taunton Road only	NA	P3	Lodge CSR RDFURN Managed by RMPC team									
Defect Category 17: Bridge & Boat Ramp/Jetty Structure Defects														
70	**BD**	**Bridges**												
	BD1-H	Compromised bridge structure carrying traffic / pedestrians on verge of collapse Identified defect means bridge is untrafficable; or Any debris on overpass that can be used as projectiles that can be hazardous to travelling public or pedestrians	NA	P1 Hazard	Hazardous defect procedure									
	BD1-S	Debris/silt on bridge that creates slippery surface	NA	P2	Refer to TMR*	1U, 1R	2 weeks	2U, 2R	2 weeks	3U, 3R	2 weeks	4U, 4R	2 weeks	5U, 5R
	BD1-P	Debris on bridge that is likely to interrupt the drainage facility, operation of expansion joints or affect the usability of the bridge	NA	P4	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	BD2-C	Component damage, cracking or signage defect identified through Preventative Inspections or Level 1, 2 or 3 Inspection Reports	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	BD3-C	Vegetation impacting asset and causing damage to bridge components	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	BD3-P	Vegetation not impacting asset - overhanging, growing in waterway under bridge	NA	P4	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
71	**BR**	**Boat Ramp / Jetty**												
	BR1-H	**Submerged obstacle** on/near the ramp affecting boats placed into water and not natural environmental feature (i.e. large rock pushed into waterway). **Wash away** (drop off) at the end of the ramp that is trapping trailers. **Component** on the jetty is hazardous (i.e. missing decking plank, sharp protrusion). **Large item/obstruction** creating trip hazard in a location likely to be trafficked by pedestrians. **Hazardous items** found at the location creating a serious threat/anger (i.e. sharps (needles), syringes etc).	NA	P1 Hazard	Hazardous defect procedure									

	BR1-S	Debris/silt on boat ramp or jetty that creates slippery surface	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	BR1-P	Cleaning of boat ramp or jetty is required	NA	P4	As per cleaning program schedule									
	BR2-C	Wash away (drop off) at the end of the ramp that is NOT trapping trailers	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	BR3-C	Non-hazardous structural damage including scour to embankment, minor concrete cracking, faded markings and signage	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	BR4-C	Scour or edge drop off exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	BR5-C	Trip hazard exceeds 30mm on boat ramp or jetty	30mm	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
Defect Category 18: Footpath Defects														
72	**FS**	**Footpath Surface**												
	FS1-H	Missing grate from footpath Trip hazard in footpath – Large object or obstruction on constructed footpath; large depression in grassed footpath; debris accumulation making footpath dangerous Sharps (needles), syringes etc located on the footpath creating a serious hazard	NA	P1 Hazard	Hazardous defect procedure									
	FS1-S	**Debris**: Accumulation of loose stones, sand or debris on the footpath exceeds the upper intervention level in **FS1-C** within high usage areas (shopping centres, schools, aged care facilities, senior citizen centres, hospitals, community facilities and transport hubs)	Upper IL Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FS1-C	**Debris**: Accumulation of loose stones, sand or debris on the footpath exceeds 15mm in depth or area exceeds 2m²	15mm	P3	Refer to TMR*	1U, 1R	25mm 2 months	2U, 2R	25mm 2 months	3U, 3R	25mm 2 months	4U, 4R	25mm 2 months	5U, 5R
	FS2-S	**Height variation:** Observed lip height variation for concrete or paved footpaths exceeds the upper intervention level in **FS2-C** within high usage areas (shopping centres, schools, aged care facilities, senior citizen centres, hospitals, community facilities and transport hubs)	Upper IL Location		Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	FS2-C	**Height variation**: Observed lip is greater than 30mm in height variation for concrete or paved footpaths	30mm	P3	Refer to TMR*	1U, 1R	50mm 4 months	2U, 2R	50mm 4 months	3U, 3R	50mm 4 months	4U, 4R	50mm 4 months	5U, 5R
	FS3-S	**Rutting:** Depth for asphalt or gravel footpath exceeds the upper intervention level in **FS3-C** within high usage areas (shopping centres, schools, aged care facilities, senior citizen centres, hospitals, community facilities and transport hubs)	Upper IL Location		Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FS3-C	**Rutting:** Greater than 30mm in depth for asphalt or gravel footpath	30mm	P3	Refer to TMR*	1U, 1R	50mm 4 months	2U, 2R	50mm 4 months	3U, 3R	50mm 4 months	4U, 4R	50mm 4 months	5U, 5R
	FS4-S	**Depression/Bump:** Height variation over 1m straight edge for concrete or paved footpaths exceeds the upper intervention level in **FS4-C** within high usage areas (shopping centres, schools, aged care facilities, senior citizen centres, hospitals, community facilities and transport hubs)	Upper IL Location		Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FS4-C	**Depression/Bump:** Exceeds 30mm in height variation over 1m straight edge for concrete or paved footpaths	30mm	P3	Refer to TMR*	1U, 1R	50mm 4 months	2U, 2R	50mm 4 months	3U, 3R	50mm 4 months	4U, 4R	50mm 4 months	5U, 5R
	FS5-C	**Cracking:** Exceeds 15mm in horizontal width	15mm	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	FS6-C	**Slab failure**: Broken area is greater than 25% with less than 50% of pathway width and length of area affected	25% area	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	FS7-C	**Ravelling**: Gravel or sealed surface is greater than 25% with less than 50% of pathway width and length of area affected	25% area	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	FS8-S	**Tactiles**: Damaged or missing tactiles		P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
73	**FE**	**Footpath Edge**												
	FE1-S	Depth of edge drop-off exceeds the upper intervention level in **FE1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FE1-C	**Edge Drop Off**: Depth of edge drop-off measured using a 1.2m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 50mm	50mm	P3	Refer to TMR*		100mm 4 months		100mm 4 months		100mm 4 months		100mm 4 months	
	FE2-C	**Edge Break**: Edge break exceeds 150mm from the average existing line of the footpath	150mm	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R

	FE3-C	**Shoulder**: Footpath shoulder exceeds 50mm above sealed surface restricting water runoff* **Design issue*: Refer to Engineering Asset Solutions for investigation of short and long term solution, response time will extend dependant on solutions	50mm	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
74	**FV**	**Footpath Vegetation**												
	FV1-H	Trees, overhanging branches or broken limbs with foliage die back overhanging any portion of footpath lane width, or large trees/branches close to footpath, which are considered to be a hazard* * In consultation with Environmental & Conservation team	NA	P1 Hazard	Hazardous defect procedure									
	FV1-S	Vegetation defect located near vicinity of shopping precincts, age care centres, senior citizen centres, schools, hospitals, community facilities and transport hubs	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FV1-C	Grass growth within concrete or paved footpath lane exceeds 30%	30%	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
	FV1-P	Previously cleared area where regrowth is evident		P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	FV2-S	Unwanted trees and shrubs or grass obscures sight distance and minimum stopping sight distance		P2	Refer to TMR*		4 weeks		4 weeks		4 weeks		4 weeks	
75	**FR**	**Footpath Pram Ramp**												
	FR1-S	Damaged or missing tactiles		P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FR1-C	Pram ramp upgrade due to non-compliance with current standards causing safety concerns		P3	Log defect Refer to Capital Program									
76	**FD**	**Footpath Drainage**												
	FD1-S	Water ponding on footpath exceeds the upper intervention level in FD1-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FD1-C	**Ponding:** Water ponding on footpath exceeds $1m^2$***** *Design issue: Refer to Engineering Asset Solutions for investigation of short and long term solution, response time will extend dependant on solutions	$1m^2$	P3	Refer to TMR*	1U, 1R	$2m^2$ 4 months	2U, 2R	$2m^2$ 4 months	3U, 3R	$2m^2$ 4 months	4U, 4R	$2m^2$ 4 months	5U, 5R
77	**FB**	**Footpath Pedestrian Bridge and Elevated Walkways**												

	FB1-H	Compromised bridge structure carrying pedestrians on verge of collapse Identified defect means bridge is untrafficable Trip hazard on bridge – Large object or obstruction on concrete/paved footpath; large depression in grassed footpath; debris making footpath dangerous Sharps (needles), syringes etc located on the footpath bridge creating a serious hazard	NA	P1 Hazard	Hazardous defect procedure									
	FB1-S	Debris/silt on bridges that creates slippery surface	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FB1-P	Debris on bridges that is likely to interrupt the drainage facility, operation of expansion joints or affect the usability of the bridge	NA	P4	Refer to TMR*	1U, 1R	9 months	2U, 2R	9 months	3U, 3R	9 months	4U, 4R	9 months	5U, 5R
	FB2-C	Component damage, cracking or signage defect identified through Preventative Inspections or Level 1, 2 or 3 Inspection Reports	NA	P3	Refer to TMR*	1U, 1R	9 months	2U, 2R	9 months	3U, 3R	9 months	4U, 4R	9 months	5U, 5R
	FB3-C	Vegetation impacting asset and causing damage to bridge components	NA	P3	Refer to TMR*	1U, 1R	9 months	2U, 2R	9 months	3U, 3R	9 months	4U, 4R	9 months	5U, 5R
	FB3-P	Vegetation not impacting asset - overhanging, growing in waterway under bridge	NA	P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
78	**FF**	**Footpath Signage & Safety Fencing**												
	FF1-H	Pole fallen across pedestrian pathway Fence damage where people can fall to cause immediate threat/injury (including handrails/guardrails)	NA	P1 Hazard	Hazardous defect procedure									
	FF1-S	Defect located within a designated pedestrian zone or cycleway where person could be harmed/injured	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FF1-C	Missing, damaged or defective signage (including guide signs), damaged components or dirty sign face* * After cleaning sign is not clearly legible	NA	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	FF2-C	Damage affecting purpose or effectiveness of the fence; pedestrians likely to gain unauthorised access to the road reserve		P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	FF2-M	Poor aesthetics to travelling public or pedestrians	NA	P5	Log the defect and monitor									
79	**FX**	**Footpath Service Pit Covers**												
	FX1-H	Popped manhole lid	NA	P1 Hazard	Hazardous defect procedure									

	FX1-S	Service pit cover is displaced or damaged; or Height or depth relative to surrounding ground exceeds the upper intervention level 30mm **Note**: Service Pit to be made safe by Council and referred to relevant authority or Council Section	Exceeds 30mm	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FX1-P	Height or depth relative to surrounding ground exceeds 20 mm	20 - 30mm	P4	Log the defect and monitor									
80	**FA**	**Footpath Property Access**												
	FA1-S	**Property Access**: Area where potholes or rutting exceeds 75mm depth or defect area more than 3m2* * Council to perform satisfactory interim treatment within 20 business days. Owner to undertake permanent repairs - Permanent Repair subject to owner responsibility.	75mm	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FA2-S	**Concrete/Paved Footpath Access**: Pedestrian area has water ponding or trip hazards to a depth greater than 30mm ^ Council to perform satisfactory interim treatment within 20 business days. Owner to undertake permanent repairs - Permanent Repair subject to owner responsibility.	30mm	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	FA2-P	**Grassed Footpath Access**: Pedestrian area has water ponding or trip hazards to a depth greater than 50mm ^ Council to perform satisfactory interim treatment within 20 business days. Owner to undertake permanent repairs - Permanent Repair subject to owner responsibility.	50mm	P4	Log defect and monitor									
Defect Category 19: Carpark Surface Defects														
81	**CD**	**Isolated Depressions and Bumps in Bituminous Surface**												
	CD1-H	Size of pothole/depression/hump/rut/scour means the carpark roadway becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	CD1-S	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge exceeds upper intervention level in **CD1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CD1-C	**Depression/Bump**: Depression or bump area exceeds 75mm in height difference under straight edge and includes areas <50m2	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 3 months	4U, 4R	100mm 3 months	5U, 5R
	CD1-P	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge exceeds 50 mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R

	CD1-M	**Depression/Bump**: Depression or bump on sealed pavements measured using a 1.2 m straight edge is less than 50mm		P5	Log the defect and monitor if depth exceeds 30mm									
82	**CS**	**Shoving / Rutting of Pavement or Asphalt**												
	CS1-H	Size of pothole/depression/hump/rut/scour means the carpark roadway becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	CS1-S	**Lateral measure**: Height/depth of shoving or rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds the upper intervention level in CS1-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CS1-C	**Lateral measure**: Height/depth of shoving or rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 75 mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 3 months	4U, 4R	100mm 3 months	5U, 5R
	CS1-P	**Lateral measure**: Height/depth of shoving or rut on sealed pavements measured laterally from top of ridge using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	CS2-S	**Longitudinal measure**: Height/depth of shoving or rut on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds the upper intervention level in CS2-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CS2-C	**Longitudinal measure**: Height/depth of shoving or rut on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 2 months	4U, 4R	100mm 2 months	5U, 5R
	CS2-P	**Longitudinal measure**: Height/depth of shoving or rut on sealed pavements measured longitudinally from top of ridge using a 1.2 m straight edge exceeds 50mm	50mm	P4	Refer to TMR*	1U, 1R	75mm 9 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
83	**CP**	**Potholes / Delamination in Bituminous Surface**												
	CP1-H	Severe loss of bitumen (seal) within wheel path of vehicle – cars are taking evasive action (swerving into opposing traffic lane)	NA	P1 Hazard	Hazardous defect procedure									
	CP1-S	**Dimension**: Plan dimension on sealed pavements exceeds the upper intervention level in CP1-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CP1-C	**Dimension**: Loss of area on sealed pavements exceeds 300mm diameter	300mm	P3	Refer to TMR*	1U, 1R	500mm 6 weeks	2U, 2R	500mm 6 weeks	3U, 3R	500mm 6 weeks	4U, 4R	500mm 6 weeks	5U, 5R
	CP1-M	**Dimension**: Loss of area on sealed pavements is less than 300mm diameter	300mm	P5	Log the defect and monitor if plate size exceeds 50 mm									

	CP2-S	**Depth**: Depth on sealed pavements exceeds the upper intervention level in **CP2-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CP2-C	**Depth**: Depth on sealed pavements exceeds 30mm	30mm	P3	Refer to TMR*	1U, 1R	40mm 6 weeks	2U, 2R	50mm 6 weeks	3U, 3R	60mm 6 weeks	4U, 4R	60mm 6 weeks	5U, 5R
	CP2-M	**Depth**: Depth on sealed pavements is less than 30 mm		P5	Log the defect and monitor if depth exceeds 10 mm									
84	**CR**	**Crocodile Cracking in Bituminous Surface**												
	CR1-H	Size of pothole/depression/hump/rut/scour means the carpark roadway becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	CR1-P	Moisture is entering/leaving the pavement	NA	P4	Refer to TMR*	1U, 1R	9 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CR1-M	Plate size is less than 100mm	100	P5	Log the defect and monitor if plate size exceeds 50 mm									
85	**CG**	**Bituminous Surface Cracks General**												
	CG1-H	Severe loss of bitumen (seal) within wheel path of vehicle – cars are taking evasive action (swerving into opposing traffic lane)	NA	P1 Hazard	Hazardous defect procedure									
	CG1-C	Cracking on sealed pavements exceeds 5mm and frequent over >15% of lane km or carpark roadway length	5mm	P3	Refer to TMR*	1U, 1R	9 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CG1-M	Individual crack width less than 5mm		P5	Log the defect and monitor if plate size exceeds 3mm									
86	**CE**	**Edge Break in Bituminous Surface**												
	CE1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	CE1-2	**Unsealed Shoulder:** From the average existing seal width, edge break exceeds the upper intervention level in **CE1-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CE1-C	**Unsealed Shoulder**: From the average existing seal width, edge break exceeds 100mm	100mm	P3	Refer to TMR*	1U, 1R	250mm 3 months	2U, 2R	250mm 3 months	3U, 3R	300mm 6 months	4U, 4R	300mm 6 months	5U, 5R
	CE1-M	**Unsealed Shoulder**: From the average existing seal width, edge break is less than 100mm	100mm	P5	Log the defect and monitor if deviation exceeds 50mm									

	CE2-S	Sealed Shoulder (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds the upper intervention level in **CE2-C** or encroaching into the edge line of carpark roadway	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CE2-C	Sealed Shoulder (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds 200mm or encroaching into the edge line of carpark roadway	200mm	P3	Refer to TMR*	1U, 1R	250mm 3 months	2U, 2R	250mm 3 months	3U, 3R	300mm 6 months	4U, 4R	300mm 6 months	5U, 5R
	CE2-P	Sealed Shoulder (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break exceeds 150mm and less than 200mm and not encroaching into the edge line of carpark roadway	150mm - 200mm	P4	Refer to TMR*	1U, 1R	200mm 9 months	2U, 2R	200mm 9 months	3U, 3R	200mm 9 months	4U, 4R	200mm 9 months	5U, 5R
	CE2-M	Sealed Shoulder (at least 0.5 m width): From the average existing seal width, measured from each side of the seal (from shoulder end), edge break is less than 150mm and not encroaching into the edge line of carpark roadway		P5	Log the defect and monitor if deviation exceeds 100mm									
87	**CO**	**Edge Drop Off in Bituminous Surface**												
	CO1-H	Any verified defect identified by inspections, complaint or notification that is hazardous	NA	P1 Hazard	Hazardous defect procedure									
	CO1-S	**Unsealed shoulder**: Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds the upper intervention level in **CO3-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CO1-C	**Unsealed shoulder**: Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 6 months	4U, 4R	100mm 6 months	5U, 5R
	COS-S	**Sealed Shoulder** (at least 0.5 m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds the upper intervention level in **CO4-C**	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	CO2-C	**Sealed Shoulder** (at least 0.5m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 75mm	75mm	P3	Refer to TMR*	1U, 1R	100mm 6 months	2U, 2R	100mm 6 months	3U, 3R	100mm 8 months	4U, 4R	100mm 8 months	5U, 5R
	CO2-P	**Sealed Shoulder** (at least 0.5m width): Depth of edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder exceeds 50mm	50mm - 75mm	P4	Refer to TMR*	1U, 1R	75mm 12 months	2U, 2R	75mm 12 months	3U, 3R	75mm 12 months	4U, 4R	75mm 12 months	5U, 5R
	CO2-M	Edge drop-off measured using a 1.2 m straight edge as vertical distance from the surface at edge of seal to the surface of the shoulder is less than 50mm		P5	Log the defect and monitor if deviation exceeds 30mm									
88	**CF**	**Flushing, Bleeding Seal**												
	CF1-H	Bleeding leads to bitumen pick up on vehicle tyres likely to result in complaints	NA	P1 Hazard	Hazardous defect procedure									
	CF1-S	Any fatty strips exceeds the upper intervention level in CF1-C	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CF1-C	Any fatty strips is greater than 20% of lane is fatty	20%	P3	Refer to TMR*	1U, 1R	30% 9 months	2U, 2R	30% 9 months	3U, 3R	30% 9 months	4U, 4R	30% 9 months	5U, 5R
	CF1-M	Less than 20% of lane km is fatty	<20%	P5	Log the defect and monitor if less than 20%									
89	**CT**	**Ravelling or Stripping Seal**												
	CT1-H	Size of pothole/depression/hump/rut/scour means the carpark roadway becomes untrafficable. Location is within wheel path or more than ½ lane and cars are taking evasive action.	NA	P1 Hazard	Hazardous defect procedure									
	CT1-S	Any ravelling or stripping on approach to or within an intersection exceeds 5m2	5m2	P2	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CT1-C	Any stripping in an area exceeds 10m2	10m2	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CT1-M	Any ravelling or stripping where the gravel pavement visibility exceeds 1m2	1m2	P5	Log the defect and monitor if stripping areas exceeds 1m2									
90	**CL**	**Loose Stone or Debris**												

	CL1-H	**Debris**: Fallen trees/branches, large objects (fridge, water tank), displaced drain/manhole covers; sand/gravel (large amount; cement. **Travel Path**: Debris will affect the carpark travel lane. Evasive action in a dangerous manner to avoid the debris/hazard required. **Travel Path**: Debris making the carpark roadway slippery/ dangerous. **Fire or smoke**: Causing hazardous conditions including trees/structures that may fall onto the carpark roadway. **Sharps**: Needles, syringes etc located within the carpark roadway creating a serious hazard.	NA	P1 Hazard	Hazardous defect procedure									
	CL1-S	Any verified defect (debris, foreign material, loose stones/material, litter) identified within an intersection	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CL1-C	**Kerb channels**: Any verified defect (debris, foreign material, loose stones, litter) accumulated build up exceeds 50mm in kerb channels	50mm	P3	Refer to TMR*	1U, 1R	100mm 2 months	2U, 2R	100mm 2 months	3U, 3R	100mm 2 months	4U, 4R	100mm 2 months	5U, 5R
	CL2-C	**Depth:** Any verified defect (debris, foreign material, loose stones, litter) accumulated build up exceeds 50mm depth of loose material on carpark roadway lane/shoulder	50mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
91	**CV**	**Grass on Sealed Carpark Roadway**												
	CV1-S	Control of vegetation growth around kerb and channel and on the carpark roadway pavement that create unsafe carpark roadway condition (encroachment on traffic lane)	NA	P2	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CV1-P	Control of vegetation growth around kerb and channel and on the road pavement exceeds 5m in length for road lane or kerb & channel	5m	P4	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	CV1-M	Control of vegetation growth around kerb and channel and on the road pavement is less than 5m in length	NA	P5	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
92	**CX**	**Service Pit Covers, Rough Manhole Covers and Grates (Rough Service access facility)**												
	CX1-H	Popped manhole lid	NA	P1 Hazard	Hazardous defect procedure									

	CX1-S	Service pit cover is displaced or damaged; or Height or depth relative to surrounding ground exceeds the upper intervention level 30mm **Note**: Service Pit to be made safe by Council and referred to relevant authority or Council Section	Exceeds 30mm	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	CX1-C	Height or depth relative to surrounding ground exceeds 20 mm	20 - 30mm	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	6 weeks	4U, 4R	6 weeks	5U, 5R
Defect Category 20: Ancillary Carpark Defects														
93	**CM**	**Carpark Missing or Faded Painted Road Lines and Markings**												
	CM1-H	Stop or give way solid line or pedestrian crossing lines are extremely faded (not visible)	NA	P1 Hazard	Hazardous defect procedure									
	CM1-S	Any verified defect that is within intersection, pedestrian zone, cycleway, school zone or on a bend	Location	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CM1-C	50% of the traffic management 'longline' marking has lost reflectivity or is discoloured over a lane km or 100 metres of footpath length	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	CM2-C	50% of the pedestrian crossing marking has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	CM3-C	50% of the Disabled Parking or Line Marking stencil has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
	CM4-C	50% of holdlines, directional lines and traffic island delineation marking has lost reflectivity or is discoloured	50%	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	4 months	3U, 3R	6 months	4U, 4R	8 months	5U, 5R
94	**CA**	**Carpark Streetscape Defects**												
	CA1-H	Defect will affect the travel lane and evasive action in a dangerous manner to avoid the debris/hazard required	NA	P1 Hazard	Hazardous defect procedure									
	CA1-S	Identified defect located within a designated pedestrian zone or cycleway	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CA1-C	Assets and/or components are damaged or broken and pose a potential risk to both vehicle and pedestrian traffic	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CA1-P	Surface (e.g. decks; seating; railings) requires repainting/resealing	NA	P4	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
	CA2-C	Assets are no longer fit for purpose^ ^ Subject to funding for all areas	NA	P3	Refer to TMR*	1U, 1R	6 months	2U, 2R	6 months	3U, 3R	6 months	4U, 4R	6 months	5U, 5R
95	**CU**	**Carpark Vegetation**												

	CU1-H	Trees, overhanging branches or broken limbs with foliage die back overhanging any portion of carriageway lane width, or large trees/branches close to carpark roadway, which are considered to be a hazard**^** **^** In consultation with Environmental & Conservation team	NA	P1 Hazard	Hazardous defect procedure									
	CU1-S	Vegetation restricting visibility of signs or site distance causing safety concerns or causing damage to assets	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CU2-H	Any vegetation obscuring critical traffic control sign ONLY if causing immediate threat/danger - someone being immediately hurt within short amount of time. Must identify issue - • Signs include – Stop, Give Way, Warning Sign • Damaged sign is on road in pathway of traffic; or footpath in area trafficked by pedestrians • Post bent into oncoming traffic • Sign is unreadable	NA	P1 Hazard	Hazardous defect procedure									
	CU2-S	Any vegetation obscures sight distance and minimum stopping sight distance	NA	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	CU2-C	**Sealed Roads only:** Vegetation obscures sight lines of accesses, intersections or sight distances of previously cleared areas; or any signs or guide posts	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	2 months	4U, 4R	3 months	5U, 5R
	CU2-P	Vegetation causing damage to existing assets	NA	P4	Refer to TMR*	1U, 1R	12 months	2U, 2R	12 months	3U, 3R	12 months	4U, 4R	12 months	5U, 5R
	CU2-M	**Sealed Roads only**: Vegetation ***not*** in sight lines exceeds 700mm within 2.4m of edge of roadway	NA	P5	As part of programmed works - slashing or mowing schedule									
96	**CW**	**Carpark Signage**												
	CW1-H	Critical traffic control sign ONLY if causing immediate threat/danger - someone being immediately hurt within short amount of time. Must identify issue - • Signs include – Stop, Give Way, Warning Sign • Damaged sign is on road in pathway of traffic; or footpath in area trafficked by pedestrians • Post bent into oncoming traffic • Sign is unreadable	NA	P1 Hazard	Hazardous defect procedure									

	CW1-S	**Regulatory signs (R1, R2, R3 and R4 series)** miss within 2.5 secs of travel at the operational speeding, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible within 2.5 secs of travel at the operational speed	NA	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	1 week	3U, 3R	1 week	4U, 4R	1 week	5U, 5R
	CW1-C	**Regulatory signs (R5 Series e.g. parking limits)** missing, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible within 2.5 secs of travel at the operational speed	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CW2-C	**Any Other Sign:** Including hazard, guide or warning signs missing, damaged, damaged components, misalignment or dirty sign face* * After cleaning sign is not clearly legible within 2.5 secs of travel at the operational speed	NA	P3	Refer to TMR*	1U, 1R	4 months	2U, 2R	4 months	3U, 3R	4 months	4U, 4R	4 months	5U, 5R
97	**CK**	**Carpark Kerb or Channelling**												
	CK1-H	Damaged, misaligned kerbing or median noses extend into travel lane causing vehicles to take evasive action	NA	P1 Hazard	Hazardous defect procedure									
	CK1-S	Damaged, misaligned kerbing or median noses exceeds the upper intervention level in **CK1-C** that interrupted longitudinal drainage flow, tripping hazards	Upper IL	P2	Refer to TMR*	1U, 1R	1 week	2U, 2R	2 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
	CK1-C	Kerb vertical displacement exceeds 60mm and/ or horizontal displacement exceeds 120mm to a maximum of 12m in kerb length	60mm	P3	Refer to TMR*	1U, 1R	100mm 9 months	2U, 2R	100mm 9 months	3U, 3R	100mm 9 months	4U, 4R	100mm 9 months	5U, 5R
	CK2-C	Kerb is silted or obstructed (e.g. concrete, hot mix, steel plates) and restricting stormwater flow exceeding 50mm	50mm	P3	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	CK3-C	Kerb trip hazard exceeding 30mm adjacent to bus stops, pedestrian crossings or taxi ranks	30mm	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R
98	**CB**	**Carpark Semi Mountable Kerb and Paved Median**												
	CB1-H	Damaged, misaligned kerbing or median noses extend into travel lane causing vehicles to take evasive action	NA	P1 Hazard	Hazardous defect procedure									
	CB1-S	Damaged, misaligned kerbing or median noses exceeds the upper intervention level in **CB1-C** that interrupted longitudinal drainage flow, tripping hazards	Upper IL	P2	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R

	CB1-C	Kerb vertical displacement exceeds 100mm and/or horizontal displacement exceeds 200mm to a maximum of 20m in kerb length	100mm	P3	Refer to TMR*	1U, 1R	200mm 3 months	2U, 2R	200mm 3 months	3U, 3R	200mm 3 months	4U, 4R	200mm 3 months	5U, 5R
	CB2-C	Artificial turf displaced or has surpassed design life	NA	P3	Refer to TMR*	1U, 1R	12 months	2U, 2R	N/A	3U, 3R	N/A	4U, 4R	N/A	5U, 5R
99	**CF**	**Carpark Safety Fencing**												
	CF1-H	Fence damaged where people can fall to cause immediate threat/injury	NA	P1 Hazard	Hazardous defect procedure									
	CF1-S	Identified defect located within a designated pedestrian zone or cycleway	Location	P2	Refer to TMR*	1U, 1R	1 month	2U, 2R	1 month	3U, 3R	1 month	4U, 4R	1 month	5U, 5R
	CF1-C	Damage affecting purpose or effectiveness of the fence; pedestrians likely to gain unauthorised access to the road reserve	NA	P3	Refer to TMR*	1U, 1R	3 months	2U, 2R	3 months	3U, 3R	3 months	4U, 4R	3 months	5U, 5R
	CF1-M	Poor aesthetics to travelling public or pedestrians	NA	P5	Log the defect and monitor									
100	**CY**	**Carpark Lighting Switchboard**												
	LS1-H	Any reported electrical switchboard or mains failure Switchboard door open, insecure or unlocked, cover dislodged, accessible to public	NA	P1 Hazard	Hazardous defect procedure									
101	**CH**	**Carpark Lighting Hardware**												
	LH1-H	Major pole damage - structurally unsound, exposed accessible wiring Lighting pole knocked down Signs of imminent danger - pole falling, significant swaying, leaning, major soil erosion at footing, or pole dented >20% pole diameter Visibly loose nuts at the base of the pole Unsecured outreach bracket; light cover dislodged	NA	P1 Hazard	Hazardous defect procedure									
	LH1-C	Missing or damaged components but no immediate danger to pedestrians or traffic - including shade cowl installation causing glare nuisance to resident; solar panel defects	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LH1-P	Minor lighting pole damage with cut/tear or dent <20% of pole diameter with NO visible imminent danger	NA	P4	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LH1-M	Loss of galvanisation and or surface rust; paint damage	NA	P5	Log defect and monitor									
102	**CZ**	**Carpark Lighting General**												

	LG1-C	Individual light damaged - light smashed, lamp failure or displacement/ re-alignment of lamp is causing glare to traffic; streetlight hanging down but wiring not accessible by public	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LG1-M	Any graffiti, vandalism, unauthorised banners	NA	P5	Refer to TMR*	1U, 1R	2 months	2U, 2R	2 months	3U, 3R	2 months	4U, 4R	2 months	5U, 5R
	LG2-C	Light continuously on or light cycling (intermittent switching on and off)	NA	P3	Lodge CSR LISTRE Managed by Roads Team Leader - Electrical contractor to be engaged									
	LG3-C	Vegetation is shading or interfering with lighting	NA	P3	Refer to TMR*	1U, 1R	4 weeks	2U, 2R	4 weeks	3U, 3R	4 weeks	4U, 4R	4 weeks	5U, 5R