CCC As-built requirements for Land Improvements V3.0

Survey As-built Guidelines (SAG) Appendix L

L01: Car Park

Name **Car Park (Outline)**

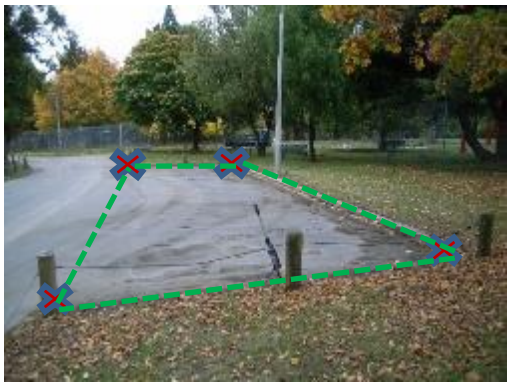
Polygon Type **L01** "Polygon Asset Inputs "

A dedicated area for parking cars, which includes the driveway, if it terminates at the car park. If the driveway continues through it is considered a Track.

CAT Column	SAG Attribute Description	Valid Values
A	Type of Polygon Feature	L01
B	Leave Blank	Leave Blank
C	Asset Record Capture Type	Select from pick list: domExistingOrNew
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign
E	Asset Unique Identifier	data - Text (100 Characters)
F	Polygon Vertex Easting coordinate	data - Decimal Number (12 Chars, 2 Decimals)
G	Polygon Vertex Northing coordinate	data - Decimal Number (12 Chars, 2 Decimals)
H	Order of vertex / point along polygon	data - Number
I	Date of commission	data - Date (dd/mm/yyyy)
J	Location certainty - accuracy of data	Select from pick list: domLocationCertainty
K	Name of main contractor who installed asset	Select from pick list: domInstalledBy
L	Date of "survey-start"	data - Date (dd/mm/yyyy)
M	Long Description - explanation, further details, or location within park	data - Text (70 Characters)
N	File name of photo - Photos must be supplied	data - Text (50 Characters)
O	Surface Material	Select from pick list: domSurfaceMaterial
P	Surface Function	Select from pick list: domCarParkSurfaceFunction
Q	Top Coat Life Cycle	data - Number
R	Date of first coat	data - Date (dd/mm/yyyy)
S	Date surface life expires	data - Date (dd/mm/yyyy)
T	Date last resurfaced	data - Date (dd/mm/yyyy)
U	Base Course Material	Select from pick list: domBaseCourseMaterial
V	Base Course Depth in millimeters (mm)	data - Decimal Number (5 Chars, 1 Decimals)
W	Date Base Course Installed	data - Date (dd/mm/yyyy)
X	Base Life Cycle	data - Number
Y	Date Base Course Life Expires	data - Date (dd/mm/yyyy)
Z	Kerb Type	Select from pick list: domKerbType
AA	Kerb Length in meters (m)	data - Decimal Number (6 Chars, 1 Decimals)
AB	Road Markings	Select from pick list: domCarParkRoadMarkings
AC	Usage Level	Select from pick list: domCarParkUsageLevel
AD	Total Number Of Spaces	data - Number
AE	Number of Disabled Spaces	data - Number
AF	Wheel Stops	data - Number
AG	Vehicle Counters	Select from pick list: domCarParkVehicleCounters
AH	Number of Sumps	data - Number

Outline of structure

X Y



All corner points along outline to be surveyed.
Create one CAT row per surveyed point.

Additional Information

*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT
See Appendix C.1.2 for a CAT example. Col G: enter number of vertex along outline

Car Park (Continued)

CLASSIFICATION INFORMATION

1. Surface Material
What is the car park surface made of? See the definitions section for a full list of materials and their descriptions.

2. Kerb Type
a. Dish Channel – Channel cross section forms a segment of a circle.
b. Kerb and Channel – Channel formed by a section of constant fall towards a vertical or near vertical face.
c. Kerb Only Vertical or near vertical face forming a step or kerb with no channel at its base.
d. Mountable Kerb Only – Kerb either with a curved face or a face at 45º or less to the horizontal. This kerb type is able to be driven over.
e. No Kerbing – No kerbing or channels surround the car park area.
f. Covered Kerb and Dish – Deep kerb and dish channel with a cover over the top.
g. Kerb and Dished Channel – Kerb with dish channel at its base.
h. Mountable Kerb and Channel – As per kerb and channel but with a mountable kerb.
i. Other – Other kerb and channel type not mentioned above.

3. Kerb Length
What length of car park perimeter has the kerb and channel? All lengths should be in metres.

4. Road Markings
Does the car park surface have markings?
Markings may be painted or formed by paving features.

5. Total Number of Spaces
If the car park has marked spaces, how many spaces are there? This includes reserved and disabled spaces.

6. Number of Disabled Spaces
If the car park has marked spaces, how many disabled spaces are there?

7. Number of Wheel Stops
Wheel stops are kerbs / raised edgings at the front of car park spaces to help prevent cars going forward too far.
Are wheel stops fitted in the car park, if so how many?

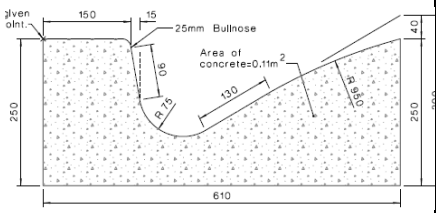
8. Vehicle Counters
Are vehicle counters fitted at the car park?

9. Number of Sumps
How many storm water sumps (drains) are there in the car park surface??

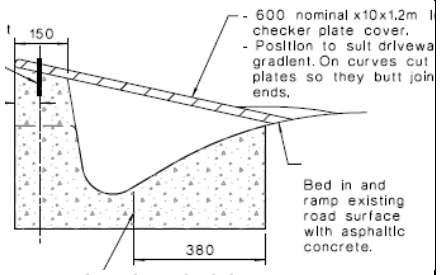
ADDITIONAL COMMENTS

Driveways in parks are included in the car parks grouping.

ADDITIONAL PHOTOS



Kerb and Dish Channel



Covered Kerb and Dish

L02: Judder Bar

Name **Judder Bar (Point)**

Point Type **L02** "Point Asset Inputs"

CAT Column	SAG Attribute Description	Valid Values
A	Type of Point Feature	L02
B	Specific type of Judder Bar	Select from pick list: domJudderBarType
C	Asset Record Capture Type	Select from pick list: domExistingOrNew
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign
E	Asset Unique Identifier	data - Text (100 Characters)
F	Centre of Structure in Easting coordinate	data - Decimal Number (12 Chars, 2 Decimals)
G	Centre of Structure in Northing coordinate	data - Decimal Number (12 Chars, 2 Decimals)
H	Date of commission	data - Date (dd/mm/yyyy)
I	Location certainty - accuracy of data	Select from pick list: domLocationCertainty
J	Name of main contractor who installed asset	Select from pick list: domInstalledBy
K	Date of "survey-start"	data - Date (dd/mm/yyyy)
L	Long Description - explanation, further details, or location within park	data - Text (70 Characters)
M	File name of photo - Photos must be supplied	data - Text (50 Characters)

Additional Information

*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT
See Appendix C.1.2 for a CAT example.

Constructed at the road surface to encourage vehicle drivers to slow down.

Centre of structure
X Y

Single judder bar with painted markings. Not all judder bars will be marked or as large as this one.

Judder Bar (Continued)

CLASSIFICATION INFORMATION

1. Judder Bar Type
a. Single
b. Double

ADDITIONAL PHOTOS

Double judder bar. These judder bars are a normal size and have painted markings.

L03: Ramp

Name **Ramp (Outline)**

Polygon Type **L03** "Polygon Asset Inputs "

An inclined flat surface providing access for wheeled objects between adjacent areas of different heights (see N02 for boat ramp).

Outline of structure
X Y

CAT Column	SAG Attribute Description	Valid Values
A	Type of Polygon Feature	L03
B	Leave Blank	Leave Blank
C	Asset Record Capture Type	Select from pick list: domExistingOrNew
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign
E	Asset Unique Identifier	data - Text (100 Characters)
F	Polygon Vertex Easting coordinate	data - Decimal Number (12 Chars, 2 Decimals)
G	Polygon Vertex Northing coordinate	data - Decimal Number (12 Chars, 2 Decimals)
H	Order of vertex / point along polygon	data - Number
I	Date of commission	data - Date (dd/mm/yyyy)
J	Location certainty - accuracy of data	Select from pick list: domLocationCertainty
K	Name of main contractor who installed asset	Select from pick list: domInstalledBy
L	Date of "survey-start"	data - Date (dd/mm/yyyy)
M	Long Description - explanation, further details, or location within park	data - Text (70 Characters)
N	File name of photo - Photos must be supplied	data - Text (50 Characters)
O	Construction Material	Select from pick list: domRampConstruction
P	Non Slip Surface Type	Select from pick list: domNonSlipSurfaceType
Q	Handrail	Select from pick list: domHandrail
R	Length in meters (m)	data - Decimal Number (4 Chars, 2 Decimals)
S	Width in meters (m)	data - Decimal Number (4 Chars, 2 Decimals)

Additional Information

*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT
See Appendix C.1.2 for a CAT example.
Col G: enter number of vertex along outline

All corner points along outline to be surveyed.
Create one CAT row per surveyed point.

Ramp (Continued)

CLASSIFICATION INFORMATION

1. Construction Material
See picklist options for a list of construction materials. Most ramps will be either concrete or wood.

2. Non Slip Surface Type
a. Chicken Wire – Wire mesh covers the surface of the boardwalk to provide grip.
b. Plastic Geotech Products – As per chicken wire but with a plastic mesh.
c. Sand Epoxy Blend – The boardwalk surface has been painted with a mixture of sand and epoxy resin.
d. Sprayed Tar – Bituminous coating on the boardwalk surface.
e. Textured Concrete – Concrete with a pattern impressed into the surface for grip.
f. None – No non slip surface exists.

3. Handrail
Is a handrail fitted alongside the ramp?

4. Length
What is the end to end distance along the inclined surface? All Lengths should be in metres.

5. Width
What is the side to side distance across the inclined surface? All widths should be in metres.

ADDITIONAL COMMENTS

Ramps are built assets.

A section of track on an incline with retaining walls on each side should not be considered a ramp and should be captured as track and retaining walls. Likewise, an incline leading onto a bridge formed with fill between two walls extending from the corners of the bridge should be considered a bridge abutment and not a ramp.
Some stockyards have a fenced ramp to allow livestock to be loaded into trucks. These ramps are part of the stockyard and should not be captured as ramps.

Ramps leading into the water should be recorded as boat ramps.

Ramps for access into buildings and constructed integral with the building foundations are to be considered part of the building and not a separate asset.

ADDITIONAL PHOTOS

Wooden ramp with no handrails or non-slip surface. As this ramp leads solely to a private residence it is a privately owned ramp.

L04: Track

Name **Track (Outline)**

Polygon Type **L04** "Polygon Asset Inputs "

A footpath or road, either sealed or unsealed, through a natural area, park, or road corridor.

CAT Column	SAG Attribute Description	Valid Values
A	Type of Polygon Feature	L04
B	Specific type of Track (intended traffic)	Select from pick list: domTrackIntendedTraffic
C	Asset Record Capture Type	Select from pick list: domExistingOrNew
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign
E	Asset Unique Identifier	data - Text (100 Characters)
F	Polygon Vertex Easting coordinate	data - Decimal Number (12 Chars, 2 Decimals)
G	Polygon Vertex Northing coordinate	data - Decimal Number (12 Chars, 2 Decimals)
H	Order of vertex / point along polygon	data - Number
I	Date of commission	data - Date (dd/mm/yyyy)
J	Location certainty - accuracy of data	Select from pick list: domLocationCertainty
K	Name of main contractor who installed asset	Select from pick list: domInstalledBy
L	Date of "survey-start"	data - Date (dd/mm/yyyy)
M	Long Description - explanation, further details, or location within park or road corridor	data - Text (70 Characters)
N	File name of photo - Photos must be supplied	data - Text (50 Characters)
O	Surface Material	Select from pick list: domSurfaceMaterial
P	Kerb Type	Select from pick list: domKerbType
Q	Width in meters (m)	data - Decimal Number (4 Chars, 2 Decimals)
R	Length in meters (m)	data - Decimal Number (7 Chars, 1 Decimals)
S	Track Drainage	Select from pick list: domTrackDrainage
T	Track Category Mountain Bike *Mandatory if Track type = Mountain Bike; otherwise leave as is	Select from pick list: domTrackCategoryMountainBike
U	Track Specification Pedestrian *Mandatory if Track type = Pedestrian; otherwise leave as is	Select from pick list: domTrackSpecificationPedestrian
V	Easement – Is there an easement?	Select from pick list: domTrackEasement
W	Final surface depth in millimeters (mm)	data - Decimal Number (5 Chars, 1 Decimals)
X	Base Course Material	Select from pick list: domBaseCourseMaterial
Y	Base course depth in millimeters (mm)	data - Decimal Number (5 Chars, 1 Decimals)
Z	Track accessibility class – How difficult is this track to traverse?	Select from pick list: domTrackAccessibilityClass
AA	Date accessibility standard met?	data - Date (dd/mm/yyyy)
AB	Date of first coat	data - Date (dd/mm/yyyy)
AC	Date last resurfaced	data - Date (dd/mm/yyyy)

Outline of structure
X Y

Additional Information

*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT
See Appendix C.1.2 for a CAT example.
Col G: enter number of vertex along outline

All corner points along outline to be surveyed.
Create one CAT row per surveyed point.

Track (Continued)

CLASSIFICATION INFORMATION

1. Intended Traffic
Intended method(s) of transportation that the track has been installed to support.
a. 4WD Vehicle – The track is suitable for four-wheel drive vehicles to use.
b. Any Vehicle – The track is suitable for any vehicle to use.
c. Horse – Horses are intended to be ridden on the track.
d. Mountain Bike – Mountain bikes are intended to be ridden on the track.
e. Pedestrian – The track is intended for foot traffic or cycles.

2. Surface Material
What is the track surface made of? See the definitions section for a list of materials and their descriptions.
https://ccc.govt.nz/assets/Documents/Consents-and-Licences/construction-requirements/IDS/As-Built-Data-Requirements/Land-Improvements-Data-Dictionary-Definitions.pdf

3. Kerb Type
a. Dish Channel – Channel cross section forms a segment of a circle.
b. Kerb and Channel – Channel formed by a section of constant fall towards a vertical or near vertical face.
c. Kerb Only Vertical or near vertical face forming a step or kerb with no channel at its base.
d. Mountable Kerb Only – Kerb either with a curved face or a face at 45º or less to the horizontal. This kerb type is able to be driven over.
e. No Kerbing – No kerbing or channels alongside the track.
f. Covered Kerb and Dish – Deep kerb and dish channel with a cover over the top.
g. Kerb and Dished Channel – Kerb with dish channel at its base.
h. Mountable Kerb and Channel – As per kerb and channel but with a mountable kerb.
i. Other – Other kerb and channel type not mentioned above.

4. Width
What is the width of the track? All widths should be in metres.

5. Track Drainage
a. Swale – Open grassed ditch beside track.
b. Hump – Raised track edge retains runoff.
c. Culvert Pipe – Sumps/drains connected by pipes or a channel made from a pipe cut in half lengthwise alongside track.
d. Open Box Drain – Square cross section drain alongside track.
e. Closed Box Drain – Covered square cross section drain alongside track. Cover may be solid or perforated/slotted.

ADDITIONAL COMMENTS

Mountain bike tracks will be unpaved tracks that can be shared use with bikes and pedestrians or single use for mountain bikes only. Berms may be constructed on some mountain bike tracks but there is generally little in the way of engineering enhancements. In general mountain bike tracks are present only in Bottle Lake Forest Park and Port Hills Regional Parks.

Tracks intended for any vehicle differ from driveways/car parks in that tracks will seldom be sealed and will be longer giving access through an area. Driveways may be sealed or unsealed but only give access into an area or to a car park.

Diagrams of the different kerb types are in the Car Park section.

ADDITIONAL PHOTOS

Gravel track intended for any vehicle.

Bare earth track intended for mountain bikes. Signage at the beginning and intersections can be the only difference between tracks intended for mountain bikes and pedestrians.

Pedestrian specific track examples.

CCC As-built requirements for Land Improvements V3.0

L05: Terraces

Name **Terraces (Outline)**

Polygon Type **L05** "Polygon Asset Inputs "

A series of level hard surfaces on a slope resembling steps. Stairs, handrails, ramps are separate assets, and are to be captured separately.

CAT Column	SAG Attribute Description	Valid Values
A	Type of Polygon Feature	L05
B	Leave Blank	Leave Blank
C	Asset Record Capture Type	Select from pick list: domExistingOrNew
D	Differs from design (yes/no)	Select from pick list: domDiffersFromDesign
E	Asset Unique Identifier	data - Text (100 Characters)
F	Polygon Vertex Easting coordinate	data - Decimal Number (12 Chars, 2 Decimals)
G	Polygon Vertex Northing coordinate	data - Decimal Number (12 Chars, 2 Decimals)
H	Order of vertex / point along polygon	data - Number
I	Date of commission	data - Date (dd/mm/yyyy)
J	Location certainty - accuracy of data	Select from pick list: domLocationCertainty
K	Name of main contractor who installed asset	Select from pick list: domInstalledBy
L	Date of "survey-start"	data - Date (dd/mm/yyyy)
M	Long Description - explanation, further details, or location within park	data - Text (70 Characters)
N	File name of photo - Photos must be supplied	data - Text (50 Characters)
O	Construction Material	Select from pick list: domTerraceConstruction
P	Width in meters (m)	data - Decimal Number (4 Chars, 2 Decimals)
Q	Length in meters (m)	data - Decimal Number (4 Chars, 2 Decimals)
R	Number of Terrace Steps	data - Number
S	Inscribed?	Select from pick list: domTerraceInscribed

Outline of structure

X Y

Additional Information

*All other columns must be left "blank" or hold the value "LEAVE BLANK" as default in CAT
See Appendix C.1.2 for a CAT example.
Col G: enter number of vertex along outline

All corner points along outline to be surveyed.
Create one CAT row per surveyed point.

Terraces (Continued)

CLASSIFICATION INFORMATION

1. Construction Material
See picklist options for a list of construction materials.

2. Width
What is the total width of the terraced area, from the top to the bottom measured in metres?

3. Length
What is the total length of the terraced area, running along the river bank, measured in metres?

4. Number of terrace steps
What is the number of terrace steps that make up the terraced area?

5. Terraces have been inscribed?
Has any of the terrace steps been inscribed, Yes or No?

ADDITIONAL COMMENTS

Stairs, handrails, ramps, seats, trees, etc, are separate assets and although they may be included in the total terraces area, are to be captured separately.

ADDITIONAL PHOTOS

Terrace on Avon River