

State highway database operation manual (SM050)

Appendix 4: Maintenance activity

WAKA KOTAHI NZ TRANSPORT AGENCY 10 February 2023 Version 17

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More information

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If you have further queries, call our contact centre on 0800 699 000 or write to us:

Waka Kotahi NZ Transport Agency Private Bag 6995 Wellington 6141

This document is available on Waka Kotahi NZ Transport Agency's website at www.nzta.govt.nz

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Overview

Purpose

This appendix outlines Waka Kotahi NZ Transport Agency's lookup codes used to describe maintenance activities

Ownership and updating

The Data Management team at National Office maintain the maintenance activity codes. Please contact <u>SM050@nzta.govt.nz</u> for any proposed modifications.

Changes made to these codes are documented on the Lookups page (under Technical Disciplines > Performance Management) on the Highways Information Portal. You can access the Highways Information Portal here.

How to use this appendix

This appendix consists of the following 12 maintenance activity tables:

- Maintenance cost transaction
- Bridge maintenance
- Drainage
- Environment
- Intelligent transportation systems (ITS)
- Lighting
- Minor structures
- Pavement
- Shoulder
- Surfacing
- Traffic facility
- Verge

Each table gives an overview of maintenance cost group, maintenance activity and fault codes related to maintenance activities performed on all assets owned and managed by Waka Kotahi NZ Transport Agency.

All items highlighted in red text represent a change to this item or show a new maintenance activity or fault item since the last update to this Appendix in February 2023.

TABLE: MAINTENANCE COST TRANSACTION

Maintenance cost transaction field name	Field type	Required by software	Generated value	Required by NZTA	Description	Allowed values
transaction_id	Integer (6)	Υ		Υ	Unique ID for the maintenance cost transaction	
batch_id	Integer (6)	Υ		Y	Unique ID for the maintenance cost batch header	
transaction_date	Date	Υ		Υ	Date the work was completed	
financial_year	Character (30)	Y		Y	Financial year in which the work was undertaken	Looks up on financial_year
cost_group	Character (30)	Υ		Υ	Maintenance cost group code	Looks up on mc_cost_group
activity	Character (30)				Maintenance activity	Looks up on mc_activity
fault	Character (30)	Υ		Υ	Fault code	Looks up on mc_fault
cost_amount	Currency (6,1)			Υ	Maintenance cost amount	
cost_amount_rci	Currency (6,1)				CCI adjusted maintenance cost amount	
quantity	Integer (7)	Υ		Y	Maintenance cost transaction quantity	
adj_quantity	Integer (7)				Converted maintenance cost transaction quantity	
qty_unit	Character (30)			Υ	Quantity unit of measure	Looks up on mt_unit
failure	Character (30)				Failure category	Looks up on mc_failure
asset_id	Serial (6)				Unique identifier for the asset that maintenance action is being undertaken	
northing	Integer (7)				NZ Transverse Mercator (NZTM) northing coordinate at the start of the carriageway	Between 1,000,000 and 2,500,000 or is null
easting	Integer (7)				NZ Transverse Mercator (NZTM) easting coordinate at the start of the carriageway	Between 4,000,000 and 6,000,000 or is null
gps_by	Character (3)				Login name of the individual or organisation who collected the GPS	Looks up on organisation

Maintenance cost transaction field name	Field type	Required by software	Generated value	Required by NZTA	Description	Allowed values
gps_method_id	Integer (5)				Unique identifier for the gps_method table	Looks up on gps_method
road_id	Integer (6)	Υ		Υ	RAMM Road ID	Looks up on roadnames
start_m	Integer (6)	Y		Y	Maintenance cost transaction start displacement from the road origin (in metres)	Between 0 and 999999
end_m	Integer (6)	Υ		Υ	Maintenance cost transaction end displacement from the road origin (in metres)	Between 1 and 999999
work_position	Character (30)	Y		Y	Position of work	C - Centre, L - Left, R - Right, B - Both Sides, F - Full Width, NA - Not Applicable, UNK - Unknown
analysis_code	Character (60)			Υ	Associated Work Breakdown Structure (WBS) number from the Waka Kotahi SAP financial system	
external_id	Character (60)				External ID reference number	
dispatch_id	Integer (6)				Unique identifier of the associated dispatch	Looks up on mt_dispatch
added_on	Date			Y	Date this row was added	
added_by				Υ	The login name of the individual or organisation who added this row	Looks up on staff
chgd_on	Date			Y	Date this row was last changed	
chgd_by				Y	The login name of the individual or organisation who changed this row	Looks up on staff

TABLE: BRIDGE MAINTENANCE

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
BR	Bridge Maint	BRIDGE	Bridge maintenance	CLEAN	Clean	m²	Cleaning of bridge components (washing, lichen removal or rust removal, for example).	Start/end of bridge	Area of bridge treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	CRASHDMG	Crash damage	each	Physical repair or replacement of bridge component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management). Includes subways & large culverts (classed as bridge structure).	Start/end of bridge	Each damaged section treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	DEBRIS	Remove debris	each	Removing debris from all components (such as joints, channels, and weep holes).	Start/end of bridge	Each bridge treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	DECKREP	Minor deck defect repair	m ²	Repairs related to general wear and tear (such as concrete spalling). Not renewal replacement.	Start/end of bridge	Area of deck treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	FOUNDAT	Foundation damage	each	Minor repairs related to general wear and tear or external/erosion damage - not renewals replacement or major replacements. Minor works that protect or maintain structure foundation.	Start/end of bridge	Each foundation treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
BR	Bridge Maint	BRIDGE	Bridge maintenance	GRAFFITI	Graffiti	m²	Removal of visible graffiti from bridge components (such as through painting and cleaning).	Start/end of bridge	Area of graffiti treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	JOINTREP	Defective joint	m	Repair damaged joint and/or replacement of joint cushions. Excludes painting to treat graffiti.	Start/end of bridge	Length of joint treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	PAINTPRO	Loss of paint corrosion protection	m²	Paint application for component corrosion protection (such as rust). Excludes painting to treat graffiti.	Start/end of bridge	Area of bridge treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	RAILS	Side rail defective	m	Repairs related to general wear and tear or railing (such as rotten or rusty components replacement). Includes barriers and handrails on bridge.	Start/end of bridge	Length of rail section maintained, not the installed component length or quantity
BR	Bridge Maint	BRIDGE	Bridge maintenance	STRUCTMEM	Maintain structural members	each	Repairs related to general wear and tear of structural member components (such as tensioning cables or tightening bolts).	Start/end of bridge	The number of components maintained (e.g., cables or bolts) within bridge length treated
BR	Bridge Maint	BRIDGE	Bridge maintenance	TIMBERDECK	Defective timber deck	m²	Timber bridge deck replacement due to wear and tear - not part of renewals programme (e.g., replacing damaged or rotten planks).	Start/end of bridge	Area of deck replaced/treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
BR	Bridge Maint	BRIDGE	Bridge maintenance	WATERWAY	Waterway restriction	hour	Removal of obstructions such as gravel, debris and trees from the structure foundation or waterway.	Start/end of bridge	Time on site for activity (activity duration) from arrival to completion
BR	Bridge Maint	TUNNELS	Tunnels	CLEAN	Clean	m	Cleaning and removal of liquid and dry/solid spills such as diesel or loose materials spillage). Washing tunnel when the interior is full of dust and water/washing/scrubbing when necessary.	Start/end of tunnel	Length of tunnel treated
BR	Bridge Maint	TUNNELS	Tunnels	DRAINAGE	Tunnel drainage	m	Clean surface drainage, flush/suck inlets, and pipes to prevent clogging. Remove detritus and debris.	Start/end of tunnel	Length of tunnel treated
BR	Bridge Maint	TUNNELS	Tunnels	GRAFFITI	Graffiti	m²	Removal of visible graffiti from tunnel components (such as through painting and cleaning).	Start/end of tunnel	Area of graffiti treated
BR	Bridge Maint	TUNNELS	Tunnels	DEBRIS	Remove debris	each	Remove rubbish, debris and vegetation from drains, pipes, or road pavement.	Start/end of tunnel section	Each tunnel treated
BR	Bridge Maint	TUNNELS	Tunnels	CRASHDMG	Crash damage	each	Physical repair or replacement of tunnel component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Start/end of tunnel section	Each damaged section

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
BR	Bridge Maint	TUNNELS	Tunnels	THEFT	Theft	each	Replacement of stolen equipment	Start/end of tunnel section	Each asset replaced
BR	Bridge Maint	TUNNELS	Tunnels	VANDALISM	Repairs due to vandalism	each	Repair or replacement of damaged equipment due to vandalism.	Start/end of tunnel section	Each asset treated
BR	Bridge Maint	TUNNELS	Tunnels	WORN	Worn or degraded	each	Replacement of worn or degraded component that no longer meets requirements and/or has an elevated risk of immediate failure due to its condition.	Start/end of tunnel section	Each asset treated
BR	Bridge Maint	TUNNELS	Tunnels	NON- FUNCTIONAL	Non-functional	each	Repair or replacement due to fault such as failing to start, loss of connection, loss of signals, not working or not operating	Start/end of tunnel section	Each asset treated
BR	Bridge Maint	TUNNELS	Tunnels	JOINTREP	Defective joint	m	Replace sealant and seal joint where damaged or missing.	Start/end of tunnel section	Length of joint repaired
BR	Bridge Maint	TUNNELS	Tunnels	SPALL	Spalling	m²	Minor concrete patch repair for spalled concrete.	Location of repair	Area of tunnel treated

TABLE: DRAINAGE

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
DR	Drainage	POSDRAIN	Positive drainage	SUBINAD	Inadequate sub-surface drain	m	Maintenance of sub-surface drain (such as subsoil, herring bone or horizontal drains) not operating adequately - cleaning/clearing blocked drain.	Start/end of drain section treated	Length of sub- surface drain maintained
DR	Drainage	SWCMAINT	Surface water channel & side drain maintenance	BLOCKED	Blocked	m	Remove blockages from lined or unlined surface water channel causing ponding or restricting flow of water. Includes removal of vegetation, debris, and litter. Includes automated sweeping of channels in urban areas.	Start/end of channel section maintained (not the location of every blockage treated)	Length of channel maintained
DR	Drainage	SWCMAINT	Surface water channel & side drain maintenance	BROKEN	Broken	m	Repair or replacement of broken sections of lined surface water channel.	Start/end of channel section treated	Length of channel treated
DR	Drainage	SWCMAINT	Surface water channel & side drain maintenance	INAD	Inadequate	m	Base preservation drainage improvement activity of Reform unlined surface water channels: Unlined channel grading or reforming to correct capacity/flow issues (e.g., hydraulic cross section restricted). Excludes side drains.	Start/end of failed section	Length of drain/channel treated as rework

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
DR	Drainage	SWCMAINT	Surface water channel & side drain maintenance	REWORK	Rework on previous maintenance	m	Rework completed on previously completed maintenance repairs due to poor workmanship or failure of original repair (e.g., inadequate treatment). This does not include a reoccurrence of fault due to factors outside the supplier's control (e.g., weather event or expected deterioration).	Start/end of failed section	Length of drain/channel treated as rework
DR	Drainage	SWCMAINT	Surface water channel & side drain maintenance	SIDEGRADE	Clear and regrade side drain	m	Base preservation drainage improvement activity of Clearing and Regrading of side drains: The removal of vegetation, debris or slump material in side drains that increases the risk of flooding.	Start/end of side drain section treated	Length of side drain treated
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	BLOCKED	Blocked	each	Remove rubbish, debris and vegetation from other non-culvert stormwater structures such as internal outlet pipes, grates, manholes and catchpits (including service covers).	Location of individual asset or start/end of a group of assets (in close proximity) treated	Number of stormwater structures treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	BROKEN	Broken	each	Repair damaged non-culvert stormwater structures such as manholes, catchpits (including service covers), flumes and socks.	Location of individual asset or start/end of a group of assets (in close proximity) treated	Number of stormwater structures treated
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	CULBLOCK	Blocked culvert	each	Clearing debris and blockages from culvert and inlet/outlets (includes jetting).	Location of individual culvert or start/end of a group of culverts (in close proximity) treated	Number of structures treated
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	CULCORR	Corroded culvert	m	Treatment or replacement of corroded sections of steel culvert.	Location of culvert treated	Length of pipe repaired

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	CULREPAIR	Culvert defect repair	m	Repairs related to operation or general wear and tear of culvert (such as cracking, spalling, concrete degradation, or abrasion). Not renewal replacement or upgrade.	Location of culvert treated	Length of pipe repaired
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	ENTREPAIR	Culvert entrance repair	each	Repair damaged entrance to culvert (inlet or outlet) due to general wear and tear or environmental damage (such as spalling, cracking or storm damage). Not renewal replacement or upgrade.	Location of individual culvert or start/end of a group of culverts (in close proximity) treated	Number of entrances (inlet/outlets) repaired
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	FILTER	Sand filter cleaning	each	Cleaning of catchpit sand filters.	Location of individual filters or start/end of a group of filters (in close proximity) treated	Number of filters treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
DR	Drainage	SWSTRUCT	Stormwater structure maintenance	REWORK	Rework on previous maintenance	each	Rework completed on previously completed maintenance repairs due to poor workmanship or failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control (e.g., weather event or expected deterioration).	Location of individual asset or start/end of a group of assets (in close proximity) with failure	Number of stormwater structures treated as rework

TABLE: ENVIRONMENT

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	AVALANCHES	Avalanches	CONTROL	Avalanche control	each	Controlling of avalanche exposure to traffic by active and passive means	Location of avalanche area	Number of events attended
EN	Environment	AVALANCHES	Avalanches	EQUIPMENT	Avalanche equipment	each equipment and weather		Location of avalanche area	Number of events attended
EN	Environment	AVALANCHES	Avalanches	RESEARCH	Avalanche research	each	Research in the avalanche field	Location of avalanche area	Number of events attended
EN	Environment	AVALANCHES	Avalanches	SNOW	Snow removal (mechanical)	each	Clearance of avalanche deposits	Location of avalanche area	Number of events attended
EN	Environment	EMERGENCY	Emergency work	BREAKDOWN	Vehicle breakdown	hour	Attend site to 'make safe' or provide Temporary Traffic Management (TTM) for a vehicle with mechanical or fuel breakdown.	Location of vehicle breakdown	Time on site for each event (event duration) from notification to completion
EN	Environment	EMERGENCY	Emergency work	CRASH	Vehicle crash	hour	Attend crash site to make safe or provide Temporary Traffic Management (TTM). Not physical work to repair damaged asset.	Location of crash	Time on site for each event (event duration) from notification to completion

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	EMERGENCY	Emergency work	DROPOUT	Dropout	hour	Make safe' of emergency dropouts, under slip and erosions (replacing granular fill). Excluding more extensive or permanent work requiring approval or funding (e.g., construction of retaining structures).	Start/end of dropout site	Time on site for each event (event duration) from notification to completion
EN	Environment	EMERGENCY	Emergency work	FLOOD	Flood	hour	Attend flooding site to provide Temporary Traffic Management (TTM) and deal with flood related activities to ensure full availability of road (excludes post event maintenance such as clearing culverts).	Start/end of flooding area attended	Time on site for each event (event duration) from notification to completion
EN	Environment	EMERGENCY	Emergency work	INCIDENT	Incident TTM	hour	Providing Temporary Traffic Management (TTM) for police and other parties for general unplanned incidents (not crash related). Includes road closures by Police. Does not include planned events or physical work to repair damaged asset.	Location of incident	Time on site for each event (event duration) from notification to completion
EN	Environment	EMERGENCY	Emergency work	LIVESTOCK	Livestock (wandering on road)	each	Attend site to deal with wandering livestock such as provide Temporary Traffic Management (TTM), or removal of animals where required.	Location or start/end of incident area	Each attended incident (not number of animals wandering)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	EMERGENCY	Emergency work	SLIP	Remove landslip debris	m³	Removal of slip material or debris from carriageway or edge of road.	Start/end of slip site	Quantity of material removed
EN	Environment	EMERGENCY	Emergency work	TREEFALL	Removal of fallen trees	hour	Removal of fallen trees from carriageway or edge of road (not as part of larger slip).	Location or start/end of site	Time on site for activity (activity duration) from arrival to completion
EN	Environment	ENVCLEAN	Environmental cleanup	ABANVEH	Abandoned vehicles	each	Attending site to assist or removal of abandoned vehicle.	Location of vehicle	Each attended incident (not number of vehicles)
EN	Environment	ENVCLEAN	Environmental cleanup	DETRITUS	Clear detritus	m	Removal of detritus such as sealing chip or slip material, and dead animals from sealed surface that is considered a safety hazard and is likely to cause a vehicle to lose control including side roads, intersections and accessways (road sweeping).	Start/end of inspected/treated section (e.g., RS length or shorter, or intersection). Not every defect treated.	Length of section treated

Cost		Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	ENVCLEAN	Environmental cleanup	GRAFFITI	Graffiti	m²	Removal of graffiti from road surface.	Location of graffiti	Area of graffiti treated
EN	Environment	ENVCLEAN	Environmental cleanup	ILLEGAL	Illegal dumping	each	Removal of items illegally dumped on road/roadside. Excludes litter, detritus, or spills covered by other activities.	Location of incident	Each attended incident (not number of items removed)
EN	Environment	ENVCLEAN	Environmental cleanup	LITTER	Clear litter	m	Removal of general smaller litter items (such as paper or plastic) from road/roadside not included in larger illegal dumping, spills, or detritus. Excludes rest area litter collection.	Start/end of inspected/treated section (e.g., RS length or shorter). Not location of every item collected.	Length of section treated/inspected
EN	Environment	ENVCLEAN	Environmental cleanup	PEST	Pest control	each	Removal of pest (such as rats, goats, pigeons, possums or chickens) from road area, including rest areas and weigh stations.	Location where pest is removed	Each attended incident (not number of pests)
EN	Environment	ENVCLEAN	Environmental cleanup	SPILLAGE	Spillage	hour	Clean or removal of liquid or dry/solid spills such as diesel, fruit or other loose materials. Includes grape and glass spills (previously separated).	Start/end of spillage (can be over extended length)	Time on site for activity (activity duration) from arrival to completion

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	RESTAREA	Rest area maintenance	DRAINFIX	Drainage repairs - rest area	each	Repair/maintenance of drainage assets (such as catchpits) and surface water channels in rest area.	Location or start/end of rest area	Each visit to/treatment of site (not number of items maintained)
EN	Environment	RESTAREA	Rest area maintenance	FACILITIES	Furniture/facility maintenance	each	Repair of non-functioning or damaged equipment or furniture within rest area such as tables, toilets, and bins due to wear and tear or vandalism.	Location or start/end of rest area	Each visit to/treatment of site (not number of items maintained)
EN	Environment	RESTAREA	Rest area maintenance	GRAFFITI	Graffiti	each	Removal of graffiti from rest area facilities and furniture.	Location or start/end of rest area	Each visit to/treatment of site (not number of items maintained)
EN	Environment	RESTAREA	Rest area maintenance	HOLES	Potholes	each	Repair of potholes in trafficked area of rest area.	Location or start/end of rest area	Number of potholes repaired
EN	Environment	RESTAREA	Rest area maintenance	LITTER	Clear litter	each	Emptying of rubbish bins and removal of visible litter items within the rest area (including overflowing rubbish bins).	Location or start/end of rest area	Each visit to/treatment of site for litter (not the number of litter items removed)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	RESTAREA	Rest area maintenance	VEGCNTRL2	Vegetation control type 2	m²	Vegetation control type 2 (rest areas): Mowing grass in rest areas.	Location or start/end of rest area	Area of vegetation treated
EN	Environment	RESTAREA	Rest area maintenance	VEGCNTRL5	Vegetation control type 5	m ²	Vegetation control type 5: Control height of vegetation/overgrown vegetation around rest area furniture or facilities.	Location or start/end of rest area	Area of vegetation treated
EN	Environment	WINTER	Winter maintenance	CMADRY	CMA dry application (ice/frost)	kg	Calcium magnesium acetate (CMA) dry application to treat ice or frost.	Start/end of CMA section	Quantity of dry CMA applied
EN	Environment	WINTER	Winter maintenance	CMAWET	CMA wet/liquid application (ice/frost)	litre	Calcium magnesium acetate (CMA) wet or liquid application to treat ice or frost.	Start/end of CMA section	Quantity of wet/liquid CMA applied
EN	Environment	WINTER	Winter maintenance	ICE/FROST	Ice/frost grit application	m	Application of grit to deal with ice/frost (not CMA or other material).	Start/end of treated section	Centreline metres that grit has been applied to.

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
EN	Environment	WINTER	Winter maintenance	SNOW	Snow removal (mechanical)	hour	Removal of snow through mechanical actions such as ploughing, brooming, or grading.	Start/end of treated section	Time on site for activity (activity duration) from arrival to completion

TABLE: ITS

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	ENCLOSURES	Enclosures	CLEAN	Clean	each	Cleaning of cabinet and equipment components (washing, lichen removal or rust removal, for example).	Location of cabinet	Number of cabinets cleaned
ΙΤ	ITS	ENCLOSURES	Enclosures	CRASHDMG	Crash damage	each	Physical repair or replacement of cabinet due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of cabinet	Number of cabinets treated
IT	ITS	ENCLOSURES	Enclosures	FAILURE	Failure	each	Physical repair or replacement due to equipment not functionally correctly.	Location of cabinet	Number of cabinets treated
ΙΤ	ITS	ENCLOSURES	Enclosures	GRAFFITI	Graffiti	each	Removal of visible graffiti from cabinet components (such as through painting and cleaning).	Location of cabinet	Number of cabinets treated
ΙΤ	ITS	ENCLOSURES	Enclosures	THEFT	Theft	each	Replacement of cabinet or components removed due to theft.	Location of cabinet	Number of cabinets treated
IT	ITS	ENCLOSURES	Enclosures	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of cabinet damaged due to vandalism.	Location of cabinet	Number of cabinets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
IT	ITS	ENCLOSURES	Enclosures	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities.	Location of cabinet	Number of cabinets treated
IT	ITS	ENCLOSURES	Enclosures	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor	Location of cabinet	Number of cabinets treated
IT	ITS	ENCLOSURES	Enclosures	RELOCATE	Relocation	each	Relocate cabinet to new location	Location of cabinet	Number of cabinets treated
IT	ITS	CAMERA	Camera	CLEAN	Clean	each	Cleaning of camera and components (washing, lichen removal or rust removal, for example)	Location of camera	Number of cameras cleaned
ΙΤ	ITS	CAMERA	Camera	CRASHDMG	Crash damage	each	Physical repair or replacement of camera due to crash damage (does not include Initial call-out or 'make safe' action such as Traffic Management).	Location of camera	Number of cameras treated
IT	ITS	CAMERA	Camera	FAILURE	Failure	each	Physical repair or replacement due to camera not functionally correctly.	Location of camera	Number of cameras treated
ΙΤ	ITS	CAMERA	Camera	GRAFFITI	Graffiti	each	Removal of visible graffiti from camera components (such as through painting and cleaning).	Location of camera	Number of cameras treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	CAMERA	Camera	THEFT	Theft	each	Replacement of camera or components removed due to theft.	Location of camera	Number of cameras treated
ΙΤ	ITS	CAMERA	Camera	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of camera damaged due to vandalism such as broken lens or damaged housing.	Location of camera	Number of cameras treated
IΤ	ITS	CAMERA	Camera	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities.	Location of camera	Number of cameras treated
ΙΤ	ITS	CAMERA	Camera	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor	Location of camera	Number of cameras treated
IT	ITS	CAMERA	Camera	RELOCATE	Relocation	each	Relocate camera to new location	Location of camera	Number of cameras treated
IΤ	ITS	DCON	Device controllers	CRASHDMG	Crash damage	each	Physical repair or replacement of detection device and/or components due to crash damage (does not include initial callout or 'make safe' action such as Traffic Management).	Location of detection device	Number of detection devices treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	DCON	Device controllers	FAILURE	Failure	each	Physical repair or replacement due to device controller not functionally correctly.	Location of detection device	Number of detection devices treated
IT	ITS	DCON	Device controllers	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of detection device damaged due to vandalism such as smashed lens or damaged cabinet.	Location of detection device	Number of detection devices treated
IT	ITS	DCON	Device controllers	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities.	Location of detection device	Number of detection devices treated
IT	ITS	EBARRIER	Electronic barrier and gates	CLEAN	Clean	each	Cleaning of electronic barrier and components (washing, lichen removal or rust removal, for example).	Location of electronic barrier	Number of barriers cleaned
ΙΤ	ITS	EBARRIER	Electronic barrier and gates	CRASHDMG	Crash damage	each	Physical repair or replacement of electronic barrier due to crash damage (does not include initial callout or 'make safe' action such as Traffic Management).	Location of electronic barrier or gate	Number of electronic barriers or gates treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
IT	ITS	EBARRIER	Electronic barrier and gates	FAILURE	Failure	each	Physical repair or replacement due to the electronic barrier or gate not functionally correctly.	Location of electronic barrier or gate	Number of electronic barriers or gates treated
ΙΤ	ITS	EBARRIER	Electronic barrier and gates	GRAFFITI	Graffiti	each	Removal of visible graffiti from electronic barrier components (such as through painting and cleaning).	Location of electronic barrier or gate	Number of electronic barriers or gates treated
ΙΤ	ITS	EBARRIER	Electronic barrier and gates	THEFT	Theft	each	Replacement of electronic barrier/gate or components due to theft.	Location of electronic barrier or gate	Number of electronic barriers or gates treated
IT	ITS	EBARRIER	Electronic barrier and gates	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of electronic barrier damaged due to vandalism such as broken or dented barrier.	Location of electronic barrier or gate	Number of electronic barriers or gates treated
IT	ITS	ESENSORS	Environmental sensors	FAILURE	Failure	each	Physical repair or replacement due to the environmental sensor not functioning correctly.	Location of environmental monitoring asset	Number of environmental monitoring assets treated
ΙΤ	ITS	ESENSORS	Environmental sensors	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of environmental sensor asset damaged due to vandalism.	Location of environmental monitoring asset	Number of environmental monitoring assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	ESIGN	Electronic sign	CLEAN	Clean	each	Cleaning of electronic sign and components (washing, lichen removal or rust removal, for example).	Location of electronic sign	Number of electronic signs cleaned
ΙΤ	ITS	ESIGN	Electronic sign	CRASHDMG	Crash damage	each	Physical repair or replacement of electronic sign due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of electronic sign	Number of electronic signs treated
IT	ITS	ESIGN	Electronic sign	FAILURE	Failure	each	Physical repair or replacement due to electronic sign not functioning correctly.	Location of electronic sign	Number of electronic signs treated
ΙΤ	ITS	ESIGN	Electronic sign	GRAFFITI	Graffiti	each	Removal of visible graffiti from electronic sign components (such as through painting and cleaning).	Location of electronic sign	Number of electronic signs treated
IT	ITS	ESIGN	Electronic sign	THEFT	Theft	each	Replacement of electronic sign or components due to theft.	Location of electronic sign	Number of electronic signs treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	ESIGN	Electronic sign	VANDALISM	Repair or replace (due to vandalism)		Repair or replacement of electronic sign damaged due to vandalism such as broken sign or dented post.	Location of electronic sign	Number of electronic signs treated
ΙΤ	ITS	ESIGN	Electronic sign	CORRECTIVE Corrective each		each	Correcting minor low risk non-performance related issues found during other activities.	Location of electronic sign	Number of electronic signs treated
ΙΤ	ITS	ESIGN	Electronic sign	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor	Location of electronic sign	Number of electronic signs treated
IT	ITS	ESIGN	Electronic sign	RELOCATE	Relocation	each	Relocate electronic sign to new location	Location of electronic sign	Number of electronic signs treated
ΙΤ	ITS	COMS	Communications and transmission	CLEAN	Clean	each	Cleaning of emergency phone asset and components (washing, lichen removal or rust removal, for example).	Location of emergency phone	Number of emergency phones cleaned

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	COMS	Communications and transmission	CRASHDMG	Crash each damage		Physical repair or replacement of emergency phone due to crash damage (does not include initial callout or 'make safe' action such as Traffic Management).	Location of emergency phone	Number of emergency phones treated
ΙΤ	ITS	COMS	Communications and transmission	transmission FAILURE Failure each functioning correctly.		Location of emergency phone	Number of emergency phones treated		
ΙΤ	ITS	COMS	Communications and transmission	GRAFFITI	Graffiti	each	Removal of visible graffiti from emergency phone components (such as through painting and cleaning).	Location of emergency phone	Number of emergency phones treated
ΙΤ	ITS	COMS	Communications and transmission	THEFT	Theft	each	Replacement of emergency phone or components removed due to theft.	Location of emergency phone	Number of emergency phones treated
IΤ	ITS	COMS	Communications and transmission	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of emergency phone damaged due to vandalism such as broken cables or dented cabinet.	Location of emergency phone	Number of emergency phones treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
IT	ITS	COMS	Communications and transmission	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities	Location of emergency phone	Number of emergency phones treated
ΙΤ	ITS	COMS	Communications and transmission	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor	Location of emergency phone	Number of emergency phones treated
IT	ITS	COMS	Communications and transmission	RELOCATE	Relocation	each	Relocate communications asset to new location	Location of emergency phone	Number of emergency phones treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	CLEAN	Clean	each	Cleaning of vehicle sensor and components (washing, lichen removal or rust removal, for example).	Location of vehicle sensor	Number of vehicle sensors treated
ΙΤ	ITS	VEHSEN	Vehicle sensors and detection processors	CRASHDMG	Crash damage	each	Physical repair or replacement of vehicle sensor due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	FAILURE	Failure	each	Physical repair or replacement due to vehicle sensor not functioning correctly.	Location of vehicle sensor	Number of vehicle sensors treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
IT	ITS	VEHSEN	Vehicle sensors and detection processors	GRAFFITI	Graffiti	each	Removal of visible graffiti from vehicle sensor or components (such as through painting and cleaning).	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	THEFT	Theft	each	Replacement of vehicle sensor or components removed due to theft.	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of vehicle sensor damaged due to vandalism.	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor.	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	VEHSEN	Vehicle sensors and detection processors	RELOCATE	Relocation	each	Relocate vehicle sensor to new location.	Location of vehicle sensor	Number of vehicle sensors treated
IT	ITS	POWER	Power supply	CLEAN	Clean	each	Cleaning of power supply (washing, lichen removal or rust removal, for example).	Location of power supply	Number of power supply assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
IT	ITS	POWER	Power supply	CRASHDMG	Crash damage	each	Physical repair or replacement of power supply asset due to crash damage (does not include initial callout or 'make safe' action such as Traffic Management).	Location of power supply	Number of power supply assets treated
IT	ITS	POWER	Power supply	FAILURE Failure each power supply asset not functioning correctly.		Location of power supply	Number of power supply assets treated		
ΙΤ	ITS	POWER	Power supply	GRAFFITI	Graffiti	each	Removal of visible graffiti from power supply asset or components (such as through painting and cleaning).	Location of power supply	Number of power supply assets treated
ΙΤ	ITS	POWER	Power supply	THEFT	Theft	each	Replacement of power supply asset or components removed due to theft.	Location of power supply	Number of power supply assets treated
IT	ITS	POWER	Power supply	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of power supply damaged due to vandalism.	Location of power supply	Number of power supply assets treated

Cost	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ΙΤ	ITS	POWER	Power supply	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities.	Location of power supply	Number of power supply assets treated
IT	ITS	POWER	Power supply	REINSTATE	Re- instatement	each	Re-instated due to planned physical works in corridor.	Location of power supply	Number of power supply assets treated
IT	ITS	POWER	Power supply	RELOCATE	Relocation	each	Relocate power supply asset to new location.	Location of power supply	Number of power supply assets treated

TABLE: LIGHTING

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
LI	Lighting	LIGHTMAINT	Maintain highway lighting	BROKEN	Broken	each	Replacement of non- functioning lamp/bulb (e.g., broken, blown, or smashed) due to normal wear and tear, or environmental factors such as storms or wind. Includes belisha beacons lights. Does not include damage due to vandalism or crash.	Location of lighting unit or start/end of section with multiple adjacent units	Number of bulbs/lamps replaced
LI	Lighting	LIGHTMAINT	Maintain highway lighting	CABLE	Fault in cable power supply	each	Light not operating due to fault in cable power supply (power supply disruption), excludes power failure from electricity supplier. Attend site to identify issue and notify third party action required.	Location of lighting unit or start/end of section with multiple adjacent units	Number of fault call-outs
LI	Lighting	LIGHTMAINT	Maintain highway lighting	CLEAN	Clean	each	Clean dirty lighting asset such as washing/cleaning of lamp.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
LI	Lighting	LIGHTMAINT	Maintain highway lighting	CORRODE	Corroded	each	Treatment of surface or non-structural corrosion of lighting asset/components under maintenance such as sandblasting and painting. This does not include planned replacement of components under the renewal programme.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	CRASHDMG	Crash damage	each	Physical repair or replacement of lighting component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of lighting unit	Number of lighting units treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	FUSE	Blown fuse	each	Replacing a blown fuse affecting operation of lighting unit (located in montrose box, for example).	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	GRAFFITI	Graffiti	each	Removal of graffiti (painting or cleaning) from lighting asset such as light pole or montrose box.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
Ц	Lighting	LIGHTMAINT	Maintain highway lighting	IGNITOR	Faulty ignitor	each	Repair of faulty ignitor/gear in lighting unit (e.g., replacement of parts).	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
LI	Lighting	LIGHTMAINT	Maintain highway lighting	LIGHTSPILL	Direct light or glare	each	Putting up shield to manage light spill onto highway.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
u	Lighting	LIGHTMAINT	Maintain highway lighting	PAINT	Paint	each	Repaint faded lighting asset or apply protective paint coating to lighting component where required such as repaint faded white delineation paint on poles or re-apply protective paint coating.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	TORQUE	Torque setting	each	Inspection, test and adjusting torque setting for lighting bases to ensure they are secure.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of lighting component damaged due to vandalism such as smashed lamps or damaged montrose box.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated
LI	Lighting	LIGHTMAINT	Maintain highway lighting	WIRE	Rewiring of column	each	Rewiring of non- functioning/damaged wires in lighting column.	Location of lighting unit or start/end of section with multiple adjacent units	Number of lighting assets treated

TABLE: MINOR STRUCTURES

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	BARRIER	Guardrail, barrier, and handrail maintenance	CORRODE	Corroded	m	Replacement or treatment such as protective coating or painting of corroded components of barrier system or handrail. Excluding terminal ends.	Start/end of barrier treated	Length of barrier/handrail treated. If single component treated, then quantity would be 1m.
MS	Minor Struct	BARRIER	Guardrail, barrier, and handrail maintenance	CRASHDMG	Crash damage	m	Replacement of barrier, handrail, or components due to crash damage such as rail section or new posts. Does not include initial callout or 'make safe' action such as Traffic Management. Excluding terminal ends.	Start/end of barrier section repaired	Length of barrier/handrail treated. If single component treated, then quantity would be 1m.
MS	Minor Struct	BARRIER	Guardrail, barrier, and handrail maintenance	DEBRIS	Remove debris	m	Removal of debris around barrier, handrail, or components (including terminal ends) impeding effective operation such as build-up of material around barrier posts.	Start/end of barrier treated	Length of barrier/handrail treated. If single component treated, then quantity would be 1m.
MS	Minor Struct	BARRIER	Guardrail, barrier, and handrail maintenance	GRAFFITI	Graffiti	m	Treatment to remove visible graffiti from barrier system, handrail, or components (including terminal ends).	Start/end of barrier treated	Length of barrier/handrail treated. If single component treated, then quantity would be 1m.

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	BARRIER	Guardrail, barrier and handrail maintenance	PAINT	Paint	m2	Repaint of faded barrier systems, handrail, and components (for delineation). This does not include corrosion protective painting.	Start and end of barrier treated	Area of barrier treated
MS	Minor Struct	BARRIER	Guardrail, barrier and handrail maintenance	POST	Post maintenance	each	Replacement, straightening and general maintenance of barrier posts due to normal wear and tear or environmental factors such as tightening bolts.	Start and end of barrier treated	Number of posts replaced or treated
MS	Minor Struct	BARRIER	Guardrail, barrier and handrail maintenance	TIGHT	Cable/bolt tightening	m	Tightening of cable, bolt and related components on barrier system or handrail to ensure the system is fully operational. Excluding terminal ends.	Start/end of barrier treated (not location of individual components)	Length of barrier treated. If only a single component is treated, then quantity would be 1m.
MS	Minor Struct	CUSHION	Crash cushion maintenance	CORRODE	Corroded	each	Replacement or treatment such as protective coating or painting of corroded components of crash cushion.	Location of crash cushion	Number of crash cushions treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	CUSHION	Crash cushion maintenance	CRASHDMG	Crash damage	each	Physical repair or replacement of crash cushion or components due to crash damage (does not include initial call-out or 'make safe' actions such as Traffic Management).	Location of crash cushion	Number of crash cushions treated
MS	Minor Struct	CUSHION	Crash cushion maintenance	DEBRIS	Remove debris	each	Remove debris around crash cushion or components impeding effective operation such as build-up of material.	Location of crash cushion	Number of crash cushions treated
MS	Minor Struct	CUSHION	Crash cushion maintenance	GRAFFITI	Graffiti	each	Treatment to remove visible graffiti from crash cushion or components.	Location of crash cushion	Number of crash cushions treated
MS	Minor Struct	CUSHION	Crash cushion maintenance	TIGHT	Cable/bolt tightening	each	Tightening of cables, bolts, or related components on crash cushions to ensure the system is fully operational.	Location of crash cushion	Number of crash cushions treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	FENCE	Fencing repairs	BROKEN	Broken	m	Replacement or repair of broken fencing due to normal wear and tear (such as rotten planks or rusted sections) or environmental factors such as storms or wind damage. Does not include damage due to vandalism or crashes. Includes all fencing types such as rock fall, safety, noise, litter, and boundary. Excludes sightrails.	Start/end of damaged fence section	Length of fence treated
MS	Minor Struct	FENCE	Fencing repairs	CRASHDMG	Crash damage	m	Physical repair or replacement of fence due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management). Includes all fencing types such as rock fall, safety, noise, litter, and boundary. Excludes sightrails.	Start/end of damaged fence section	Length of fence treated
MS	Minor Struct	FENCE	Fencing repairs	GRAFFITI	Graffiti	m²	Removal of graffiti such as painting and cleaning from fence. Includes all fencing types such as rock fall, safety, noise, litter, and boundary. Excludes sight rails.	Start and end of fence section with graffiti	Area of graffiti removed

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	FENCE	Fencing repairs	ROCK	Rock fall damage	m	Repair rock fall or similar fencing damaged due to operational function (e.g., damage due to rock fall or slips). Does not include damage due to vandalism or crashes. Does not include other fencing types such as noise.	Start/end of damaged fence section	Length of fence treated
MS	Minor Struct	FENCE	Fencing repairs	VANDALISM	Repair or replace (due to vandalism)	m	Repair or replacement of fencing damaged due to vandalism. Includes all fencing types such as rock fall, safety, noise, litter, and boundary. Excludes sightrails.	Start/end of damaged fence section	Length of fence treated
MS	Minor Struct	GANTRY	Gantry maintenance	CLEAN	Clean	each	Cleaning of gantry components such as washing, and debris or rust removal.	Location of gantry	Number of gantry structures treated
MS	Minor Struct	GANTRY	Gantry maintenance	CRASHDMG	Crash damage	each	Physical repair or replacement of gantry component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of gantry	Number of gantry structures treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	GANTRY	Gantry maintenance	GRAFFITI	Graffiti	m²	Removal of graffiti from gantry structure such as painting or cleaning.	Location of gantry	Area of gantry structure treated
MS	Minor Struct	GANTRY	Gantry maintenance	PAINT	Paint	each	Repaint faded gantry asset or apply protective paint coating to gantry component where required such as repaint faded white delineation paint on poles or re-apply protective paint coating.	Location of gantry	Number of gantry structures treated
MS	Minor Struct	GANTRY	Gantry maintenance	TIGHT	Cable/bolt tightening	each	Tightening of cables, bolts and related components on gantry system asset to ensure operational compliance.	Location of gantry	Number of gantry structures treated (each asset not each component)
MS	Minor Struct	GANTRY	Gantry maintenance	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of gantry component damaged due to vandalism such as cutting safety wires or damaged locks.	Location of gantry	Number of gantry structures treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	TERMINAL	Terminal end maintenance	CORRODE	Corroded	each	Replacement or treatment of protective coating or painting of corroded components of terminal end.	Location of terminal end	Number of terminal ends treated
MS	Minor Struct	TERMINAL	Terminal end maintenance	CRASHDMG	Crash damage	each	Replacement of terminal end due to crash damage (does not include the initial call-out or 'make safe' action such as Traffic Management).	Location of terminal end	Number of terminal ends treated
MS	Minor Struct	TERMINAL	Terminal end maintenance	TIGHT	Cable/bolt tightening	each	Tightening of cables, bolts, and related components on terminal end to ensure operational system.	Location of terminal end	Number of terminal ends treated
MS	Minor Struct	WALLS	Retaining wall maintenance	CORRODE	Corroded	m	Replacement or treatment such as protective coating or painting of corroded or rotten components of retaining wall. This does not include planned replacement of components under the renewal programme.	Start/end of damaged retaining wall section	Length of retaining wall treated. If single component treated, then quantity would be 1m.

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	WALLS	Retaining wall maintenance	COLLAPSE	Collapse	m²	Minor replacement or repair of wall/section of wall which collapsed due to geotechnical or structural integrity issues (e.g., significant movement causing failure of section of wall, or erosion). Does not include crash damage, renewals (replacement/upgrade) or significant works requiring approval.	Start/end of damaged retaining wall section	Area of retaining wall treated
MS	Minor Struct	WALLS	Retaining wall maintenance	CRASHDMG	Crash damage	m	Physical repair or replacement of retaining wall section/component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Start/end of damaged retaining wall section	Length of retaining wall treated. If single component treated, then quantity would be 1m.
MS	Minor Struct	WALLS	Retaining wall maintenance	GRAFFITI	Graffiti	m²	Removal of graffiti from retaining wall (painting or cleaning).	Start/end of retaining wall section with graffiti	Area of retaining wall treated
MS	Minor Struct	WALLS	Retaining wall maintenance	PAINT	Paint	m²	Paint application for preventative component protection such as rust protection.	Start/end of treated retaining wall section	Area of retaining wall treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
MS	Minor Struct	WALLS	Retaining wall maintenance	SPALL	Spalling	m2	Repair to retaining wall due to damage caused by spalling (e.g., concrete walls).	Start/end of damaged retaining wall section	Area of retaining wall treated
MS	Minor Struct	WALLS	Retaining wall maintenance	TIGHT	Cable/bolt tightening	m	Tightening of cables, bolts, and related components of a retaining wall to ensure it is fully operational.	Start/end of treated retaining wall section	Length of retaining wall treated (not individual components). If single component treated, then quantity would be 1m.

TABLE: PAVEMENT

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	CONCPAVE	Concrete pavement repairs	CRACK	Concrete cracking	m	Repair of cracks in concrete pavement (excluding joint cracking)	Location or start/end of repair	Length of cracking treated
PA	Pavement	CONCPAVE	Concrete pavement repairs	JOINT	Joint cracking	m	Repair of joint cracking in concrete pavement	Location of repair	Length of cracking treated
PA	Pavement	CONCPAVE	Concrete pavement repairs	POLISHED	Polished surface	m²	Treatment of polished surface on a concrete pavement such as scabbing	Start/end of treated section	Area of concrete pavement treated
РА	Pavement	CONCPAVE	Concrete pavement repairs	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event	Start/end of failed section	Size (area) of completed repair
PA	Pavement	CONCPAVE	Concrete pavement repairs	SPALL	Spalling	m²	Repair of spalled sections of the concrete pavement	Start/end of treated section	Area of concrete pavement treated
PA	Pavement	CONCPAVE	Concrete pavement repairs	SUBSIDE	Subsidence	m ²	Repair or replacement of subsided/slumped sections of the concrete pavement	Start/end of treated section	Area of concrete pavement treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	DIGOUTS	Digouts (all pavements)	ALLIGCRK	Alligator cracking	m²	Digout repair to treat an area of alligator cracking in sealed carriageway	Start/end of repair	Size (area) of completed repair
PA	Pavement	DIGOUTS	Digouts (all pavements)	DEFORM	Deformation	m ²	Digout repair to treat deformation or shear failure of pavement layer in sealed carriageway such as heave or shove.	Start/end of repair	Size (area) of completed repair
PA	Pavement	DIGOUTS	Digouts (all pavements)	DEPRESS	Depression	m²	Digout repair to treat depression in sealed carriageway such as a slump.	Start/end of repair	Size (area) of completed repair
PA	Pavement	DIGOUTS	Digouts (all pavements)	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed repair
PA	Pavement	DIGOUTS	Digouts (all pavements)	SATPAVE	Saturated pavement	m²	Digout repair to correct an area with pavement failures caused by saturated pavement due to water ingress into the pavement.	Start/end of repair	Size (area) of completed repair
PA	Pavement	DIGOUTS	Digouts (all pavements)	SUBSIDE	Subsidence	m²	Digout repair to treat uneven pavement (in a lane or shoulder) due to subsidence in the sealed carriageway (such as lack of shoulder support).	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	LEVEL	Minor levelling	ABUT	Uneven abutment join	m²	Minor levelling repair to treat uneven pavement within the sealed carriageway at an abutment join.	Start/end of repair	Size (area) of completed repair
PA	Pavement	LEVEL	Minor levelling	DEPRESS	Depression	m ²	Minor levelling repair to treat a pavement depression such as a slump in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	LEVEL	Minor levelling	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed repair
PA	Pavement	LEVEL	Minor levelling	RUTTING	Wheelpath rutting	m ²	Minor levelling repair to address wheel path rutting in the sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	LEVEL	Minor levelling	SHAPE	Poor cross- section shape	m²	Minor levelling repair to treat uneven pavement due to cross sectional issues within the sealed carriageway such as reshape due to poor cross section shape.	Start/end of repair	Size (area) of completed repair
PA	Pavement	LEVEL	Minor levelling	SUBSIDE	Subsidence	m ²	Minor levelling repair to treat uneven pavement (in a lane or shoulder) due to subsidence in the sealed carriageway.	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	LEVEL	Minor Levelling	UNEVEN	Uneven surface	m²	Minor levelling repair to treat an uneven surface such as poor seal join or peak roughness.	Start/end of repair	Size (area) of completed repair
PA	Pavement	MILLFILL	Milling	DEFORM	Deformation	m²	Mill and fill repair to treat deformation or shear failure of pavement layer in sealed carriageway such as a heave or shove.	Start/end of repair	Size (area) of completed repair
PA	Pavement	MILLFILL	Milling	DEPRESS	Depression	m²	Mill and fill repair to treat a pavement depression such as a slump in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	MILLFILL	Milling	FATIGCK	Fatigue cracking	m²	Mill and fill repair to treat an area of fatigue cracking in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	MILLFILL	Milling	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
PA	Pavement	MILLFILL	Milling	RUTTING	Wheel path rutting	m ²	Mill and fill repair to address wheel path rutting in the sealed carriageway.	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	OVERLAY	Overlay	ALLIGCRK	Alligator cracking	m²	Overlay to treat an area of alligator cracking in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	OVERLAY	Overlay	DEFORM	Deformation	m²	Overlay to treat deformation or shear failure of pavement layer in sealed carriageway such as a heave or shove.	Start/end of repair	Size (area) of completed repair
PA	Pavement	OVERLAY	Overlay	DEPRESS	Depression	m²	Overlay to treat a depression such as a slump in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	OVERLAY	Overlay	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
PA	Pavement	POTFILL	Pothole repairs	HOLES	Potholes	each	Repair pothole in sealed carriageway area.	Location of pothole (point location of grouped potholes within 5m radius/not over section/length of road)	Number of potholes at location

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	POTFILL	Pothole repairs	UNSL- HOLES	Pothole repair (unsealed road)	each	Repair pothole in unsealed carriageway area.	Location of pothole (point location of grouped potholes within 5m radius/not over section/length of road)	Number of potholes at location
PA	Pavement	POTFILL	Pothole repairs	REWORK	Rework on previous maintenance	each	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Location of pothole (point location of grouped potholes within 5m radius/not over section/length of road)	Number of potholes at location
PA	Pavement	RIPREMAKE	Rip and remake	ALLIGCRK	Alligator cracking	m ²	Rip and remake repair to treat an area of alligator cracking in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	RIPREMAKE	Rip and remake	DEFORM	Deformation	m²	Rip and remake repair to treat deformation or shear failure of pavement layer in sealed carriageway such as a heave or shove.	Start/end of repair	Size (area) of completed repair
PA	Pavement	RIPREMAKE	Rip and remake	DEPRESS	Depression	m²	Rip and remake repair to treat a pavement depression such as a slump in sealed carriageway.	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	RIPREMAKE	Rip and remake	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair due to inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
PA	Pavement	RIPREMAKE	Rip and remake	RUTTING	Wheel path rutting	m²	Rip and remake repair to address wheel path rutting in the sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	RIPREMAKE	Rip and remake	SUBSIDE	Subsidence	m²	Rip and remake repair to treat uneven pavement (in a lane or shoulder) due to subsidence in the sealed carriageway (such as lack of shoulder support).	Start/end of repair	Size (area) of completed repair
PA	Pavement	SERVCOVER	Service cover adjustment	BROKEN	Broken	each	Replacement or repair of broken service cover or surrounding edge.	Location of broken service cover	Number of service covers treated
PA	Pavement	SERVCOVER	Service cover adjustment	UNEVEN	Uneven surface	each	Adjustment of service cover that is not level with surrounding carriageway surface (e.g., too high, or low) creating noise, vibration or ride nuisance.	Location of service cover	Number of service covers treated
PA	Pavement	STAB	In situ stabilisation	ALLIGCRK	Alligator cracking	m ²	In situ stabilised repair to treat an area of alligator cracking in sealed carriageway.	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	STAB	In situ stabilisation	DEFORM	Deformation	m ²	In situ stabilised repair to treat deformation or shear failure of pavement layer in sealed carriageway such as a heave or shove.	Start/end of repair	Size (area) of completed repair
PA	Pavement	STAB	In situ stabilisation	DEPRESS	Depression	m ²	In situ stabilised repair to treat a pavement depression such as a slump in sealed carriageway.	Start/end of repair	Size (area) of completed repair
PA	Pavement	STAB	In situ stabilisation	FLUSH	Flushing	m²	In situ stabilised repair to deal with flushing in sealed carriageway impacting on pavement performance such as deformation or surface instability due to excess binder.	Start/end of repair	Size (area) of completed repair
PA	Pavement	STAB	In situ stabilisation	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
PA	Pavement	STAB	In situ stabilisation	RUTTING	Wheel path rutting	m²	In situ stabilised repair to address wheel path rutting in the sealed carriageway.	Start/end of repair	Size (area) of completed repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	STAB	In situ stabilisation	SATPAVE	Saturated pavement	m²	In situ stabilised repair to correct an area with pavement failures caused by saturated pavement due to water ingress into the pavement.	Start/end of repair	Size (area) of completed repair
PA	Pavement	STAB	In situ stabilisation	SUBSIDE	Subsidence	m²	In situ stabilised repair to treat uneven pavement (in a lane or shoulder) due to subsidence in the sealed carriageway (such as lack of shoulder support).	Start/end of repair	Size (area) of completed repair
PA	Pavement	SURFOPEN	Surface openings	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
PA	Pavement	SURFOPEN	Surface openings	TRENCH	Trench settlement	m²	Repair or reinstatement of settled trench in sealed carriageway.	Location of trench	Area of trench repaired
PA	Pavement	UNSEALED	Maintain unsealed pavements	AGGLOSS	Aggregate loss	m ³	Replacing wearing course on unsealed carriageways due to aggregate loss.	Start/end of repair	Volume of material replaced
PA	Pavement	UNSEALED	Maintain unsealed pavements	CORRUG	Corrugation	m²	Repairs to address corrugation of the wearing course on unsealed carriageways such as grading.	Start/end of repair	Size (area) of material repaired

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
PA	Pavement	UNSEALED	Maintain unsealed pavements	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area) of rework repair
PA	Pavement	UNSEALED	Maintain unsealed pavements	RUTTING	Wheel path rutting	m²	Repairs to address wheel path rutting in unsealed carriageways such as grading.	Start/end of repair	Size (area) of completed repair
PA	Pavement	UNSEALED	Maintain unsealed pavements	SATPAVE	Saturated pavement	m²	Repair to correct an area with pavement failures caused by saturated pavement due to water ingress.	Start/end of repair	Size (area) of rework repair
PA	Pavement	UNSEALED	Maintain unsealed pavements	SCOUR	Scouring	m²	Treatment of scouring on unsealed carriageway.	Start/end of repair	Size (area) of rework repair
PA	Pavement	UNSEALED	Maintain unsealed pavements	SHAPE	Poor cross- section shape	m²	Maintenance repairs to treat uneven pavement due to cross sectional issues within unsealed carriageway (such as grading to reshape poor cross section shape).	Start/end of repair	Size (area) of rework repair
PA	Pavement	UNSEALED	Maintain unsealed pavements	SUBSIDE	Subsidence	m²	Maintenance repairs to treat uneven pavement due to subsidence in the unsealed carriageway.	Start/end of repair	Size (area) of rework repair

TABLE: SHOULDER

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SH	Shoulder	SHLDMAINT	Shoulder maintenance	EDGEBRK	Edge break	m	Repair the edge of seal where the edge break is encroaching into the sealed carriageway (i.e., patching edge of seal).	Start/end of repair	Length of repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	EDGERUT	Edge rutting	m	Reinstatement of unsealed shoulder (importing and compacting make-up metal) to repair rutting or heavy vehicle damage.	Start/end of repair	Length of repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	HIGHSHLD	High shoulder	m	Base preservation drainage improvement activity of <i>High Lip Removal:</i> Removal of high shoulder (removal of vegetation and detritus from shoulder) restricting flow of water.	Start/end of repair	Length of repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	LOWSHLD	Low shoulder	m	Treatment of low unsealed shoulder (importing, spreading, and compacting make- up metal) to repair rutting or heavy vehicle damage.	Start/end of repair	Length of repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SH	Shoulder	SHLDMAINT	Shoulder maintenance	REWORK	Rework on previous maintenance	m	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a re-occurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Length of rework repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	SCOUR	Scouring	m	Repair scouring of unsealed shoulder (importing and compacting make-up metal).	Start/end of repair	Length of repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	SHAPE	Poor cross- section shape	m	Maintenance to correct cross sectional issues such as loss of shape causing unevenly graded shoulder or limiting water flow.	Start/end of repair	Length of repair
SH	Shoulder	SHLDMAINT	Shoulder maintenance	SOFTSHLD	Soft shoulder	m	Treatment of soft spots in the unsealed shoulder.	Start/end of repair	Length of repair

TABLE: SURFACING

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	ciarification	Location requirements	Unit clarification
SU	Surfacing	FILLCRK	Fill cracks	ALLIGCRK	Alligator cracking	m	Filling of alligator cracking with appropriate material to a sufficient width to fully cover with sealing product such as asphaltic binder for >5mm, asphaltic binder with filler for 5 - 20mm, fine premix material for >20mm, polymer modified for >5mm or 100mm wide polymer bandage on asphaltic concrete for all cracks.	Start/end of repair	Length of crack filling completed within repair section
SU	Surfacing	FILLCRK	Fill cracks	ISOCRK	Isolated crack	m	Filling of longitudinal, transverse, diagonal, and large rectangular cracks with appropriate material to a sufficient width to fully cover with sealing product such as asphaltic binder for >5mm, asphaltic binder with filler for 5 - 20mm, fine premix material for >20mm, polymer modified for >5mm or 100mm wide polymer bandage on asphaltic concrete for all cracks.	Start/end of repair	Length of crack filling completed within repair section

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	FILLCRK	Fill cracks	REWORK	Rework on previous maintenance	m	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair due to inadequate treatment. This does not include a re-occurrence of fault due to factors outside of the supplier's control such as a weather event.	Start/end of failed section	Length of crack filling completed within repair section as rework
SU	Surfacing	FILLCRK	Fill cracks	SLIPCRK	Slippage crack	m	Filling of slippage cracks (crescent shaped in asphaltic concrete wearing course) with appropriate material to a sufficient width to fully cover with sealing products such as asphaltic binder for >5mm, asphaltic binder with filler for 5 - 20mm, fine premix material for >20mm, polymer modified for >5mm or 100mm wide polymer bandage on asphaltic concrete for all cracks.	Start/end of repair	Length of crack filling completed within repair section

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	RECHIP	Re-chip surfacing	BLEED	Bleeding	m²	Apply chip such as diluent and chip or pavement gritting to chipseal surface to treat areas of active bleeding (excessive bitumen that can cause stripping, or texture loss).	Start/end of repair	Size (area) of re-chipping
SU	Surfacing	RECHIP	Re-chip surfacing	POLISHED	Polished surface	m²	Apply chip to a surface (chipseal or asphalt) in a localised area to treat low skid resistance due to polished aggregate (maintenance repair not renewal length)	Start/end of repair	Size (area) of re-chipping

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	RECHIP	Re-chip surfacing	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a re-occurrence of fault due to factors outside of the supplier's control such as a weather event.	Start/end of failed section	Size (area) of completed rework
SU	Surfacing	RECHIP	Re-chip surfacing	SCAB	Scabbing or ravelling	m²	Application of binder and chip to a surface (chipseal or asphalt) in localised area to treat scabbing or ravelling (progressive loss of chip). This would be maintenance repair not renewal length.	Start/end of repair	Size (area) of re-chipping

Cos		Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	RECHIP	Re-chip surfacing	STRIP	Stripping	m²	Application of binder and chip to a chipseal surface to treat stripping (displacement of binder from the chip generally through wet conditions).	Start/end of repair	Size (area) of re-chipping
SU	Surfacing	RECHIP	Re-chip surfacing	TEXTURE	Loss of texture	m²	Application of chip to a surface (chipseal or asphalt) in localised area to improve texture (such as loss due to old flushing or asphaltic concrete patches).	Start/end of repair	Size (area) of re-chipping

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	SEALCRK	Seal cracks	ALLIGCRK	Alligator cracking	m²	Sealing of alligator cracks with appropriate chip size, binder, and quantity. Final surface texture to match existing.	Start/end of repair	Size(area) of seal patch
SU	Surfacing	SEALCRK	Seal cracks	REWORK	Rework on previous maintenance	m²	Rework completed on previously completed maintenance repairs due to poor workmanship/failure of original repair such as inadequate treatment. This does not include reoccurrence of fault due to factors outside the supplier's control such as a weather event.	Start/end of failed section	Size (area of completed rework

Co		Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SI	J Surfacing	SURFREP	Surfacing defect repairs	POLISHED	Polished surface	m ²	Treatment of surface to treat low skid resistance due to polished aggregate such as micromilling or scabbing.	Start/end of repair	Size (area) of repair
SI	J Surfacing	SURFREP	Surfacing defect repairs	SECONDCOAT	2nd coat	m²	Second coat sealing of completed maintenance repairs (excluding preseal repairs) to ensure texture of the repair is consistent with the surrounding pavement.	Start/end of repair	Size (area) of repair

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
SU	Surfacing	WATERBLAST	Waterblasting (also known as water cutting)	FLUSH	Flushing	m^2	High pressure water treatment such as waterblasting or water cutting to treat areas of flushing causing reduced texture or skid resistance.	Start/end of repair	Size (area) of waterblasting

TABLE: TRAFFIC FACILITY

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	ATP	Audio tactile profiled marking maintenance	NONFUNCT	Replace non- functional asset	m	Replacement of non- functional audio tactile profiled marking (ATP) i.e., ATP that no longer meets requirements due to wear and tear or damage such as loss of reflectivity, loss of thickness (ATP height) or missing.	Start and end of continuous section of ATP replaced	Length of ATP replaced
TF	Traff Facil	CMPMAINT	Culvert marker post maintenance	NONFUNCT	Replace non- functional asset	each	Replacement of non- functional or missing culvert marker posts (CMP) - worn or damaged. Excludes graffiti treatment.	Location of CMP or start/end of section with multiple adjacent CMPs	Number of CMPs replaced at location or within section
TF	Traff Facil	COLMARK	Special coloured marking maintenance	NONFUNCT	Replace non- functional asset	m²	Replacement of non- functional special coloured marking (such as cycle lanes, speed zones or bus lanes) that no longer meets requirements due to wear and tear or damage such as loss of reflectivity, delamination or faded.	Start and end of special coloured marking replaced	Area of marking replaced

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	EDGEPOST	Edge marker post maintenance	CLEAN	Clean	each	Cleaning of edge marker posts (EMP) where condition results in reduced visibility and function (also includes safe hit posts).	Start/end of inspected/treated section (RS length or shorter). Not the location of every EMP treated.	Number of EMPs treated within the section
TF	Traff Facil	EDGEPOST	Edge marker post maintenance	MISSING	Missing	each	Installation of missing EMPs in a defined section based on standard requirements such as required spacing on curve - this also includes safe hit posts. Includes missing EMPs due to crash damage and vandalism.	Start/end of inspected/treated section (RS length or shorter). Not the location of every EMP treated.	Number of EMPs installed within the section
TF	Traff Facil	EDGEPOST	Edge marker post maintenance	NONFUNCT	Replace non- functional asset	each	Replace or repair EMPs that are not visible or functional due to damage or wear and tear such as faded or missing reflector strips, or broken EMPs (also includes safe hit posts). Includes damaged EMPs due to crash damage or vandalism.	Start/end of inspected/treated section (RS length or shorter). Not the location of every EMP treated.	Number of EMPs treated within the section

Co		Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
ТІ	F Traff Facil	EDGEPOST	Edge marker post maintenance	REALIGN	Realign	each	Realign or straighten EMPs that are not clearly visible or do not meet standard requirements (also includes safe hit posts).	Start/end of inspected/treated section (RS length or shorter). Not the location of every EMP treated.	Number of EMPs treated within the section
ТІ	Traff Facil	LRMSMAINT	LRMS sign maintenance	NONFUNCT	Replace non- functional asset	each	Replacement or treatment of non-functional or missing LRMS signs because they are damaged, illegible, incorrectly located or misaligned. Excludes graffiti treatment.	Location of LRMS sign	Number of LRMS signs treated at location (e.g., multiple signs on one post, or back-to-back signs)
TI	F Traff Facil	MARKING	Road marking maintenance	NONFUNCT	Replace non- functional asset	m	Replacement of non- functional marking - road marking (paint) that no longer meets requirements due to being worn, faded, not reflective or missing.	Start and end of road section where marking has been placed. May include multiple marking types within the section treated.	Length of marking replaced. For non-linear items such as arrows, apply a nominal length for the marking item

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	MARKING	Road marking maintenance	REWORK	Rework on previous maintenance	m	Rework completed on previously completed maintenance due to poor workmanship/failure of original repair such as inadequate treatment. This does not include a re-occurrence of fault due to factors outside the supplier's control such as a weather event.	Start and end of failed section. May include multiple marking types within the section treated.	Length of marking corrected. For non-linear items such as arrows, apply a nominal length for the marking item.
TF	Traff Facil	MIRROR	Mirror maintenance	ILLEGIBLE	Illegible	each	Maintenance of a mirror that is not clearly visible or functional such as realign, straighten, clean or repair.	Location of mirror	Number of mirrors treated
TF	Traff Facil	POSTMAINT	Signpost and fitting maintenance	POST	Post maintenance	each	Replacement or general maintenance of signpost only due to normal wear and tear or environmental/external factors such as rotten, loose fittings, broken or painting. Excludes graffiti, realignment or where sign and post are both replaced/treated.	Location of signpost	Number of posts treated at location (e.g., sign with multiple posts)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	POSTMAINT	Signpost and fitting maintenance	TORQUE	Torque setting	each	Test and adjusting torque setting of signs with frangible bases, if required, in accordance with the manufacturer's recommendations.	Location of signpost or start/end of section with multiple adjacent signs tested and treated	Number of posts treated at location or within section
TF	Traff Facil	RPM	Raised pavement marker maintenance	BROKEN	Broken	each	Replace raised pavement markers (RPMs) that are broken or damaged. Includes reflective, ceramic, or internally illuminated RPMs.	Start and end of inspected/treated section (RS length or shorter). Not the location of every RPM treated.	Number of RPMs replaced per section
TF	Traff Facil	RPM	Raised pavement marker maintenance	MISSING	Missing	each	Replace raised pavement markers (RPMs) that are missing due to wear or physical activity. Includes reflective, ceramic, or internally illuminated RPMs.	Start and end of inspected/treated section (RS length or shorter). Not the location of every RPM treated.	Number of RPMs replaced per section

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	RPM	Raised pavement marker maintenance	NONFUNCT	Replace non- functional asset	each	Replacement of non- functional raised pavement markers (RPMs) such as RPMs that no longer meet visibility requirements due to being worn, faded or no longer reflective.	Start and end of inspected/treated section (RS length or shorter). Not the location of every RPM treated.	Number of RPMs replaced within section
TF	Traff Facil	SAFETYX	Safety crossing maintenance	BROKEN	Broken	each	Repair of broken pedestrian crossing/refuge island (e.g., kea crossing) elements such as ramps and pedestrian bars due to vandalism, wear and tear or crash damage.	Location of safety crossing	Number of elements repaired
TF	Traff Facil	SIGNALS	Traffic signal maintenance	CLEAN	Clean	each	Cleaning of traffic signal where condition results in reduced visibility and function.	Location of traffic signal	Number of traffic signals cleaned

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SIGNALS	Traffic signal maintenance	CRASHDMG	Crash damage	each	Physical repair or replacement of traffic signal component due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Location of traffic signal	Number of traffic signal elements replaced or repaired
TF	Traff Facil	SIGNALS	Traffic signal maintenance	PAINT	Paint	each	Repaint faded traffic signal asset or apply protective paint coating to traffic signal component where required such as repaint faded white delineation paint on poles or reapply protective paint coating.	Location of traffic signal	Number of traffic signal assets treated
TF	Traff Facil	SIGNALS	Traffic signal maintenance	GRAFFITI	Graffiti	each	Removal of visible graffiti from traffic signal or components (such as through painting or cleaning).	Location of traffic signal	Number of traffic signal assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SIGNALS	Traffic signal maintenance	THEFT	Theft	each	Replacement of traffic signal or components removed due to theft.	Location of traffic signal	Number of traffic signal assets treated
TF	Traff Facil	SIGNALS	Traffic signal maintenance	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of traffic signal damaged due to vandalism.	Location of traffic signal	Number of traffic signal assets treated
TF	Traff Facil	SIGNALS	Traffic signal maintenance	CORRECTIVE	Corrective maintenance	each	Correcting minor low risk non-performance related issues found during other activities.	Location of traffic signal	Number of traffic signal assets treated

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SIGNMAINT	Sign maintenance	CLEAN	Clean	each	Cleaning of sign where condition results in reduced visibility and function. Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage). If sign and post are both treated, then the post is included in this record.	Location of sign	Number of signs treated at location (e.g., multiple signs on one post or back-to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	CRASHDMG	Crash damage	each	Physical repair or replacement of sign due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management). Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage). If the sign and post are both treated, then the post is included in this record.	Location of sign	Number of signs replaced at location (e.g., multiple signs on one post or back- to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	GRAFFITI	Graffiti	each	Removal of visible graffiti from sign or post. Includes regulatory and non-regulatory traffic signs, CMPs and LRMS signage (excluding EMPs).	Location of sign	Number of signs treated at location (e.g., multiple signs on one post or back-to-back signs)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SIGNMAINT	Sign maintenance	ILLEGIBLE	Illegible	each	Replacement of illegible sign due to fading, loss of reflectivity (not visible at night), delamination, wear, untreatable graffiti, broken or bent. Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage).	Location of sign	Number of signs replaced at location (e.g., multiple signs on one post or back- to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	MISSING	Missing	each	Re-instatement of sign that previously existed but is found to be missing (during inspections). Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage). If the sign and post are both missing, then the post is included in this record.	Location of sign	Number of signs installed at location (e.g., multiple signs on one post or back- to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	NONSTD	Remove non- standard sign	each	Removal of illegal non- standard signs within State Highway corridor.	Location of sign	Number of signs removed at location (e.g., multiple signs on one post or back- to-back signs)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SIGNMAINT	Sign maintenance	REALIGN	Realign	each	Realign or straighten sign that is not clearly visible or functional/does not meet standard requirements. Includes post straightening, tightening sockets, and replanting post. Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage)	Location of sign	Number of signs realigned at location (e.g., post with multiple signs, or back-to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	REMOVE	Remove	each	Removal of signs no longer required such as closure of service, or incorrectly located. Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage). Does not include removal of signs under projects or renewals.	Location of sign	Number of signs removed at location (e.g., multiple signs on one post, or back- to-back signs)
TF	Traff Facil	SIGNMAINT	Sign maintenance	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of sign damaged due to vandalism affecting functionality such as removed components, bent or gunshot damage. Includes regulatory and non-regulatory traffic signs (excluding CMPs, EMPs and LRMS signage).	Location of sign	Number of signs treated at location (e.g., multiple posts on one post, or back-to-back signs)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SRAILMAINT	Sight rail maintenance	BROKEN	Broken	m	Replacement or repair of damaged/broken sight rail due to normal wear and tear (e.g., rotten planks), vandalism or environmental factors such as storms and wind. Does not include crash damage.	Start and end of sightrail treated	Length of sightrail treated not individual components. If single component treated, then the quantity would be 1m.
TF	Traff Facil	SRAILMAINT	Sight rail maintenance	CLEAN	Clean	m	Cleaning of sightrail where condition results in reduced visibility and function.	Start and end of sightrail treated	Length of sightrail treated not individual components. If single component treated, then the quantity would be 1m.
TF	Traff Facil	SRAILMAINT	Sight rail maintenance	CRASHDMG	Crash damage	m	Physical repair or replacement of sight rail due to crash damage (does not include initial call-out or 'make safe' action such as Traffic Management).	Start and end of sightrail treated	Length of sightrail treated not individual components. If single component treated, then the quantity would be 1m.

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	SRAILMAINT	Sight rail maintenance	GRAFFITI	Graffiti	m	Removal of visible graffiti from sight rail such as painting or chemical cleaning.	Start and end of sight rail treated	Length of sight rail treated not individual components. If single component treated, then the quantity would be 1m.
TF	Traff Facil	SRAILMAINT	Sight rail maintenance	PAINT	Paint	m	Painting sight rail that is faded or for protection. Excludes painting to treat graffiti.	Start and end of sight rail treated	Length of sight rail treated not individual components. If single component treated, then the quantity would be 1m.
TF	Traff Facil	WPMAINT	Weigh pit and HCV facility maintenance	FACILITIES	Furniture/facility maintenance	each	Repair of non-functioning or damaged equipment or furniture within Weigh Pit or HCV facilities (e.g., buildings, toilets, and bins) due to wear and tear or vandalism.	Location of Weigh Pit or HCV facility	Each visit to/treatment of facility (not number of items repaired)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	WPMAINT	Weigh pit and HCV facility maintenance	HOLES	Potholes	each	Repair of potholes in trafficked sealed area of Weigh Pit or HCV facility.	Location of Weigh Pit or HCV facility	Number of potholes repaired
TF	Traff Facil	WPMAINT	Weigh pit and HCV facility maintenance	LITTER	Clear litter	each	Emptying of rubbish bins and removal of visible litter items within the Weigh Pit or HCV facility (including overflowing rubbish bins).	Location of Weigh Pit or HCV facility	Each visit to /treatment of site for litter (not the number of litter items removed).
TF	Traff Facil	WPMAINT	Weigh pit and HCV facility maintenance	VANDALISM	Repair or replace (due to vandalism)	each	Repair or replacement of Weigh Pit or HCV facility equipment or facilities damaged due to vandalism.	Location of Weigh Pit or HCV facility	Each visit to/treatment of site (not number of items repaired)

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
TF	Traff Facil	WPMAINT	Weigh pit and HCV facility maintenance	WEIGHPIT	Weigh pit equipment	each	Repair or replacement of Weigh Pit equipment as a result of wear and tear (such as concrete pad or brake pit). Does not include electronic equipment.	Location of Weigh Pit or HCV facility	Each visit to/treatment of site (not number of items repaired)

TABLE: VEGETATION

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
VG	Verge	VEGETATION	Vegetation control and maintenance	DEAD	Dead tree/limb	each	Vegetation control - dead tree or limb: Removal of dead limbs or trees that present a risk of falling onto the road (includes trees in road reserve and adjacent property).	Location of trees treated	Number of trees treated at location
VG	Verge	VEGETATION	Vegetation control and maintenance	SOWN	Self-sown trees	each	Vegetation control - self- sown trees: Removal of self-sown trees greater than 1m high and less than 3m. Native trees included.	Location of trees treated	Number of trees treated at location
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL1	Vegetation control type 1	m²	Vegetation control type 1 (urban): Mowing of nominated areas, shoulders, medians, islands and verges.	Start and end of treated section (RS length or shorter)	Area of vegetation treatment
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL3	Vegetation control type 3	m	Vegetation control type 3 - Sightline vegetation control: Maintenance of overgrown verge, shoulder vegetation, vegetation blocking forward sight to signs/delineation and tree limbs in clear zone. Includes Type 3A and 3B, and HCV facilities.	Start and end of treated section (RS length or shorter)	Length of vegetation treatment

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL4	Vegetation control type 4	m	Vegetation control type 4 - Sightline vegetation (large, vegetated areas): Maintenance of vegetation to required height to maintain sightline.	Start and end of treated section (RS length or shorter)	Length of vegetation treatment
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL4A	Vegetation control type 4a	m	Vegetation control type 4A - Sightline vegetation (rural road sight bench): Maintenance of vegetation to required height to maintain sightline.	Start and end of treated section (RS length or shorter)	Length of vegetation treatment
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL5	Vegetation control type 5	m	Vegetation control type 5: Control height of vegetation around assets such as markers, structures, barriers, and channels. Includes moss and lichen removal from sealed surfaces (chemical control).	Start and end of treated section (RS length or shorter)	Length of vegetation treatment

Cost code	Cost description	Activity code	Activity description	Fault code	Fault description	Unit	Activity and fault clarification	Location requirements	Unit clarification
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL6	Vegetation control type 6	m	Vegetation control type 6: Control of all pest plants within limit of works (including stockpiles and can include chemical control).	Start and end of treated section (RS length or shorter)	Length of vegetation treatment
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL7	Vegetation control type 7	m²	Vegetation control type 7: Maintain plant areas - weeding, bark/chip raking, replace dead plants and trimming/pruning trees and shrubs (affecting sight distance/other plants). (Planted area maintenance).	Start and end of treated section (RS length or shorter)	Area of vegetation treatment
VG	Verge	VEGETATION	Vegetation control and maintenance	VEGCNTRL8	Vegetation control type 8	m²	Vegetation control type 8: Identification (recording the species composition and habitat value) of areas of existing indigenous species and local ecological significance and manage these through methods such as buffering.	Start and end of treated section (RS length or shorter)	Area of vegetation treatment