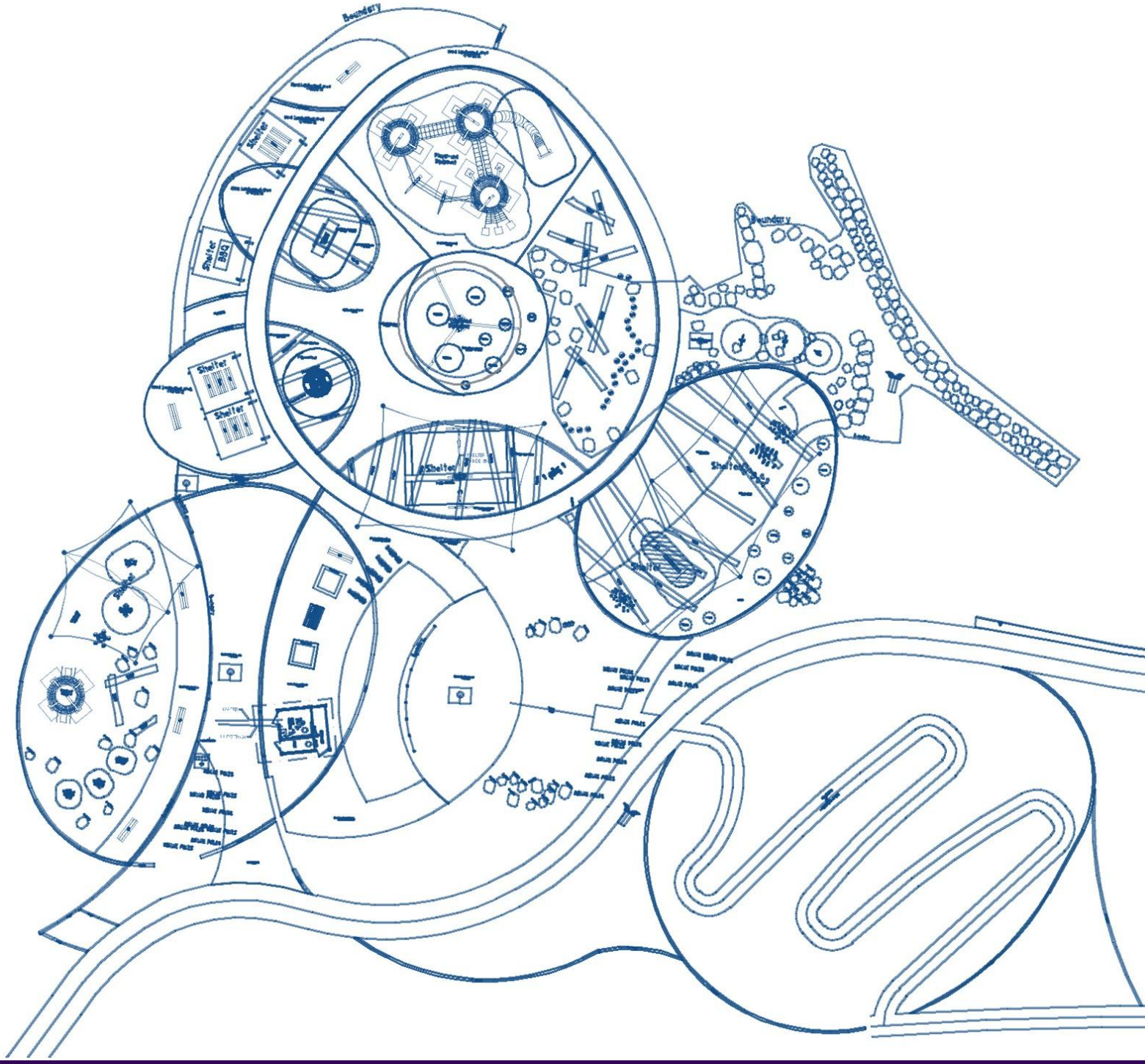


Drafting requirements for Ref 11 Summary Drawings

Reference Document 11

Version 4.0 (November 2026)

ACT Government

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4.0	0	Major update – Over 120 asset classes aligned with ACT Government geospatial datasets, the City and Environment Directorate asset management system and related specifications. Ref 11 Toolkit's BLKEDIT now supports multipage dialog boxes and includes inbuilt validation tools. CAD blocks available in standard and improved dynamic blocks and handle large numbers of asset attributes. Changes to drawing submission and validation process. Vectorworks drawings are no longer permitted as alternatives to Ref 11 Summary Drawings.	Sue Marriage Tim Rampton	November 2026

Front cover: Whitlam 2D2 hard landscape summary plan by Coleman Engineering Services

Acknowledgement of Country

City and Environment Directorate (CED) acknowledges that Aboriginal people are the Traditional Owners of Australia. We acknowledge and pay respect to the Ngunnawal people as the custodians of the land and waters that we live and thrive on today and recognise any other people or families with connection to the lands of the ACT and region.

CED acknowledges that Canberra's cultural and natural heritage was maintained by the Traditional Custodians for many generations before colonial settlement on Australian soil. Aboriginal people's management of the land preserved the natural balance of local plants and animals. This knowledge of the environment in which we live is critical to the protection and restoration of our land today.

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1 Objective and general requirements

1.1 Objective

This document defines the spatial and attribute requirements for Ref 11 Summary Drawing CAD data related to new, removed or modified municipal assets. These requirements apply to both civil and landscape Ref 11 Summary Drawings submitted for integration into the City and Environment Directorate (CED) asset management system.

1.2 General

This document specifies the technical conformance requirements to be followed when preparing Ref 11 Summary Drawings; including standard CAD blocks, layer naming conventions, units, coordinate systems, spatial representation and required attribute data for each asset used in Summary Drawings.

Ref 11 Summary Drawings are submitted at Design Acceptance, Operational Acceptance (OA), Soft Landscape Consolidation (SLC), and Final Handover if there are any changes since OA/SLC. CED Reference Documents and associated advisory notes may communicate addition submission stages.

Ref 11 Summary Drawings produced in CAD packages, such as AutoCAD, can be streamlined and validated using Ref 11 Toolkit 4.0 (see *Ref 11 Toolkit 4.0 User Guide*).

1.3 Ref 11 Summary Drawings

Ref 11 Summary Drawings are CAD model/base drawing in AutoCAD DWG format that must comply with requirements in this document.

Ref 11 Summary Drawings submitted for Design Acceptance are to accurately reflect proposed works.

Ref 11 Summary Drawings submitted for Operational Acceptance, Soft Landscape Consolidation (and Final Handover if there are any changes since OA/SLC) are to accurately reflect Works as Executed (WAE)/as-constructed assets information.

The purpose of a Ref 11 Summary Drawing is to streamline loading spatial and attribute data, depicting proposed or new municipal assets, into the directorate's asset management system and GIS systems.

1.4 Summary Drawing requirements

Table 1 Summary Drawing requirements

Drawing configuration	Details
Submission types	Ref 11 Summary Drawings are to be submitted for the following submission types: • Design Acceptance submissions – Design information for proposed assets • Operational Acceptance, Soft Landscape Consolidation (and Final Handover if there are any changes since OA/SLC) submissions – Updated with Works as Executed data.
Horizontal datum / projection (coordinate system)	Geocentric Datum of Australia 2020 (GDA2020) / Map Grid of Australia 2020 (MGA2020) Zone 55.
2D / 3D requirements (vertical datum)	Drawings can be 2D (elevation set to 0.0) or 3D (elevation based on the Australian Height Datum).

Drawing configuration	Details
CAD drawing format	Summary Drawings must be in either of the following formats: • AutoCAD DWG • RealDWG DWG. Summary Drawings must not be submitted in the following formats: • DXF • AutoCAD Civil 3D (with Civil 3D property sets) If the Ref 11 Summary Drawing has been produced in AutoCAD Civil 3D, use the eTransmit tool with transmittal setup File format set to AutoCAD 2018 Drawing format with Exploded AEC Objects (or newer).
CAD drawing type	Ref 11 Summary Drawings are CAD models for data loading into the asset management system, not drawings for publishing. The following drawing elements are not required: • Title blocks • Plotstyles • Hatches • Notes • Dimension styles • Scale bars • Section arrows • Titles • Paper space (viewports, title blocks, page layouts, etc.).
Model space, paper space	All spatial information is to be in model space. Paper space layouts are not required.
CAD drawing units	All drawing units must be in metres and decimals of a metre (1 drawing unit = 1 m).
Drawing insertion point	An AutoCAD drawing's insertion point is defined by the AutoCAD base system variable. The base system variable must be set to 0,0,0.
New assets	All new/proposed assets constructed as part of the Works must be shown on the appropriate Ref 11 standard layer for the asset within the Summary Drawing.
Existing assets	Existing features do not need to be represented in Summary Drawings since CAD data representing existing assets are not validated. Attribute data is not required to be entered for pre-existing assets or features not changed by the development. However, these may be shown if needed as contextual data for the current Works on the appropriate layers.
Removed assets	All assets being removed/demolished as part of the submission package must be shown on the appropriate removed layer for the asset within the Summary Drawing. Ref 11 standard blocks and associated geometry must be used to represent removed assets. Only essential/minimal attribute data should be entered to distinguish the asset from other similar assets in the area. For example, a removed streetlight should show the streetlight number attribute, and a removed bridge should include the bridge number.
Future assets	Future works not forming part of the project are not required to be shown in Summary Drawings.

Drawing configuration	Details
Common block (project information)	A Summary Drawing must include a single COMMON BLOCK inserted into model space. The COMMON BLOCK is used for specifying the following project information: • Consultant • Project • Submission stage • Suburb • Drawing title • Drawing number • Revision • Use of Ref 11 supplementary values file.
Project extents boundary	A Summary Drawing must include a single closed polyline representing the project extents drawn on layer: REF11_PROJECT_EXTENT_BOUNDARY_NEW. Where a project is across multiple locations (e.g. several school sites / local shops), multiple closed polylines are permitted; one at each location.
Title blocks	Title blocks are not required. If a consultant wishes to insert their own title block: • it must NOT be inserted in model space. • it must NOT be xreferenced. • it must NOT be named COMMON_BLOCK.
Fonts	Arial and Arial Narrow TrueType fonts have been used within the Ref 11 standard CAD blocks. Newer installations of Windows 11 may not include the Arial Narrow font family by default. Where Arial Narrow is unavailable, the Bahnschrift TrueType font family may be used as a suitable substitute, offering multiple font weights and width variants while maintaining a clear and consistent drafting appearance.
Standard dimension styles	N/A
Standard hatching	Hatching is not to be used in Ref 11 Summary Drawings.
Standard plotstyles	N/A
Standard linetypes	No custom linetypes have been specified in this document. Adopting alternative layer linetypes will not compromise drawing validation or submissions.
Standard layers	Only Ref 11 standard layers are to be used in Ref 11 Summary Drawings. Refer to **Section 2.2** for a list of standard layers representing new assets. All standard layers for an asset type (new, existing and removed) are specified in the layer table for each individual asset type. All unused layers to be purged from the drawing.
Standard layer colours	Standard layer colours are specified in this document and used in Ref 11 Toolkit 4.0. Adopting alternative layer colours will not compromise drawing validation or submissions. Refer to **Section 2.2** for a list of standard layers representing new assets.

Drawing configuration	Details
CAD representation of municipal assets	Ref 11 features are specified in the following spatial types: • Ref 11 asset types represented as a linear feature and have an associated Ref 11 block providing asset data are to be drawn as a single lightweight 2D polyline that may have one or more segments with the associated Ref 11 block inserted at the midpoint of one of the polyline's segments (e.g. kerbs, stormwater pipes, etc.). • Ref 11 asset types represented simply as a linear feature without any associated Ref 11 block are to be drawn as a single lightweight 2D polyline that may have one or more segments. • Ref 11 asset types represented as a polygon feature and have an associated Ref 11 block providing asset data are to be drawn as a closed lightweight 2D polyline with the associated Ref 11 block inserted inside the closed polyline. • Ref 11 asset types represented simply as a polygon feature and without any associated Ref 11 block are to be drawn as a closed lightweight 2D polyline (e.g. community path area). • Ref 11 asset types represented as a point feature have a Ref 11 block inserted at the centre of the feature. Where dynamic blocks have a rotatable symbol, use the grips to rotate the symbol to match the features orientation (e.g. seats, barbecues, etc.).
Standard blocks	Only standard Ref 11 blocks specified in this document are to be used in Ref 11 Summary Drawings. Standard blocks must not be renamed or altered. They are available in the following format: • AutoCAD dynamic blocks with attributes. All unused blocks to be purged from the drawing. Previous Reference 11 (3.x) standard blocks (with 'acdc' prefixes) are not to be used. Refer to **Section 2.1** for complete list of standard blocks.
Block insertion points	Most Ref 11 dynamic AutoCAD blocks are stylised using a leader with or without a symbol and a few attributes. The block insertion point will be at the centre of the symbol or the leader arrow/dot enabling the attribute data to be positioned in a clear location. Other blocks may appear as a symbol only with or without visible attributes (e.g. bollards). A few blocks contain no symbol with one or two visible attributes (e.g. pavements, carparks, etc.).
Block insertion rules	The Ref 11 standard blocks used in Ref 11 Summary Drawings are to be inserted using the following rules: • Blocks representing 'point features' (e.g. streetlight columns, stormwater manholes, stormwater sumps, seats, etc.) are to be inserted at the centre of the asset. Some features such as stormwater headwalls have insertion points positioned for inserting at the end of a pipe, not the centre of the headwall. • Blocks providing asset data for 'linear features' (e.g. stormwater pipes, kerbs, etc.) are to be inserted at the midpoint of one of the segments of the feature. • Blocks providing asset data for 'polygon features' (e.g. driveways, playground areas, Vehicle Crossings, etc.) are to be inserted inside the closed lightweight polyline.

Drawing configuration	Details
Block attribute data	All Ref 11 standard blocks include block attributes. The allowable values, data types and mandatory requirements for each attribute are specified in this document under the section relevant to their asset type. Attribute information must be accurate and complete and include all relevant as-built information, not just mandatory attributes. • Date values are to be in the format DD/MM/YYYY e.g. 18/07/2025. • Attributes designated as real or integer are not to include unit identifiers (e.g. m, mm, m^2 or %). • Where this document specifies block attributes, use Ref 11 lookup tables, then only allowable values specified in the Ref 11 lookup table are acceptable. Exceptions are if an attribute value is approved but not listed as an allowable value that has been approved at design stage for construction (e.g. new approved product / material / MIS / MITS / EAN / LAN or ACT Standard Drawings) then the required value is entered in the block's CONSULTANTS_COMMENTS attribute and 'See CONSULTANTS_COMMENTS' is entered for the associated attribute value. • Allowable values have not been listed for Ref 11 lookup tables where it is considered impractical to do so. Instead, a reference is provided to the relevant Municipal Infrastructure Standard (MIS) or Municipal Infrastructure Technical Specification (MITS) (e.g. tree species).

1.5 Project information

Project information for the Summary Drawing must be included in the Ref 11 block named COMMON_BLOCK, which should be inserted into model space on layer REF11_PROJECTINFO. The data in this block, such as the project name and details, is transferred to all Ref 11 features in the Summary Drawing when it is loaded into the asset management system. The data in this block is also used in validation reports and logs generated by Ref 11 Toolkit 4.0's ValidateDWG tool.

The revision must be updated whenever a Summary Drawing is resubmitted for approval.

Submission stage must reflect the appropriate submission stage, (e.g. WORKS AS EXECUTED, DESIGN, ISSUED FOR TENDER, ISSUED FOR CONSTRUCTION)

A Ref 11 COMMON_BLOCK is still required in model space even if consultants choose to insert a title block in paper space. The consultant's title block MUST NOT be named COMMON_BLOCK.

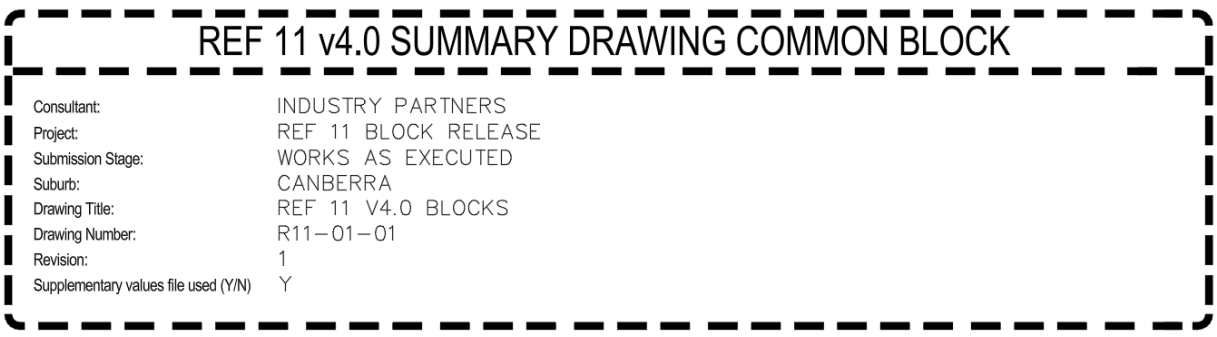


Figure 1 Example of Ref 11 common block with project information added

Table 2 Common block attributes

Block attribute	Data type	Max length
CONSULTANT*	Character	200
PROJECT*	Character	200
SUBMISSION_STAGE*	Character	200
SUBURB*	Character	200
DRAWING_TITLE*	Character	200
DRAWING_NUMBER*	Character	200
REVISION*	Character	200
SUPP_VALUES_FILE	Character	200

* Designates mandatory attribute

1.6 Ref 11 Supplementary values file for proposed Ref 11 values

A Ref 11 Supplementary Values File is a file containing approved or proposed attribute values that supplement the standard Ref 11 allowable values lists. The file enables project-specific values to be documented, reviewed and submitted with a Ref 11 Summary Drawing where the required attribute values are not available within the current Ref 11 specification. Where Ref 11 Toolkit 4.0 is used, values contained within a Ref 11 Supplementary Values File can be made available for selection and validation within the Toolkit. Refer to *Ref 11 Toolkit 4.0 User Guide* on how to generate and use a Ref 11 supplementary values file to populate additional values in the block drop down lists.

1.7 Project extents boundary (new requirement)

Summary Drawings must include a single closed polyline representing the project extents drawn on layer: REF11_PROJECT_EXTENT_BOUNDARY_NEW.

Where a Summary Drawing contains multiple locations, (e.g. several school sites, local shops, playgrounds, community path upgrades, etc.) multiple closed polylines are permitted; one at each location.

1.8 Submission requirements

Consultants must submit accurate Summary Drawings that include all relevant information and comply with the requirements of this document.

Where a Ref 11 Summary Drawing uses values from a Ref 11 Supplementary Values File, the following should be submitted together:

- Ref 11 Summary Drawing (DWG)
- Ref 11 Supplementary Values File
- ValidateDWG Summary Report
- ValidateDWG Attribute Non-Conformance Report
- ValidateDWG Block Conformance Report

This enables reviewers to assess proposed values used within the submission.

If submitted Summary Drawings fail validation or do not meet the requirements, they must be corrected and resubmitted for approval.

1.9 Reference Document 11 structure

1.9.1 Asset categories

To promote consistency across other related CED Reference Documents, municipal assets have been separated into the following asset categories and asset types.

Table 3 Ref 11 asset categories and asset types

Asset category	Asset types	
Bridges and related structures	• Boardwalk • Boat ramp • Bridge	• Jetty • Rural bridge • Underpass
Buildings	• Building • Building equipment • Building feature	• Pavilion • Public toilet
Fences, guardrails and barriers	• Bollard • Fence boundary feature • Gate	• Noise wall • Road barrier • Wall
Hydrology	• Dam wall • Kerb inlet • Major gross pollutant trap • Minor gross pollutant trap • Retarding basin • Stormwater branch connection • Stormwater culvert • Stormwater dead end • Stormwater headwall • Stormwater manhole • Stormwater open drain • Stormwater pipe • Stormwater subsoil drain • Stormwater subsoil high end riser • Stormwater sump	• Stormwater tie • Stormwater tie kerb connection • Trash rack • Urban lakes and ponds • Wastewater dam • Water filter • Water fitting • Water hydrant • Water meter • Water pipe • Water pit • Water pump • Water service offtake • Water valve • Waterway structure
Irrigation assets	• Bore • Irrigation area • Irrigation control box	• Irrigation pipe • Irrigation sprinkler
Land use	• Contaminated site	
Parking and related assets	• Car park • Smart parking sensor • Smart parking transmitter	• Parking machine • Traffic
Public lighting and electrical assets	• Amenity lighting • Electrical box pit • Electrical cable • Electricity pole • Floodlight • ICT device • Power outlet • Site light	• Solar panel • Streetlight cable • Streetlight cable joint • Streetlight column • Streetlight control box • Streetlight photoelectric cell • Switchboard
Public transport assets	• Bus stop	• Light rail

Asset category	Asset types	
Recreation and sports assets	• Basketball court • Dog park • Dog park structure • Fitness site • Grandstand • Picnic area	• Playground • Playground area • Playground structure • Skate park • Sportsground
Road, path and paving assets	• Chicane point • Community path area • Community path centreline • Driveway • Hard surface • Kerb • Kerb ramp	• Kerb slot • Road centreline • Road pavement • Step point • Tactile indicators • Vehicle Crossing
Soft landscape assets	• Grass • Landscape area • Root barrier • Shrub bed	• Structural soil • Structural soil cell • Tree
Street and park furniture	• Artwork • Barbecue • Bicycle infrastructure • Bicycle rack • Drinking fountain • Flagpole • Fountain • Memorial • Minor structure	• Notice board • Open space bin • Park feature • Park sign • Seat • Storage structure • Shelter (including shade sails) • Table
Traffic Control Device (TCD) assets	• Bluetooth detector • Feature sign • Line and pavement marking • On-road cycle lane • Priority crossing • Sign blade • Sign group	• Site sign • Speed hump • Traffic camera • Traffic island • Traffic signal controller • Traffic signal site • Wayfinding sign

1.9.2 Asset types

Ref 11 asset types are simplified versions of corresponding geospatial feature classes or asset types from the directorate's asset management system, with only the relevant attributes selected for inclusion.

Tags include terminology used across industry standards, MIS, MITS, EANs (Engineering Advisory Notes), LANs (Landscape Advisory Notes) and ACT Standard Drawings. An asset type index has been included towards the end of this document to further assist users navigate to required sections (e.g. kerb ramps are also known as pram crossings).

The following requirements have been specified for each asset type:

- CAD block
- Block attributes and associated Ref 11 lookup tables with allowable values
- Allowable values have not been listed for Ref 11 lookup tables where it has been considered impractical (e.g. tree species); instead, a reference is provided to relevant MIS/MITS
- Mandatory attributes denoted by *
- Spatial requirements (e.g. standalone block, closed polyline feature, polyline)
- CAD layers for new, existing and removed assets.

1.9.3 Attribute requirements

Each asset type includes a block attributes table that specifies:

- each block attribute name
- whether they are mandatory (depicted by * next to block attribute name)
- data type (real, integer, character or date)
- date values are to be in the format DD/MM/YYYY e.g. 18/07/2025
- field lengths
- associated Ref 11 lookup tables.

1.9.4 Ref 11 lookup tables

Where attributes specify Ref 11 lookup tables, allowable values for each Ref 11 lookup table are shown in a table immediately following the block attribute table.

1.10 Resources

Ref 11 Resources are available to our Industry Partners via the City Services ProjectWise Portal which requires a ProjectWise licence connected to the ACT Governments ProjectWise instance.
To obtain a licence, please contact *TCCS.ProjectWiseAccounts@act.gov.au*

The following resources are available to support producing conforming Ref 11 Summary Drawings.

Table 4 Ref 11 resources

Ref 11 resources	Descriptions
Ref 11 CAD blocks (.dwg)	Authoritative CAD DWG dynamic blocks are provided for all asset types defined within this document. • Each block incorporates a leader arrow, with the insertion point located at the arrowhead, enabling annotation to be repositioned into clear space while maintaining a reference to the asset location. Where text placement is preferred on the left, users may choose to mirror the block. • These are the approved blocks for use in Ref 11 4.0 Summary Drawings. • Ensure drawing units are correctly configured before insertion, as incorrect unit settings may result in scaling issues. • If a .dws standards file is used in a summary drawing that checks for standard block definitions, Ref 11 dynamic blocks may trigger AutoCAD CAD Standards violation warnings when blocks are modified from their default state. This is an expected behaviour of dynamic blocks and does not necessarily indicate a drafting error.
Ref 11 4-0 Summary Drawing Template.dwt	CAD drawing template with all the Ref 11 standard layers for new, existing and removed asset classes.
Ref 11 4-0 Quick Reference.dwg	This drawing provides a quick reference guide to all Ref 11 4.0 layers and blocks. It includes descriptions and sample data that complies with Ref 11 Toolkit ValidateDWG validation requirements. • This drawing is provided for reference purposes only and is NOT intended as a source for copying blocks into production drawings. • Industry Partners should use the authoritative Ref 11 4.0 block definitions when preparing Ref 11 Summary Drawings. • Before inserting blocks, ensure the target drawing units have been correctly configured. Incorrect unit settings may cause blocks to be inserted at an unintended scale.
Ref 11 4-0 Data Specification.xlsx	A data specification in Microsoft Excel format.
Ref 11 Toolkit 4.0	Ref 11 Toolkit is a suite of CAD tools to aid producing Ref 11 Summary Drawings. It now includes built in preliminary validation. Versions available: • Ref 11 Toolkit 4.0 for AutoCAD • Ref 11 Toolkit 4.0 for BricsCAD Ref 11 Toolkit 4.0 requires the Ref 11 Toolkit 4.0 menu to be installed and the menubar displayed.
Ref 11 Toolkit 4.0 User Guide	Documentation on how to install and use the Ref 11 Toolkit 4.0 suite of CAD tools.

2 Ref 11 blocks and layers

2.1 Ref 11 blocks

Asset type	Ref 11 block name
Project Information	COMMON_BLOCK
Project extents boundary	*no block required*
Amenity lighting	REF11_AMENITY_LIGHTING.dwg
Artwork	REF11_ARTWORK.dwg
Barbecue	REF11_BARBECUE.dwg
Basketball court	REF11_BASKETBALL_COURT.dwg
Bicycle infrastructure	REF11_BICYCLE_INFRASTRUCTURE.dwg
Bicycle rack	REF11_BICYCLE_RACK.dwg
Bluetooth detector	REF11_BLUETOOTH_DETECTOR.dwg
Boardwalk	REF11_BOARDWALK.dwg
Boat ramp	REF11_BOAT_RAMP.dwg
Bollard	REF11_BOLLARD.dwg
Bore	REF11_BORE.dwg
Bridge	REF11_BRIDGE.dwg
Building	REF11_BUILDING.dwg
Building equipment	REF11_BUILDING_EQUIPMENT.dwg
Building feature	REF11_BUILDING_FEATURE.dwg
Bus stop	REF11_BUS_STOP.dwg
Car park	REF11_CAR_PARK.dwg
Chicane point	REF11_CHICANE_POINT.dwg
Community path area	*No block is required for community path area, but the community path centreline and associated block need to be included*
Community path centreline	REF11_COMMUNITY_PATH_CL.dwg
Contaminated site	REF11_CONTAMINATED_SITE.dwg
Dam wall	REF11_DAM_WALL.dwg
Dog park	REF11_DOG_PARK.dwg
Dog park structure	REF11_DOG_PARK_STRUCTURE.dwg
Drinking fountain	REF11_DRINKING_FOUNTAIN.dwg
Driveway	REF11_DRIVEWAY.dwg
Electrical box pit	REF11_ELECTRICAL_BOX_PIT.dwg
Electrical cable	REF11_ELECTRICAL_CABLE.dwg

Asset type	Ref 11 block name
Feature sign	REF11_FEATURE_SIGN.dwg
Fence boundary feature	REF11_FENCE_BOUNDARY_FEATURE.dwg
Fitness site	REF11_FITNESS_SITE.dwg
Flagpole	REF11_FLAGPOLE.dwg
Floodlight	REF11_FLOODLIGHT.dwg
Fountain	REF11_FOUNTAIN.dwg
Gate	REF11_GATE.dwg
Grandstand	REF11_GRANDSTAND.dwg
Grass	REF11_GRASS.dwg
Hard surface	REF11_HARD_SURFACE.dwg
ICT device	REF11_ICT_DEVICE.dwg
Irrigation area	REF11_IRRIGATION_AREA.dwg
Irrigation control box	REF11_IRRIGATION_CONTROL_BOX.dwg
Irrigation pipe	REF11_IRRIGATION_PIPE.dwg
Irrigation sprinkler	REF11_IRRIGATION_SPRINKLER.dwg
Jetty	REF11_JETTY.dwg
Kerb	REF11_KERB.dwg
Kerb inlet	REF11_KERB_INLET.dwg
Kerb ramp	REF11_KERB_RAMP.dwg
Kerb slot	REF11_KERB_SLOT.dwg
Landscape area	REF11_LANDSCAPE_AREA.dwg
Major gross pollutant trap	REF11_MAJOR_GROSS_POLLUTANT_TRAP.dwg
Memorial	REF11_MEMORIAL.dwg
Minor gross pollutant trap	REF11_MINOR_GROSS_POLLUTANT_TRAP.dwg
Minor structure	REF11_MINOR_STRUCTURE.dwg
Noise wall	REF11_NOISE_WALL.dwg
Notice board	REF11_NOTICE_BOARD.dwg
On-road cycle lane	REF11_ON_ROAD_CYCLE_LANE.dwg
Open space bin	REF11_OPEN_SPACE_BIN.dwg
Park feature	REF11_PARK_FEATURE.dwg
Park sign	REF11_PARK_SIGN.dwg
Parking machine	REF11_PARKING_MACHINE.dwg
Pavilion	REF11_PAVILION.dwg
Picnic area	REF11_PICNIC_AREA.dwg

Asset type	Ref 11 block name
Playground	REF11_PLAYGROUND.dwg
Playground area	REF11_PLAYGROUND_AREA.dwg
Playground structure	REF11_PLAYGROUND_STRUCTURE.dwg
Power outlet	REF11_POWER_OUTLET.dwg
Priority crossing	REF11_PRIORITY_CROSSING.dwg
Public toilet	REF11_PUBLIC_TOILET.dwg
Retarding basin	REF11_RETARDING_BASIN.dwg
Road barrier	REF11_ROAD_BARRIER.dwg
Road centreline	REF11_ROAD_CENTRELINE.dwg
Road pavement	REF11_ROAD_PAVEMENT.dwg
Root barrier	REF11_ROOT_BARRIER.dwg
Rural bridge	REF11_RURAL_BRIDGE.dwg
Seat	REF11_SEAT.dwg
Shelter	REF11_SHELTER.dwg
Shrub bed	REF11_SHRUB_BED.dwg
Sign blade	REF11_SIGN_BLADE.dwg
Sign group	REF11_SIGN_GROUP.dwg
Skate park	REF11_SKATE_PARK.dwg
Smart parking sensor	REF11_SMART_PARKING_SENSOR.dwg
Smart parking transmitter	REF11_SMART_PARKING_TRANSMITTER.dwg
Solar panel	REF11_SOLAR_PANEL.dwg
Speed hump	REF11_SPEED_HUMP.dwg
Sportsground	REF11_SPORTSGROUND.dwg
Step point	REF11_STEP_POINT.dwg
Storage structure	REF11_STORAGE_STRUCTURE.dwg
Stormwater branch connection	REF11_STORMWATER_BRANCH.dwg
Stormwater culvert	REF11_STORMWATER_CULVERT.dwg
Stormwater dead end	REF11_STORMWATER_DEADEND.dwg
Stormwater headwall	REF11_STORMWATER_HEADWALL.dwg
Stormwater manhole	REF11_STORMWATER_MANHOLE.dwg
Stormwater open drain	REF11_STORMWATER_OPEN_DRAIN.dwg
Stormwater pipe	REF11_STORMWATER_PIPE.dwg
Stormwater subsoil drain	REF11_STORMWATER_SUBSOIL_DRAIN.dwg
Stormwater subsoil high end riser	REF11_STORMWATER_SUBSOIL_HER.dwg

Asset type	Ref 11 block name
Stormwater sump	REF11_STORMWATER_SUMP.dwg
Stormwater tie	REF11_STORMWATER_TIE.dwg
Streetlight cable	REF11_STREETLIGHT_CABLE.dwg
Streetlight cable joint	REF11_STREETLIGHT_CABLE_JOINT.dwg
Streetlight column	REF11_STREETLIGHT_COLUMN.dwg
Streetlight control box	REF11_STREETLIGHT_CONTROL_BOX.dwg
Streetlight photoelectric cell	REF11_STREETLIGHT_PHOTOELECTRIC_CELL.dwg
Structural soil	REF11_STRUCTURAL_SOIL.dwg
Structural soil cell	REF11_STRUCTURAL_SOIL_CELL.dwg
Stormwater tie kerb connection	REF11_TIE_KERB_CONNECTION.dwg
Switchboard	REF11_SWITCHBOARD.dwg
Table	REF11_TABLE.dwg
Tactile indicators	REF11_TACTILE_INDICATORS.dwg
Traffic camera	REF11_TRAFFIC_CAMERA.dwg
Traffic island	REF11_TRAFFIC_ISLAND.dwg
Traffic signal controller	REF11_TRAFFIC_SIGNAL_CONTROLLER.dwg
Traffic signal site	REF11_TRAFFIC_SIGNAL_SITE.dwg
Trash rack	REF11_TRASH_RACK.dwg
Tree	REF11_TREE.dwg
Urban lakes and ponds	REF11_URBAN_LAKES_PONDS.dwg
Vehicle Crossing	REF11_VEHICLE_CROSSING.dwg
Wall	REF11_WALL.dwg
Wastewater dam	REF11_WASTEWATER_DAM.dwg
Water filter	REF11_WATER_FILTER.dwg
Water fitting	REF11_WATER_FITTING.dwg
Water hydrant	REF11_WATER_HYDRANT.dwg
Water meter	REF11_WATER_METER.dwg
Water pipe	REF11_WATER_PIPE.dwg
Water pit	REF11_WATER_PIT.dwg
Water pump	REF11_WATER_PUMP.dwg
Water service offtake	REF11_WATER_SERVICE_OFFTAKE.dwg
Water valve	REF11_WATER_VALVE.dwg
Waterway structure	REF11_WATERWAY_STRUCTURE.dwg
Wayfinding sign	REF11_WAYFINDING_SIGN.dwg

2.2 Ref 11 layers

The following layers only represent newly constructed assets.

Refer to individual sections in this document relating to asset types for layers relating to existing or removed/demolished assets.

Project information	Layer name	Linetype	Colour
Project information	REF11_PROJECTINFO	Continuous	white
Project extents	REF11_PROJECT_EXTENT_BOUNDARY_NEW	Continuous	200

Asset type	Layer name	Linetype	Colour
Amenity lighting	REF11_AMENITY_LIGHTING_NEW	Continuous	141
Artwork	REF11_ARTWORK_NEW	Continuous	50
Barbecue	REF11_BARBECUE_NEW	Continuous	40
Basketball court	REF11_BASKETBALL_COURT_NEW	Continuous	201
Bicycle infrastructure	REF11_BICYCLE_INFRASTRUCTURE_NEW	Continuous	42
Bicycle rack	REF11_BICYCLE_RACK_NEW	Continuous	41
Bluetooth detector	REF11_BLUETOOTH_DETECTOR_NEW	Continuous	211
Boardwalk	REF11_BOARDWALK_NEW	Continuous	190
Boat ramp	REF11_BOAT_RAMP_NEW	Continuous	193
Bollard	REF11_BOLLARD_NEW	Continuous	43
Bore	REF11_BORE_NEW	Continuous	142
Bridge	REF11_BRIDGE_NEW	Continuous	192
Building	REF11_BUILDING_NEW	Continuous	182
Building equipment	REF11_BUILDING_EQUIPMENT_NEW	Continuous	181
Building feature	REF11_BUILDING_FEATURE_NEW	Continuous	180
Bus stop	REF11_BUS_STOP_NEW	Continuous	40
Car park	REF11_CAR_PARK_NEW	Continuous	42
Chicane point	REF11_CHICANE_POINT_NEW	Continuous	42
Community path area	REF11_COMMUNITY_PATH_AREA_NEW	Continuous	140
Community path centreline	REF11_COMMUNITY_PATH_CL_NEW	Continuous	7
Contaminated site	REF11_CONTAMINATED_SITE_NEW	Continuous	240
Dam wall	REF11_DAM_WALL_NEW	Continuous	173
Dog park	REF11_DOG_PARK_NEW	Continuous	20
Dog park structure	REF11_DOG_PARK_STRUCTURE_NEW	Continuous	20
Drinking fountain	REF11_DRINKING_FOUNTAIN_NEW	Continuous	140

Asset type	Layer name	Linetype	Colour
Driveway	REF11_DRIVEWAY_NEW	Continuous	30
Electrical box pit	REF11_ELECTRICAL_BOX_PIT_NEW	Continuous	161
Electrical cable	REF11_ELECTRICAL_CABLE_NEW	Continuous	132
Feature sign	REF11_FEATURE_SIGN_NEW	Continuous	52
Fence boundary feature	REF11_FENCE_BOUNDARY_FEATURE_NEW	Continuous	193
Fitness site	REF11_FITNESS_SITE_NEW	Continuous	203
Flagpole	REF11_FLAGPOLE_NEW	Continuous	52
Floodlight	REF11_FLOODLIGHT_NEW	Continuous	221
Fountain	REF11_FOUNTAIN_NEW	Continuous	140
Gate	REF11_GATE_NEW	Continuous	191
Grandstand	REF11_GRANDSTAND_NEW	Continuous	223
Grass	REF11_GRASS_NEW	Continuous	90
Hard surface	REF11_HARD_SURFACE_NEW	Continuous	142
ICT device	REF11_ICT_DEVICE_NEW	Continuous	131
Irrigation area	REF11_IRRIGATION_AREA_NEW	Continuous	140
Irrigation control box	REF11_IRRIGATION_CONTROL_BOX_NEW	Continuous	143
Irrigation pipe	REF11_IRRIGATION_PIPE_NEW	Continuous	141
Irrigation sprinkler	REF11_IRRIGATION_SPRINKLER_NEW	Continuous	141
Jetty	REF11_JETTY_NEW	Continuous	193
Kerb	REF11_KERB_NEW	Continuous	100
Kerb inlet	REF11_KERB_INLET_NEW	Continuous	81
Kerb ramp	REF11_KERB_RAMP_NEW	Continuous	140
Kerb slot	REF11_KERB_SLOT_NEW	Continuous	140
Landscape area	REF11_LANDSCAPE_AREA_NEW	Continuous	140
Major gross pollutant trap	REF11_MAJOR_GROSS_POLLUTANT_TRAP_NEW	Continuous	82
Memorial	REF11_MEMORIAL_NEW	Continuous	53
Minor gross pollutant trap	REF11_MINOR_GROSS_POLLUTANT_TRAP_NEW	Continuous	82
Minor structure	REF11_MINOR_STRUCTURE_NEW	Continuous	192
Noise wall	REF11_NOISE_WALL_NEW	Continuous	190
Notice board	REF11_NOTICE_BOARD_NEW	Continuous	52
On-road cycle lane	REF11_ON_ROAD_CYCLE_LANE_NEW	Continuous	43
Open space bin	REF11_OPEN_SPACE_BIN_NEW	Continuous	51
Park feature	REF11_PARK_FEATURE_NEW	Continuous	142
Park sign	REF11_PARK_SIGN_NEW	Continuous	50

Asset type	Layer name	Linetype	Colour
Parking machine	REF11_PARKING_MACHINE_NEW	Continuous	33
Pavilion	REF11_PAVILION_NEW	Continuous	223
Picnic area	REF11_PICNIC_AREA_NEW	Continuous	143
Playground	REF11_PLAYGROUND_NEW	Continuous	200
Playground area	REF11_PLAYGROUND_AREA_NEW	Continuous	202
Playground structure	REF11_PLAYGROUND_STRUCTURE_NEW	Continuous	201
Power outlet	REF11_POWER_OUTLET_NEW	Continuous	163
Priority crossing	REF11_PRIORITY_CROSSING_NEW	Continuous	41
Project extent boundary	PROJECT_EXTENT_BOUNDARY	Continuous	7
Public toilet	REF11_PUBLIC_TOILET_NEW	Continuous	141
Retarding basin	REF11_RETARDING_BASIN_NEW	Continuous	172
Road barrier	REF11_ROAD_BARRIER_NEW	Continuous	41
Road centreline	REF11_ROAD_CENTRELINE_NEW	Continuous	7
Road pavement	REF11_ROAD_PAVEMENT_NEW	Continuous	43
Root barrier	REF11_ROOT_BARRIER_NEW	Continuous	162
Rural bridge	REF11_RURAL_BRIDGE_NEW	Continuous	192
Seat	REF11_SEAT_NEW	Continuous	43
Shelter	REF11_SHELTER_NEW	Continuous	191
Shrub bed	REF11_SHRUB_BED_NEW	Continuous	82
Sign blade	REF11_SIGN_BLADE_NEW	Continuous	magenta
Sign group	REF11_SIGN_GROUP_NEW	Continuous	51
Skate park	REF11_SKATE_PARK_NEW	Continuous	200
Smart parking sensor	REF11_SMART_PARKING_SENSOR_NEW	Continuous	213
Smart parking transmitter	REF11_SMART_PARKING_TRANSMITTER_NEW	Continuous	211
Solar panel	REF11_SOLAR_PANEL_NEW	Continuous	150
Speed hump	REF11_SPEED_HUMP_NEW	Continuous	40
Sportsground	REF11_SPORTSGROUND_NEW	Continuous	222
Step point	REF11_STEP_POINT_NEW	Continuous	101
Storage structure	REF11_STORAGE_STRUCTURE_NEW	Continuous	193
Stormwater branch connection	REF11_STORMWATER_BRANCH_NEW	Continuous	81
Stormwater culvert	REF11_STORMWATER_CULVERT_NEW	Continuous	80
Stormwater dead end	REF11_STORMWATER_DEADEND_NEW	Continuous	81
Stormwater headwall	REF11_STORMWATER_HEADWALL_NEW	Continuous	81
Stormwater manhole	REF11_STORMWATER_MANHOLE_NEW	Continuous	81

Asset type	Layer name	Linetype	Colour
Stormwater open drain	REF11_STORMWATER_OPEN_DRAIN_NEW	Continuous	80
Stormwater pipe	REF11_STORMWATER_PIPE_NEW	Continuous	81
Stormwater subsoil drain	REF11_STORMWATER_SUBSOIL_DRAIN_NEW	Continuous	yellow
Stormwater subsoil high end riser	REF11_STORMWATER_SUBSOIL_HER_NEW	Continuous	white
Stormwater sump	REF11_STORMWATER_SUMP_NEW	Continuous	81
Stormwater tie	REF11_STORMWATER_TIE_NEW	Continuous	83
Streetlight cable	REF11_STREETLIGHT_CABLE_NEW	Continuous	162
Streetlight cable joint	REF11_STREETLIGHT_CABLE_JOINT_NEW	Continuous	161
Streetlight column	REF11_STREETLIGHT_COLUMN_NEW	Continuous	160
Streetlight control box	REF11_STREETLIGHT_CONTROL_BOX_NEW	Continuous	162
Streetlight photoelectric cell	REF11_STREETLIGHT_PHOTOELECTRIC_CELL_NEW	Continuous	163
Structural soil	REF11_STRUCTURAL_SOIL_NEW	Continuous	32
Structural soil cell	REF11_STRUCTURAL_SOIL_CELL_NEW	Continuous	30
Stormwater tie kerb connection	REF11_TIE_KERB_CONNECTION_NEW	Continuous	62
Switchboard	REF11_SWITCHBOARD_NEW	Continuous	131
Table	REF11_TABLE_NEW	Continuous	41
Tactile indicators	REF11_TACTILE_INDICATORS_NEW	Continuous	141
Traffic camera	REF11_TRAFFIC_CAMERA_NEW	Continuous	213
Traffic island	REF11_TRAFFIC_ISLAND_NEW	Continuous	103
Traffic signal controller	REF11_TRAFFIC_SIGNAL_CONTROLLER_NEW	Continuous	212
Traffic signal site	REF11_TRAFFIC_SIGNAL_SITE_NEW	Continuous	210
Trash rack	REF11_TRASH_RACK_NEW	Continuous	82
Tree	REF11_TREE_NEW	Continuous	92
Urban lakes and ponds	REF11_URBAN_LAKES_PONDS_NEW	Continuous	171
Vehicle Crossing	REF11_VEHICLE_CROSSING_NEW	Continuous	31
Wall	REF11_WALL_NEW	Continuous	193
Wastewater dam	REF11_WASTEWATER_DAM_NEW	Continuous	173
Water filter	REF11_WATER_FILTER_NEW	Continuous	151
Water fitting	REF11_WATER_FITTING_NEW	Continuous	151
Water hydrant	REF11_WATER_HYDRANT_NEW	Continuous	151
Water meter	REF11_WATER_METER_NEW	Continuous	151
Water pipe	REF11_WATER_PIPE_NEW	Continuous	150
Water pit	REF11_WATER_PIT_NEW	Continuous	152
Water pump	REF11_WATER_PUMP_NEW	Continuous	152

Asset type	Layer name	Linetype	Colour
Water service offtake	REF11_WATER_SERVICE_OFFTAKE_NEW	Continuous	153
Water valve	REF11_WATER_VALVE_NEW	Continuous	153
Waterway structure	REF11_WATERWAY_STRUCTURE_NEW	Continuous	170
Wayfinding sign	REF11_WAYFINDING_SIGN_NEW	Continuous	52

3 Bridges and related structures

Boardwalk	Boardwalks and decking
Boat ramp	Boat ramps
Bridge	Bridges, tunnels, underpasses and culverts
Jetty	Jetties, piers and wharfs
Rural bridge	Bridges, tunnels and culverts

3.1 Boardwalk

Bridges and related structures > Boardwalk
Tags: boardwalk, decking

A boardwalk is represented by a closed lightweight polyline signifying the perimeter with the **REF11_BOARDWALK** block inserted inside with attribute information.

Table 5 Boardwalk layers

Layer	Description	Linetype	Colour
REF11_BOARDWALK_NEW	New boardwalk	Continuous	190
REF11_BOARDWALK_EXG	Existing boardwalk	Continuous	194
REF11_BOARDWALK_REM	Removed boardwalk	Continuous	red

Table 6 REF11_BOARDWALK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	BOARDWALK_ASSET_SUB_TYPE
ASSET_TYPE*	MINOR STRUCTURE	Character	200	BOARDWALK_ASSET_TYPE
DECK_MATERIAL*		Character	200	BOARDWALK_DECK_MATERIAL
FRAME_MATERIAL*		Character	200	BOARDWALK_FRAME_MATERIAL
OTHER_CONSTRUCTION_MATERIAL		Character	200	STRUCTURE_MATERIAL
WIDTH*		Real	38.8	
LENGTH*		Real	38.8	

* Designates mandatory attribute

Table 7 REF11_BOARDWALK Ref 11 lookup tables

Ref 11 lookup table	Values
BOARDWALK_ASSET_SUB_TYPE	BOARDWALK DECKING
BOARDWALK_ASSET_TYPE	MINOR STRUCTURE
BOARDWALK_DECK_MATERIAL	ALUMINIUM COMPOSITE CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL OTHER STEEL STONE TIMBER
BOARDWALK_FRAME_MATERIAL	CONCRETE METAL TIMBER
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER

3.2 Boat ramp

Bridges and related structures > Boat ramp
Tags: boat ramp

A boat ramp is represented by a closed lightweight polyline signifying the perimeter with the **REF11_BOAT_RAMP** block inserted inside with attribute information.

Table 8 Boat ramp layers

Layer	Description	Linetype	Colour
REF11_BOAT_RAMP_NEW	New boat ramp	Continuous	193
REF11_BOAT_RAMP_EXG	Existing boat ramp	Continuous	197
REF11_BOAT_RAMP_REM	Removed boat ramp	Continuous	red

Table 9 REF11_BOAT_RAMP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	BOAT RAMP	Character	200	BOAT_RAMP_ASSET_SUB_TYPE
ASSET_TYPE*	MINOR STRUCTURE	Character	200	BOAT_RAMP_ASSET_TYPE

* Designates mandatory attribute

Table 10 REF11_BOAT_RAMP Ref 11 lookup tables

Ref 11 lookup table	Values
BOAT_RAMP_ASSET_SUB_TYPE	BOAT RAMP
BOAT_RAMP_ASSET_TYPE	MINOR STRUCTURE

3.3 Bridge

Bridges and related structures > Bridge
Tags: bridge, equestrian ford, underpass

A bridge is represented by a closed lightweight polyline signifying the perimeter with the **REF11_BRIDGE** block inserted inside with attribute information.

Table 11 Bridge layers

Layer	Description	Linetype	Colour
REF11_BRIDGE_NEW	New bridge	Continuous	192
REF11_BRIDGE_EXG	Existing bridge	Continuous	196
REF11_BRIDGE_REM	Removed bridge	Continuous	red

Table 12 REF11_BRIDGE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	BRIDGE_ASSET_SUB_TYPE
ASSET_ID*		Character	200	
ASSET_TYPE*	BRIDGE	Character	200	BRIDGE_ASSET_TYPE
FUNCTION_TYPE*		Character	200	BRIDGE_FUNCTION
CROSSING_TYPE*		Character	200	BRIDGE_CROSSING_TYPE
CROSSING*		Character	200	BRIDGE_CROSSING
DESIGN_STANDARD*		Character	200	LOAD_RATING
CURRENT_STANDARD*		Character	200	LOAD_RATING
DATE_STRENGTHENED		Date		
POSTED_LOAD_LIMIT*		Real	38.8	
POSTED_LOAD_LIMIT_DATE_APPLIED*		Date		
ROAD_NETWORK_TYPE*		Character	200	BRIDGE_ROAD_TYPE
ROAD_APPROACH_ALIGNMENT*		Character	200	ROAD_APPROACH_ALIGNMENT
POSTED_SPEED_LIMIT*		Character	200	BRIDGE_SPEED_LIMIT
STRUCTURE_LENGTH*		Real	38.8	
STRUCTURE_WIDTH*		Real	38.8	
SKEW_ANGLE		Real	38.8	
MINIMUM_CLEARANCE		Real	38.8	
CARRIAGEWAY_WIDTH		Real	38.8	
WEARING_SURFACE*		Character	200	WEARING_SURFACE
NUMBER_OF_LANES*		Integer	8	

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
MEDIAN_WIDTH		Real	38.8	
MEDIAN_HEIGHT*		Real	38.8	
BARRIER_RAILING_TYPE		Character	200	BRIDGE_BARRIER_TYPE
NUMBER_OF_FOOTPATHS*		Integer	8	
LEFT_FOOTPATH_WIDTH		Real	38.8	
RIGHT_FOOTPATH_WIDTH		Real	38.8	
PEDESTRIAN_BARRIER_TYPE		Character	200	BRIDGE_BARRIER_TYPE
NUMBER_OF_ABUTMENTS*		Integer	8	
ABUTMENT_FOUNDATION_TYPE		Character	200	FOUNDATION_TYPE
ABUTMENT_TYPE		Character	200	ABUTMENT_TYPE
NUMBER_OF_JOINTS*		Integer	8	
JOINT_TYPE_ABUTMENT_1		Character	200	JOINT_TYPE
JOINT_ACTION_ABUTMENT_1		Character	200	JOINT_ACTION
JOINT_TYPE_ABUTMENT_2		Character	200	JOINT_TYPE
JOINT_ACTION_ABUTMENT_2		Character	200	JOINT_ACTION
BEARING_QUANTITY		Real	38.8	
BEARING_TYPE		Character	200	BEARING_TYPE
NUMBER_OF_PIERS*		Integer	8	
PIER_FOUNDATION_TYPE		Character	200	FOUNDATION_TYPE
PIER_TYPE		Character	200	PIER_TYPE
PIER_MATERIAL		Character	200	PIER_MATERIAL
NUMBER_OF_SPANS*		Integer	8	
SPAN_STRUCTURAL_DESCRIPTION*		Character	200	
SPAN_STRUCTURAL_ACTION*		Character	200	STRUCTURAL_ACTION
SPAN_LENGTH*		Character	200	
SUPERSTRUCTURE_TYPE*		Character	200	SUPERSTRUCTURE_TYPE
SUPERSTRUCTURE_MATERIAL*		Character	200	SUPERSTRUCTURE_MATERIAL
CULVERT_CELL_WIDTH		Real	38.8	
NUMBER_OF_CELLS*		Real	38.8	
CULVERT_CELL_HEIGHT		Real	38.8	
DECK_MATERIAL*		Character	200	DECK_MATERIAL
UNDERPASS_VULNERABILITY		Character	200	UNDERPASS_VULNERABILITY

* Designates mandatory attribute

Table 13 REF11_BRIDGE Ref 11 lookup tables

Ref 11 lookup table	Values
BRIDGE_ASSET_SUB_TYPE	ARCH BRIDGE BOX CULVERT CABLE STAYED BRIDGE CANTILEVER SPAN BRIDGE CONCRETE SLAB CULVERT - COMBINATION CULVERT FOOTBRIDGE EQUESTRIAN FORD FOOTBRIDGE GIRDER CONTINUOUS GIRDER SIMPLY SUPPORTED LIGHT RAIL BRIDGE PIPE CULVERT ROAD BRIDGE STEEL PIPE CULVERT STOCK MOVEMENT TUNNEL TRUSS BRIDGE VEHICLE TUNNEL
BRIDGE_ASSET_TYPE	BRIDGE CULVERT
BRIDGE_FUNCTION	ANIMAL CROSSING LIGHT RAIL BRIDGE PEDESTRIAN BRIDGE ROAD BRIDGE
BRIDGE_CROSSING_TYPE	HORSE CROSSING PEDESTRIAN PATH OVER FLOODWAY PEDESTRIAN PATH OVER PEDESTRIAN PATH PEDESTRIAN PATH OVER ROAD PEDESTRIAN PATH OVER WATER ROAD OVER FLOODWAY ROAD OVER FLOODWAY AND PEDESTRIAN PATH ROAD OVER PEDESTRIAN PATH ROAD OVER RAIL ROAD OVER ROAD ROAD OVER WATER
BRIDGE_CROSSING	CREEK FLOODWAY FLOODWAY + FOOTPATH FOOTPATH GROUND LINED CHANNEL RAIL RIVER ROAD WATERBODY

Ref 11 lookup table	Values
LOAD_RATING	A14 1976 H20-44 HS15-44 HS20-44 MS18 SM1600 SM1600 1996 T44 T44 1976 T44 1992 T54
BRIDGE_ROAD_TYPE	ARTERIAL B DOUBLE NETWORK FUTURE B DOUBLE NETWORK LIGHT RAIL LIGHT RAIL BRIDGE MUNICIPAL PEDESTRIAN
ROAD_APPROACH_ALIGNMENT	CURVED SKEWED STRAIGHT
BRIDGE_SPEED_LIMIT	20 40 50 60 70 80 90 100
WEARING_SURFACE	ASPHALT GRAVEL OTHER REINFORCED CONCRETE SPRAYED SEAL TIMBER
BRIDGE_BARRIER_TYPE	CONCRETE CONCRETE AND PERSPEX PROTECTIVE CONCRETE AND STEEL CONCRETE POSTS AND GALVANISED PIPE RAIL CONCRETE POSTS AND STEEL RAIL FLEXBEAM GUARDRAIL GALVANISED PIPE AND CHAIN WIRE GALVANISED PIPE AND RAIL MASONRY PIPE PROTECTIVE BARRIER STEEL STEEL AND CONCRETE ENDS STEEL AND PERSPEX TIMBER W-BEAM GUARDRAIL
FOUNDATION_TYPE	CYLINDERS (CAISSONS) PILES SPREAD FOOTING

Ref 11 lookup table	Values
ABUTMENT_TYPE	GABIONS MASONRY OR BRICK PRESTRESSED CONCRETE REINFORCED CONCRETE REINFORCED EARTH SELECTED BACKFILL TIMBER
JOINT_TYPE	ASSEMBLY JOINT SEAL - ALUMINIUM NOSING WITH ELASTOMERIC STRIP ASSEMBLY JOINT SEAL - NEOPRENE JOINT COMPRESSION JOINT SEAL - CONCRETE NOSINGS CONSTRUCTION JOINT CONTRACTION JOINT FIXED JOINTS MODULAR EXPANSION JOINT OPEN EXPANSION JOINT POLYMER NOSING JOINT POURABLE JOINT SEAL SAWCUT JOINT SLIDING PLATE
JOINT_ACTION	EXPANSION FIXED
BEARING_TYPE	BRONZE PLATE ELASTOMER MORTAR PAD POT ROCKER STEEL PLATE STRIPS
PIER_TYPE	BLADE (WALLED) DUAL COLUMN \ HEADSTOCK MULTI COLUMN \ HEADSTOCK SINGLE COLUMN \ HEADSTOCK
PIER_MATERIAL	REINFORCED CONCRETE STEEL STEEL PIPE + REINFORCED CONCRETE TIMBER
STRUCTURAL_ACTION	ARCH CABLE STAYED CONTINUOUS CONTINUOUS OVER PIERS CANTILEVERED AT BOTH ENDS PORTAL PORTAL OUTER SPANS INNER SPAN SIMPLY SUPPORTED SIMPLY SUPPORTED STUB PORTAL

Ref 11 lookup table	Values
SUPERSTRUCTURE_TYPE	ARCH BEAM GIRDER BOX GIRDER CANTILEVERED SPAN BRIDGE COMPOSITE SLAB SLAB TRUSS VOIDED SLAB
SUPERSTRUCTURE_MATERIAL	POST TENSIONED CONCRETE PRESTRESSED CONCRETE REINFORCED CONCRETE STEEL TIMBER
DECK_MATERIAL	FIBRE REINFORCED PLASTIC (FRP) PRESTRESSED CONCRETE REINFORCED CONCRETE SELECTED BACKFILL STEEL TIMBER
UNDERPASS_VULNERABILITY	NOT VULNERABLE - GAP < 3M VULNERABLE - GAP >= 3M

3.4 Jetty

Bridges and related structures > Jetty
Tags: jetty, pier, wharf

A jetty is represented by a closed lightweight polyline signifying the perimeter with the **REF11_JETTY** block inserted inside with attribute information.

Table 14 Jetty layers

Layer	Description	Linetype	Colour
REF11_JETTY_NEW	New jetty	Continuous	193
REF11_JETTY_EXG	Existing jetty	Continuous	197
REF11_JETTY_REM	Removed jetty	Continuous	red

Table 15 REF11_JETTY attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	JETTY_ASSET_SUB_TYPE
ASSET_TYPE*	WATERWAY STRUCTURE	Character	200	JETTY_ASSET_TYPE
WIDTH*		Real	38.8	
LENGTH*		Real	38.8	
AREA*		Real	38.8	
HEIGHT*		Real	38.8	
MATERIAL*		Character	200	JETTY_MATERIAL
SUBSTRUCTURE_MATERIAL*		Character	200	JETTY_SUBSTRUCTURE_MATERIAL
HANDRAIL*		Character	255	JETTY_HANDRAIL
HANDRAIL_MATERIAL		Character	200	HANDRAIL_MATERIAL

* Designates mandatory attribute

Table 16 REF11_JETTY Ref 11 lookup tables

Ref 11 lookup table	Values
JETTY_ASSET_SUB_TYPE	JETTY PIER WHARF
JETTY_ASSET_TYPE	WATERWAY STRUCTURE
JETTY_MATERIAL	ALUMINIUM COMPOSITE CONCRETE METAL STEEL TIMBER
JETTY_SUBSTRUCTURE_MATERIAL	ALUMINIUM COMPOSITE CONCRETE METAL STEEL TIMBER
JETTY_HANDRAIL	NO HANDRAIL WITH HANDRAIL
HANDRAIL_MATERIAL	METAL PLASTIC TIMBER

3.5 Rural bridge

Bridges and related structures > Rural bridge
Tags: rural bridge

A rural bridge is represented by a closed lightweight polyline signifying the perimeter with the **REF11_RURAL_BRIDGE** block inserted inside with attribute information.

Table 17 Rural bridge layers

Layer	Description	Linetype	Colour
REF11_RURAL_BRIDGE_NEW	New rural bridge	Continuous	192
REF11_RURAL_BRIDGE_EXG	Existing rural bridge	Continuous	196
REF11_RURAL_BRIDGE_REM	Removed rural bridge	Continuous	red

Table 18 REF11_RURAL_BRIDGE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	RURAL BRIDGE	Character	200	RURAL_BRIDGE_ASSET_TYPE
ASSET_ID		Character	200	
ASSET_SUB_TYPE*		Character	200	BRIDGE_ASSET_SUB_TYPE
FUNCTION_TYPE*		Character	200	BRIDGE_FUNCTION
LOAD_RATING*		Character	200	LOAD_RATING
DECK_MATERIAL*		Character	200	STRUCTURE_MATERIAL
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
FRAME_MATERIAL*		Character	200	STRUCTURE_MATERIAL
ENDWALL_TYPE		Character	200	HEADWALL_PIT_TYPE
ENDWALL_MATERIAL		Character	200	HEADWALL_MATERIAL
PIPE_MATERIAL		Character	200	PIPE_MATERIAL
PIPE_DIAMETER		Real	38.8	PIPE_DIAMETER
NUMBER_OF_CELLS		Real	38.8	
CELL_SPAN*		Real	38.8	
ROAD_SURFACE		Character	200	ROAD_TYPE
HEADWALL_TYPE		Character	200	HEADWALL_PIT_TYPE
HEADWALL_MATERIAL		Character	200	HEADWALL_MATERIAL
WATER_FLOW		Character	200	WATER_FLOW
OUTLET_SCOUR_PROTECTION*		Character	200	

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
RIVER_NAME		Character	200	
CATCHMENT		Character	200	CATCHMENT_NAME

* Designates mandatory attribute

Table 19 REF11_RURAL_BRIDGE Ref 11 lookup tables

Ref 11 lookup table	Values
RURAL_BRIDGE_ASSET_TYPE	RURAL BRIDGE
BRIDGE_ASSET_SUB_TYPE	ARCH BRIDGE BOX CULVERT CABLE STAYED BRIDGE CANTILEVER SPAN BRIDGE CONCRETE SLAB CULVERT - COMBINATION CULVERT FOOTBRIDGE EQUESTRIAN FORD FOOTBRIDGE GIRDER CONTINUOUS GIRDER SIMPLY SUPPORTED LIGHT RAIL BRIDGE PIPE CULVERT ROAD BRIDGE STEEL PIPE CULVERT STOCK MOVEMENT TUNNEL TRUSS BRIDGE VEHICLE TUNNEL
BRIDGE_FUNCTION	ANIMAL CROSSING LIGHT RAIL BRIDGE PEDESTRIAN BRIDGE ROAD BRIDGE
LOAD_RATING	A14 1976 H20-44 HS15-44 HS20-44 MS18 SM1600 SM1600 1996 T44 T44 1976 T44 1992 T54

Ref 11 lookup table	Values
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER
HEADWALL_PIT_TYPE	BYPASS OUTLET CHANNEL WALL CULVERT HEADWALL DIVERSION WEIR DROP STRUCTURE END WALL LOW FLOW OUTLET PIPE OUTLET POND OUTLET RAISED WEIR SPECIAL INLET STRUCTURE SPECIAL OUTLET STRUCTURE SPILLWAY WALL STANDARD TAPERED TRASH RACK
PIPE_MATERIAL	DUCTILE IRON CEMENT LINED FIBRE REINFORCED CONCRETE GALVANISED STEEL HIGH DENSITY POLYETHLENE HYDROCON PERMEABLE POLYETHYLENE POLYPROPYLENE POLYPROPYLENE BLACKMAX POLYVINYL CHLORIDE REINFORCED CONCRETE STEEL REINFORCED CONCRETE UNPLASTICISED POLYVINYL CHLORIDE VITRIFIED CLAY
PIPE_DIAMETER	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
ROAD_TYPE	SEALED ROAD UNSEALED ROAD

Ref 11 lookup table	Values
HEADWALL_MATERIAL	HIGH DENSITY POLYETHLENE PRECAST CONCRETE PRECAST REINFORCED CONCRETE REINFORCED CONCRETE REINFORCED CONCRETE + ZONED EARTH FILL EMBANKMENT REINFORCED CONCRETE INVERT REINFORCED CONCRETE INVERT LEVEL WITH STONE PITCHED WALL REINFORCED CONCRETE WITH GROUT MAT REINFORCED CONCRETE WITH REINFORCED CONCRETE BLOCK WALL ROCK FILL EMBANKMENT SANDBAGS STONE PITCHING ON A CONCRETE BASE STONE PITCHING WITH CEMENT MORTAR
WATER_FLOW	HIGH VELOCITY LOW VELOCITY MODERATE VELOCITY
CATCHMENT_NAME	DOG TRAP CREEK FYSHWICK LAKE BURLEY GRIFFIN MURRUMBIDGEE TUGGERANONG WODEN WOOLSHED

4 Buildings

Building	Amenities buildings, community buildings, demountable buildings, huts, laboratories, office buildings, operations buildings, pump sheds, rural buildings, sheds, site buildings, spray booths, toll booths, weighbridge offices and workshops
Building equipment	Air conditioners, air handling units, backup power generators, benches, compressed air systems, cooling towers, cupboards, desks, evaporative coolers, fridges, heat pump units, hot water services, HVAC, lockers, microwaves, safes, shelving, spill stations and work benches
Building feature	Aerials, air inlets, amenities, balconies, bathrooms, canteens, condenser water piping, duct work, exhaust extraction, external doors, extraction fans, fire doors, folding doors, hot water piping, hydraulic grease and air, kitchens, lockers, motor control centres, offices, oil pipes, roller doors, rooms, service pits, sliding doors, underfloor heating, workshop – chassis clean bays and workshop bays
Pavilion	Pavilions
Public toilet	Public toilets

4.1 Building

Buildings > Building
Tags: building

A building is represented by a closed lightweight polyline signifying the perimeter with the **REF11_BUILDING** block inserted inside with attribute information.

Table 20 Building layers

Layer	Description	Linetype	Colour
REF11_BUILDING_NEW	New building	Continuous	182
REF11_BUILDING_EXG	Existing building	Continuous	186
REF11_BUILDING_REM	Removed building	Continuous	red

Table 21 REF11_BUILDING attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BUILDING	Character	200	BUILDING_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BUILDING_ASSET_SUB_TYPE
STRUCTURE_DESCRIPTION		Character	200	
STRUCTURE_LENGTH		Real	38.8	
STRUCTURE_WIDTH		Real	38.8	
STRUCTURE_HEIGHT		Real	38.8	
STRUCTURE_MATERIAL*		Character	200	BUILDING_MATERIAL
ROOF_MATERIAL*		Character	200	BUILDING_MATERIAL
FLOOR_MATERIAL*		Character	200	BUILDING_MATERIAL
STRUCTURE_FLOOR_AREA*		Real	38.8	
NO_OF_TOILET_FACILITIES*		Integer	8	
NO_OF_SHOWER_UNITS*		Integer	8	
NO_OF_HAND_BASINS*		Integer	8	

* Designates mandatory attribute

Table 22 REF11_BUILDING Ref 11 lookup tables

Ref 11 lookup table	Values
BUILDING_ASSET_TYPE	BUILDING
BUILDING_ASSET_SUB_TYPE	AMENITIES BUILDING COMMUNITY BUILDING DEMOUNTABLE BUILDING HUT LABORATORY OFFICE BUILDING OPERATIONS BUILDING PUMP SHED RURAL BUILDING SHED SITE BUILDING SPRAY BOOTH TOLL BOOTH WEIGHBRIDGE OFFICE WORKSHOP
BUILDING_MATERIAL	ALUMINIUM BARE EARTH BESSA BLOCK BRICK COLOURBOND CONCRETE CONCRETE BLOCKS DIRT FIBREGLASS FIBRO SHEETING GALVANISED HARDWOOD MESH + HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) REINFORCED CONCRETE STEEL STEEL MESH STONE TIMBER WEATHERBOARD

4.2 Building equipment

Buildings > Building equipment
Tags: building equipment

Building equipment is represented by the **REF11_BUILDING_EQUIPMENT** block inserted at the centre of the feature with attribute information.

Table 23 Building equipment layers

Layer	Description	Linetype	Colour
REF11_BUILDING_EQUIPMENT_NEW	New building equipment	Continuous	181
REF11_BUILDING_EQUIPMENT_EXG	Existing building equipment	Continuous	185
REF11_BUILDING_EQUIPMENT_REM	Removed building equipment	Continuous	red

Table 24 REF11_BUILDING_EQUIPMENT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BUILDING EQUIPMENT	Character	200	BLDG_EQUIP_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BLDG_EQUIP_ASSET_SUB_TYPE
MAKE_MODEL		Character	200	BUILDING_EQUIPMENT_MAKE_MODEL
SERIAL_NUMBER		Character	200	
QUANTITY*		Real	38.8	
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
HEIGHT*		Real	38.8	
MATERIAL*		Character	200	BUILDING_EQUIPMENT_MATERIAL

* Designates mandatory attribute

Table 25 REF11_BUILDING_EQUIPMENT Ref 11 lookup tables

Ref 11 lookup table	Values
BLDG_EQUIP_ASSET_TYPE	BUILDING EQUIPMENT
BLDG_EQUIP_ASSET_SUB_TYPE	AIR CONDITIONER AIR HANDLING UNIT BACKUP POWER GENERATOR BENCH COMPRESSED AIR SYSTEM COOLING TOWER CUPBOARD DESK EVAPORATIVE COOLER FRIDGE HEAT PUMP UNIT HOT WATER SERVICE HVAC LOCKERS MICROWAVE SAFE SHELVING SPILL STATION WORK BENCH
BUILDING_EQUIPMENT_MAKE_MODEL	DAIKIN MITSUBISHI
BUILDING_EQUIPMENT_MATERIAL	ALUMINIUM GLASS PANELS METAL TIMBER

4.3 Building feature

Buildings > Building feature
Tags: building feature

A building feature is represented by the **REF11_BUILDING_FEATURE** block inserted at the centre of the feature with attribute information.

Table 26 Building feature layers

Layer	Description	Linetype	Colour
REF11_BUILDING_FEATURE_NEW	New building feature	Continuous	180
REF11_BUILDING_FEATURE_EXG	Existing building feature	Continuous	184
REF11_BUILDING_FEATURE_REM	Removed building feature	Continuous	red

Table 27 REF11_BUILDING_FEATURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BUILDING FEATURE	Character	200	BLDG_FEATURE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BLDG_FEATURE_ASSET_SUB_TYPE
QUANTITY		Real	38.8	
MATERIAL*		Character	200	BUILDING_EQUIPMENT_MATERIAL
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
HEIGHT*		Real	38.8	

* Designates mandatory attribute

Table 28 REF11_BUILDING_FEATURE Ref 11 lookup tables

Ref 11 lookup table	Values
BLDG_FEATURE_ASSET_TYPE	BUILDING FEATURE
BLDG_FEATURE_ASSET_SUB_TYPE	AERIAL AIR INLET AMENITIES BALCONY BATHROOM CANTEEN CONDENSER WATER PIPING DUCT WORK EMERGENCY LIGHT EMERGENCY WARNING AND INTERCOMMUNICATION SYSTEM SPEAKER EXHAUST/EXTRACTION EXIT LIGHT EXTERNAL DOOR EXTRACTION FAN FIRE DOOR FOLDING DOOR HOT WATER PIPING HYDRAULIC GREASE AND AIR KITCHEN LADDER BRACKET LOCKERS MOTOR CONTROL CENTRE OFFICE OIL PIPES ROLLER DOOR ROOM SERVICE PIT SLIDING DOOR SMOKE DETECTOR UNDERFLOOR HEATING WORKSHOP - CHASSIS CLEAN BAY WORKSHOP BAY
BUILDING_EQUIPMENT_MATERIAL	ALUMINIUM GLASS PANELS METAL TIMBER

4.4 Pavilion

Buildings > Pavilion
Tags: pavilion

A pavilion is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PAVILION** block inserted inside with attribute information.

Table 29 Pavilion layers

Layer	Description	Linetype	Colour
REF11_PAVILION_NEW	New pavilion	Continuous	223
REF11_PAVILION_EXG	Existing pavilion	Continuous	227
REF11_PAVILION_REM	Removed pavilion	Continuous	red

Table 30 REF11_PAVILION attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PAVILION	Character	200	PAVILION_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PAVILION_ASSET_SUB_TYPE
CANTEEN_NUMBER		Character	200	
CHANGE_ROOM_NUMBER		Real	38.8	
DISABLED_CUBICLE_NUMBER		Real	38.8	
FEMALE_CUBICLE_NUMBER		Real	38.8	
FEMALE_SHOWER_NUMBER		Real	38.8	
MALE_CUBICLE_NUMBER		Real	38.8	
MALE_SHOWER_NUMBER		Real	38.8	
URINAL_NUMBER		Real	38.8	
UNISEX_CUBICLE_NUMBER		Real	38.8	
SURFACE_AREA		Real	38.8	
STORE_ROOM_NUMBER		Real	38.8	

* Designates mandatory attribute

Table 31 REF11_PAVILION Ref 11 lookup tables

Ref 11 lookup table	Values
PAVILION_ASSET_TYPE	PAVILION
PAVILION_ASSET_SUB_TYPE	DEPOT FACILITIES SHED

4.5 Public toilet

Buildings > Public toilet
Tags: public toilet, toilet

A public toilet is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PUBLIC_TOILET** block inserted inside with attribute information.

Table 32 Public toilet layers

Layer	Description	Linetype	Colour
REF11_PUBLIC_TOILET_NEW	New public toilet	Continuous	141
REF11_PUBLIC_TOILET_EXG	Existing public toilet	Continuous	145
REF11_PUBLIC_TOILET_REM	Removed public toilet	Continuous	red

Table 33 REF11_PUBLIC_TOILET attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PUBLIC TOILET	Character	200	PUBLIC_TOILET_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PUBLIC_TOILET_ASSET_SUB_TYPE
TOILET_SYSTEM*		Character	200	TOILET_SYSTEM
WATER_SUPPLY*		Character	200	WATER_SUPPLY
TOILET_ACCESS*		Character	200	TOILET_ACCESS
TOTAL_NO_OF_CUBICLES*		Integer	8	
UNISEX_CUBICLE_NUMBER*		Integer	8	
DISABLED_CUBICLE_NUMBER*		Integer	8	
DISABLED_CUBICLE*		Character	200	DISABLED_ACCESS
FEMALE_CUBICLE_NUMBER*		Integer	8	
MALE_CUBICLE_NUMBER*		Integer	8	
URINAL_NUMBER*		Integer	8	
SINK_NUMBER*		Integer	8	

* Designates mandatory attribute

Table 34 REF11_PUBLIC_TOILET Ref 11 lookup tables

Ref 11 lookup table	Values
PUBLIC_TOILET_ASSET_TYPE	PUBLIC TOILET
PUBLIC_TOILET_ASSET_SUB_TYPE	AUTOMATED SYSTEM EG EXCELOO BRAND TOILET MANUAL STYLE ABLUTION BLOCK MANUAL STYLE ABLUTION BLOCKS WITH SHOWER FACILITIES PIT TOILET PORTABLE TOILET PUBLIC TOILET LOCATED WITHIN BUILDING
TOILET_SYSTEM	BIOLOGICAL AQUATIC SYSTEM COMPOSTING SYSTEM CONNECTED TO TOWN SEWERAGE PIT TOILET PUMPOUT SYSTEM SEPTIC SYSTEM
WATER_SUPPLY	POTABLE TOWN WATER RAIN WATER FROM TANK WATER FROM BORE WATER FROM COMBINATION OF RIVER AND BORE WATER FROM RIVER OR OTHER DRAINAGE LINE
TOILET_ACCESS	24 HOURS ACCESS BY KEY SUPPLIED BY AGENCY ACCESS DURING ORGANISED SPORTS BOOKINGS AEST 7AM TO 8PM, AEDT 7AM TO 10PM EXTENDED HOURS (6:30AM TO 10-11PM) NOT ACCESSIBLE TO THE PUBLIC OFFICE HOURS OPEN DURING RESERVE OPENING HOURS
DISABLED_ACCESS	DISABLED ACCESS NO DISABLED ACCESS

5 Fences, guardrails and barriers

Bollard	Bollards (fixed) and rocks
Fence boundary feature	Agricultural, bollards (vertical), bollards with chain, booms, cave enclosures, chainwire mesh fences, decorative fences, handrails, high standard enclosure fencing, hob fences, lake fences, log barriers, paling fences, pipe fencings, pool style fencing, portable fences, post and rail fencing and rock boulders
Gate	Agricultural gates, boom gates, cattle grids, cavalletti, chain gates, enclosure pedestrian, enclosure vehicle, log gates, pedestrian gates, pipe gates, removable bollards, security gates, squeeze posts, step gates and supergates
Noise wall	Noise walls
Road barrier	Concrete barriers, corrugated metal guardrails and cable guardrails
Wall	Dam walls, fins, flume walls, retain slopes, retaining walls and seating walls

5.1 Bollard

Fences, guardrails and barriers > Bollard
Tags: bollard, rock

A bollard is represented by the **REF11_BOLLARD** block inserted at the centre of the feature with attribute information (see Gate for removable bollards).

Table 35 Bollard layers

Layer	Description	Linetype	Colour
REF11_BOLLARD_NEW	New bollard	Continuous	43
REF11_BOLLARD_EXG	Existing bollard	Continuous	47
REF11_BOLLARD_REM	Removed bollard	Continuous	13

Table 36 REF11_BOLLARD attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BOLLARD	Character	200	BOLLARD_ASSET_TYPE
BOLLARD_MATERIAL*		Character	200	BOLLARD_MATERIAL
NUMBER_OF_BOLLARDS*		Real	38.8	

* Designates mandatory attribute

Table 37 REF11_BOLLARD Ref 11 lookup tables

Ref 11 lookup table	Values
BOLLARD_ASSET_TYPE	BOLLARD
BOLLARD_MATERIAL	CONCRETE METAL PLASTIC ROCK STAINLESS STEEL TIMBER

5.2 Fence boundary feature

Fences, guardrails and barriers > Fence boundary feature
Tags: fence boundary feature

A fence boundary feature is represented by a linear feature (line, lightweight polyline) with the **REF11_FENCE_BOUNDARY_FEATURE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 38 Fence boundary feature layers

Layer	Description	Linetype	Colour
REF11_FENCE_BOUNDARY_FEATURE_NEW	New fence boundary feature	Continuous	193
REF11_FENCE_BOUNDARY_FEATURE_EXG	Existing fence boundary feature	Continuous	197
REF11_FENCE_BOUNDARY_FEATURE_REM	Removed fence boundary feature	Continuous	red

Table 39 REF11_FENCE_BOUNDARY_FEATURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	FENCE/BOLLARD	Character	200	FENCE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	FENCE_ASSET_SUB_TYPE
PURPOSE*		Character	200	FENCE_PURPOSE
LENGTH*		Real	38.8	
HEIGHT*		Character	200	
TERRAIN*		Character	200	TERRAIN
VEGETATION_TYPE		Character	200	VEGETATION
WIRE		Character	200	FENCE_WIRE
ENDS_MATERIAL		Character	200	FENCE_POST_MATERIAL
POSTS_MATERIAL		Character	200	FENCE_POST_MATERIAL
BOLLARD_MATERIAL		Character	200	BOLLARD_MATERIAL
BOLLARD_COUNT		Real	38.8	

* Designates mandatory attribute

Table 40 REF11_FENCE_BOUNDARY_FEATURE Ref 11 lookup tables

Ref 11 lookup table	Values
FENCE_ASSET_TYPE	FENCE/BOLLARD
FENCE_ASSET_SUB_TYPE	AGRICULTURAL (NETTING, RINGLOCK, PLAIN) BOLLARD (VERTICAL) BOLLARD WITH CHAIN BOOM CAVE ENCLOSURE CHAINWIRE MESH FENCE DECORATIVE FENCE HANDRAIL HIGH STANDARD ENCLOSURE FENCING HOB FENCE LAKE FENCE LOG BARRIER NO FENCE - REFERENCE ONLY PALING PIPE FENCING POOL STYLE FENCING (PLAY AND RECREATION) POOL STYLE FENCING (PLAYGROUNDS) PORTABLE FENCE POST AND RAIL ROCK BOULDER ROPE MESH TRAFFIC LANE SEPARATION KERB
FENCE_PURPOSE	AESTHETIC SCREENING CARPARK CONTAINMENT DEFLECTION EASEMENT EXTERNAL BOUNDARY FENCE HISTORIC INTERNAL LITTER RETAINMENT PLAYGROUND ENCLOSURE RESTRICTING VEHICLE ACCESS RURAL LEASE FENCE SECURITY SOUND REDUCTION URBAN BOUNDARY WILDLIFE ENCLOSURE
TERRAIN	BETWEEN FLAT AND UNDULATED BETWEEN UNDULATED AND STEEP FLAT - ACCESSIBLE BY 2 WHEEL DRIVE STEEP - ACCESSIBLE BY FOOT OR MOTOR BIKE UNDULATED - ACCESSIBLE BY 4 WHEEL DRIVE
VEGETATION	HEAVY FOREST IMPROVED PASTURE OR NATIVE GRASSLANDS LIGHT FOREST REGROWTH
FENCE_WIRE	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*

Ref 11 lookup table	Values
FENCE_POST_MATERIAL	BRICK CHAIN MESH COLOURBOND CONCRETE GALVANISED STEEL HARDWOOD MESH WITH FIBRE PANELS MESH WITH TIMBER PANELS METAL PLASTIC SILT BARRIER STEEL STEEL MESH TIMBER TREATED PINE WIRE
BOLLARD_MATERIAL	CONCRETE METAL PLASTIC ROCK STAINLESS STEEL TIMBER

5.3 Gate

Fences, guardrails and barriers > Gate
Tags: gate, cattle grid, removable bollard

A gate is represented by the **REF11_GATE** block inserted at the centre of the feature with attribute information.

Table 41 Gate layers

Layer	Description	Linetype	Colour
REF11_GATE_NEW	New gate	Continuous	191
REF11_GATE_EXG	Existing gate	Continuous	195
REF11_GATE_REM	Removed gate	Continuous	red

Table 42 REF11_GATE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	GATE_ASSET_SUB_TYPE
ASSET_TYPE*	GATE	Character	200	GATE_ASSET_TYPE
PURPOSE*		Character	200	GATE_PURPOSE
NUMBER_OF_GATES*		Integer	8	
MATERIAL*		Character	200	GATE_MATERIAL
LENGTH*		Real	38.8	
HEIGHT*		Real	38.8	
SIGN_ON_GATE*		Character	200	SIGN_ON_GATE

* Designates mandatory attribute

Table 43 REF11_GATE Ref 11 lookup tables

Ref 11 lookup table	Values
GATE_ASSET_SUB_TYPE	AGRICULTURAL GATE BOOM GATE CATTLE GRID CATTLE GRID (BIKE) CAVALLETTI CHAIN GATE ENCLOSURE PEDESTRIAN ENCLOSURE VEHICLE LOG GATE PEDESTRIAN GATE PIPE GATE REMOVABLE BOLLARD METAL REMOVABLE BOLLARD WOOD SECURITY GATE SQUEEZE POST STEP GATE SUPERGATE
GATE_ASSET_TYPE	GATE
GATE_PURPOSE	ACCESS GATE AMBULANCE GATE SECURITY GATE
GATE_MATERIAL	CHAIN MESH WITH FIBRO CHAIN MESH WITH TIMBER COLOURBOND GALVANISED CHAIN MESH GALVANISED WELDED MESH METAL TIMBER
SIGN_ON_GATE	NO SIGN ON GATE SIGN ON GATE

5.4 Noise wall

Fences, guardrails and barriers > Noise wall
Tags: noise wall

A noise wall is represented by a linear feature (line, lightweight polyline) with the **REF11_NOISE_WALL** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 44 Noise wall layers

Layer	Description	Linetype	Colour
REF11_NOISE_WALL_NEW	New noise wall	Continuous	190
REF11_NOISE_WALL_EXG	Existing noise wall	Continuous	194
REF11_NOISE_WALL_REM	Removed noise wall	Continuous	red

Table 45 REF11_NOISE_WALL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	NOISE WALL	Character	200	NOISE_WALL_ASSET_SUB_TYPE
ASSET_TYPE*	WALL	Character	200	NOISE_WALL_ASSET_TYPE
BOUNDARY_TYPE*		Character	200	BOUNDARY_TYPE
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
MIN_WALL_HEIGHT*		Real	38.8	
MAX_WALL_HEIGHT*		Real	38.8	
SLOPE_FROM_VERTICAL*		Character	200	SLOPE_FROM_VERTICAL
MATERIAL*		Character	200	WALL_MATERIAL
WALL_PAINTED*		Character	200	WALL_PAINTED
RAILING_ABOVE*		Character	200	RAILING_ABOVE

* Designates mandatory attribute

Table 46 REF11_NOISE_WALL Ref 11 lookup tables

Ref 11 lookup table	Values
NOISE_WALL_ASSET_SUB_TYPE	NOISE WALL
NOISE_WALL_ASSET_TYPE	WALL
BOUNDARY_TYPE	CANBERRA NATURE PARK DISTRICT PARK DISTRICT PLAYING FIELD FLOODWAY LAKE LANEWAY NEIGHBOURHOOD PARK OVAL PEDESTRIAN PARKLAND POND RIVER SEMI NATURAL OPEN SHOPPING CENTRE STREET TOWN PARK
SLOPE_FROM_VERTICAL	15 DEGREES FROM VERTICAL 30 DEGREES FROM VERTICAL 45 DEGREES FROM VERTICAL VERTICAL
WALL_MATERIAL	BESSER BLOCKS BRICK CAST IN SITU CONCRETE COMPOSITE - REINFORCED CONCRETE + EARTH FILL EMBANKMENT COMPOSITE - REINFORCED CONCRETE + ZONED EARTH FILL EMBANKMENT CONCRETE EARTH FILL EMBANKMENT GABION MATTRESS GLASS MASONRY PRECAST CONCRETE REINFORCED CONCRETE ARCH REINFORCED CONCRETE GRAVITY ROCK FILL EMBANKMENT ROLLER COMPACTED CONCRETE GRAVITY SANDSTONE STEEL STONE STONE AND CONCRETE STONE AND CONCRETE + GLASS PANELS TIMBER
WALL_PAINTED	WALL NOT PAINTED WALL PAINTED
RAILING_ABOVE	NO RAILING RAILING ABOVE

5.5 Road barrier

Fences, guardrails and barriers > Road barrier
Tags: road barrier, guardrail, concrete barrier

A road barrier is represented by a linear feature (line, lightweight polyline) with the **REF11_ROAD_BARRIER** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 47 Road barrier layers

Layer	Description	Linetype	Colour
REF11_ROAD_BARRIER_NEW	New road barrier	Continuous	41
REF11_ROAD_BARRIER_EXG	Existing road barrier	Continuous	45
REF11_ROAD_BARRIER_REM	Removed road barrier	Continuous	red

Table 48 REF11_ROAD_BARRIER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ROAD BARRIER	Character	200	ROAD_BARRIER_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	ROAD_BARRIER_ASSET_SUB_TYPE
BARRIER_ASSOCIATION*		Character	200	BARRIER_ASSOCIATION
BARRIER_LENGTH*		Real	38.8	
BARRIER_HEIGHT*		Real	38.8	
APPROACH_TERMINAL_TYPE*		Character	200	BARRIER_TERMINAL_TYPE
DEPARTURE_TERMINAL_TYPE*		Character	200	BARRIER_TERMINAL_TYPE

* Designates mandatory attribute

Table 49 REF11_ROAD_BARRIER Ref 11 lookup tables

Ref 11 lookup table	Values
ROAD_BARRIER_ASSET_TYPE	ROAD BARRIER
ROAD_BARRIER_ASSET_SUB_TYPE	CABLE GUARDRAIL CONCRETE BARRIER CORRUGATED METAL GUARDRAIL
BARRIER_ASSOCIATION	ASSOCIATED WITH BRIDGE ASSOCIATED WITH CULVERT NO ASSOCIATION
BARRIER_TERMINAL_TYPE	4 ROPE ANCHOR BLOCK ATTACHED TO EXISTING BARRIER OR STRUCTURE BARRIER TERMINAL TYPE BREAKAWAY CABLE TERMINAL ET2000 FISHTAIL FLARED ENERGY ABSORBING TERMINAL LAUNCHING RAMP MELT NON-RIGID THRIE BEAM APPROACH TERMINAL FIXED WITH BRIDGE RAILING NON-RIGID THRIE BEAM APPROACH TERMINAL FIXED WITH RIGID CONCRETE BARRIER NON-RIGID THRIE BEAM DEPARTURE TERMINAL FIXED WITH BRIDGE RAILING NON-RIGID THRIE BEAM DEPARTURE TERMINAL FIXED WITH RIGID CONCRETE BARRIER NON-RIGID W BEAM APPROACH TERMINAL FIXED WITH RIGID CONCRETE BARRIER NON-RIGID W BEAM DEPARTURE TERMINAL FIXED WITH RIGID CONCRETE BARRIER NON-RIGID W-BEAM FIXED WITH NON-RIGID BRIDGE BARRIER OMNI QUAD GUARD CUSHION QUAD GUARD ELITE QUAD GUARD WIRE REACT350 RIGID VEHICLE BARRIER TERMINAL ROPE ANCHOR BLOCK SEQUENTIAL KINKING TERMINAL TAUII TRACC

5.6 Wall

Fences, guardrails and barriers > Wall
Tags: wall

A wall is represented by a linear feature (line, lightweight polyline) with the **REF11_WALL** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 50 Wall layers

Layer	Description	Linetype	Colour
REF11_WALL_NEW	New wall	Continuous	193
REF11_WALL_EXG	Existing wall	Continuous	197
REF11_WALL_REM	Removed wall	Continuous	240

Table 51 REF11_WALL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	WALL_ASSET_SUB_TYPE
ASSET_TYPE*	WALL	Character	200	WALL_ASSET_TYPE
PURPOSE*		Character	200	WALL_PURPOSE
BOUNDARY_TYPE*		Character	200	BOUNDARY_TYPE
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
MIN_WALL_HEIGHT*		Real	38.8	
MAX_WALL_HEIGHT*		Real	38.8	
MATERIAL*		Character	200	WALL_MATERIAL
WALL_PAINTED*		Character	200	WALL_PAINTED
SLOPE_FROM_VERTICAL*		Character	200	SLOPE_FROM_VERTICAL
RAILING_ABOVE*		Character	200	RAILING_ABOVE

* Designates mandatory attribute

Table 52 REF11_WALL Ref 11 lookup tables

Ref 11 lookup table	Values
WALL_ASSET_SUB_TYPE	FREE STANDING WALL LAKE WALL RETAINING WALL
WALL_ASSET_TYPE	WALL
WALL_PURPOSE	DAM WALL FIN FIN (HOLDS PLAQUE) FIN (PERGOLA) FIN (RAMP - STAIRS) FIN (RAMP) FIN (STAIRS) FIN (STREET SIGN) FLUME WALL RETAIN SLOPE RETAINING WALL (BUS STOP) RETAINING WALL (SCHOOL) RETAINING WALL (STAIRS) SEATING WALL
BOUNDARY_TYPE	CANBERRA NATURE PARK DISTRICT PARK DISTRICT PLAYING FIELD FLOODWAY LAKE LANEWAY NEIGHBOURHOOD PARK OVAL PEDESTRIAN PARKLAND POND RIVER SEMI NATURAL OPEN SHOPPING CENTRE STREET TOWN PARK
WALL_PAINTED	WALL NOT PAINTED WALL PAINTED
SLOPE_FROM_VERTICAL	15 DEGREES FROM VERTICAL 30 DEGREES FROM VERTICAL 45 DEGREES FROM VERTICAL VERTICAL
RAILING_ABOVE	NO RAILING RAILING ABOVE

Ref 11 lookup table	Values
WALL_MATERIAL	ANCHORED SHEET-PILED BESSER BLOCKS BRICK CAST IN SITU CONCRETE COMPOSITE - REINFORCED CONCRETE + EARTH FILL EMBANKMENT COMPOSITE - REINFORCED CONCRETE + ZONED EARTH FILL EMBANKMENT CONCRETE CORTEN EARTH FILL EMBANKMENT GABION MATTRESS GLASS MASONRY PRECAST CONCRETE REINFORCED CONCRETE ARCH REINFORCED CONCRETE GRAVITY ROCK FILL EMBANKMENT ROLLER COMPACTED CONCRETE GRAVITY SANDSTONE STEEL STONE STONE AND CONCRETE STONE AND CONCRETE + GLASS PANELS TIMBER

6 Hydrology

Dam wall	Dam walls and weirs
Kerb inlet	Kerb inlet to divert storm water from road kerb and gutters to water gardens or trees
Major gross pollutant trap	Major gross pollutant traps and trash racks
Minor gross pollutant trap	Minor gross pollutant traps and trash racks
Retarding basin	Retarding basins, clean water storage dams, embankments, flood levees, sediment retention basins, water basins and water catchment dams
Stormwater branch connection	Stormwater branch connections
Stormwater culvert	Box and pipe culverts
Stormwater dead end	Stormwater dead ends
Stormwater headwall	Drop structures, endwalls, special outlet structures and standard headwalls
Stormwater manhole	Inspection pits, large manholes, special chambered manholes, special structures and standard manholes
Stormwater open drain	Concrete channels, grass channels, grassed floodways, metal channels, spillways, stone channels and swale drains
Stormwater pipe	Stormwater pipes
Stormwater subsoil drain	Stormwater subsoil drains
Stormwater subsoil high end riser	Stormwater subsoil high end risers
Stormwater sump	Sump, concealed sumps, drop inlet structures, grated sumps, inspection pits, kerb inlet sumps, lintel sumps, median gully pits, plantation sumps, seepage beds, special inlet structures, stilling wells, surcharge sumps and table drain gully pits
Stormwater tie	Commercial stormwater ties, residential stormwater ties, small pipes, split residential stormwater ties and tie points
Stormwater tie kerb connection	Stormwater tie connection to kerb and connections draining stormwater to gutter.
Trash racks	Trash racks not associated with GPT, safety screens
Urban lakes and ponds	Bio retention basins, creeks (man-made), retarding basin vegetation, rivers, urban lakes, urban ponds and wetlands
Wastewater dam	Grey water dams and leachate dams
Water filter	Self-cleaning media filter systems and water filtration units
Water fitting	Down pipes, stand pipes and taps
Water hydrant	Fire hydrants, fire hydrants and hose reels, hydrant connectors, sprinkler systems and water hydrants
Water meter	Water meters

Water pipe	Water pipes, backwash lines, irrigation mains, non-potable rising mains, non-potable water mains, potable mains and suction lines
Water pit	Water pits, filter chambers, meter chambers, pump wells and valve chambers
Water pump	Intake pumps, recirculation pumps and water pumps
Water service offtake	Water service offtakes
Water valve	Air relief valves, butterfly valves, gate valves, hydrants, hydrant booster valves, isolation valves, pressure relief valves, sluice valves, solenoid valves, sprinkler booster valves, stop valves and swing check valves
Waterway structure	Diving platforms, erosion structures, fish ladders, buoys, groynes, lake ladders, lake posts, rural headwalls and weirs

6.1 Dam wall

Hydrology > Dam wall
Tags: dam wall, weir

A dam wall is represented by a linear feature (line, lightweight polyline) with the **REF11_DAM_WALL** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 53 Dam wall layers

Layer	Description	Linetype	Colour
REF11_DAM_WALL_NEW	New dam wall	Continuous	173
REF11_DAM_WALL_EXG	Existing dam wall	Continuous	177
REF11_DAM_WALL_REM	Removed dam wall	Continuous	red

Table 54 REF11_DAM_WALL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	DAM_WALL_ASSET_SUB_TYPE
ASSET_TYPE*	WATER RETAINING ASSET	Character	200	DAM_WALL_ASSET_TYPE
MATERIAL*		Character	200	DAM_WALL_MATERIAL
CONSTRUCTION*		Character	200	CONSTRUCTION
EMBANKMENT_LENGTH*		Real	38.8	
HEIGHT*		Real	38.8	
DROP_HEIGHT*		Real	38.8	
STORAGE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 55 REF11_DAM_WALL Ref 11 lookup tables

Ref 11 lookup table	Values
DAM_WALL_ASSET_SUB_TYPE	DAM WALL WEIR
DAM_WALL_ASSET_TYPE	WATER RETAINING ASSET
DAM_WALL_MATERIAL	CONCRETE EARTH FILL EMBANKMENT PRECAST CONCRETE REINFORCED CONCRETE ARCH ROCK FILL EMBANKMENT STONE AND CONCRETE
CONSTRUCTION	CAST IN-SITU HAND PLACED PRECAST

6.2 Kerb inlet

Hydrology > Kerb inlet
Tags: kerb inlet, rain garden watering, tree watering, WSUD

A kerb inlet is represented by the **REF11_KERB_INLET** block inserted at the centre of the feature with attribute information.

Table 56 Kerb inlet layers

Layer	Description	Linetype	Colour
REF11_KERB_INLET_NEW	New kerb inlet	Continuous	81
REF11_KERB_INLET_EXG	Existing kerb inlet	Continuous	85
REF11_KERB_INLET_REM	Removed kerb inlet	Continuous	red

Table 57 REF11_KERB_INLET attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	KERB INLET	Character	200	KERB_INLET_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	KERB_INLET_ASSET_SUB_TYPE
MANUFACTURER		Character	200	
MODEL		Character	200	
MODEL_NUMBER		Character	200	
OUTLET_PIPE_SIZE	150	Integer	8	
INLET_STYLE		Character	200	KERB_INLET_STYLE
INLET_INVERT_LEVEL		Real	38.8	
GRATE_STYLE		Character	200	KERB_INLET_GRATE_STYLE
MAINTENANCE_FRONT_OF_KERB		Character	200	KERB_INLET_MAINT_FRONT
MAINTENANCE_BACK_OF_KERB		Character	200	KERB_INLET_MAINT_BACK

* Designates mandatory attribute

Table 58 REF11_KERB_INLET Ref 11 lookup tables

Ref 11 lookup table	Values
KERB_INLET_ASSET_TYPE	KERB INLET
KERB_INLET_ASSET_SUB_TYPE	RAIN GARDEN TREE TREE / RAIN GARDEN
KERB_INLET_STYLE	MANIFOLD SHAPE SINGLE PIPE

Ref 11 lookup table	Values
KERB_INLET_GRATE_STYLE	GRATE SLOTTED STAINLESS STEEL SHEET TWIN SLOT STAINLESS STEEL SHEET
KERB_INLET_MAINT_FRONT	NO YES
KERB_INLET_MAINT_BACK	NO YES

6.3 Major gross pollutant trap

Hydrology > Major gross pollutant trap
Tags: gross pollutant trap, GPT

A major gross pollutant trap is represented by the **REF11_MAJOR_GROSS_POLLUTANT_TRAP** block inserted at the centre of the feature with attribute information. See Minor gross pollutant trap for proprietary gross pollutant traps (e.g. Ecosol, Humesguard, Rocla, Spel).

Table 59 Major gross pollutant trap layers

Layer	Description	Linetype	Colour
REF11_MAJOR_GROSS_POLLUTANT_TRAP_NEW	New major gross pollutant trap	Continuous	82
REF11_GROSS_POLLUTANT_TRAP_EXG	Existing major gross pollutant trap	Continuous	86
REF11_GROSS_POLLUTANT_TRAP_REM	Removed major gross pollutant trap	Continuous	red

Table 60 REF11_MAJOR_GROSS_POLLUTANT_TRAP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	GROSS POLLUTANT TRAP	Character	200	GPT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	GPT_ASSET_SUB_TYPE
GPT_SUB_TYPE*		Character	200	GPT_TYPE
POINT_ID		Character	255	
CATCHMENT		Character	200	
BASIN_LENGTH		Real	38.8	
BASIN_WIDTH		Real	38.8	
BASIN_DEPTH		Real	38.8	
ULTIMATE_U		Character	200	
ONE_YEAR_A		Character	200	
DRYING_AREA		Character	200	GPT_DRYING_AREA
NUMBER_PANELS		Real	38.8	
PANEL_WIDTH		Real	38.8	
PANEL_HEIGHT		Real	38.8	
BAR_DIMENSIONS		Character	200	BAR_DIMENSIONS
BAR_OPENING		Real	38.8	
MATERIAL*		Character	200	GPT_MATERIAL

* Designates mandatory attribute

Table 61 REF11_MAJOR_GROSS_POLLUTANT_TRAP Ref 11 lookup tables

Ref 11 lookup table	Values
GPT_ASSET_TYPE	GROSS POLLUTANT TRAP
GPT_ASSET_SUB_TYPE	MAJOR GROSS POLLUTANT TRAP SPECIAL GROSS POLLUTANT TRAP
GPT_TYPE	DUS CUSTOM GPT
GPT_DRYING_AREA	COMPACTED BLUE METAL HOTMIX BITUMEN REINFORCED CONCRETE
BAR_DIMENSIONS	50MM * 8 50MM * 100 60MM CENTRE TO CENTRE 75MM * 10 100MM * 50 * 3
GPT_MATERIAL	CORRUGATED STEEL PRECAST CONCRETE REINFORCED CONCRETE STEEL GRILL

6.4 Minor gross pollutant trap

Hydrology > Minor gross pollutant trap
Tags: gross pollutant trap, GPT

A minor gross pollutant trap is represented by the **REF11_MINOR_GROSS_POLLUTANT_TRAP** block inserted at the centre of the feature with attribute information. These relate to proprietary gross pollutant traps (e.g. Ecosol, Humesguard, Rocla, Spel). See Major gross pollutant trap for the larger gross pollutant trap.

Table 62 Minor gross pollutant trap layers

Layer	Description	Linetype	Colour
REF11_MINOR_GROSS_POLLUTANT_TRAP_NEW	New minor gross pollutant trap	Continuous	82
REF11_MINOR_GROSS_POLLUTANT_TRAP_EXG	Existing minor gross pollutant trap	Continuous	86
REF11_MINOR_GROSS_POLLUTANT_TRAP_REM	Removed minor gross pollutant trap	Continuous	red

Table 63 REF11_MINOR_GROSS_POLLUTANT_TRAP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	MINOR GROSS POLLUTANT TRAP	Character	200	MINOR_GPT_ASSET_TYPE
ASSET_SUB_TYPE*	PROPRIETARY DEVICE	Character	200	MINOR_GPT_ASSET_SUB_TYPE
GPT_SUB_TYPE		Character	200	MINOR_GPT_TYPE
VARIANT		Character	200	
POINT_ID		Character	200	
CATCHMENT		Character	200	
ULTIMATE_U		Character	200	
ONE_YEAR_A		Character	200	
CONSTRUCTION_TYPE		Character	200	MINOR_GPT_CONSTRUCTION_TYPE
COVER_LEVEL*		Real	38.8	
MAIN_CHAMBER_LID*		Character	200	MINOR_GPT_MAIN_CHAMBER_LID
ACCESS_LID		Character	200	MINOR_GPT_ACCESS_LID
STEP_IRON_QUANTITY		Integer	8	
TREATMENT_FLOW_RATE		Real	38.8	
BOOM_TYPE*		Character	200	MINOR_GPT_BOOM_TYPE
STORAGE_CHAMBER		Character	200	MINOR_GPT_STORAGE_CHAMBER
STORAGE_CHAMBER_VOLUME		Real	38.8	
STORAGE_CHAMBER_INVERT_LEVEL		Real	38.8	

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
TRASH_RACK_TYPE		Character	200	MINOR_GPT_TRASH_RACK_TYPE
BASKET_TYPE		Character	200	MINOR_GPT_BASKET_TYPE
SEDIMENT_SUMP		Character	200	MINOR_GPT_SEDIMENT_SUMP

* Designates mandatory attribute

Table 64 REF11_MINOR_GROSS_POLLUTANT_TRAP Ref 11 lookup tables

Ref 11 lookup table	Values
MINOR_GPT_ASSET_TYPE	MINOR GROSS POLLUTANT TRAP
MINOR_GPT_ASSET_SUB_TYPE	PROPRIETARY DEVICE
MINOR_GPT_TYPE	ECOSOL GPT 4300 ECOSOL GPT 4750 ECOSOL GPT 41500 HUMES HUMEGARD HG15 HUMES HUMEGARD HG18 HUMES HUMEGARD HG24 HUMES HUMEGARD HG27 HUMES HUMEGARD HG30 HUMES HUMEGARD HG35 HUMES HUMEGARD HG40A HUMES HUMEGARD HG45 HUMES HUMEGARD HG45A HUMES HUMEGARD HG50 HUMES HUMEGARD HG55 ROCLA CDS 1009 ROCLA CDS 1012 ROCLA CDS 1015 ROCLA CDS 1512 ROCLA CDS 1518 ROCLA CDS 2018 ROCLA CDS 3018 ROCLA CDS 3024 ROCLA CLEANSALL 375 ROCLA CLEANSALL 600 ROCLA CLEANSALL 750 ROCLA CLEANSALL 900 ROCLA CLEANSALL 1350 SPEL STORMCEPTOR CLASS 1
MINOR_GPT_CONSTRUCTION_TYPE	COMPOSITE IN_SITU_CONCRETE PRECAST_CONCRETE
MINOR_GPT_MAIN_CHAMBER_LID	CAST_IRON COMPOSITE CONCRETE GALVANIZED STEEL STAINLESS STEEL STEEL

Ref 11 lookup table	Values
MINOR_GPT_ACCESS_LID	CAST_IRON COMPOSITE CONCRETE GALVANIZED STEEL POLYMER STAINLESS STEEL STEEL
MINOR_GPT_BOOM_TYPE	ANGLED DEFLECTION COMB FIXED DEFLECTION BOOM FIXED LITTER COMB MULTI STAGE COMB NONE
MINOR_GPT_STORAGE_CHAMBER	INTEGRAL MULTI CHAMBER NONE SINGLE CHAMBER
MINOR_GPT_TRASH_RACK_TYPE	FIXED SCREEN GRATED INLET NONE
MINOR_GPT_BASKET_TYPE	FIXED TRASH BASKET NONE REMOVABLE LINER BASKET REMOVABLE TRASH BASKET SCREEN BASKET
MINOR_GPT_SEDIMENT_SUMP	NO YES

6.5 Retarding basin

Hydrology > Retarding basin
Tags: retarding basin, flood levee, sediment retention basin

A retarding basin is represented by a closed lightweight polyline signifying the perimeter with the **REF11_RETARDING_BASIN** block inserted inside with attribute information.

Table 65 Retarding basin layers

Layer	Description	Linetype	Colour
REF11_RETARDING_BASIN_NEW	New retarding basin	Continuous	172
REF11_RETARDING_BASIN_EXG	Existing retarding basin	Continuous	176
REF11_RETARDING_BASIN_REM	Removed retarding basin	Continuous	red

Table 66 REF11_RETARDING_BASIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	RET_BASIN_ASSET_SUB_TYPE
ASSET_TYPE*	WATER RETAINING ASSET	Character	200	RET_BASIN_ASSET_TYPE
MATERIAL*		Character	200	RET_BASIN_MATERIAL
CONSTRUCTION*		Character	200	CONSTRUCTION
SURFACE_AREA*		Real	38.8	
DIMENSION_DETAILS*		Character	200	
MINIMUM_HEIGHT*		Real	38.8	
MAXIMUM_HEIGHT*		Real	38.8	
DROP_HEIGHT*		Real	38.8	
EARTHWORK_LENGTH*		Real	38.8	

* Designates mandatory attribute

Table 67 REF11_RETARDING_BASIN Ref 11 lookup tables

Ref 11 lookup table	Values
RET_BASIN_ASSET_SUB_TYPE	CLEAN WATER STORAGE DAM EMBANKMENT FLOOD LEVEE RETARDING BASIN SEDIMENT RETENTION BASIN WATER BASIN WATER CATCHMENT DAM
RET_BASIN_ASSET_TYPE	WATER RETAINING ASSET
RET_BASIN_MATERIAL	EARTH FILL EMBANKMENT GRASS
CONSTRUCTION	CAST IN-SITU HAND PLACED PRECAST

6.6 Stormwater branch connection

Hydrology > Stormwater branch connection
Tags: stormwater branch connection

A stormwater branch connection is represented by the **REF11_STORMWATER_BRANCH** block inserted at the centre of the feature with attribute information.

Table 68 Stormwater branch connection layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_BRANCH_NEW	New stormwater branch connection	Continuous	81
REF11_STORMWATER_BRANCH_EXG	Existing stormwater branch connection	Continuous	85
REF11_STORMWATER_BRANCH_REM	Removed stormwater branch connection	Continuous	red

Table 69 REF11_STORMWATER_BRANCH attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SW BRANCH CONNECTION	Character	200	SW_BRANCH_ASSET_TYPE
BRANCH_INVERT_LEVEL		Real	38.8	
BRANCH_SURFACE_LEVEL		Real	38.8	
BRANCH_DEPTH		Real	38.8	

* Designates mandatory attribute

Table 70 REF11_STORMWATER_BRANCH Ref 11 lookup tables

Ref 11 lookup table	Values
SW_BRANCH_ASSET_TYPE	SW BRANCH CONNECTION

6.7 Stormwater culvert

Hydrology > Stormwater culvert
Tags: culvert

A stormwater culvert is represented by a linear feature (line, lightweight polyline) with the **REF11_STORMWATER_CULVERT** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 71 Stormwater culvert layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_CULVERT_NEW	New stormwater culvert	Continuous	80
REF11_STORMWATER_CULVERT_EXG	Existing stormwater culvert	Continuous	84
REF11_STORMWATER_CULVERT_REM	Removed stormwater culvert	Continuous	red

Table 72 REF11_STORMWATER_CULVERT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BOX CULVERT	Character	200	CULVERT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	CULVERT_ASSET_SUB_TYPE
CROSSING_TYPE*		Character	200	BRIDGE_CROSSING_TYPE
CROSSING*		Character	200	BRIDGE_CROSSING
ASSOCIATED_WITH_STRUCTURE*		Character	200	ASSOCIATED_WITH_STRUCTURE
ASSOCIATED_STRUCTURE_NUMBER		Character	200	
MATERIAL*		Character	200	CULVERT_MATERIAL
NUMBER_OF_CELLS		Real	38.8	
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
HEIGHT*		Real	38.8	
UP_INVERT_LEVEL*		Real	38.8	
DOWN_INVERT_LEVEL*		Real	38.8	
GRADE*		Real	38.8	

* Designates mandatory attribute

Table 73 REF11_STORMWATER_CULVERT Ref 11 lookup tables

Ref 11 lookup table	Values
CULVERT_ASSET_TYPE	BOX CULVERT PIPE CULVERT
CULVERT_ASSET_SUB_TYPE	CORRUGATED GALVANISED STEEL: MULTI PLATE PIPE CULVERT LINKED TO HEAD AND END WALL CULVERT LINKED TO SUMP AND END WALL CULVERT WITH SURCHARGE SUMP AND GPT END PRECAST CONCRETE: CROWN + BASE CULVERT PRECAST CONCRETE: LINK SLAB CULVERT REINFORCED CONCRETE: CAST INSITU CULVERT
BRIDGE_CROSSING_TYPE	HORSE CROSSING PEDESTRIAN PATH OVER FLOODWAY PEDESTRIAN PATH OVER PEDESTRIAN PATH PEDESTRIAN PATH OVER ROAD PEDESTRIAN PATH OVER WATER ROAD OVER FLOODWAY ROAD OVER FLOODWAY AND PEDESTRIAN PATH ROAD OVER PEDESTRIAN PATH ROAD OVER RAIL ROAD OVER ROAD ROAD OVER WATER
BRIDGE_CROSSING	CREEK FLOODWAY FLOODWAY + FOOTPATH FOOTPATH GROUND LINED CHANNEL RAIL RIVER ROAD WATERBODY
ASSOCIATED_WITH_STRUCTURE	ASSOCIATED WITH STRUCTURE NOT ASSOCIATED WITH STRUCTURE STORMWATER NETWORK
CULVERT_MATERIAL	PRECAST CONCRETE PRECAST REINFORCED CONCRETE REINFORCED CONCRETE STEEL REINFORCED CONCRETE

6.8 Stormwater dead end

Hydrology > Stormwater dead end
Tags: stormwater dead end

A stormwater dead end is represented by the **REF11_STORMWATER_DEADEND** block inserted at the centre of the feature with attribute information.

Table 74 Stormwater dead end layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_DEADEND_NEW	New stormwater dead end	Continuous	81
REF11_STORMWATER_DEADEND_EXG	Existing stormwater dead end	Continuous	85
REF11_STORMWATER_DEADEND_REM	Removed stormwater dead end	Continuous	red

Table 75 REF11_STORMWATER_DEADEND attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STORMWATER DEAD END	Character	200	STORMWATER_DEAD_END_ASSET_TYPE
POINT_ID		Character	200	
SURFACE_LEVEL*		Real	38.8	
INVERT_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 76 REF11_STORMWATER_DEADEND Ref 11 lookup tables

Ref 11 lookup table	Values
STORMWATER_DEAD_END_ASSET_TYPE	STORMWATER DEAD END

6.9 Stormwater headwall

Hydrology > Stormwater headwall
Tags: headwall

A stormwater headwall is represented by the **REF11_STORMWATER_HEADWALL** block inserted at the centre of the feature with attribute information.

Table 77 Stormwater headwall layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_HEADWALL_NEW	New stormwater headwall	Continuous	81
REF11_STORMWATER_HEADWALL_EXG	Existing stormwater headwall	Continuous	85
REF11_STORMWATER_HEADWALL_REM	Removed stormwater headwall	Continuous	red

Table 78 REF11_STORMWATER_HEADWALL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	HEADWALL	Character	200	HEADWALL_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	HEADWALL_ASSET_SUB_TYPE
POINT_ID		Character	200	
PIT_TYPE*		Character	200	HEADWALL_PIT_TYPE
CONSTRUCTION*		Character	200	CONSTRUCTION
MATERIAL*		Character	200	HEADWALL_MATERIAL
APRON_TYPE*		Character	200	APRON_TYPE
SKEW_ANGLE		Real	38.8	
SURFACE_LEVEL*		Real	38.8	
INVERT_LEVEL*		Real	38.8	
HEIGHT*		Real	38.8	

* Designates mandatory attribute

Table 79 REF11_STORMWATER_HEADWALL Ref 11 lookup tables

Ref 11 lookup table	Values
HEADWALL_ASSET_TYPE	ABANDONED STRUCTURE HEADWALL
HEADWALL_ASSET_SUB_TYPE	DROP STRUCTURE ENDWALL SPECIAL OUTLET STRUCTURE STANDARD HEADWALL V-NOTCH SPILLWAY STRUCTURE
HEADWALL_PIT_TYPE	BYPASS OUTLET CHANNEL WALL CULVERT HEADWALL DIVERSION WEIR DROP STRUCTURE END WALL LOW FLOW OUTLET PIPE OUTLET POND OUTLET RAISED WEIR SPECIAL INLET STRUCTURE SPECIAL OUTLET STRUCTURE SPILLWAY WALL STANDARD TAPERED TRASH RACK
CONSTRUCTION	CAST IN-SITU HAND PLACED PRECAST
HEADWALL_MATERIAL	HIGH DENSITY POLYETHLENE PRECAST CONCRETE PRECAST REINFORCED CONCRETE REINFORCED CONCRETE REINFORCED CONCRETE + ZONED EARTH FILL EMBANKMENT REINFORCED CONCRETE INVERT REINFORCED CONCRETE INVERT LEVEL WITH STONE PITCHED WALL REINFORCED CONCRETE WITH GROUT MAT REINFORCED CONCRETE WITH REINFORCED CONCRETE BLOCK WALL ROCK FILL EMBANKMENT SANDBAGS STONE PITCHING ON A CONCRETE BASE STONE PITCHING WITH CEMENT MORTAR
APRON_TYPE	GABION + RENO MATTRESS (STORM BASKET) GRASS GROUT MAT HEAD/END WALL ROCK MATTRESS AT INLET/OUTLET PRECAST CONCRETE REINFORCED CONCRETE ROCK FILLED GABION MATTRESS ROCK RIP RAP STONE PITCHING ON A CONCRETE BASE STONE PITCHING WITH CEMENT MORTAR TRASH RACK

6.10 Stormwater manhole

Hydrology > Stormwater manhole
Tags: manhole

A stormwater manhole is represented by the **REF11_STORMWATER_MANHOLE** block inserted at the centre of the feature with attribute information.

Table 80 Stormwater manhole layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_MANHOLE_NEW	New stormwater manhole	Continuous	81
REF11_STORMWATER_MANHOLE_EXG	Existing stormwater manhole	Continuous	85
REF11_STORMWATER_MANHOLE_REM	Removed stormwater manhole	Continuous	red

Table 81 REF11_STORMWATER_MANHOLE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	MANHOLE	Character	200	MANHOLE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	MANHOLE_ASSET_SUB_TYPE
POINT_ID		Character	200	
PIT_TYPE*		Character	200	MANHOLE_PIT_TYPE
COVER_TYPE*		Character	200	COVER_TYPE
LID_TYPE*		Character	200	LID_TYPE
LID_SIZE*		Character	200	LID_SIZE
LID_MATERIAL*		Character	200	LID_MATERIAL
SURFACE_LEVEL*		Real	38.8	
INVERT_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 82 REF11_STORMWATER_MANHOLE Ref 11 lookup tables

Ref 11 lookup table	Values
MANHOLE_ASSET_TYPE	ABANDONED STRUCTURE MANHOLE
MANHOLE_ASSET_SUB_TYPE	INSPECTION PIT LARGE MANHOLE SPECIAL CHAMBERED MANHOLE SPECIAL STRUCTURE STANDARD MANHOLE

Ref 11 lookup table	Values
MANHOLE_PIT_TYPE	CLASS D GATIC COVER MAINTENANCE HOLE SPECIAL CHAMBERED SPECIAL CHAMBERED SEALED STANDARD STANDARD SEALED
COVER_TYPE	CAST IRON GALVANISED STEEL HEAVY DUTY COVER HEAVY DUTY GATIC HEAVY DUTY WITH SPECIAL GRATE COVER REINFORCED CONCRETE SPECIAL GRATE COVER STEEL GRILL WEBFORGE GALVANISED STEEL
LID_TYPE	CAST IRON GRATE CIRCULAR AND RECTANGULAR CI+D CLASS D CAST IRON CONCRETE LINTEL WITH GRATED INLET GALVANISED STEEL HEAVY DUTY GATIC HEAVY DUTY GATIC L185AS3996 HEAVY DUTY LID PS + PD 550X690 REINFORCED CONCRETE QS + QD 840X690 REINFORCED CONCRETE RD 830X690 REINFORCED CONCRETE STANDARD REINFORCED CONCRETE STANDARD REINFORCED CONCRETE CIRCULAR LID STEEL GRILL WEBFORGE GALVANISED STEEL SERIES 2 WA 325 WEBFORGED GALVANISED STEEL OPEN GRATE CIRCULAR
LID_SIZE	450MM X 450MM GALVANISED LOCKABLE GRATE 550MM X 690MM REINFORCED CONCRETE 600MM X 300MM DIAMETER 600MM X 600MM DIAMETER 600MM X 900MM DIAMETER 720MM DIAMETER 830MM X 690MM REINFORCED CONCRETE 840MM X 690MM REINFORCED CONCRETE 900MM X 900MM GRATED PIT 1200MM X 800MM DIAMETER 3500MM X 2400MM DIAMETER GRATED INLET WEB FORGED GALVANISED STEEL HUMES 900MM X 600MMX 600MM PRECAST GS OTHER CIRCULAR OTHER RECTANGULAR
LID_MATERIAL	CAST IRON CAST IRON AND CONCRETE GALVANISED STEEL REINFORCED CONCRETE STEEL

6.11 Stormwater open drain

Hydrology > Stormwater open drain
Tags: open drain

A stormwater open drain is represented by a linear feature (line, lightweight polyline) with the **REF11_STORMWATER_OPEN_DRAIN** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 83 Stormwater open drain layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_OPEN_DRAIN_NEW	New stormwater open drain	Continuous	80
REF11_STORMWATER_OPEN_DRAIN_EXG	Existing stormwater open drain	Continuous	84
REF11_STORMWATER_OPEN_DRAIN_REM	Removed stormwater open drain	Continuous	red

Table 84 REF11_STORMWATER_OPEN_DRAIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	OPEN_DRAIN_ASSET_SUB_TYPE
ASSET_TYPE*	OPEN STORMWATER DRAIN	Character	200	OPEN_DRAIN_ASSET_TYPE
DRAIN_CODE		Character	200	
CHANNEL_SHAPE*		Character	200	CHANNEL_SHAPE
CHANNEL_MATERIAL*		Character	200	CHANNEL_MATERIAL
START_LOCATION*		Character	200	
END_LOCATION*		Character	200	
PIPE_DIAMETER		Real	38.8	PIPE_DIAMETER
TOP_WIDTH*		Real	38.8	
BASE_WIDTH*		Real	38.8	
DEPTH*		Real	38.8	
LENGTH*		Real	38.8	
UP_INVERT_LEVEL*		Real	38.8	
DOWN_INVERT_LEVEL*		Real	38.8	
GRADE*		Real	38.8	
RESERVE_MATERIAL*		Character	200	RESERVE_MATERIAL

* Designates mandatory attribute

Table 85 REF11_STORMWATER_OPEN_DRAIN Ref 11 lookup tables

Ref 11 lookup table	Values
OPEN_DRAIN_ASSET_SUB_TYPE	CONCRETE CHANNEL GRASS CHANNEL GRASSED FLOODWAY METAL CHANNEL SPILLWAY STONE CHANNEL SWALE DRAIN
OPEN_DRAIN_ASSET_TYPE	OPEN STORMWATER DRAIN
CHANNEL_SHAPE	RECTANGULAR SEMI-CIRCULAR TRAPEZOIDAL TRIANGULAR U SHAPE
CHANNEL_MATERIAL	EARTH FILL EMBANKMENT EARTH FILL EMBANKMENT AND CEMENT MORTAR ENKAMAT GABION STONE BASKET GRASS GRASS AND MATTRESS GRASS WITH LOW FLOW PIPE GRASS WITH REINFORCED CONCRETE INVERT REINFORCED CONCRETE REINFORCED CONCRETE INVERT LEVEL WITH STONE PITCHED WALL ROCK FILL EMBANKMENT ROCK MATTRESS STONE PITCHING ON A CONCRETE BASE STONE PITCHING WITH CEMENT MORTAR
PIPE_DIAMETER	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
RESERVE_MATERIAL	EARTH FILL EMBANKMENT GABION STONE BASKET GRASS GRASS AND MATTRESS GRASS WITH REINFORCED CONCRETE INVERT GROUT MAT ORGANIC FIBRE MAT GENERALLY SPRAYED WITH BITUMEN EMULSION REINFORCED CONCRETE ROCK FILL EMBANKMENT STONE PITCHING ON A CONCRETE BASE STONE PITCHING WITH CEMENT MORTAR

6.12 Stormwater pipe

Hydrology > Stormwater pipe
Tags: stormwater pipe

A stormwater pipe is represented by a linear feature (line, lightweight polyline) with the **REF11_STORMWATER_PIPE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 86 Stormwater pipe layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_PIPE_NEW	New stormwater pipe	Continuous	81
REF11_STORMWATER_PIPE_EXG	Existing stormwater pipe	Continuous	85
REF11_STORMWATER_PIPE_REM	Removed stormwater pipe	Continuous	red

Table 87 REF11_STORMWATER_PIPE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STORMWATER PIPE	Character	200	PIPE_ASSET_TYPE
ASSOCIATED_WITH_STRUCTURE*		Character	200	ASSOCIATED_WITH_STRUCTURE
ASSOCIATED_STRUCTURE_NUMBER		Character	200	
PIPE_DIAMETER*		Real	38.8	PIPE_DIAMETER
MATERIAL*		Character	200	PIPE_MATERIAL
LENGTH*		Real	38.8	
LENGTH_SOURCE*		Character	200	LENGTH_SOURCE
JOINT_TYPE*		Character	200	PIPE_JOINT_TYPE
UP_INVERT_LEVEL*		Real	38.8	
DOWN_INVERT_LEVEL*		Real	38.8	
GRADE*		Real	38.8	

* Designates mandatory attribute

Table 88 REF11_STORMWATER_PIPE Ref 11 lookup tables

Ref 11 lookup table	Values
PIPE_ASSET_TYPE	ABANDONED PIPE STORMWATER PIPE
ASSOCIATED_WITH_STRUCTURE	ASSOCIATED WITH STRUCTURE NOT ASSOCIATED WITH STRUCTURE STORMWATER NETWORK
PIPE_DIAMETER	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
PIPE_MATERIAL	DUCTILE IRON CEMENT LINED FIBRE REINFORCED CONCRETE GALVANISED STEEL HIGH DENSITY POLYETHLENE HYDROCON PERMEABLE POLYETHYLENE POLYPROPYLENE POLYPROPYLENE BLACKMAX POLYVINYL CHLORIDE REINFORCED CONCRETE STEEL REINFORCED CONCRETE UNPLASTICISED POLYVINYL CHLORIDE VITRIFIED CLAY
LENGTH_SOURCE	DERIVED FROM GIS FIELD MEASURED (SOURCE FROM CCTV) FIELD MEASURED (SOURCE FROM WAE)
PIPE_JOINT_TYPE	BUTT WELDED JOINT CEMENT / WELDED JOINT FLEXIBLE GASKET FLUSH JOINT POLYETHYLENE WELDING JOINT RUBBER RING JOINT SPIGOT + SOCKET JOINT SUPERTITE JOINT/COUPLING BAND

6.13 Stormwater subsoil drain

Hydrology > Stormwater subsoil drain
Tags: subsoil drain, SSD

A stormwater subsoil drain is represented by a linear feature (line, lightweight polyline) with the **REF11_STORMWATER_SUBSOIL_DRAIN** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 89 Stormwater subsoil drain layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_SUBSOIL_DRAIN_NEW	New stormwater subsoil drain	Continuous	yellow
REF11_STORMWATER_SUBSOIL_DRAIN_EXG	Existing stormwater subsoil drain	Continuous	magenta
REF11_STORMWATER_SUBSOIL_DRAIN_REM	Removed stormwater subsoil drain	Continuous	red

Table 90 REF11_STORMWATER_SUBSOIL_DRAIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STORMWATER SUBSOIL DRAIN	Character	200	SSD_ASSET_TYPE
ASSOCIATED_WITH_STRUCTURE		Character	200	
ASSOCIATED_STRUCTURE_NUMBER		Character	200	
LENGTH		Real	38.8	

* Designates mandatory attribute

Table 91 REF11_STORMWATER_SUBSOIL_DRAIN Ref 11 lookup tables

Ref 11 lookup table	Values
SSD_ASSET_TYPE	STORMWATER SUBSOIL DRAIN

6.14 Stormwater subsoil high end riser

Hydrology > Stormwater subsoil high end riser
Tags: subsoil drain, high end riser

A stormwater subsoil high end riser is represented by the **REF11_STORMWATER_SUBSOIL_HER** block inserted at the centre of the feature with attribute information.

Table 92 Stormwater subsoil high end riser layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_SUBSOIL_HER_NEW	New stormwater subsoil high end riser	Continuous	white
REF11_STORMWATER_SUBSOIL_HER_EXG	Existing stormwater subsoil high end riser	Continuous	magenta
REF11_STORMWATER_SUBSOIL_HER_REM	Removed stormwater subsoil high end riser	Continuous	red

Table 93 REF11_STORMWATER_SUBSOIL_HER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STORMWATER SUBSOIL HIGH END RISER	Character	200	SSD_HER_ASSET_TYPE

* Designates mandatory attribute

Table 94 REF11_STORMWATER_SUBSOIL_HER Ref 11 lookup tables

Ref 11 lookup table	Values
SSD_HER_ASSET_TYPE	STORMWATER SUBSOIL HIGH END RISER

6.15 Stormwater sump

Hydrology > Stormwater sump
Tags: stormwater sump

A stormwater sump is represented by the **REF11_STORMWATER_SUMP** block inserted at the centre of the feature with attribute information.

Table 95 Stormwater sump layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_SUMP_NEW	New stormwater sump	Continuous	81
REF11_STORMWATER_SUMP_EXG	Existing stormwater sump	Continuous	85
REF11_STORMWATER_SUMP_REM	Removed stormwater sump	Continuous	red

Table 96 REF11_STORMWATER_SUMP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SUMP	Character	200	SUMP_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SUMP_ASSET_SUB_TYPE
POINT_ID		Character	200	
PIT_TYPE*		Character	200	SUMP_PIT_TYPE
LID_TYPE*		Character	200	LID_TYPE
LID_SIZE*		Character	200	LID_SIZE
LID_MATERIAL*		Character	200	LID_MATERIAL
COVER_TYPE*		Character	200	COVER_TYPE
SURFACE_LEVEL*		Real	38.8	
INVERT_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 97 REF11_STORMWATER_SUMP Ref 11 lookup tables

Ref 11 lookup table	Values
SUMP_ASSET_TYPE	ABANDONED STRUCTURE SUMP
SUMP_ASSET_SUB_TYPE	CONCEALED SUMP DROP INLET STRUCTURE GRATED SUMP INSPECTION PIT KERB INLET SUMP LINTEL SUMP MEDIAN GULLY PIT PD SUMP PLANTATION SUMP PS SUMP QD SUMP QS SUMP R SUMP SEEPAGE BED SPECIAL INLET STRUCTURE STILLING WELL SURCHARGE SUMP TABLE DRAIN GULLY PIT
SUMP_PIT_TYPE	DOUBLE GRATED SUMP DOUBLE KERB INLET SUMP DOUBLE LINTEL SUMP DOUBLE R SUMP F TYPE STANDARD GULLY PIT LARGE CAPACITY INLET STRUCTURE MEDIAN GULLY DOUBLE GRATE MEDIAN GULLY SINGLE GRATE MEDIAN GULLY TRIPLE GRATE MULTIPLE KERB INLET SUMP MULTIPLE LINTEL SUMP MULTIPLE PLANTATION SUMP MULTIPLE QD SUMP MULTIPLE QS SUMP MULTIPLE R SUMP PLANTATION SUMP PLANTATION SUMP DOUBLE APRON PLANTATION SUMP SINGLE APRON QS PLANTATION SUMP DOUBLE APRON QS PLANTATION SUMP SINGLE APRON R PLANTATION SUMP DOUBLE APRON R PLANTATION SUMP SINGLE APRON SEALED SUMP SO1 GRATED SUMP SO2 GRATED SUMP SPECIAL CHAMBERED SPECIAL CHAMBERED SEALED SPECIAL INLET STRUCTURE STANDARD SURCHARGE SUMP TRIPLE R SUMP

Ref 11 lookup table	Values
LID_TYPE	CAST IRON GRATE CIRCULAR AND RECTANGULAR CI+D CLASS D CAST IRON CONCRETE LINTEL WITH GRATED INLET GALVANISED STEEL HEAVY DUTY GATIC HEAVY DUTY GATIC L185AS3996 HEAVY DUTY LID PS + PD 550X690 REINFORCED CONCRETE QS + QD 840X690 REINFORCED CONCRETE RD 830X690 REINFORCED CONCRETE STANDARD REINFORCED CONCRETE STANDARD REINFORCED CONCRETE CIRCULAR LID STEEL GRILL WEBFORGE GALVANISED STEEL SERIES 2 WA 325 WEBFORGED GALVANISED STEEL OPEN GRATE CIRCULAR
LID_SIZE	450MM X 450MM GALVANISED LOCKABLE GRATE 550MM X 690MM REINFORCED CONCRETE 600MM X 300MM DIAMETER 600MM X 600MM DIAMETER 600MM X 900MM DIAMETER 720MM DIAMETER 830MM X 690MM REINFORCED CONCRETE 840MM X 690MM REINFORCED CONCRETE 900MM X 900MM GRATED PIT 1200MM X 800MM DIAMETER 3500MM X 2400MM DIAMETER GRATED INLET WEB FORGED GALVANISED STEEL HUMES 900MM X 600MMX 600MM PRECAST GS OTHER CIRCULAR OTHER RECTANGULAR
LID_MATERIAL	CAST IRON CAST IRON AND CONCRETE GALVANISED STEEL REINFORCED CONCRETE STEEL
COVER_TYPE	CAST IRON GALVANISED STEEL HEAVY DUTY COVER HEAVY DUTY GATIC HEAVY DUTY WITH SPECIAL GRATE COVER REINFORCED CONCRETE SPECIAL GRATE COVER STEEL GRILL WEBFORGE GALVANISED STEEL

6.16 Stormwater tie

Hydrology > Stormwater tie
Tags: stormwater tie

A stormwater tie is represented by a linear feature (line, lightweight polyline) with the **REF11_STORMWATER_TIE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 98 Stormwater tie layers

Layer	Description	Linetype	Colour
REF11_STORMWATER_TIE_NEW	New stormwater tie	Continuous	83
REF11_STORMWATER_TIE_EXG	Existing stormwater tie	Continuous	87
REF11_STORMWATER_TIE_REM	Removed stormwater tie	Continuous	red

Table 99 REF11_STORMWATER_TIE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STORMWATER TIE	Character	200	SW_TIE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SW_TIE_ASSET_SUB_TYPE
PIPE_DIAMETER*		Real	38.8	PIPE_DIAMETER
MATERIAL*		Character	200	PIPE_MATERIAL
LENGTH*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 100 REF11_STORMWATER_TIE Ref 11 lookup tables

Ref 11 lookup table	Values
SW_TIE_ASSET_TYPE	STORMWATER TIE
SW_TIE_ASSET_SUB_TYPE	COMMERCIAL STORMWATER TIE RESIDENTIAL STORMWATER TIE SMALL PIPE SPLIT - RESIDENTIAL STORMWATER TIE TIE POINT
PIPE_DIAMETER	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*

Ref 11 lookup table	Values
PIPE_MATERIAL	DUCTILE IRON CEMENT LINED FIBRE REINFORCED CONCRETE GALVANISED STEEL HIGH DENSITY POLYETHLENE HYDROCON PERMEABLE POLYETHYLENE POLYPROPYLENE POLYPROPYLENE BLACKMAX POLYVINYL CHLORIDE REINFORCED CONCRETE STEEL REINFORCED CONCRETE UNPLASTICISED POLYVINYL CHLORIDE VITRIFIED CLAY

6.17 Stormwater tie kerb connection

Hydrology > SW tie kerb connection
Tags: tie kerb connection

A SW tie kerb connection is represented by the **REF11_TIE_KERB_CONNECTION** block inserted at the centre of the feature with attribute information.

Table 101 SW tie kerb connection layers

Layer	Description	Linetype	Colour
REF11_TIE_KERB_CONNECTION_NEW	New SW tie kerb connection	Continuous	62
REF11_TIE_KERB_CONNECTION_EXG	Existing SW tie kerb connection	Continuous	66
REF11_TIE_KERB_CONNECTION_REM	Removed SW tie kerb connection	Continuous	red

Table 102 REF11_TIE_KERB_CONNECTION attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SW TIE KERB CONNECTION	Character	200	TIE_KERB_ASSET_TYPE
ASSET_SUB_TYPE*	STANDARD CONNECTION	Character	200	TIE_KERB_ASSET_SUB_TYPE
SPEC_CONFORMANCE*	CONFORMS TO MITS06A	Character	200	TIE_KERB_SPEC
KERB_ADAPTER_MATERIAL*		Character	200	TIE_KERB_ADAPTER_MATERIAL
PIPE_DIAMETER*		Integer	8	
PIPE_MATERIAL*		Character	200	TIE_KERB_PIPE_MATERIAL
CONCRETE_ENCASEMENT*		Character	200	TIE_KERB_CONC_ENCASEMENT
DEPTH*		Integer	8	
VERGE_SURFACE*		Character	200	TIE_KERB_VERGE_SURFACE

* Designates mandatory attribute

Table 103 REF11_TIE_KERB_CONNECTION Ref 11 lookup tables

Ref 11 lookup table	Values
TIE_KERB_ASSET_TYPE	SW TIE KERB CONNECTION
TIE_KERB_ASSET_SUB_TYPE	NON-STANDARD CONNECTION STANDARD CONNECTION
TIE_KERB_SPEC	CONFORMS TO MITS06A DOES NOT CONFORM TO MITS06A
TIE_KERB_ADAPTER_MATERIAL	ALUMINIUM TO AS 3996.5 ALUMINIUM TO AS 3996.5 CAST IRON GALVANIZED STEEL NON-STANDARD
TIE_KERB_PIPE_MATERIAL	DUCTILE IRON CEMENT LINED UNPLASTICISED POLYVINYL CHLORIDE
TIE_KERB_CONC_ENCASEMENT	NO YES
TIE_KERB_VERGE_SURFACE	CONCRETE GRASS GRAVEL OTHER PAVED

6.18 Trash rack

Hydrology > Trash rack
Tags: trash rack

A trash rack is represented by the **REF11_TRASH_RACK** block inserted at the centre of the feature with attribute information. This is to be used for stand-alone trash racks and safety screens (see **Gross Pollutant Traps** for trash racks / safety screens integrated into gross pollutant traps).

Table 104 Trash rack layers

Layer	Description	Linetype	Colour
REF11_TRASH_RACK_NEW	New trash rack	Continuous	82
REF11_TRASH_RACK_EXG	Existing trash rack	Continuous	86
REF11_TRASH_RACK_REM	Removed trash rack	Continuous	red

Table 105 REF11_TRASH_RACK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TRASH RACK	Character	200	TRASH_RACK_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	TRASH_RACK_ASSET_SUB_TYPE
MANUFACTURER*		Character	200	
MODEL*		Character	200	
RACK_TYPE		Character	200	TRASH_RACK_TYPE
INCLINED_ANGLE		Integer	8	
MATERIAL		Character	200	TRASH_RACK_MATERIAL
RACK_SHAPE		Character	200	TRASH_RACK_SHAPE
NUMBER_PANELS		Integer	8	
PANEL_WIDTH		Integer	8	
PANEL_HEIGHT		Integer	8	
BAR_DIMENSIONS		Character	200	
BAR_OPENING		Real	38.8	
LOCATION_TYPE		Character	200	TRASH_RACK_LOCATION

* Designates mandatory attribute

Table 106 REF11_TRASH_RACK Ref 11 lookup tables

Ref 11 lookup table	Values
TRASH_RACK_ASSET_TYPE	TRASH RACK
TRASH_RACK_ASSET_SUB_TYPE	SAFETY SCREEN TRASH RACK
TRASH_RACK_TYPE	BAR PANELS MESH PANEL
TRASH_RACK_MATERIAL	ALUMINIUM GALVANISED STEEL STAINLESS STEEL
TRASH_RACK_SHAPE	FLAT TRIANGULAR
TRASH_RACK_LOCATION	OPEN CHANNEL POND / LAKE

6.19 Urban lakes and ponds

Hydrology > Urban lakes ponds
Tags: urban lakes ponds, river, creek, lake

Urban lakes and ponds are represented by a closed lightweight polyline signifying the perimeter with the **REF11_URBAN_LAKES_PONDS** block inserted inside with attribute information.

Table 107 Urban lakes and ponds layers

Layer	Description	Linetype	Colour
REF11_URBAN_LAKES_PONDS_NEW	New urban and lakes ponds	Continuous	171
REF11_URBAN_LAKES_PONDS_EXG	Existing urban and lakes ponds	Continuous	175
REF11_URBAN_LAKES_PONDS_REM	Removed urban and lakes ponds	Continuous	red

Table 108 REF11_URBAN_LAKES_PONDS attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	PONDS_ASSET_SUB_TYPE
ASSET_TYPE*	URBAN LAKES AND PONDS	Character	200	PONDS_ASSET_SUB_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 109 REF11_URBAN_LAKES_PONDS Ref 11 lookup tables

Ref 11 lookup table	Values
PONDS_ASSET_SUB_TYPE	URBAN LAKES AND PONDS

6.20 Wastewater dam

Hydrology > Wastewater dam
Tags: wastewater dam

A wastewater dam is represented by a closed lightweight polyline signifying the perimeter with the **REF11_WASTEWATER_DAM** block inserted inside with attribute information.

Table 110 Wastewater dam layers

Layer	Description	Linetype	Colour
REF11_WASTEWATER_DAM_NEW	New wastewater dam	Continuous	173
REF11_WASTEWATER_DAM_EXG	Existing wastewater dam	Continuous	177
REF11_WASTEWATER_DAM_REM	Removed wastewater dam	Continuous	red

Table 111 REF11_WASTEWATER_DAM attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	WWATER_DAM_ASSET_SUB_TYPE
ASSET_TYPE*	WATER RETAINING ASSET	Character	200	WWATER_DAM_ASSET_TYPE
MATERIAL*		Character	200	RETARDING_BASIN_MATERIAL
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 112 REF11_WASTEWATER_DAM Ref 11 lookup tables

Ref 11 lookup table	Values
WWATER_DAM_ASSET_SUB_TYPE	GREY WATER DAM LEACHATE DAM
WWATER_DAM_ASSET_TYPE	WATER RETAINING ASSET
RETARDING_BASIN_MATERIAL	EARTH FILL EMBANKMENT GRASS

6.21 Water filter

Hydrology > Water filter
Tags: water filter

A water filter is represented by the **REF11_WATER_FILTER** block inserted at the centre of the feature with attribute information.

Table 113 Water filter layers

Layer	Description	Linetype	Colour
REF11_WATER_FILTER_NEW	New water filter	Continuous	151
REF11_WATER_FILTER_EXG	Existing water filter	Continuous	155
REF11_WATER_FILTER_REM	Removed water filter	Continuous	red

Table 114 REF11_WATER_FILTER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	WATER_FILTER_ASSET_SUB_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	WATER_FILTER_ASSET_TYPE
NUMBER_OF_FILTERS*		Integer	8	

* Designates mandatory attribute

Table 115 REF11_WATER_FILTER Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_FILTER_ASSET_SUB_TYPE	SELF CLEANING MEDIA FILTER SYSTEM WATER FILTRATION UNIT
WATER_FILTER_ASSET_TYPE	WATER CONTROL DEVICE

6.22 Water fitting

Hydrology > Water fitting
Tags: water fitting, stand pipe, down pipe, tap

A water fitting is represented by the **REF11_WATER_FITTING** block inserted at the centre of the feature with attribute information.

Table 116 Water fitting layers

Layer	Description	Linetype	Colour
REF11_WATER_FITTING_NEW	New water fitting	Continuous	151
REF11_WATER_FITTING_EXG	Existing water fitting	Continuous	155
REF11_WATER_FITTING_REM	Removed water fitting	Continuous	red

Table 117 REF11_WATER_FITTING attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	WATER_FITTING_ASSET_SUB_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	WATER_FITTING_ASSET_TYPE
MAKE_MODEL*		Character	200	
QUANTITY*		Real	38.8	
MATERIAL*		Character	200	WATER_FITTING_MATERIAL
HEIGHT*		Real	38.8	

* Designates mandatory attribute

Table 118 REF11_WATER_FITTING Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_FITTING_ASSET_SUB_TYPE	DOWN PIPE STAND PIPE TAP
WATER_FITTING_ASSET_TYPE	WATER CONTROL DEVICE
WATER_FITTING_MATERIAL	METAL UNPLASTICISED POLYVINYL CHLORIDE

6.23 Water hydrant

Hydrology > Water hydrant
Tags: water hydrant, fire hydrant

A water hydrant is represented by the **REF11_WATER_HYDRANT** block inserted at the centre of the feature with attribute information.

Table 119 Water hydrant layers

Layer	Description	Linetype	Colour
REF11_WATER_HYDRANT_NEW	New water hydrant	Continuous	151
REF11_WATER_HYDRANT_EXG	Existing water hydrant	Continuous	155
REF11_WATER_HYDRANT_REM	Removed water hydrant	Continuous	red

Table 120 REF11_WATER_HYDRANT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	HYDRANT_ASSET_SUB_TYPE
CONNECTION_TYPE*		Character	200	HYDRANT_CONNECTION_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	WATER_HYDRANT_ASSET_TYPE
MATERIAL*	METAL	Character	200	HYDRANT_MATERIAL

* Designates mandatory attribute

Table 121 REF11_WATER_HYDRANT Ref 11 lookup tables

Ref 11 lookup table	Values
HYDRANT_ASSET_SUB_TYPE	FIRE HYDRANT FIRE HYDRANT & HOSE REEL HYDRANT CONNECTOR SPRINKLER SYSTEM WATER HYDRANT
HYDRANT_CONNECTION_TYPE	BLUE HYDRANT CONNECTION FIRE HYDRANT CONNECTOR RED HYDRANT CONNECTION SILVER HYDRANT CONNECTION
WATER_HYDRANT_ASSET_TYPE	WATER CONTROL DEVICE
HYDRANT_MATERIAL	METAL

6.24 Water meter

Hydrology > Water meter
Tags: water meter

A water meter is represented by the **REF11_WATER_METER** block inserted at the centre of the feature with attribute information.

Table 122 Water meter layers

Layer	Description	Linetype	Colour
REF11_WATER_METER_NEW	New water meter	Continuous	151
REF11_WATER_METER_EXG	Existing water meter	Continuous	155
REF11_WATER_METER_REM	Removed water meter	Continuous	red

Table 123 REF11_WATER_METER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATER METER	Character	200	WATER_METER_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WATER_METER_ASSET_SUB_TYPE
METER_MAKE_MODEL*		Character	200	METER_MAKE_MODEL
WATER_METER_NUMBER*		Character	200	
OLD_WATER_METER_NUMBER		Character	200	

* Designates mandatory attribute

Table 124 REF11_WATER_METER Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_METER_ASSET_TYPE	WATER METER
WATER_METER_ASSET_SUB_TYPE	BARBECUE TAP BARBEQUE TAP DRINKING FOUNTAIN FLOW METER NON POTABLE IRRIGATION FROM WATERWAYS STREAM GAUGE SUPPLY FROM SERVICE LINES SUPPLY TO FACILITY OR BUILDING SUPPLY TO IRRIGATION SYSTEM WATER DATA LOGGER
METER_MAKE_MODEL	ABB MAGMASTER

6.25 Water pipe

Hydrology > Water pipe
Tags: water pipe

A water pipe is represented by a linear feature (line, lightweight polyline) with the **REF11_WATER_PIPE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 125 Water pipe layers

Layer	Description	Linetype	Colour
REF11_WATER_PIPE_NEW	New water pipe	Continuous	150
REF11_WATER_PIPE_EXG	Existing water pipe	Continuous	154
REF11_WATER_PIPE_REM	Removed water pipe	Continuous	8

Table 126 REF11_WATER_PIPE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATER PIPE	Character	200	WATER_PIPE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WATER_PIPE_ASSET_SUB_TYPE
MATERIAL*		Character	200	PIPE_MATERIAL
PIPE_DIAMETER*		Real	38.8	WATER_PIPE_DIAMETER
LENGTH*		Real	38.8	
UP_INVERT_LEVEL*		Real	38.8	
DOWN_INVERT_LEVEL*		Real	38.8	
GRADE*		Real	38.8	
JOINT_TYPE*		Character	200	JOINT_TYPE

* Designates mandatory attribute

Table 127 REF11_WATER_PIPE Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_PIPE_ASSET_TYPE	WATER PIPE
WATER_PIPE_ASSET_SUB_TYPE	BACKWASH LINE IRRIGATION MAIN NON-POTABLE RISING MAIN NON-POTABLE WATER MAIN POTABLE MAIN SUCTION LINE
PIPE_MATERIAL	DUCTILE IRON CEMENT LINED FIBRE REINFORCED CONCRETE GALVANISED STEEL HIGH DENSITY POLYETHLENE HYDROCON PERMEABLE POLYETHYLENE POLYPROPYLENE POLYPROPYLENE BLACKMAX POLYVINYL CHLORIDE REINFORCED CONCRETE STEEL REINFORCED CONCRETE UNPLASTICISED POLYVINYL CHLORIDE VITRIFIED CLAY
WATER_PIPE_DIAMETER	63 80 90 100 110 125 160 180 200 250 280 315 400 450 500
JOINT_TYPE	ASSEMBLY JOINT SEAL - ALUMINIUM NOSING WITH ELASTOMERIC STRIP ASSEMBLY JOINT SEAL - NEOPRENE JOINT COMPRESSION JOINT SEAL - CONCRETE NOSINGS CONSTRUCTION JOINT CONTRACTION JOINT FIXED JOINTS MODULAR EXPANSION JOINT OPEN EXPANSION JOINT POLYMER NOSING JOINT POURABLE JOINT SEAL SAWCUT JOINT SLIDING PLATE

6.26 Water pit

Hydrology > Water pit
Tags: water pit

A water pit is represented by a closed lightweight polyline signifying the perimeter with the **REF11_WATER_PIT** block inserted inside with attribute information.

Table 128 Water pit layers

Layer	Description	Linetype	Colour
REF11_WATER_PIT_NEW	New water pit	Continuous	152
REF11_WATER_PIT_EXG	Existing water pit	Continuous	156
REF11_WATER_PIT_REM	Removed water pit	Continuous	red

Table 129 REF11_WATER_PIT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATER PIT	Character	200	WATER_PIT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WATER_PIT_ASSET_SUB_TYPE
LID_TYPE*		Character	200	LID_TYPE
LID_SIZE*		Character	200	LID_SIZE
NUMBER_OF_LIDS*		Real	38.8	
MATERIAL*		Character	200	WATER_PIT_MATERIAL
SURFACE_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	
SURFACE_AREA*		Real	38.8	
LADDER_ACCESS*		Character	200	LADDER_ACCESS

* Designates mandatory attribute

Table 130 REF11_WATER_PIT Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_PIT_ASSET_TYPE	WATER PIT
WATER_PIT_ASSET_SUB_TYPE	FILTER CHAMBER METER CHAMBER PUMP WELL VALVE CHAMBER
LID_TYPE	CAST IRON GRATE CIRCULAR AND RECTANGULAR CI+D CLASS D CAST IRON CONCRETE LINTEL WITH GRATED INLET GALVANISED STEEL HEAVY DUTY GATIC HEAVY DUTY GATIC L185AS3996 HEAVY DUTY LID PS + PD 550X690 REINFORCED CONCRETE QS + QD 840X690 REINFORCED CONCRETE RD 830X690 REINFORCED CONCRETE STANDARD REINFORCED CONCRETE STANDARD REINFORCED CONCRETE CIRCULAR LID STEEL GRILL WEBFORGE GALVANISED STEEL SERIES 2 WA 325 WEBFORGED GALVANISED STEEL OPEN GRATE CIRCULAR
LID_SIZE	450MM X 450MM GALVANISED LOCKABLE GRATE 550MM X 690MM REINFORCED CONCRETE 600MM X 300MM DIAMETER 600MM X 600MM DIAMETER 600MM X 900MM DIAMETER 720MM DIAMETER 830MM X 690MM REINFORCED CONCRETE 840MM X 690MM REINFORCED CONCRETE 900MM X 900MM GRATED PIT 1200MM X 800MM DIAMETER 3500MM X 2400MM DIAMETER GRATED INLET WEB FORGED GALVANISED STEEL HUMES 900MM X 600MMX 600MM PRECAST GS OTHER CIRCULAR OTHER RECTANGULAR
WATER_PIT_MATERIAL	CONCRETE
LADDER_ACCESS	LADDER ACCESS NO LADDER ACCESS

6.27 Water pump

Hydrology > Water pump
Tags: water pump

A water pump is represented by the **REF11_WATER_PUMP** block inserted at the centre of the feature with attribute information.

Table 131 Water pump layers

Layer	Description	Linetype	Colour
REF11_WATER_PUMP_NEW	New water pump	Continuous	152
REF11_WATER_PUMP_EXG	Existing water pump	Continuous	156
REF11_WATER_PUMP_REM	Removed water pump	Continuous	red

Table 132 REF11_WATER_PUMP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	WATER_PUMP_ASSET_SUB_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	WATER_PUMP_ASSET_TYPE
PURPOSE*		Character	200	PUMP_PURPOSE
MAKE_MODEL*		Character	200	PUMP_MAKE_MODEL
SERIAL_NUMBER		Character	200	

* Designates mandatory attribute

Table 133 REF11_WATER_PUMP Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_PUMP_ASSET_SUB_TYPE	INTAKE PUMP RECIRCULATION PUMP WATER PUMP
WATER_PUMP_ASSET_TYPE	WATER CONTROL DEVICE
PUMP_PURPOSE	BORE BUILDING SUPPLY FILLING DAM FILLING WATER TANK IRRIGATION TOILET SUPPLY
PUMP_MAKE_MODEL	GRUNDFOS OR LOWARA 7.5 KW GRUNDFOS OR LOWARA 11 KW GRUNDFOS S1 (50HZ) HONDA G-160 KELAIR LOWARA 11KW THOMPSON KELLY AND LEWIS

6.28 Water service offtake

Hydrology > Water service offtake
Tags: water service offtake

A water service offtake is represented by the **REF11_WATER_SERVICE_OFFTAKE** block inserted at the centre of the feature with attribute information.

Table 134 Water service offtake layers

Layer	Description	Linetype	Colour
REF11_WATER_SERVICE_OFFTAKE_NEW	New water service offtake	Continuous	153
REF11_WATER_SERVICE_OFFTAKE_EXG	Existing water service offtake	Continuous	157
REF11_WATER_SERVICE_OFFTAKE_REM	Removed water service offtake	Continuous	red

Table 135 REF11_WATER_SERVICE_OFFTAKE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATER SERVICE OFFTAKE	Character	200	WSO_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WSO_ASSET_SUB_TYPE
TEE_PIPE_DIAMETER		Real	38.8	WATER_PIPE_DIAMETER
OFFTAKE_PIPE_DIAMETER		Real	38.8	WATER_PIPE_DIAMETER
CONCENTRIC_REDUCER		Character	200	CONCENTRIC_REDUCER
SURFACE_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 136 REF11_WATER_SERVICE_OFFTAKE Ref 11 lookup tables

Ref 11 lookup table	Values
WSO_ASSET_TYPE	WATER SERVICE OFFTAKE
WSO_ASSET_SUB_TYPE	45 DEGREE JUNCTION CONCENTRIC REDUCER TEE OFFTAKE
WATER_PIPE_DIAMETER	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
CONCENTRIC_REDUCER	CONCENTRIC REDUCER NO CONCENTRIC REDUCER

6.29 Water valve

Hydrology > Water valve
Tags: water valve

A water valve is represented by the **REF11_WATER_VALVE** block inserted at the centre of the feature with attribute information.

Table 137 Water valve layers

Layer	Description	Linetype	Colour
REF11_WATER_VALVE_NEW	New water valve	Continuous	153
REF11_WATER_VALVE_EXG	Existing water valve	Continuous	157
REF11_WATER_VALVE_REM	Removed water valve	Continuous	8

Table 138 REF11_WATER_VALVE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATER VALVE	Character	200	WATER_VALVE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WATER_VALVE_ASSET_SUB_TYPE
MAKE_MODEL*		Character	200	WATER_VALVE_MAKE_MODEL
VALVE_SIZE*		Real	38.8	WATER_VALVE_SIZE
MATERIAL*		Character	200	WATER_VALVE_MATERIAL
LID_TYPE*		Character	200	LID_TYPE
LID_SIZE*		Character	200	LID_SIZE
SURFACE_LEVEL*		Real	38.8	
DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 139 REF11_WATER_VALVE Ref 11 lookup tables

Ref 11 lookup table	Values
WATER_VALVE_ASSET_SUB_TYPE	AIR RELIEF VALVE BUTTERFLY VALVE GATE VALVE HYDRANT HYDRANT BOOSTER VALVE ISOLATION VALVE PRESSURE RELIEF VALVE SLUICE VALVE SOLENOID VALVE SPRINKLER BOOSTER VALVE STOP VALVE SWING CHECK VALVE
WATER_VALVE_ASSET_TYPE	WATER VALVE
WATER_VALVE_MAKE_MODEL	A.R.I. D-050-CD AVK
WATER_VALVE_SIZE	25 40 50 80 100 150 200 250 300 400 500
WATER_VALVE_MATERIAL	BRASS CONCRETE METAL
LID_TYPE	CAST IRON GRATE CIRCULAR AND RECTANGULAR CI+D CLASS D CAST IRON CONCRETE LINTEL WITH GRATED INLET GALVANISED STEEL HEAVY DUTY GATIC HEAVY DUTY GATIC L185AS3996 HEAVY DUTY LID PS + PD 550X690 REINFORCED CONCRETE QS + QD 840X690 REINFORCED CONCRETE RD 830X690 REINFORCED CONCRETE STANDARD REINFORCED CONCRETE STANDARD REINFORCED CONCRETE CIRCULAR LID STEEL GRILL WEBFORGE GALVANISED STEEL SERIES 2 WA 325 WEBFORGED GALVANISED STEEL OPEN GRATE CIRCULAR

Ref 11 lookup table	Values
LID_SIZE	450MM X 450MM GALVANISED LOCKABLE GRATE 550MM X 690MM REINFORCED CONCRETE 600MM X 300MM DIAMETER 600MM X 600MM DIAMETER 600MM X 900MM DIAMETER 720MM DIAMETER 830MM X 690MM REINFORCED CONCRETE 840MM X 690MM REINFORCED CONCRETE 900MM X 900MM GRATED PIT 1200MM X 800MM DIAMETER 3500MM X 2400MM DIAMETER GRATED INLET WEB FORGED GALVANISED STEEL HUMES 900MM X 600MMX 600MM PRECAST GS OTHER CIRCULAR OTHER RECTANGULAR

6.30 Waterway structure

Hydrology > Waterway structure
Tags: waterway structure, lake post, lake ladder, buoy, erosion structure, diving platform, weir, fish ladder, groyne

A waterway structure is represented by the **REF11_WATERWAY_STRUCTURE** block inserted at the centre of the feature with attribute information.

Table 140 Waterway structure layers

Layer	Description	Linetype	Colour
REF11_WATERWAY_STRUCTURE_NEW	New waterway structure	Continuous	170
REF11_WATERWAY_STRUCTURE_EXG	Existing waterway structure	Continuous	174
REF11_WATERWAY_STRUCTURE_REM	Removed waterway structure	Continuous	red

Table 141 REF11_WATERWAY_STRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WATERWAY STRUCTURE	Character	200	WATERWY_STRUC_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WATERWY_STRUC_ASSET_SUB_TYPE
MATERIAL*		Character	200	STRUCTURE_MATERIAL

* Designates mandatory attribute

Table 142 REF11_WATERWAY_STRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
WATERWY_STRUC_ASSET_TYPE	WATERWAY STRUCTURE
WATERWY_STRUC_ASSET_SUB_TYPE	DIVING PLATFORM EROSION STRUCTURE FISH LADDER GREEN BUOY GROYNE LAKE LADDER LAKE POST ORANGE BUOY RED BUOY RURAL HEADWALL WEIR WHITE BUOY YELLOW BUOY
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER

7 Irrigation assets

Bore	Extraction bores, groundwater bores, injection bores and monitoring bores
Irrigation area	Irrigation areas
Irrigation control box	Irrigation control boxes
Irrigation pipe	Drip lines, lateral lines and main lines
Irrigation sprinkler	Irrigation sprinklers

7.1 Bore

Irrigation assets > Bore
Tags: bore

A bore is represented by the **REF11_BORE** block inserted at the centre of the feature with attribute information.

Table 143 Bore layers

Layer	Description	Linetype	Colour
REF11_BORE_NEW	New bore	Continuous	142
REF11_BORE_EXG	Existing bore	Continuous	146
REF11_BORE_REM	Removed bore	Continuous	red

Table 144 REF11_BORE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	BORE_ASSET_SUB_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	BORE_ASSET_TYPE

* Designates mandatory attribute

Table 145 REF11_BORE Ref 11 lookup tables

Ref 11 lookup table	Values
BORE_ASSET_SUB_TYPE	EXTRACTION BORE GROUNDWATER BORE INJECTION BORE MONITORING BORE
BORE_ASSET_TYPE	WATER CONTROL DEVICE

7.2 Irrigation area

Irrigation assets > Irrigation area
Tags: irrigation area, grass, shrubs, trees, trough

An irrigation area is represented by a closed lightweight polyline signifying the perimeter with the **REF11_IRRIGATION_AREA** block inserted inside with attribute information.

Table 146 Irrigation area layers

Layer	Description	Linetype	Colour
REF11_IRRIGATION_AREA_NEW	New irrigation area	Continuous	140
REF11_IRRIGATION_AREA_EXG	Existing irrigation area	Continuous	144
REF11_IRRIGATION_AREA_REM	Removed irrigation area	Continuous	red

Table 147 REF11_IRRIGATION_AREA attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	IRRIGATION SYSTEM	Character	200	
ASSET_SUB_TYPE*		Character	200	IRRIGATION_ASSET_SUB_TYPE
IRRI_TYPE*		Character	200	IRRIGATION_TYPE
WATER_TYPE*		Character	200	IRRIGATION_WATER_TYPE
RAIN_GAUGE*		Character	200	IRRIGATION_RAIN_GAUGE
SURFACE_AREA*		Real	38.8	
POTABLE_WATER_TOPUP		Character	200	POTABLE_WATER_TOPUP

* Designates mandatory attribute

Table 148 REF11_IRRIGATION_AREA Ref 11 lookup tables

Ref 11 lookup table	Values
IRRIGATION_ASSET_SUB_TYPE	ARBORETUM MECHANISM COMTROL MECHANISM DRIPLINE MECHANISM HARDIE TOUCH MECHANISM HUNTER MECHANISM NO MECHANISM QUICK COUPLING MECHANISM RAINBIRD MECHANISM RICHDEL MECHANISM TORO MECHANISM
IRRIGATION_TYPE	GRASS SHRUBS TREES TROUGH (RURAL)
IRRIGATION_WATER_TYPE	BORE WATER LAKE WATER POND WATER TANK WATER TOWN WATER
IRRIGATION_RAIN_GAUGE	NO RAIN GAUGE RAIN GAUGE
POTABLE_WATER_TOPUP	YES NO

7.3 Irrigation control box

Irrigation assets > Irrigation control box
Tags: irrigation control box

An irrigation control box is represented by the **REF11_IRRIGATION_CONTROL_BOX** block inserted at the centre of the feature with attribute information.

Table 149 Irrigation control box layers

Layer	Description	Linetype	Colour
REF11_IRRIGATION_CONTROL_BOX_NEW	New irrigation control box	Continuous	143
REF11_IRRIGATION_CONTROL_BOX_EXG	Existing irrigation control box	Continuous	147
REF11_IRRIGATION_CONTROL_BOX_REM	Removed irrigation control box	Continuous	red

Table 150 REF11_IRRIGATION_CONTROL_BOX attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	IRRIGATION CONTROL BOX	Character	200	IRRI_CTRL_BOX_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	IRRI_CTRL_BOX_ASSET_SUB_TYPE
MAKE*		Character	200	
POWER_SUPPLY		Character	200	POWER_SUPPLY

* Designates mandatory attribute

Table 151 REF11_IRRIGATION_CONTROL_BOX Ref 11 lookup tables

Ref 11 lookup table	Values
IRRI_CTRL_BOX_ASSET_TYPE	IRRIGATION CONTROL BOX
IRRI_CTRL_BOX_ASSET_SUB_TYPE	ARBORETUM PUBLIC PLACE RESERVE SPORTSGROUND URBAN OPEN SPACE
POWER_SUPPLY	BATTERY MAINS POWER SOLAR POWER

7.4 Irrigation pipe

Irrigation assets > Irrigation pipe
Tags: irrigation pipe

An irrigation pipe is represented by a linear feature (line, lightweight polyline) with the **REF11_IRRIGATION_PIPE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 152 Irrigation pipe layers

Layer	Description	Linetype	Colour
REF11_IRRIGATION_PIPE_NEW	New irrigation pipe	Continuous	141
REF11_IRRIGATION_PIPE_EXG	Existing irrigation pipe	Continuous	145
REF11_IRRIGATION_PIPE_REM	Removed irrigation pipe	Continuous	red

Table 153 REF11_IRRIGATION_PIPE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	IRRIGATION PIPE	Character	200	IRRI_PIPE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	IRRI_PIPE_ASSET_SUB_TYPE
PIPE_DIAMETER*		Real	38.8	IRRIGATION_PIPE_DIAMETER
MATERIAL*		Character	200	IRRIGATION_PIPE_MATERIAL
LENGTH*		Real	38.8	

* Designates mandatory attribute

Table 154 REF11_IRRIGATION_PIPE Ref 11 lookup tables

Ref 11 lookup table	Values
IRRI_PIPE_ASSET_TYPE	IRRIGATION PIPE
IRRI_PIPE_ASSET_SUB_TYPE	DRIP LINE LATERAL LINE MAIN LINE
IRRIGATION_PIPE_DIAMETER	40 50 80 100 110 180
IRRIGATION_PIPE_MATERIAL	METAL POLYMERIZING VINYL CHLORIDE

7.5 Irrigation sprinkler

Irrigation assets > Irrigation sprinkler
Tags: irrigation sprinkler, sprinkler

An irrigation sprinkler is represented by the **REF11_IRRIGATION_SPRINKLER** block inserted at the centre of the feature with attribute information.

Table 155 Irrigation sprinkler layers

Layer	Description	Linetype	Colour
REF11_IRRIGATION_SPRINKLER_NEW	New irrigation sprinkler	Continuous	141
REF11_IRRIGATION_SPRINKLER_EXG	Existing irrigation sprinkler	Continuous	145
REF11_IRRIGATION_SPRINKLER_REM	Removed irrigation sprinkler	Continuous	red

Table 156 REF11_IRRIGATION_SPRINKLER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	SPRINKLER	Character	200	SPRINKLER_ASSET_SUB_TYPE
ASSET_TYPE*	WATER CONTROL DEVICE	Character	200	SPRINKLER_ASSET_TYPE
MAKE_MODEL*		Character	200	
QUANTITY*		Real	38.8	

* Designates mandatory attribute

Table 157 REF11_IRRIGATION_SPRINKLER Ref 11 lookup tables

Ref 11 lookup table	Values
SPRINKLER_ASSET_SUB_TYPE	SPRINKLER
SPRINKLER_ASSET_TYPE	WATER CONTROL DEVICE

8 Land use

Contaminated site	Contaminated sites

8.1 Contaminated site

Land use > Contaminated site
Tags: contaminated site

A contaminated site is represented by a closed lightweight polyline signifying the perimeter with the **REF11_CONTAMINATED_SITE** block inserted inside with attribute information.

Table 158 Contaminated site layers

Layer	Description	Linetype	Colour
REF11_CONTAMINATED_SITE_NEW	New contaminated site	Continuous	240
REF11_CONTAMINATED_SITE_EXG	Existing contaminated site	Continuous	244
REF11_CONTAMINATED_SITE_REM	Removed contaminated site	Continuous	243

Table 159 REF11_CONTAMINATED_SITE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	CONTAMINATED SITE	Character	200	CONTAMINATED_SITE_ASSET_TYPE
LANDFILL_TYPE*		Character	200	CO_CSM_LANDFILL_TYPE
LOCATION_DETAIL*		Character	200	
SMP_PROVIDED		Character	200	CO_YES_NO_NA
MAIN_CONTAMINANT_CLASS*		Character	200	CO_CSM_CLASS
OTHER_CONTAMINANT_TYPE		Character	200	
ASBESTOS_PRESENT		Character	200	CO_YES_NO_NA
LIVESTOCK_DIP_TYPE		Character	200	CO_CSM_LIVESTOCK_DIP_TYPE
HEAVY_METALS_PRESENT		Character	200	CO_YES_NO_NA
HYDROCARBON_TANK_PRESENT		Character	200	CO_YES_NO_NA
NUMBER_OF_TANKS_IN_SITU		Integer	8	CO_CSM_NUMBER_OF_TANKS
NUMBER_OF_TANKS_REMOVED		Integer	8	CO_CSM_NUMBER_OF_TANKS
TANK_LOCATION		Character	200	CO_CSM_TANK_LOCATION
TOTAL_TANKS		Integer	8	CO_CSM_NUMBER_OF_TANKS

* Designates mandatory attribute

Table 160 REF11_CONTAMINATED_SITE Ref 11 lookup tables

Ref 11 lookup table	Values
CONTAMINATED_SITE_ASSET_TYPE	CONTAMINATED SITE
CO_CSM_LANDFILL_TYPE	CONTROLLED FILL/DUMP DOMESTIC DUMP HISTORIC LANDFILL MUNCIPAL DUMP NOT APPLICABLE SPOIL DUMP UNCONTROLLED FILL/DUMP
CO_CSM_CLASS	CATTLE DIP HYDROCARBON LANDFILL OTHER SHEEP DIP
CO_YES_NO_NA	NO NOT APPLICABLE YES
CO_CSM_LIVESTOCK_DIP_TYPE	NOT APPLICABLE PLUNGE PLUNGE AND SPRAY SPRAY UNKNOWN
CO_CSM_NUMBER_OF_TANKS	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OVER 10 OVER 20 UNKNOWN
CO_CSM_TANK_LOCATION	ABOVEGROUND NOT APPLICABLE UNDERGROUND UNKNOWN

9 Parking and related assets

Car park	Indented on-road parking, off road parking, on-road parking. single level and multi-level car parks
Parking machine	Parking machines
Smart parking sensor	Overhead and underground smart parking sensors
Smart parking transmitter	Smart parking transmitters

9.1 Car park

Parking and related assets > Car park
Tags: car park

A car park is represented by a closed lightweight polyline signifying the perimeter with the **REF11_CAR_PARK** block inserted inside with attribute information.

Table 161 Car park layers

Layer	Description	Linetype	Colour
REF11_CAR_PARK_NEW	New car park	Continuous	42
REF11_CAR_PARK_EXG	Existing car park	Continuous	46
REF11_CAR_PARK_REM	Removed car park	Continuous	red

Table 162 REF11_CAR_PARK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	CAR PARK	Character	200	CAR_PARK_ASSET_TYPE
CAR_PARK_TYPE*		Character	200	CAR_PARK_TYPE
ASSET_SUB_TYPE*		Character	200	CAR_PARK_ASSET_SUB_TYPE
NUMBER_OF_LEVELS*		Character	200	
GROUND_SURFACE_TYPE*		Character	200	SURFACE_TYPE
SURFACE_AREA*		Real	38.8	
ACCESS_TYPE*		Character	200	CARP_PARK_ACCESS_TYPE
NO_OF_MARKED_SPACES		Integer	8	
NO_OF_DISABLED_SPACES		Integer	8	
NO_OF_EV_SPACES		Integer	8	
PARK_AND_RIDE		Character	200	PARK_AND_RIDE

* Designates mandatory attribute

Table 163 REF11_CAR_PARK Ref 11 lookup tables

Ref 11 lookup table	Values
CAR_PARK_ASSET_TYPE	CAR PARK
CAR_PARK_TYPE	MULTI LEVEL SINGLE LEVEL
CAR_PARK_ASSET_SUB_TYPE	INDENTED ON ROAD OFF ROAD ON ROAD
SURFACE_TYPE	ASPHALTIC CONCRETE BITUMEN BRICK PAVERS CHIP SEAL CLAY CONCRETE CONCRETE AGGREGATE DIRT FINE CRUSHED ROCK GRANITE GRASS GRAVEL MIX OF CONCRETE AND ASPHALTIC CONCRETE PAVERS OR CONCRETE BLOCKS REINFORCED CONCRETE
CARP_PARK_ACCESS_TYPE	BOOM GATE LOCKED GATE UNRESTRICTED
PARK_AND_RIDE	PARK AND RIDE CAR PARK

9.2 Parking machine

Parking and related assets > Parking machine
Tags: parking machine, voucher parking, parking meter

A parking machine is represented by the **REF11_PARKING_MACHINE** block inserted at the centre of the feature with attribute information.

Table 164 Parking machine layers

Layer	Description	Linetype	Colour
REF11_PARKING_MACHINE_NEW	New parking machine	Continuous	33
REF11_PARKING_MACHINE_EXG	Existing parking machine	Continuous	37
REF11_PARKING_MACHINE_REM	Removed parking machine	Continuous	red

Table 165 REF11_PARKING_MACHINE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PARKING MACHINE	Character	200	
ASSET_SUB_TYPE*		Character	200	
POWER_SOURCE*		Character	200	
PARKING_MACHINE_ID		Character	200	
MODEL		Character	200	
COMMUNICATION_TYPE*		Character	200	
MANUFACTURER		Character	200	
OPERATED_BY		Character	200	

* Designates mandatory attribute

Table 166 REF11_PARKING_MACHINE Ref 11 lookup tables

Ref 11 lookup table	Values
PARKING_MACHINE_ASSET_SUB_TYPE	NUMBER PLATE / PARKING BAY NUMBER ONLINE / APP PAY AND DISPLAY TICKET TICKET UNKNOWN
PARKING_MACHINE_PWR_SOURCE	MAINS POWER NO POWER SOURCE SOLAR
PARKING_MACHINE_COMM_TYPE	CELLULAR ETHERNET / WIRED NETWORK NONE
PARKING_MACHINE_OPERATED_BY	ACT GOVERNMENT PRIVATELY OPERATED UNKNOWN WILSON PARKING

9.3 Smart parking sensor

Parking and related assets > Smart parking sensor
Tags: smart parking sensor

A smart parking sensor is represented by the **REF11_SMART_PARKING_SENSOR** block inserted at the centre of the feature with attribute information.

Table 167 Smart parking sensor layers

Layer	Description	Linetype	Colour
REF11_SMART_PARKING_SENSOR_NEW	New smart parking sensor	Continuous	213
REF11_SMART_PARKING_SENSOR_EXG	Existing smart parking sensor	Continuous	217
REF11_SMART_PARKING_SENSOR_REM	Removed smart parking sensor	Continuous	red

Table 168 REF11_SMART_PARKING_SENSOR attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	SMART PARKING SENSOR	Character	200	PARKING_SENSOR_ASSET_SUB_TYPE
ASSET_TYPE*	ITS DEVICE	Character	200	PARKING_SENSOR_ASSET_TYPE
SENSOR_TYPE*		Character	200	SENSOR_TYPE
BATTERY_VOLTAGE*		Character	200	BATTERY_VOLTAGE

* Designates mandatory attribute

Table 169 REF11_SMART_PARKING_SENSOR Ref 11 lookup tables

Ref 11 lookup table	Values
PARKING_SENSOR_ASSET_SUB_TYPE	SMART PARKING SENSOR
PARKING_SENSOR_ASSET_TYPE	ITS DEVICE
SENSOR_TYPE	OVERHEAD UNDERGROUND
BATTERY_VOLTAGE	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*

9.4 Smart parking transmitter

Parking and related assets > Smart parking transmitter
Tags: smart parking transmitter

A smart parking transmitter is represented by the **REF11_SMART_PARKING_TRANSMITTER** block inserted at the centre of the feature with attribute information.

Table 170 Smart parking transmitter layers

Layer	Description	Linetype	Colour
REF11_SMART_PARKING_TRANSMITTER_NEW	New smart parking transmitter	Continuous	211
REF11_SMART_PARKING_TRANSMITTER_EXG	Existing smart parking transmitter	Continuous	215
REF11_SMART_PARKING_TRANSMITTER_REM	Removed smart parking transmitter	Continuous	red

Table 171 REF11_SMART_PARKING_TRANSMITTER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	SMART PARKING TRANSMITTER	Character	200	PARKING_TRANSMIT_SUB_TYPE
ASSET_TYPE*	ITS DEVICE	Character	200	PARKING_TRANSMIT_ASSET_TYPE
MOUNTING*		Character	200	MOUNTING
POWER_SOURCE*		Character	200	POWER_SOURCE

* Designates mandatory attribute

Table 172 REF11_SMART_PARKING_TRANSMITTER Ref 11 lookup tables

Ref 11 lookup table	Values
PARKING_TRANSMIT_SUB_TYPE	SMART PARKING TRANSMITTER
PARKING_TRANSMIT_ASSET_TYPE	ITS DEVICE
MOUNTING	ROOF MOUNTED SIGN POST STREETLIGHT COLUMN WALL MOUNTED
POWER_SOURCE	BATTERY ELECTRICAL MAINS SOLAR PANEL STREETLIGHT CABLE TRAFFIC SIGNAL CONTROL BOX

10 Public lighting and electrical assets

Amenity lighting	Amenity lighting, artwork lighting, boardwalk lights, bollard lights, fairy lights, festoon string lights and uplighting
Electrical box pit	Control boxes, distribution boards, electrical pits, extractor panels, fuel detection panels, gas detector systems, hv transformer kiosks, meter boxes, power boxes, pump control boxes, receiver boxes, small solar panels, switchboards and telecommunication pits
Electrical cable	Electrical cables
Floodlight	Floodlights
ICT device	CCTV cameras, CCTV monitors, computers, digital weight displays, monitors, printers, software, traffic lights, tv aerials and weighing indicators
Power outlet	Power outlets
Solar panel	Solar panels
Streetlight cable	Overhead cables and underground cables
Streetlight cable joint	Streetlight cable joints
Streetlight column	Streetlight column and luminaires, and streetlight luminaires only
Streetlight control box	Streetlight control boxes
Streetlight photoelectric cell	Streetlight photoelectric cells
Switchboard	Switchboards

10.1 Amenity lighting

Public lighting and electrical assets > Amenity lighting
Tags: amenity lighting, artwork lighting, boardwalk lights, bollard lights, fairy lights, festoon string lights, uplighting

Amenity lighting is represented by the **REF11_AMENITY_LIGHTING** block inserted at the centre of the feature with attribute information.

Table 173 Amenity lighting layers

Layer	Description	Linetype	Colour
REF11_AMENITY_LIGHTING_NEW	New amenity lighting	Continuous	141
REF11_AMENITY_LIGHTING_EXG	Existing amenity lighting	Continuous	145
REF11_AMENITY_LIGHTING_REM	Removed amenity lighting	Continuous	red

Table 174 REF11_AMENITY_LIGHTING attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	AMENITY_LIGHTING_ASSET_SUB_TYPE
ASSET_TYPE*	AMENITY LIGHTING	Character	200	
ASSET_ID		Character	200	
LIGHT_ATTACHMENT		Character	200	LIGHT_ATTACHMENT
LOCATION		Character	200	
SUBURB		Character	200	
CONSTRUCTION_DATE		Date		
POWER_SOURCE		Character	200	POWER_SOURCE
LUMINAIRE		Character	200	STREETLIGHT_LUMINAIRE
LAMP_TYPE		Character	200	STREETLIGHT_LAMP_TYPE
LAMP_WATTAGE		Integer	8	
LAMP_COUNT		Integer	8	
HEIGHT		Real	38.8	
MATERIAL		Character	200	SITE_LIGHT_MATERIAL

* Designates mandatory attribute

Table 175 REF11_AMENITY_LIGHTING Ref 11 lookup tables

Ref 11 lookup table	Values
AMENITY_LIGHTING_ASSET_SUB_TYPE	AMENITY LIGHTING ARTWORK LIGHTING BOARDWALK LIGHTS BOLLARD LIGHTS FAIRY LIGHTS FESTOON STRING LIGHTS UPLIGHTING
LIGHT_ATTACHMENT	BUILDING FREE STANDING IN GROUND LIGHT POLE PIPE POLE STRUCTURE UPLIGHTING WALL MOUNTED
POWER_SOURCE	BATTERY ELECTRICAL MAINS SOLAR PANEL STREETLIGHT CABLE TRAFFIC SIGNAL CONTROL BOX
STREETLIGHT_LUMINAIRE	*Allowable values omitted for brevity.* *Refer to MIS 14 and ACTSD-4201.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet (some values will require CED approval).*
STREETLIGHT_LAMP_TYPE	COMPACT FLUORESCENT COMPACT SOURCE IODINE HIGH PRESSURE SODIUM HIGH PRESSURE SODIUM TWIN ARC INCANDESCENT LIGHT EMITTING DIODE MERCURY HIGH PRESURE FLUORESCENT COATING MERCURY HIGH PRESURE PHOSPHOR COATING MERCURY LOW PRESURE FLUORESCENT COATING MERCURY VAPOUR METAL HALIDE MULTI-COLOURED FLOWER EFFECT PHOTOLUMINESCENCE QUARTZ IODIDE SODIUM VAPOUR HIGH PRESSURE SODIUM VAPOUR HIGH PRESSURE TWIN ARC SODIUM VAPOUR LOW PRESSURE
SITE_LIGHT_MATERIAL	METAL TIMBER

10.2 Electrical box pit

Public lighting and electrical assets > Electrical box pit
Tags: electrical box pit

An electrical box pit is represented by the **REF11_ELECTRICAL_BOX_PIT** block inserted at the centre of the feature with attribute information.

Table 176 Electrical box pit layers

Layer	Description	Linetype	Colour
REF11_ELECTRICAL_BOX_PIT_NEW	New electrical box pit	Continuous	161
REF11_ELECTRICAL_BOX_PIT_EXG	Existing electrical box pit	Continuous	165
REF11_ELECTRICAL_BOX_PIT_REM	Removed electrical box pit	Continuous	red

Table 177 REF11_ELECTRICAL_BOX_PIT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ELECTRICAL BOX/PIT	Character	200	ELEC_PIT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	ELEC_PIT_ASSET_SUB_TYPE
LID_TYPE		Character	200	LID_TYPE
LID_SIZE		Character	200	LID_SIZE
LID_MATERIAL		Character	200	LID_MATERIAL
BOX_PIT_ATTACHMENT*		Character	200	ATTACHMENT_TYPE
SECURITY_PURPOSES*		Character	200	SECURITY_PURPOSES

* Designates mandatory attribute

Table 178 REF11_ELECTRICAL_BOX_PIT Ref 11 lookup tables

Ref 11 lookup table	Values
ELEC_PIT_ASSET_TYPE	ELECTRICAL BOX/PIT
ELEC_PIT_ASSET_SUB_TYPE	CONTROL BOX DISTRIBUTION BOARDS ELECTRICAL PIT EXTRACTOR PANEL FUEL DETECTION PANEL GAS DETECTOR SYSTEM HV TRANSFORMER KIOSK METER BOX MICRO PILLAR MINI PILLAR POWER BOX PUMP CONTROL BOX RECEIVER BOX SMALL SOLAR PANEL SUBSTATION SWITCHBOARD TELECOMMUNICATION PIT
LID_TYPE	CAST IRON GRATE CIRCULAR AND RECTANGULAR CI+D CLASS D CAST IRON CONCRETE LINTEL WITH GRATED INLET GALVANISED STEEL HEAVY DUTY GATIC HEAVY DUTY GATIC L185AS3996 HEAVY DUTY LID PS + PD 550X690 REINFORCED CONCRETE QS + QD 840X690 REINFORCED CONCRETE RD 830X690 REINFORCED CONCRETE STANDARD REINFORCED CONCRETE STANDARD REINFORCED CONCRETE CIRCULAR LID STEEL GRILL WEBFORGE GALVANISED STEEL SERIES 2 WA 325 WEBFORGED GALVANISED STEEL OPEN GRATE CIRCULAR
LID_SIZE	450MM X 450MM GALVANISED LOCKABLE GRATE 550MM X 690MM REINFORCED CONCRETE 600MM X 300MM DIAMETER 600MM X 600MM DIAMETER 600MM X 900MM DIAMETER 720MM DIAMETER 830MM X 690MM REINFORCED CONCRETE 840MM X 690MM REINFORCED CONCRETE 900MM X 900MM GRATED PIT 1200MM X 800MM DIAMETER 3500MM X 2400MM DIAMETER GRATED INLET WEB FORGED GALVANISED STEEL HUMES 900MM X 600MMX 600MM PRECAST GS OTHER CIRCULAR OTHER RECTANGULAR

Ref 11 lookup table	Values
LID_MATERIAL	CAST IRON CAST IRON AND CONCRETE GALVANISED STEEL REINFORCED CONCRETE STEEL
ATTACHMENT_TYPE	BOOM GATE BUILDING CAGE FENCE FREE STANDING GATE LIGHT POLE PIPE POLE STRUCTURE TRAILER MOUNTED
SECURITY_PURPOSES	FOR SECURITY PURPOSES NOT FOR SECURITY PURPOSES

10.3 Electrical cable

Public lighting and electrical assets > Electrical cable
Tags: electrical cable

An electrical cable is represented by a linear feature (line, lightweight polyline) with the **REF11_ELECTRICAL_CABLE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 179 Electrical cable layers

Layer	Description	Linetype	Colour
REF11_ELECTRICAL_CABLE_NEW	New electrical cable	Continuous	132
REF11_ELECTRICAL_CABLE_EXG	Existing electrical cable	Continuous	136
REF11_ELECTRICAL_CABLE_REM	Removed electrical cable	Continuous	red

Table 180 REF11_ELECTRICAL_CABLE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ELECTRICAL CABLE	Character	200	
ASSET_ID		Character	200	
ASSET_SUB_TYPE*		Character	200	STREETLIGHT_CABLE_ASSET_SUB_TYPE
CABLE_TYPE		Character	200	CABLE_TYPE
CONDUIT		Character	200	CONDUIT
POWER_SOURCE		Character	200	POWER_SOURCE
CABLE_LENGTH		Real	38.8	
OFFSET_DISTANCE_KERB		Real	38.8	
OFFSET_DISTANCE_PROPERTY		Real	38.8	
CABLE_DEPTH		Real	38.8	
LOCATION		Character	200	
SUBURB		Character	200	
CONSTRUCTION_DATE		Date		

* Designates mandatory attribute

Table 181 REF11_ELECTRICAL_CABLE Ref 11 lookup tables

Ref 11 lookup table	Values
STREETLIGHT_CABLE_ASSET_SUB_TYPE	OVERHEAD CABLE UNDERGROUND CABLE
CABLE_TYPE	2 CORE 6MM T+E 2 CORE 6MM TPS XLPE STREETLIGHT CABLE 2.5MM 2 CORE STREETLIGHT CABLE 4 CORE 16MM XLPE PVC STREETLIGHT CABLE 4MM 2 CORE STREETLIGHT CABLE 16MM 2 CORE XLPE STREETLIGHT CABLE 16MM 4 CORE XPLE STREETLIGHT CABLE 16MM TWISTED SERVICE CU 16MM XLPE SINGLE CORE HARD DRAWN CU 35MM 4 CORE XPLE STREETLIGHT CABLE 51 CORE ORANGE CIRCULAR STREETLIGHT CABLE SINGLE CORE 6MM T+E
CONDUIT	25MM UPVC CAT A 32MM UPVC CAT A 40MM UPVC CAT A 50MM UPVC CAT A 63MM UPVC CAT A 100MM UPVC CAT A 125MM UPVC CAT A BEND 50MM 90 DEG
POWER_SOURCE	BATTERY ELECTRICAL MAINS SOLAR PANEL STREETLIGHT CABLE TRAFFIC SIGNAL CONTROL BOX

10.4 Floodlight

Public lighting and electrical assets > Floodlight
Tags: floodlight

A floodlight is represented by the **REF11_FLOODLIGHT** block inserted at the centre of the feature with attribute information.

Table 182 Floodlight layers

Layer	Description	Linetype	Colour
REF11_FLOODLIGHT_NEW	New floodlight	Continuous	221
REF11_FLOODLIGHT_EXG	Existing floodlight	Continuous	225
REF11_FLOODLIGHT_REM	Removed floodlight	Continuous	red

Table 183 REF11_FLOODLIGHT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	FLOODLIGHT	Character	200	FLOODLIGHT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	FLOODLIGHT_ASSET_SUB_TYPE
POWER_BOX*		Character	200	POWER_BOX

* Designates mandatory attribute

Table 184 REF11_FLOODLIGHT Ref 11 lookup tables

Ref 11 lookup table	Values
FLOODLIGHT_ASSET_TYPE	FLOODLIGHT
FLOODLIGHT_ASSET_SUB_TYPE	COMPETITION LIGHT FLOODLIGHT POWER BOX STREETLIGHT TRAINING LIGHT
POWER_BOX	ATTACHED TO POLE SEPARATE FROM POLE

10.5 ICT device

Public lighting and electrical assets > ICT device
Tags: ICT device, CCTV

An ICT device is represented by the **REF11_ICT_DEVICE** block inserted at the centre of the feature with attribute information.

Table 185 ICT device layers

Layer	Description	Linetype	Colour
REF11_ICT_DEVICE_NEW	New ICT device	Continuous	131
REF11_ICT_DEVICE_EXG	Existing ICT device	Continuous	135
REF11_ICT_DEVICE_REM	Removed ICT device	Continuous	red

Table 186 REF11_ICT_DEVICE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ICT DEVICE	Character	200	ICT_DEVICE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	ICT_DEVICE_ASSET_SUB_TYPE
MAKE_MODEL*		Character	200	
NUMBER_OF_DEVICES*		Real	38.8	
DEVICE_ATTACHMENT*		Character	200	ATTACHMENT_TYPE
SECURITY_PURPOSES*		Character	200	SECURITY_PURPOSES

* Designates mandatory attribute

Table 187 REF11_ICT_DEVICE Ref 11 lookup tables

Ref 11 lookup table	Values
ICT_DEVICE_ASSET_TYPE	ICT DEVICE
ICT_DEVICE_ASSET_SUB_TYPE	CCTV CAMERA CCTV MONITOR COMPUTER DIGITAL WEIGHT DISPLAY LIGHT SENSOR MONITOR PRINTER SOFTWARE TRAFFIC COUNTER TRAFFIC LIGHT TV AERIAL WEIGHING INDICATOR
ATTACHMENT_TYPE	BOOM GATE BUILDING CAGE FENCE FREE STANDING GATE LIGHT POLE PIPE POLE STRUCTURE TRAILER MOUNTED
SECURITY_PURPOSES	FOR SECURITY PURPOSES NOT FOR SECURITY PURPOSES

10.6 Power outlet

Public lighting and electrical assets > Power outlet
Tags: power outlet

A power outlet is represented by the **REF11_POWER_OUTLET** block inserted at the centre of the feature with attribute information.

Table 188 Power outlet layers

Layer	Description	Linetype	Colour
REF11_POWER_OUTLET_NEW	New power outlet	Continuous	163
REF11_POWER_OUTLET_EXG	Existing power outlet	Continuous	167
REF11_POWER_OUTLET_REM	Removed power outlet	Continuous	red

Table 189 REF11_POWER_OUTLET attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	POWER_OUTLET_ASSET_SUB_TYPE
ASSET_TYPE*	POWER OUTLET	Character	200	POWER_OUTLET_ASSET_TYPE
TEN_AMP_QUANTITY*		Real	38.8	
FIFTEEN_AMP_QUANTITY*		Real	38.8	
THREE_PHASE_QUANTITY*		Real	38.8	
DISTRIBUTION_BOARD_LOCATION		Character	200	
DISTRIBUTION_BOARD_ID		Character	200	
CIRCUIT_BREAKER_ID		Character	200	
OPERATING_VOLTAGE*		Character	200	

* Designates mandatory attribute

Table 190 REF11_POWER_OUTLET Ref 11 lookup tables

Ref 11 lookup table	Values
POWER_OUTLET_ASSET_SUB_TYPE	MULTIPLE POWER OUTLET SINGLE POWER OUTLET
POWER_OUTLET_ASSET_TYPE	POWER OUTLET

10.7 Solar panel

Public lighting and electrical assets > Solar panel
Tags: solar panel

A solar panel is represented by the **REF11_SOLAR_PANEL** block inserted at the centre of the feature with attribute information.

Table 191 Solar panel layers

Layer	Description	Linetype	Colour
REF11_SOLAR_PANEL_NEW	New solar panel	Continuous	150
REF11_SOLAR_PANEL_EXG	Existing solar panel	Continuous	154
REF11_SOLAR_PANEL_REM	Removed solar panel	Continuous	red

Table 192 REF11_SOLAR_PANEL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	SOLAR_PANEL_ASSET_SUB_TYPE
ASSET_TYPE*	SOLAR PANEL	Character	200	
ASSET_ID		Character	200	
CONSTRUCTION_DATE		Date		
MAKE_MODEL		Character	200	
POWER_SOURCE		Character	200	
OUTPUT		Real	38.8	
MOUNTING		Character	200	SOLAR_PANEL_MOUNTING
MATERIAL		Character	200	SOLAR_PANEL_MATERIAL
WIDTH		Real	38.8	
HEIGHT		Real	38.8	
LOCATION		Character	200	
SUBURB		Character	200	

* Designates mandatory attribute

Table 193 REF11_SOLAR_PANEL Ref 11 lookup tables

Ref 11 lookup table	Values
SOLAR_PANEL_ASSET_SUB_TYPE	LARGE SOLAR PANEL SMALL SOLAR PANEL
SOLAR_PANEL_MOUNTING	BOOM GATE BUILDING BUS SHELTER CAGE FENCE FREE STANDING GATE LIGHT POLE PIPE POLE STREETLIGHT COLUMN TRAFFIC SIGNAL COLUMN TRAILER MOUNTED
SOLAR_PANEL_MATERIAL	GLASS GLASS AND SILICON METAL

10.8 Streetlight cable

Public lighting and electrical assets > Streetlight cable
Tags: streetlight cable

A streetlight cable is represented by a linear feature (line, lightweight polyline) with the **REF11_STREETLIGHT_CABLE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 194 Streetlight cable layers

Layer	Description	Linetype	Colour
REF11_STREETLIGHT_CABLE_NEW	New streetlight cable	Continuous	162
REF11_STREETLIGHT_CABLE_EXG	Existing streetlight cable	Continuous	166
REF11_STREETLIGHT_CABLE_REM	Removed streetlight cable	Continuous	red

Table 195 REF11_STREETLIGHT_CABLE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STREETLIGHT CABLE	Character	200	SL_CABLE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SL_CABLE_ASSET_SUB_TYPE
CABLE_DEPTH*		Real	38.8	
OFFSET_DISTANCE_PROPERTY*		Real	38.8	
OFFSET_DISTANCE_KERB*		Real	38.8	
CONDUIT*		Character	200	CONDUIT
CABLE_TYPE*		Character	200	CABLE_TYPE
CABLE_LENGTH*		Real	38.8	

* Designates mandatory attribute

Table 196 REF11_STREETLIGHT_CABLE Ref 11 lookup tables

Ref 11 lookup table	Values
SL_CABLE_ASSET_TYPE	STREETLIGHT CABLE
SL_CABLE_ASSET_SUB_TYPE	OVERHEAD CABLE UNDERGROUND CABLE
CONDUIT	25MM UPVC CAT A 32MM UPVC CAT A 40MM UPVC CAT A 50MM UPVC CAT A 63MM UPVC CAT A 100MM UPVC CAT A 125MM UPVC CAT A BEND 50MM 90 DEG
CABLE_TYPE	2 CORE 6MM T+E 2 CORE 6MM TPS XLPE STREETLIGHT CABLE 2.5MM 2 CORE STREETLIGHT CABLE 4 CORE 16MM XLPE PVC STREETLIGHT CABLE 4MM 2 CORE STREETLIGHT CABLE 16MM 2 CORE XLPE STREETLIGHT CABLE 16MM 4 CORE XPLE STREETLIGHT CABLE 16MM TWISTED SERVICE CU 16MM XLPE SINGLE CORE HARD DRAWN CU 35MM 4 CORE XPLE STREETLIGHT CABLE 51 CORE ORANGE CIRCULAR STREETLIGHT CABLE SINGLE CORE 6MM T+E

10.9 Streetlight cable joint

Public lighting and electrical assets > Streetlight cable joint
Tags: streetlight cable joint

A streetlight cable joint is represented by the **REF11_STREETLIGHT_CABLE_JOINT** block inserted at the centre of the feature with attribute information.

Table 197 Streetlight cable joint layers

Layer	Description	Linetype	Colour
REF11_STREETLIGHT_CABLE_JOINT_NEW	New streetlight cable joint	Continuous	161
REF11_STREETLIGHT_CABLE_JOINT_EXG	Existing streetlight cable joint	Continuous	165
REF11_STREETLIGHT_CABLE_JOINT_REM	Removed streetlight cable joint	Continuous	red

Table 198 REF11_STREETLIGHT_CABLE_JOINT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STREETLIGHT CABLE JOINT	Character	200	SL_CABLE_JNT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SL_CABLE_JNT_ASSET_SUB_TYPE

* Designates mandatory attribute

Table 199 REF11_STREETLIGHT_CABLE_JOINT Ref 11 lookup tables

Ref 11 lookup table	Values
SL_CABLE_JNT_ASSET_TYPE	STREETLIGHT CABLE JOINT
SL_CABLE_JNT_ASSET_SUB_TYPE	CAPPED DEAD END DUMMY LIVE END OVERHEAD SERVICE CONNECTION PIT BRANCH JOINT SLEEVE STRAIGHT THROUGH DIFFERENT CABLE STRAIGHT THROUGH SAME CABLE TEE JOINT UNDERGROUND TO OVERHEAD SERVICE CONNECTION

10.10 Streetlight column

Public lighting and electrical assets > Streetlight column
Tags: streetlight column, public lighting

A streetlight column is represented by the **REF11_STREETLIGHT_COLUMN** block inserted at the centre of the feature with attribute information.

Table 200 Streetlight column layers

Layer	Description	Linetype	Colour
REF11_STREETLIGHT_COLUMN_NEW	New streetlight column	Continuous	160
REF11_STREETLIGHT_COLUMN_EXG	Existing streetlight column	Continuous	164
REF11_STREETLIGHT_COLUMN_REM	Removed streetlight column	Continuous	30

Table 201 REF11_STREETLIGHT_COLUMN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STREET LIGHT	Character	200	SL_COLUMN_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SL_COLUMN_ASSET_SUB_TYPE
ASSET_ID*		Character	200	
COLUMN_TYPE*		Character	200	STREETLIGHT_COLUMN_TYPE
COLUMN_MATERIAL*		Character	200	STREETLIGHT_COLUMN_MATERIAL
COLUMN_HEIGHT*		Real	38.8	STREETLIGHT_COLUMN_HEIGHT
MOUNTING*		Character	200	STREETLIGHT_MOUNTING
SUPPLY*		Character	200	STREETLIGHT_COLUMN_SUPPLY
AUSTRALIAN_STANDARD		Character	200	
AUSTRALIAN_STANDARD_COMPLIANCE*		Character	200	COMPLIANCE
OUTREACH_ARM_COUNT*		Integer	8	
OUTREACH_ARM_LENGTH		Real	38.8	SL_OUTREACH_ARM_LENGTH
LAMP_TYPE*		Character	200	STREETLIGHT_LAMP_TYPE
LUMINAIRE*		Character	200	STREETLIGHT_LUMINAIRE
LAMP_COUNT*		Integer	8	
LAMP_WATTAGE*		Integer	8	STREETLIGHT_WATTAGE
SECONDARY_OUTREACH_ARM_COUNT*		Integer	8	
SECONDARY_OUTREACH_ARM_HEIGHT		Real	38.8	
SECONDARY_OUTREACH_ARM_LENGTH		Real	38.8	
SECONDARY_LAMP_TYPE		Character	200	STREETLIGHT_LAMP_TYPE

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
SECONDARY_LUMINAIRE		Character	200	STREETLIGHT_LUMINAIRE
SECONDARY_LAMP_COUNT		Integer	8	
SECONDARY_LAMP_WATTAGE		Integer	8	STREETLIGHT_WATTAGE

* Designates mandatory attribute

Table 202 REF11_STREETLIGHT_COLUMN Ref 11 lookup tables

Ref 11 lookup table	Values
SL_COLUMN_ASSET_TYPE	STREETLIGHT
SL_COLUMN_ASSET_SUB_TYPE	STREETLIGHT COLUMN AND LUMINAIRE STREETLIGHT LUMINAIRE ONLY
STREETLIGHT_COLUMN_TYPE	AWNINGS BOLLARD BRICK WALL BRIDGE BUS SHELTER COMM TOWER - OPTUS COMM TOWER - TELSTRA CONCRETE COLUMN CONCRETE WITH HV/LV DIST CONCRETE WITH TRAFFIC LIGHTS ENERGY ABSORBING COLUMN ENERGY ABSORBING COMBINED USE COLUMN FORDE COLUMN FYNTRIM COLUMN HERITAGE COLUMN IMPACT ABSORBING COLUMN IMPACT ABSORBING COMBINED USE COLUMN IN GROUND INGAL COLUMN MULTIFUNCTION COLUMN NO COLUMN HARD SURFACE MOUNTED PEDESTRIAN OVERPASS POST TOP COLUMN PREGNANT PILLAR COLUMN RIGID COLUMN SLIP BASE COLUMN SPECIAL COLUMN STEPPED ROUND COLUMN STRUCTURE TAPERED OCTAGONAL COLUMN TAPERED ROUND COLUMN TIMBER POLE TOILET BLOCK TUNNEL UNDERPASS VICPOLE COLUMN WOODEN POLE

Ref 11 lookup table	Values
STREETLIGHT_COLUMN_MATERIAL	ALUMINIUM AWNINGS BOLLARD BRICK WALL BRIDGE BUS SHELTER CONCRETE COLUMN CREOSOTE FIBREGLASS GALVANISED STEEL PEDESTRIAN OVERPASS STAINLESS STEEL STEEL STEEL - SPECIAL PAINTED STEEL DISTRIBUTION (PREGNANT PILLAR) STEEL ORDINARY STEEL ORDINARY (LANEWAY) STEEL ORDINARY (PAINTED) STEEL SPECIAL STRUCTURE TANALITH TIMBER TOILET BLOCK TUNNEL UNDERPASS
STREETLIGHT_COLUMN_HEIGHT	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet, e.g. 4.2, 6.3, etc.*
STREETLIGHT_MOUNTING	BASE MOUNTED DIRECT BURIED DIRECT BURIED SLIP BASE PLATE IN GROUND RAG BOLT RAG BOLT MOUNTED SLIP BASE ROOF MOUNTED STRUCTURE WALL MOUNTED
STREETLIGHT_COLUMN_SUPPLY	OVERHEAD CABLE SOLAR POWERED TRAFFIC SIGNAL CONTROLLER UNDERGROUND CABLE
COMPLIANCE	COMPLIANT NON COMPLIANT
SL_OUTREACH_ARM_LENGTH	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet, e.g. 1.5, 2.5, etc.*

Ref 11 lookup table	Values
STREETLIGHT_LAMP_TYPE	COMPACT FLUORESCENT COMPACT SOURCE IODINE HIGH PRESSURE SODIUM HIGH PRESSURE SODIUM TWIN ARC INCANDESCENT LIGHT EMITTING DIODE MERCURY HIGH PRESURE FLUORESCENT COATING MERCURY HIGH PRESURE PHOSPHOR COATING MERCURY LOW PRESURE FLUORESCENT COATING MERCURY VAPOUR METAL HALIDE MULTI-COLOURED FLOWER EFFECT PHOTOLUMINESCENCE QUARTZ IODIDE SODIUM VAPOUR HIGH PRESSURE SODIUM VAPOUR HIGH PRESSURE TWIN ARC SODIUM VAPOUR LOW PRESSURE
STREETLIGHT_LUMINAIRE	*Allowable values omitted for brevity.* *Refer to MIS 14 and ACTSD-4201.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet (some values will require CED approval).*
STREETLIGHT_WATTAGE	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*

10.11 Streetlight control box

Public lighting and electrical assets > Streetlight control box
Tags: streetlight control box

A streetlight control box is represented by the **REF11_STREETLIGHT_CONTROL_BOX** block inserted at the centre of the feature with attribute information.

Table 203 Streetlight control box layers

Layer	Description	Linetype	Colour
REF11_STREETLIGHT_CONTROL_BOX_NEW	New streetlight control box	Continuous	162
REF11_STREETLIGHT_CONTROL_BOX_EXG	Existing streetlight control box	Continuous	166
REF11_STREETLIGHT_CONTROL_BOX_REM	Removed streetlight control box	Continuous	red

Table 204 REF11_STREETLIGHT_CONTROL_BOX attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STREETLIGHT CONTROL BOX	Character	200	SL_CTRL BOX_ASSET_TYPE
ASSET_ID*		Character	200	
ASSET_SUB_TYPE*		Character	200	SL_CTRL BOX_ASSET_SUB_TYPE
SUBSTATION_NUMBER*		Character	200	
CONTROLLER_BOX_MOUNTING*		Character	200	CONTROLLER_BOX_MOUNTING
CONTACTOR_CONTROL_NUMBER*		Character	200	
NUMBER_OF_CIRCUITS*		Real	38.8	
PARENT_CIRCUIT_ID*		Character	200	
ASBESTOS_PANEL*		Character	200	ASBESTOS_PANEL
AUSTRALIAN_STANDARD*		Character	200	
AUSTRALIAN_STANDARD_COMPLIANCE*		Character	200	COMPLIANCE

* Designates mandatory attribute

Table 205 REF11_STREETLIGHT_CONTROL_BOX Ref 11 lookup tables

Ref 11 lookup table	Values
SL_CTRL BOX_ASSET_TYPE	STREETLIGHT CONTROL BOX
SL_CTRL BOX_ASSET_SUB_TYPE	CONTROL POINT INSIDE SUBSTATION EXTERNAL CONTROL POINT
CONTROLLER_BOX_MOUNTING	BRICK SUBSTATION BRICK WALL CONCRETE POLE CONTROL CUBICLE GROUND SUBSTATION IND SUBSTATION MINI PILLAR PADMOUNT SUBSTATION SUBSTATION TOILET BLOCK WOODEN POLE
ASBESTOS_PANEL	ASBESTOS PANEL
COMPLIANCE	COMPLIANT NON COMPLIANT

10.12 Streetlight photoelectric cell

Public lighting and electrical assets > Streetlight photoelectric cell
Tags: streetlight photoelectric cell

A streetlight photoelectric cell is represented by the **REF11_STREETLIGHT_PHOTOELECTRIC_CELL** block inserted at the centre of the feature with attribute information.

Table 206 Streetlight photoelectric cell layers

Layer	Description	Linetype	Colour
REF11_STREETLIGHT_PHOTOELECTRIC_CELL_NEW	New streetlight photoelectric cell	Continuous	163
REF11_STREETLIGHT_PHOTOELECTRIC_CELL_EXG	Existing streetlight photoelectric cell	Continuous	167
REF11_STREETLIGHT_PHOTOELECTRIC_CELL_REM	Removed streetlight photoelectric cell	Continuous	red

Table 207 REF11_STREETLIGHT_PHOTOELECTRIC_CELL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	PHOTOELECTRIC CELL	Character	200	SL_PE_CELL_ASSET_SUB_TYPE
ASSET_TYPE*	STREETLIGHT PHOTOELECTRIC CELL	Character	200	SL_PE_CELL_ASSET_TYPE

* Designates mandatory attribute

Table 208 REF11_STREETLIGHT_PHOTOELECTRIC_CELL Ref 11 lookup tables

Ref 11 lookup table	Values
SL_PE_CELL_ASSET_SUB_TYPE	PHOTOELECTRIC CELL
SL_PE_CELL_ASSET_TYPE	STREETLIGHT PHOTOELECTRIC CELL

10.13 Switchboard

Public lighting and electrical assets > Switchboard
Tags: switchboard

A switchboard is represented by the **REF11_SWITCHBOARD** block inserted at the centre of the feature with attribute information.

Table 209 Switchboard layers

Layer	Description	Linetype	Colour
REF11_SWITCHBOARD_NEW	New switchboard	Continuous	131
REF11_SWITCHBOARD_EXG	Existing switchboard	Continuous	135
REF11_SWITCHBOARD_REM	Removed switchboard	Continuous	red

Table 210 REF11_SWITCHBOARD attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SWITCHBOARD	Character	200	
ASSET_SUB_TYPE*		Character	200	SWITCHBOARD_ASSET_SUB_TYPE
ASSET_ID		Character	200	
MAKE_MODEL		Character	200	
SERIAL_NUMBER		Character	200	
SECURITY_PURPOSES		Character	200	SECURITY_PURPOSES
SWITCHBOARD_ATTACHMENT		Character	200	ATTACHMENT_TYPE
LOCATION		Character	200	
SUBURB		Character	200	
CONSTRUCTION_DATE		Date		

* Designates mandatory attribute

Table 211 REF11_SWITCHBOARD Ref 11 lookup tables

Ref 11 lookup table	Values
SWITCHBOARD_ASSET_SUB_TYPE	CONTROL BOX DISTRIBUTION BOARDS ELECTRICAL SWITCHBOARD EXTRACTOR PANEL FUEL DETECTION PANEL GAS DETECTOR SYSTEM MECHANICAL SWITCHBOARD METER BOX PUMP CONTROL BOX SOLAR GRID CONNECTION CUBICLE SOLAR INVERTER
SECURITY_PURPOSES	FOR SECURITY PURPOSES NOT FOR SECURITY PURPOSES
ATTACHMENT_TYPE	BOOM GATE BUILDING CAGE FENCE FREE STANDING GATE LIGHT POLE PIPE POLE STRUCTURE TRAILER MOUNTED

11 Public transport assets

Bus stop	Bus stops

11.1 Bus stop

Public transport assets > Bus stop
Tags: bus stop

A bus stop is represented by the **REF11_BUS_STOP** block inserted at the centre of the feature with attribute information.

Table 212 Bus stop layers

Layer	Description	Linetype	Colour
REF11_BUS_STOP_NEW	New bus stop	Continuous	40
REF11_BUS_STOP_EXG	Existing bus stop	Continuous	44
REF11_BUS_STOP_REM	Removed bus stop	Continuous	10

Table 213 REF11_BUS_STOP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PUBLIC TRANSPORT STOP	Character	200	BUS_STOP_ASSET_TYPE
ASSET_SUB_TYPE*	BUS STOP	Character	200	BUS_STOP_ASSET_SUB_TYPE
ID_NUMBER		Real	38.8	
SCHOOL_ONLY		Character	200	SCHOOL_SERVICES
INDENTED_BAY*		Character	200	TERMINAL_TYPE
SIGN_TYPE*		Character	200	BUS_STOP_SIGN_TYPE
TIMETABLE_BOLLARD*		Character	200	TIMETABLE_BOLLARD
CONCRETE_PAD*		Character	200	CONCRETE_PAD
FOOTPATH_CONNECTION*		Character	200	FOOTPATH_CONNECTION
DISABILITY_ACCESS*		Character	200	DISABILITY_ACCESS
LUMINOUS_STRIP*		Character	200	LUMINOUS_STRIP
SHELTER_TYPE*		Character	200	BUS_STOP_SHELTER_TYPE
SHELTER_DESCRIPTION*		Character	200	
SHELTER_ADVERTISING*		Character	200	SHELTER_ADVERTISING
SEAT_TYPE*		Character	200	BUS_STOP_SEAT_TYPE
SEAT_FRAME_TYPE*		Character	200	SEAT_FRAME_TYPE
BENCH*		Character	200	BENCH_SEAT
BICYCLE_RACK*		Character	200	BUS_STOP_BICYCLE_RACK
BICYCLE_RACK_CAPACITY*		Real	38.8	

* Designates mandatory attribute

Table 214 REF11_BUS_STOP Ref 11 lookup tables

Ref 11 lookup table	Values
BUS_STOP_ASSET_TYPE	PUBLIC TRANSPORT STOP
BUS_STOP_ASSET_SUB_TYPE	BUS STOP
SCHOOL_SERVICES	INACTIVE REGULAR AND SCHOOL SERVICES SCHOOL SERVICES ONLY
TERMINAL_TYPE	INDENTED BAY BUS STOP ON ROAD BUS STOP
BUS_STOP_SIGN_TYPE	LIGHT POLE METAL POLE (BUS STOP) TIMBER PEG
TIMETABLE_BOLLARD	NO TIMETABLE BOLLARD TIMETABLE BOLLARD INSTALLED
CONCRETE_PAD	CONCRETE PAD NO CONCRETE PAD
FOOTPATH_CONNECTION	INCLUDES FOOTPATH CONNECTION NO FOOTPATH CONNECTION
DISABILITY_ACCESS	NO, DIFFICULT SITE NO, FUNCTIONAL, WITH TILES NO, NOT ASSESSED YES
LUMINOUS_STRIP	LUMINOUS STRIP INSTALLED NO LUMINOUS STRIP INSTALLED
BUS_STOP_SHELTER_TYPE	ADSHELL ALUMINIUM/GLASS BRICK CHIPBOARD COMPOSITE CONCRETE CUSTOM DESIGN LEXAN MONOCRETE NO SHELTER - CONCRETE PAD OOH! MEDIA ADVERTISING STEEL STEEL/GLASS STEEL/MESH TIMBER
SHELTER_ADVERTISING	NO SHELTER ADVERTISING SHELTER ADVERTISING

Ref 11 lookup table	Values
BUS_STOP_SEAT_TYPE	ALUMINIUM ARMREST RECYCLED CONCRETE FIBREGLASS KAKADU METAL STRAPS MONARO NO SEAT INSTALLED PRESSED METAL RECYCLED MATERIAL STEEL MESH TIMBER
SEAT_FRAME_TYPE	BRICK CONCRETE FIBREGLASS METAL NO SEAT EXISTS RECYCLED PLASTIC TIMBER
BENCH_SEAT	BENCH SEAT NO BENCH SEAT
BUS_STOP_BICYCLE_RACK	INCLUDES BICYCLE RACK NO BIKE RACK

12 Recreation and sports assets

Basketball court	Basketball courts
Dog park	Dog parks
Dog park structure	A-frames, bridges, double bar jumps, hoops, hurdles, hoop tunnels, log balance beams, low bar jumps, pyramid ramps, sit-stay platforms, step platforms, tall bar jumps, tyre jumps, weave poles and weave spikes
Fitness site	Aerobic walkers, balance beams, bench dips, body dips and leg raises, body lifts, body pulls and push ups, chest press, chinup bars, exercise bikes, hand bikes, horizontal bars, horizontal ladders, hurdles, jump to touch, leg presses, leg raises and pull ups, log hops, multi stations, other sites, parallel bars, ping pong tables, pull downs, pull ups, push ups, recreational courts, roman rings, shoulder presses, sit up benches, sit ups and push ups, star jumps, step ups, stretching equipment and vaults
Grandstand	Open and undercover grandstands
Picnic area	Picnic areas
Playground	Central community playgrounds, central neighbourhood playgrounds, district playgrounds, local neighbourhood playgrounds, local neighbourhood natural playgrounds and rural playgrounds
Playground area	Mix of structures and natural, only natural and only structures
Playground structure	Balance elements, balance logs with ropes, bridges, chin up or turn over bars, climbers, combination units, cubby houses, digging pits, exercise elements, flying foxes, forts, platforms, goals, mazes, monkey bars, musical instruments, natural arches, natural balance logs , natural base areas, natural dry creeks, natural grass mounds, natural mazes, natural platforms, natural play rocks, natural posts, natural rill logs, natural sandstone logs, natural stepping logs, natural stepping stones, natural storage areas, natural totem poles, natural tunnels, panels (activity), play art elements, rockers, rotating elements, rubber mounds, rubber play mounds, running tracks, sand pits, sand play items, sculptures, slides, sound elements, spinning rockers, swings, track glides, trampolines, water play features and weave poles
Skate park	Half pipes, skate bowls, skate parks and skate ramps
Sportsground	Sportsgrounds

12.1 Basketball court

Recreation and sports assets > Basketball court
Tags: basketball court

A basketball court is represented by a closed lightweight polyline signifying the perimeter with the **REF11_BASKETBALL_COURT** block inserted inside with attribute information.

Table 215 Basketball court layers

Layer	Description	Linetype	Colour
REF11_BASKETBALL_COURT_NEW	New basketball court	Continuous	201
REF11_BASKETBALL_COURT_EXG	Existing basketball court	Continuous	205
REF11_BASKETBALL_COURT_REM	Removed basketball court	Continuous	red

Table 216 REF11_BASKETBALL_COURT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BASKETBALL COURT	Character	200	BBALL_COURT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BBALL_COURT_ASSET_SUB_TYPE
SURFACE_TYPE*		Character	200	BBALL_COURT_SURFACE_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 217 REF11_BASKETBALL_COURT Ref 11 lookup tables

Ref 11 lookup table	Values
BBALL_COURT_ASSET_TYPE	BASKETBALL COURT
BBALL_COURT_ASSET_SUB_TYPE	4 WAY HOOP DOUBLE COURT HALF COURT SINGLE COURT
BBALL_COURT_SURFACE_TYPE	ASPHALT CONCRETE

12.2 Dog park

Recreation and sports assets > Dog park
Tags: dog park

A dog park is represented by a closed lightweight polyline signifying the perimeter with the **REF11_DOG_PARK** block inserted inside with attribute information.

Table 218 Dog park layers

Layer	Description	Linetype	Colour
REF11_DOG_PARK_NEW	New dog park	Continuous	20
REF11_DOG_PARK_EXG	Existing dog park	Continuous	24
REF11_DOG_PARK_REM	Removed dog park	Continuous	red

Table 219 REF11_DOG_PARK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	DOG PARK	Character	200	DOG_PARK_ASSET_SUB_TYPE
ASSET_TYPE*	URBAN OPEN SPACE	Character	200	DOG_PARK_ASSET_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 220 REF11_DOG_PARK Ref 11 lookup tables

Ref 11 lookup table	Values
DOG_PARK_ASSET_SUB_TYPE	DOG PARK
DOG_PARK_ASSET_TYPE	URBAN OPEN SPACE

12.3 Dog park structure

Recreation and sports assets > Dog park structure
Tags: dog park play structure, dog park play element

A dog park structure is represented by the **REF11_DOG_PARK_STRUCTURE** block inserted at the centre of the feature with attribute information.

Table 221 Dog park structure layers

Layer	Description	Linetype	Colour
REF11_DOG_PARK_STRUCTURE_NEW	New dog park structure	Continuous	20
REF11_DOG_PARK_STRUCTURE_EXG	Existing dog park structure	Continuous	24
REF11_DOG_PARK_STRUCTURE_REM	Removed dog park structure	Continuous	red

Table 222 REF11_DOG_PARK_STRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	DOG PARK STRUCTURE	Character	200	DOG_PRK_STRUC_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	DOG_PRK_STRUC_SUB_TYPE
MAKE*		Character	200	
MODEL*		Character	200	
PRIMARY_MATERIAL*		Character	200	DOG_PRK_STRUC_PRIMARY_MAT
SECONDARY_MATERIAL		Character	200	DOG_PRK_STRUC_SECONDARY_MAT

* Designates mandatory attribute

Table 223 REF11_DOG_PARK_STRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
DOG_PRK_STRUC_ASSET_TYPE	DOG PARK STRUCTURE
DOG_PRK_STRUC_SUB_TYPE	A-FRAME BRIDGE DOUBLE BAR JUMP HOOP / HURDLE HOOP TUNNEL LOG BALANCE BEAM LOW BAR JUMP PYRAMID RAMP SIT-STAY PLATFORM STEP PLATFORM TALL BAR JUMP TYRE JUMP WEAVE POLES / WEAVE SPIKES
DOG_PRK_STRUC_PRIMARY_MAT	CONCRETE FIBREGLASS METAL PLASTIC PLYWOOD ROCK ROPE RUBBER TIMBER
DOG_PRK_STRUC_SECONDARY_MAT	CONCRETE FIBREGLASS METAL PLASTIC PLYWOOD ROCK ROPE RUBBER TIMBER

12.4 Fitness site

Recreation and sports assets > Fitness site
Tags: fitness site, recreational court

A fitness site is represented by the **REF11_FITNESS_SITE** block inserted at the centre of the feature with attribute information.

Table 224 Fitness site layers

Layer	Description	Linetype	Colour
REF11_FITNESS_SITE_NEW	New fitness site	Continuous	203
REF11_FITNESS_SITE_EXG	Existing fitness site	Continuous	207
REF11_FITNESS_SITE_REM	Removed fitness site	Continuous	red

Table 225 REF11_FITNESS_SITE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	FITNESS SITE	Character	200	FITNESS_SITE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	FITNESS_SITE_ASSET_SUB_TYPE
SURFACE_TYPE*		Character	200	FITNESS_SITE_SURFACE_TYPE

* Designates mandatory attribute

Table 226 REF11_FITNESS_SITE Ref 11 lookup tables

Ref 11 lookup table	Values
FITNESS_SITE_ASSET_TYPE	FITNESS SITE
FITNESS_SITE_SURFACE_TYPE	ASPHALT CONCRETE GRASS (SYNTHETIC) GRAVEL MULCH NATURAL MIXED RUBBER SAND TANBARK
FITNESS_SITE_ASSET_SUB_TYPE	AEROBIC WALKER BALANCE BEAM BENCH DIP BODY DIPS & LEG RAISES BODY LIFT BODY PULLS & PUSH UPS CHEST PRESS CHINUP BAR EXERCISE BIKE HAND BIKE HORIZONTAL BAR HORIZONTAL LADDER HURDLES JUMP TO TOUCH LEG PRESS LEG RAISES & PULL UPS LOG HOP MULTI STATION OTHER SITE PARALLEL BARS PING PONG TABLE PULL DOWNS PULL UPS PUSH UPS RECREATIONAL COURT ROMAN RINGS SHOULDER PRESS SIT UP BENCH SIT UPS & PUSH UPS STAR JUMPS STEP UPS STRETCHING EQUIPMENT VAULT

12.5 Grandstand

Recreation and sports assets > Grandstand
Tags: grandstand

A grandstand is represented by a closed lightweight polyline signifying the perimeter with the **REF11_GRANDSTAND** block inserted inside with attribute information.

Table 227 Grandstand layers

Layer	Description	Linetype	Colour
REF11_GRANDSTAND_NEW	New grandstand	Continuous	223
REF11_GRANDSTAND_EXG	Existing grandstand	Continuous	227
REF11_GRANDSTAND_REM	Removed grandstand	Continuous	red

Table 228 REF11_GRANDSTAND attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	GRANDSTAND	Character	200	GRANDSTAND_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	GRANDSTAND_ASSET_SUB_TYPE

* Designates mandatory attribute

Table 229 REF11_GRANDSTAND Ref 11 lookup tables

Ref 11 lookup table	Values
GRANDSTAND_ASSET_TYPE	GRANDSTAND
GRANDSTAND_ASSET_SUB_TYPE	OPEN UNDERCOVER

12.6 Picnic area

Recreation and sports assets > Picnic area
Tags: picnic area

A picnic area is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PICNIC_AREA** block inserted inside with attribute information.

Table 230 Picnic area layers

Layer	Description	Linetype	Colour
REF11_PICNIC_AREA_NEW	New picnic area	Continuous	143
REF11_PICNIC_AREA_EXG	Existing picnic area	Continuous	147
REF11_PICNIC_AREA_REM	Removed picnic area	Continuous	red

Table 231 REF11_PICNIC_AREA attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	PICNIC AREA	Character	200	PICNIC_AREA_ASSET_SUB_TYPE
ASSET_TYPE*	RESERVE	Character	200	PICNIC_AREA_ASSET_TYPE
SURFACE_AREA*		Real	38.8	
NUMBER_OF_BARBECUES*		Real	38.8	
NUMBER_OF_SEATS*		Real	38.8	
NUMBER_OF_TABLES*		Real	38.8	

* Designates mandatory attribute

Table 232 REF11_PICNIC_AREA Ref 11 lookup tables

Ref 11 lookup table	Values
PICNIC_AREA_ASSET_SUB_TYPE	PICNIC AREA
PICNIC_AREA_ASSET_TYPE	RESERVE

12.7 Playground

Recreation and sports assets > Playground
Tags: playground

A playground is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PLAYGROUND** block inserted inside with attribute information.

Table 233 Playground layers

Layer	Description	Linetype	Colour
REF11_PLAYGROUND_NEW	New playground	Continuous	200
REF11_PLAYGROUND_EXG	Existing playground	Continuous	204
REF11_PLAYGROUND_REM	Removed playground	Continuous	red

Table 234 REF11_PLAYGROUND attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PLAYGROUND	Character	200	PLAYGROUND_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PLAYGROUND_ASSET_SUB_TYPE
PARKING*		Character	200	PLAYGROUND_PARKING
SURFACE_AREA*		Real	38.8	
SHADE_LEVEL*		Character	200	PLAYGROUND_SHADE
SHADE_DESCRIPTION		Character	200	

* Designates mandatory attribute

Table 235 REF11_PLAYGROUND Ref 11 lookup tables

Ref 11 lookup table	Values
PLAYGROUND_ASSET_TYPE	PLAYGROUND
PLAYGROUND_ASSET_SUB_TYPE	CENTRAL COMMUNITY CENTRAL NEIGHBOURHOOD DISTRICT LOCAL NEIGHBOURHOOD LOCAL NEIGHBOURHOOD NATURAL RURAL
PLAYGROUND_PARKING	CARPARK DISABLED PARKING OFF STREET ON STREET
PLAYGROUND_SHADE	FAIR GOOD MODERATE NO SHADING POOR SHADE STRUCTURE ADJACENT SURROUNDING TREES

12.8 Playground area

Recreation and sports assets > Playground area
Tags: playground area

A playground area is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PLAYGROUND_AREA** block inserted inside with attribute information.

Table 236 Playground area layers

Layer	Description	Linetype	Colour
REF11_PLAYGROUND_AREA_NEW	New playground area	Continuous	202
REF11_PLAYGROUND_AREA_EXG	Existing playground area	Continuous	206
REF11_PLAYGROUND_AREA_REM	Removed playground area	Continuous	red

Table 237 REF11_PLAYGROUND_AREA attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PLAYGROUND AREA	Character	200	PLAYGROUND_AREA_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PLAYGROUND_AREA_SUB_TYPE
ACCESS_DESCRIPTION*		Character	200	PLAYGROUND_ACCESS
ALL_ACCESS_DISABLED*		Character	200	DISABLED_ACCESS
AGE_RANGE_0_TO_3*		Character	200	PLAYGROUND_AGES_0_TO_3
AGE_RANGE_4_TO_7*		Character	200	PLAYGROUND_AGES_4_TO_7
AGE_RANGE_8_TO_12*		Character	200	PLAYGROUND_AGES_8_TO_12
AGE_RANGE_13_PLUS*		Character	200	PLAYGROUND_AGES_13_PLUS
SURFACE_AREA*		Real	38.8	
SURFACE_TYPE*		Character	200	PLAYGROUND_SURFACE_TYPE
FENCING_TYPE		Character	200	PLAYGROUND_FENCING_TYPE
EDGING_TYPE*		Character	200	PLAYGROUND_EDGING_TYPE

* Designates mandatory attribute

Table 238 REF11_PLAYGROUND_AREA Ref 11 lookup tables

Ref 11 lookup table	Values
PLAYGROUND_AREA_ASSET_TYPE	PLAYGROUND AREA
PLAYGROUND_AREA_SUB_TYPE	MIX OF STRUCTURE AND NATURAL NATURAL STRUCTURE
PLAYGROUND_ACCESS	CONCRETE FOOTPATH ENTRANCE GATE GRAVEL FOOTPATH MULTIPLE CONCRETE FOOTPATHS NO FOOTPATH NO PLAYGROUND CARPARK OPEN SPACE GRASSING ROCK CLIMBING WHEELCHAIR ACCESSIBLE
DISABLED_ACCESS	DISABLED ACCESS NO DISABLED ACCESS
PLAYGROUND_AGES_0_TO_3	NOT SUITABLE FOR AGE RANGE 0 TO 3 SUITABLE FOR AGE RANGE 0 TO 3
PLAYGROUND_AGES_4_TO_7	NOT SUITABLE FOR AGE RANGE 4 TO 7 SUITABLE FOR AGE RANGE 4 TO 7
PLAYGROUND_AGES_8_TO_12	NOT SUITABLE FOR AGE RANGE 8 TO 12 SUITABLE FOR AGE RANGE 8 TO 12
PLAYGROUND_AGES_13_PLUS	NOT SUITABLE FOR AGE RANGE 13 PLUS SUITABLE FOR AGE RANGE 13 PLUS
PLAYGROUND_SURFACE_TYPE	ASPHALT CONCRETE GRASS (SYNTHETIC) GRAVEL MULCH NATURAL MIXED RUBBER SAND TANBARK
PLAYGROUND_FENCING_TYPE	CHAIN MESH CONCRETE WALL FULL WITH CHILDPROOF GATE PARTIAL POOL STYLE STEEL BALUSTRADE
PLAYGROUND_EDGING_TYPE	BLUESTONE BRICK CONCRETE FENCE MIXED PAVERS PLASTIC ROCK ROCK WALL RUBBER SPADE TIMBER (COPPERS LOG) TIMBER (SLEEPER)

12.9 Playground structure

Recreation and sports assets > Playground structure
Tags: playground structure

A playground structure is represented by the **REF11_PLAYGROUND_STRUCTURE** block inserted at the centre of the feature with attribute information.

Table 239 Playground structure layers

Layer	Description	Linetype	Colour
REF11_PLAYGROUND_STRUCTURE_NEW	New playground structure	Continuous	201
REF11_PLAYGROUND_STRUCTURE_EXG	Existing playground structure	Continuous	205
REF11_PLAYGROUND_STRUCTURE_REM	Removed playground structure	Continuous	red

Table 240 REF11_PLAYGROUND_STRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PLAYGROUND STRUCTURE	Character	200	PLAYGROUND_STRUC_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PLAYGROUND_STRUC_SUB_TYPE
ESTIMATED_DESIGN_LIFE*		Real	38.8	
INSTALLED_BY*		Character	200	
MAKE		Character	200	PLAYGROUND_STRUC_MAKE
MODEL		Character	200	
PRIMARY_MATERIAL*		Character	200	PLAYGROUND_MATERIAL
SECONDARY_MATERIAL		Character	200	PLAYGROUND_MATERIAL
STEPPING_STONE_COUNT		Real	38.8	

* Designates mandatory attribute

Table 241 REF11_PLAYGROUND_STRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
PLAYGROUND_STRUC_ASSET_TYPE	PLAYGROUND STRUCTURE
PLAYGROUND_STRUC_SUB_TYPE	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
PLAYGROUND_STRUC_MAKE	*Allowable values omitted for brevity.* *Refer to Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
PLAYGROUND_MATERIAL	ALUMINIUM BLUESTONE BRICK CANVAS CHAIN CHAIN (PLASTIC COATED) CHAIN (RUBBER COATED) CONCRETE CORRUGATED IRON FIBREGLASS METAL (PAINTED) METAL (PLASTIC COATED) METAL (POWDER COATED) METAL (RUBBER COATED) NATURAL GRASS PLASTIC PLYWOOD PLYWOOD (PAINTED) ROCK ROPE RUBBER SAND STEEL (GALVANISED) STEEL (STAINLESS) STONE TIMBER TIMBER (CYPRESS) TIMBER (PAINTED) TIMBER (REDGUM) TIMBER (TREATED)

12.10 Skate park

Recreation and sports assets > Skate park
Tags: skate park

A skate park is represented by a closed lightweight polyline signifying the perimeter with the **REF11_SKATE_PARK** block inserted inside with attribute information.

Table 242 Skate park layers

Layer	Description	Linetype	Colour
REF11_SKATE_PARK_NEW	New skate park	Continuous	200
REF11_SKATE_PARK_EXG	Existing skate park	Continuous	204
REF11_SKATE_PARK_REM	Removed skate park	Continuous	red

Table 243 REF11_SKATE_PARK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SKATE PARK	Character	200	SKATE_PARK_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SKATE_PARK_ASSET_SUB_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 244 REF11_SKATE_PARK Ref 11 lookup tables

Ref 11 lookup table	Values
SKATE_PARK_ASSET_TYPE	SKATE PARK
SKATE_PARK_ASSET_SUB_TYPE	HALF PIPE SKATE BOWL SKATE PARK SKATE RAMP

12.11 Sportsground

Recreation and sports assets > Sportsground
Tags: sportsground

A sportsground is represented by a closed lightweight polyline signifying the perimeter with the **REF11_SPORTSGROUND** block inserted inside with attribute information.

Table 245 Sportsground layers

Layer	Description	Linetype	Colour
REF11_SPORTSGROUND_NEW	New sportsground	Continuous	222
REF11_SPORTSGROUND_EXG	Existing sportsground	Continuous	226
REF11_SPORTSGROUND_REM	Removed sportsground	Continuous	red

Table 246 REF11_SPORTSGROUND attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SPORTSGROUND	Character	200	SPORTSGROUND_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SPORTSGROUND_ASSET_SUB_TYPE
GROUND_NUMBER		Integer	8	
GROUND_NAME		Character	200	
ZONE*		Character	200	SPORTSGROUND_ZONE
SURFACE_TYPE*		Character	200	SPORTSGROUND_SURFACE_TYPE
SURFACE_AREA*		Real	38.8	
WATER_SOURCE*		Character	200	SPORTSGROUND_WATER_SOURCE
CURRENT_IRRIGATED_AREA*		Real	38.8	
TOTAL_IRRIGATED_AREA*		Real	38.8	
TOTAL_DRYLAND_AREA*		Real	38.8	
TOTAL_MAINTAINED_AREA*		Real	38.8	

* Designates mandatory attribute

Table 247 REF11_SPORTSGROUND Ref 11 lookup tables

Ref 11 lookup table	Values
SPORTSGROUND_ASSET_TYPE	SPORTSGROUND
SPORTSGROUND_ASSET_SUB_TYPE	COMMUNITY RECREATION IRRIGATED PARK DISTRICT PLAYING FIELD ENCLOSED OVAL INFORMAL USE OVAL NEIGHBOURHOOD OVAL SPECIAL PURPOSE AREA SWIMMING POOL
SPORTSGROUND_ZONE	BELCONNEN GUNGAHLIN INNER NORTH INNER SOUTH TUGGERANONG WESTON WODEN
SPORTSGROUND_SURFACE_TYPE	COMBINATION COOL SEASON SYNTHETIC WARM SEASON
SPORTSGROUND_WATER_SOURCE	POTABLE STORM WATER TREATED EFFLUENT

13 Road, path and paving assets

Chicane point	Chicane points to restrict vehicular access to community paths
Community path area	Community path perimeters
Community path centreline	Community path centrelines for footpaths, shared paths and bicycle paths
Driveway	Commercial and residential driveways
Hard surface	Footpaths, pads, sediment forebays, shop or building pavements, slabs, stone pitching and yards
Kerb	Kerbs, edges of roads, tracks and trails
Kerb ramp	Kerb ramps (pram crossings)
Kerb slot	Kerb slots (at-grade path crossings through a median refuge island or traffic island, as defined in *ACTSD-0517*)
Road centreline	Road centrelines
Road pavement	Road pavements including all the layers
Step point	Step points and stairs
Tactile indicators	Tactile indicators
Vehicle Crossing	Vehicle Crossings

13.1 Chicane point

Road, path and paving assets > Chicane point
Tags: chicane point, vehicle restriction rail, bicycle path entry control

A chicane point restricts vehicular access onto paths and is represented by the **REF11_CHICANE_POINT** block inserted at the centre of the feature with attribute information.

Table 248 Chicane point layers

Layer	Description	Linetype	Colour
REF11_CHICANE_POINT_NEW	New chicane point	Continuous	42
REF11_CHICANE_POINT_EXG	Existing chicane point	Continuous	46
REF11_CHICANE_POINT_REM	Removed chicane point	Continuous	red

Table 249 REF11_CHICANE_POINT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	CHICANE POINT	Character	200	CHICANE_POINT_ASSET_SUB_TYPE
ASSET_TYPE*	TRAFFIC CALMING DEVICE	Character	200	CHICANE_POINT_ASSET_TYPE
CHICANE_MATERIAL*		Character	200	CHICANE_MATERIAL
PAVEMENT_MATERIAL*		Character	200	PATH_SURFACE

* Designates mandatory attribute

Table 250 REF11_CHICANE_POINT Ref 11 lookup tables

Ref 11 lookup table	Values
CHICANE_POINT_ASSET_SUB_TYPE	CHICANE POINT
CHICANE_POINT_ASSET_TYPE	TRAFFIC CALMING DEVICE
CHICANE_MATERIAL	GALVANISED STEEL TIMBER
PATH_SURFACE	ASPHALT CONCRETE ENVIROMESH FIBRE REINFORCED CONCRETE GRAVEL PAVERS OR CONCRETE BLOCKS PERMEABLE PAVEMENT POROUS PAVEMENT STONE TIMBER

13.2 Community path area

Road, path and paving assets > Community path area
Tags: community path, footpath, cyclepath, shared path

A community path area is a graphics only feature represented by a closed lightweight polyline signifying the perimeter of the community path. The community path centreline also needs to be drawn with its associated block (see **Section 13.3**).

Table 251 Community path area layers

Layer	Description	Linetype	Colour
REF11_COMMUNITY_PATH_AREA_NEW	New community path area	Continuous	140
REF11_COMMUNITY_PATH_AREA_EXG	Existing community path area	Continuous	144
REF11_COMMUNITY_PATH_AREA_REM	Removed community path area	Continuous	red

13.3 Community path centreline

Road, path and paving assets > Community path centreline
Tags: community path, footpath, cyclepath, shared path

A community path centreline is represented by a linear feature (line, lightweight polyline) with the **REF11_COMMUNITY_PATH_CL** block inserted at the midpoint along one of the feature's segments with attribute information. The community path perimeter also needs to be drawn (see **Section 13.2**).

Table 252 Community path centreline layers

Layer	Description	Linetype	Colour
REF11_COMMUNITY_PATH_CL_NEW	New community path centreline	Continuous	7
REF11_COMMUNITY_PATH_CL_EXG	Existing community path centreline	Continuous	7
REF11_COMMUNITY_PATH_CL_REM	Removed community path centreline	Continuous	240

Table 253 REF11_COMMUNITY_PATH_CL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	COMMUNITY PATH	Character	200	COMMUNITY_PATH_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	COMMUNITY_PATH_SUB_TYPE
AVERAGE_WIDTH*		Real	38.8	
PATH_SURFACE*		Character	200	PATH_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE
JOINT_TYPE		Character	200	COMMUNITY_PATH_JOINT_TYPES
CONCRETE_SUBBASE		Character	200	CONCRETE_SUBBASE
CONCRETE_SUBBASE_REINFORCING		Character	255	REINFORCING_TYPE
PATH_LENGTH*		Real	38.8	
TRAVEL_DIRECTION		Character	255	TRAVEL_DIRECTION
TRAVEL_RESTRICTION		Character	255	TRAVEL_RESTRICTION
PAINTED_SEPARATION_LINES		Character	200	PAINTED_SEPARATION_LINES
LINK_PATH		Character	200	LINK_PATH

* Designates mandatory attribute

Table 254 REF11_COMMUNITY_PATH_CL Ref 11 lookup tables

Ref 11 lookup table	Values
COMMUNITY_PATH_ASSET_TYPE	COMMUNITY PATH
COMMUNITY_PATH_SUB_TYPE	BICYCLE-ONLY PATH (ONE-WAY PAIR) BICYCLE-ONLY PATH (TWO-WAY PAIR) INTERMEDIATE / TRUNK PATH INTERMEDIATE PATH MINOR PATH PEDESTRIAN-ONLY PATH TRUNK PATH
PATH_SURFACE	ASPHALT CLAY OR CONCRETE PAVERS COMPOSITE SURFACE ENVIROMESH GRAVEL IN SITU REINFORCED CONCRETE PERMEABLE PAVEMENT POROUS PAVEMENT STONE TIMBER
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING
COMMUNITY_PATH_JOINT_TYPES	ARTICULATED JOINT CONSTRUCTION JOINT WITH DOWELS ISOLATION JOINT LIGHT DUTY DOWELLED EXPANSION JOINT WEAKENED PLANE JOINT
CONCRETE_SUBBASE	CONCRETE SUBBASE NO SUBBASE
TRAVEL_DIRECTION	ONE-WAY TWO-WAY
TRAVEL_RESTRICTION	CYCLE ONLY NO RESTRICTION PEDESTRIAN ONLY
PAINTED_SEPARATION_LINES	NO SEPARATION LINES SP1 SEPARATION LINES SP2 SEPARATION LINES
LINK_PATH	LINK PATH NOT LINK PATH

13.4 Driveway

Road, path and paving assets > Driveway
Tags: driveway

A driveway is represented by a closed lightweight polyline signifying the perimeter with the **REF11_DRIVEWAY** block inserted inside with attribute information.

Table 255 Driveway layers

Layer	Description	Linetype	Colour
REF11_DRIVEWAY_NEW	New driveway	Continuous	30
REF11_DRIVEWAY_EXG	Existing driveway	Continuous	34
REF11_DRIVEWAY_REM	Removed driveway	Continuous	240

Table 256 REF11_DRIVEWAY attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	DRIVEWAY	Character	200	DRIVEWAY_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	DRIVEWAY_SUB_TYPE
DRIVEWAY_SURFACE*		Character	200	DRIVEWAY_SURFACE
SURFACE_AREA*		Real	38.8	
REINFORCING_TYPE		Character	255	REINFORCING_TYPE
PEDESTRIAN_PRIORITY_FOOTPATH*		Character	200	PEDESTRIAN_PRIORITY_FOOTPATH

* Designates mandatory attribute

Table 257 REF11_DRIVEWAY Ref 11 lookup tables

Ref 11 lookup table	Values
DRIVEWAY_ASSET_TYPE	DRIVEWAY
DRIVEWAY_SUB_TYPE	HEAVY DUTY DRIVEWAY COMMERCIAL OR INDUSTRIAL RESIDENTIAL
DRIVEWAY_SURFACE	BITUMEN CONCRETE ENVIROMESH EXPOSED AGGREGATE PAVERS OR CONCRETE BLOCKS PLAIN COLOURED CONCRETE STAMPED CONCRETE
PEDESTRIAN_PRIORITY_FOOTPATH	NO FOOTPATH RUNS THROUGH DRIVEWAY PEDESTRIAN PRIORITY FOOTPATH RUNS THROUGH DRIVEWAY
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING

13.5 Hard surface

Road, path and paving assets > Hard surface
Tags: shop build pavement, hard surface

A hard surface is represented by a closed lightweight polyline signifying the perimeter with the **REF11_HARD_SURFACE** block inserted inside with attribute information.

Table 258 Hard surface layers

Layer	Description	Linetype	Colour
REF11_HARD_SURFACE_NEW	New hard surface	Continuous	142
REF11_HARD_SURFACE_EXG	Existing hard surface	Continuous	146
REF11_HARD_SURFACE_REM	Removed hard surface	Continuous	red

Table 259 REF11_HARD_SURFACE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	HARD SURFACE	Character	200	HARD_SURFACE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	HARD_SURFACE_SUB_TYPE
SURFACE_AREA*		Real	38.8	
PAVEMENT_MATERIAL*		Character	200	PAVEMENT_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE
CONCRETE_SUBBASE		Character	200	CONCRETE_SUBBASE
CONCRETE_SUBBASE_REINFORCING		Character	200	REINFORCING_TYPE

* Designates mandatory attribute

Table 260 REF11_HARD_SURFACE Ref 11 lookup tables

Ref 11 lookup table	Values
HARD_SURFACE_ASSET_TYPE	HARD SURFACE
HARD_SURFACE_SUB_TYPE	FOOTPATH PAD SEDIMENT FOREBAY SHOP/BUILDING PAVEMENT SLAB STONE PITCHING YARD
PAVEMENT_SURFACE	ASPHALT BRICK PAVERS CLAY CONCRETE CONCRETE PAVERS ENVIROMESH FLEXIBLE PAVEMENT FLEXIBLE POROUS PAVING PAVERS OR CONCRETE BLOCKS PERMEABLE PAVEMENT PERMEABLE PAVING REINFORCED CONCRETE STONE WITH CEMENT MORTAR
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING
CONCRETE_SUBBASE	CONCRETE SUBBASE NO SUBBASE

13.6 Kerb

Road, path and paving assets > Kerb
Tags: kerb, open channel invert, open concrete invert, edge of bitumen

A kerb is represented by a linear feature (line, lightweight polyline) with the **REF11_KERB** block inserted at the midpoint along one of the feature's segments with attribute information. The kerb's linear feature represents the nominal kerb lines as specified in ACT Standard Drawings *ACTSD-0101* and *ACTSD-0102*.

Table 261 Kerb layers

Layer	Description	Linetype	Colour
REF11_KERB_NEW	New kerb	Continuous	100
REF11_KERB_EXG	Existing kerb	Continuous	104
REF11_KERB_REM	Removed kerb	Continuous	240

Table 262 REF11_KERB attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	KERB_ASSET_SUB_TYPE
ASSET_TYPE*	KERB	Character	200	KERB_ASSET_TYPE

* Designates mandatory attribute

Table 263 REF11_KERB Ref 11 lookup tables

Ref 11 lookup table	Values
KERB_ASSET_SUB_TYPE	BARRIER KERB BARRIER KERB AND GUTTER BARRIER KERB TEMPORARY CASTELLATED KERB EDGE OF BITUMEN EDGE OF ROAD / PATH / TRACK / TRAIL FLUSH KERB KERB AND GUTTER KERB ONLY KERB TYPE 4A MODIFIED LAYBACK KERB MOUNTABLE KERB MOUNTABLE KERB AND GUTTER MOUNTABLE KERB TEMPORARY MOWER STRIP OPEN CHANNEL INVERT PERMEABLE KERB REINFORCED BUS STOP KERB AND GUTTER REINFORCED BUS STOP KERB ONLY REINFORCED FLUSH KERB REINFORCED KERB AND GUTTER REINFORCED OPEN CONCRETE INVERT SPECIAL MODIFIED LAYBACK
KERB_ASSET_TYPE	KERB

13.7 Kerb ramp

Road, path and paving assets > Kerb ramp
Tags: pram crossing, kerb ramp

A kerb ramp (also known as a pram crossing) is represented by a closed lightweight polyline signifying the perimeter with the **REF11_KERB_RAMP** block inserted inside with attribute information.

Table 264 Kerb ramp layers

Layer	Description	Linetype	Colour
REF11_KERB_RAMP_NEW	New kerb ramp	Continuous	140
REF11_KERB_RAMP_EXG	Existing kerb ramp	Continuous	144
REF11_KERB_RAMP_REM	Removed kerb ramp	Continuous	red

Table 265 REF11_KERB_RAMP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	KERB RAMP	Character	200	KERB_RAMP_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	KERB_RAMP_SUB_TYPE
PRAM_CROSSING_WIDTH*		Real	38.8	
LOCATION*		Character	200	KERB_RAMP_LOCATION
ALIGNMENT*		Character	200	KERB_RAMP_ALIGNMENT
PRAM_CROSSING_SURFACE*		Character	200	PRAM_CROSSING_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE

* Designates mandatory attribute

Table 266 REF11_KERB_RAMP Ref 11 lookup tables

Ref 11 lookup table	Values
KERB_RAMP_ASSET_TYPE	KERB RAMP
KERB_RAMP_SUB_TYPE	INNER URBAN KERB RAMP SUBURBAN KERB RAMP
KERB_RAMP_LOCATION	ISLAND MEDIAN VERGE
KERB_RAMP_ALIGNMENT	ON CURVE ON SKEW ON STRAIGHT
PRAM_CROSSING_SURFACE	CONCRETE ENVIROMESH
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING

13.8 Kerb slot

Road, path and paving assets > Kerb slot
Tags: kerb slot

A kerb slot is an at-grade path crossings through a median refuge island or traffic island, as defined in *ACTSD-0517*. A kerb slot is represented by a closed lightweight polyline signifying the perimeter with the **REF11_KERB_SLOT** block inserted inside with attribute information.

Table 267 Kerb slot layers

Layer	Description	Linetype	Colour
REF11_KERB_SLOT_NEW	New kerb slot	Continuous	140
REF11_KERB_SLOT_EXG	Existing kerb slot	Continuous	144
REF11_KERB_SLOT_REM	Removed kerb slot	Continuous	red

Table 268 REF11_KERB_SLOT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	KERB SLOT	Character	200	KERB_SLOT_ASSET_TYPE
KERB_SLOT_WIDTH*		Real	38.8	
KERB_SLOT_SURFACE*		Character	200	PATH_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE

* Designates mandatory attribute

Table 269 REF11_KERB_SLOT Ref 11 lookup tables

Ref 11 lookup table	Values
KERB_SLOT_ASSET_TYPE	KERB SLOT
PATH_SURFACE	PAVERS OR CONCRETE BLOCKS PERMEABLE PAVEMENT POROUS PAVEMENT STONE
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING

13.9 Road centreline

Road, path and paving assets > Road centreline
Tags: road link, road centreline

A road centreline is represented by a linear feature (line, lightweight polyline) with the **REF11_ROAD_CENTRELINE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 270 Road centreline layers

Layer	Description	Linetype	Colour
REF11_ROAD_CENTRELINE_NEW	New road centreline	Continuous	7
REF11_ROAD_CENTRELINE_EXG	Existing road centreline	Continuous	8
REF11_ROAD_CENTRELINE_REM	Removed road centreline	Continuous	red

Table 271 REF11_ROAD_CENTRELINE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ROAD_NAME*		Character	200	
ROAD_CREATED_DATE*		Date		

* Designates mandatory attribute

13.10 Road pavement

Road, path and paving assets > Road pavement
Tags: road pavement

A road pavement is represented by a closed lightweight polyline signifying the perimeter with the **REF11_ROAD_PAVEMENT** block inserted inside with attribute information.

Table 272 Road pavement layers

Layer	Description	Linetype	Colour
REF11_ROAD_PAVEMENT_NEW	New road pavement	Continuous	43
REF11_ROAD_PAVEMENT_EXG	Existing road pavement	Continuous	47
REF11_ROAD_PAVEMENT_REM	Removed road pavement	Continuous	red

Table 273 REF11_ROAD_PAVEMENT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ROAD PAVEMENT	Character	200	ROAD_PAVEMENT_ASSET_TYPE
PAVEMENT_CLASSIFICATION*		Character	200	PAVEMENT_CLASSIFICATION
PAVEMENT_TYPE*		Character	200	PAVEMENT_TYPE
PAVEMENT_CONSTRUCTION*		Character	200	PAVEMENT_CONSTRUCTION
PAVEMENT_SURFACE_TYPE*		Character	200	PAVEMENT_SURFACE_TYPE
PAVEMENT_FINISH		Character	200	
PAVEMENT_COLOUR		Character	200	
PAVEMENT_PATTERN		Character	200	
PAVEMENT_PRIME		Character	200	
PAVEMENT_CBR_SUBGRADE*		Character	200	
PAVEMENT_ESA*		Character	200	
SURFACE_AREA*		Real	38.8	
LAYER_1_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_1_BINDER		Character	200	LAYER_BINDER
LAYER_1_DEPTH		Integer	8	
LAYER_1_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_1_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_1_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_1_RECYCLED_PERCENT		Character	200	
LAYER_1_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_1_STABILISATION		Character	200	LAYER_STABILISATION

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
LAYER_1_TYPE		Character	200	LAYER_TYPE
LAYER_2_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_2_BINDER		Character	200	LAYER_BINDER
LAYER_2_DEPTH		Integer	8	
LAYER_2_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_2_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_2_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_2_RECYCLED_PERCENT		Character	200	
LAYER_2_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_2_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_2_TYPE		Character	200	LAYER_TYPE
LAYER_3_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_3_BINDER		Character	200	LAYER_BINDER
LAYER_3_DEPTH		Integer	8	
LAYER_3_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_3_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_3_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_3_RECYCLED_PERCENT		Character	200	
LAYER_3_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_3_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_3_TYPE		Character	200	LAYER_TYPE
LAYER_4_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_4_BINDER		Character	200	LAYER_BINDER
LAYER_4_DEPTH		Integer	8	
LAYER_4_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_4_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_4_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_4_RECYCLED_PERCENT		Character	200	
LAYER_4_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_4_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_4_TYPE		Character	200	LAYER_TYPE
LAYER_5_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_5_BINDER		Character	200	LAYER_BINDER

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
LAYER_5_DEPTH		Integer	8	
LAYER_5_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_5_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_5_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_5_RECYCLED_PERCENT		Character	200	
LAYER_5_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_5_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_5_TYPE		Character	200	LAYER_TYPE
LAYER_6_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_6_BINDER		Character	200	LAYER_BINDER
LAYER_6_DEPTH		Integer	8	
LAYER_6_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_6_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_6_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_6_RECYCLED_PERCENT		Character	200	
LAYER_6_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_6_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_6_TYPE		Character	200	LAYER_TYPE
LAYER_7_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_7_BINDER		Character	200	LAYER_BINDER
LAYER_7_DEPTH		Integer	8	
LAYER_7_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_7_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL
LAYER_7_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_7_RECYCLED_PERCENT		Character	200	
LAYER_7_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_7_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_7_TYPE		Character	200	LAYER_TYPE
LAYER_8_AGGREGATE		Character	200	LAYER_AGGREGATE
LAYER_8_BINDER		Character	200	LAYER_BINDER
LAYER_8_DEPTH		Integer	8	
LAYER_8_MATERIAL		Character	200	LAYER_MATERIAL
LAYER_8_MATERIAL_DETAIL		Character	200	LAYER_MATERIAL_DETAIL

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
LAYER_8_RECYCLED_MATERIAL		Character	200	YES_NO
LAYER_8_RECYCLED_PERCENT		Character	200	
LAYER_8_REINFORCING_TYPE		Character	200	LAYER_REINFORCING_TYPE
LAYER_8_STABILISATION		Character	200	LAYER_STABILISATION
LAYER_8_TYPE		Character	200	LAYER_TYPE

* Designates mandatory attribute

Table 274 REF11_ROAD_PAVEMENT Ref 11 lookup tables

Ref 11 lookup table	Values
ROAD_PAVEMENT_ASSET_TYPE	ROAD PAVEMENT
PAVEMENT_CLASSIFICATION	ACCESS STREET A ACCESS STREET B ARTERIAL INTERSECTION THRESHOLD TREATMENT MAJOR COLLECTOR MINOR COLLECTOR NATIONAL SUB-ARTERIAL
PAVEMENT_TYPE	FLEXIBLE RIGID
PAVEMENT_CONSTRUCTION	ASPHALT OVER CONCRETE SUBBASE FLEXIBLE DEEP LIFT DGA FLEXIBLE GRANULAR FLEXIBLE SEGMENTAL BLOCK FLEXIBLE STABILISED GRANULAR UNBOUND RIGID CONCRETE
PAVEMENT_SURFACE_TYPE	ASPHALTIC CONCRETE BRICK PAVERS CHIP SEAL CONCRETE FINE CRUSHED ROCK GRAVEL MIX OF CONCRETE AND ASPHALTIC CONCRETE
LAYER_MATERIAL	ASPHALT CONCRETE GRANULAR SPRAY SEAL

Ref 11 lookup table	Values
LAYER_MATERIAL_DETAIL	DGA AC5 - 5MM NOMINAL SIZED DENSE GRADED ASPHALT DGA AC7 - 7MM NOMINAL SIZED DENSE GRADED ASPHALT DGA AC10 - 10MM NOMINAL SIZED DENSE GRADED ASPHALT DGA AC14 - 14MM NOMINAL SIZED DENSE GRADED ASPHALT DGA AC20 - 20MM NOMINAL SIZED DENSE GRADED ASPHALT DGA AC28 - 28MM NOMINAL SIZED DENSE GRADED ASPHALT DGB20 - DENSELY GRADED BASE 20MM NOMINAL SIZED DGS20 - 20MM NOMINAL SIZED DENSELY GRADED SUBBASE DGS40 - 40MM NOMINAL SIZED DENSELY GRADED SUBBASE EME2 10 - 10MM NOMINAL SIZED HIGH MODULUS ASPHALT EME2 14 - 14MM NOMINAL SIZED HIGH MODULUS ASPHALT EME2 20 - 20MM NOMINAL SIZED HIGH MODULUS ASPHALT FGG7 - 7MM NOMINAL SIZED FINE GAP GRADED ASPHALT FGG10 - 10MM NOMINAL SIZED FINE GAP GRADED ASPHALT GMB20 - 20MM NOMINAL SIZED GRADED MACADAM BASE GMS40 - 40MM NOMINAL SIZED GRADED MACADAM SUBBASE GRA - GEOTEXTILE REINFORCED ASPHALT LMC - LEAN MIX CONCRETE N20 R - 20MPA REINFORCED CONCRETE N20 U - 20MPA UNREINFORCED CONCRETE N25 R - 25MPA REINFORCED CONCRETE N25 U - 25MPA UNREINFORCED CONCRETE N32 R - 32MPA REINFORCED CONCRETE N32 U - 32MPA UNREINFORCED CONCRETE N40 R - 40MPA REINFORCED CONCRETE N40 U - 40MPA UNREINFORCED CONCRETE N50 R - 50MPA REINFORCED CONCRETE N50 U - 50MPA UNREINFORCED CONCRETE OG10 - 10MM NOMINAL SIZED OPEN GRADED ASPHALT OG14 - 14MM NOMINAL SIZED OPEN GRADED ASPHALT RCCB20 - 20MM NOMINAL SIZED RECYCLED CRUSHED CONCRETE BASE RCCS20 - 20MM NOMINAL SIZED RECYCLED CRUSHED CONCRETE SUBBASE SMA10 - 10MM NOMINAL SIZED STONE MASTIC ASPHALT SMA14 - 14MM NOMINAL SIZED STONE MASTIC ASPHALT SMZ - SELECT MATERIAL ZONE SUBGRADE
LAYER_STABILISATION	CAPE SEAL D/D - DOUBLE/DOUBLE SEAL FIBRE REINFORCED SEAL GRS - GEOTEXTILE REINFORCED SEAL S/D - SINGLE/DOUBLE SEAL S/S - SINGLE/SINGLE SEAL SAM - STAIN ALLEVIATING MEMBRANE
YES_NO	NO YES
LAYER_AGGREGATE	DGB20 MOD - 20MM NOMINAL SIZED MODIFIED GRANULAR BASE MATERIAL DGB40 MOD - 40MM NOMINAL SIZED MODIFIED GRANULAR BASE MATERIAL DGS20 MOD - 20MM NOMINAL SIZED MODIFIED GRANULAR SUBBASE MATERIAL DGS40 MOD - 40MM NOMINAL SIZED MODIFIED GRANULAR SUBBASE MATERIAL FBS - FOAM BITUMEN STABILISED SUBBASE HBB - HEAVILY BOUND BASE HBS - HEAVILY BOUND SUBBASE

Ref 11 lookup table	Values
LAYER_REINFORCING_TYPE	GEOGRID GEOTEXTILE GLASS FIBRE REINFORCED POLYMER NON-RECYCLED PLASTIC FIBRES NONE RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING
LAYER_BINDER	10/20 - EME2 BINDER 15/25 - EME2 BINDER A5E - POLYMER MODIFIED BINDER A15E - POLYMER MODIFIED BINDER A20E - POLYMER MODIFIED BINDER A35P - POLYMER MODIFIED BINDER A50C - POLYMER MODIFIED BINDER C170 - BITUMEN BINDER C240 - BITUMEN BINDER C320 - BITUMEN BINDER C450 - BITUMEN BINDER C600 - BITUMEN BINDER M500 - BITUMEN BINDER M1000 - BITUMEN BINDER S15E - POLYMER MODIFIED BINDER S15RF - FIELD BLENDED CRUMB RUBBER BINDER S20E - POLYMER MODIFIED BINDER S20RF - FIELD BLENDED CRUMB RUBBER BINDER S35E - POLYMER MODIFIED BINDER S45R - POLYMER MODIFIED BINDER
LAYER_TYPE	BASE SUBBASE WEARING SURFACE

13.11 Step point

Road, path and paving assets > Step point
Tags: step point, stairs

A step point is represented by the **REF11_STEP_POINT** block inserted at the centre of the feature with attribute information.

Table 275 Step point layers

Layer	Description	Linetype	Colour
REF11_STEP_POINT_NEW	New step point	Continuous	101
REF11_STEP_POINT_EXG	Existing step point	Continuous	105
REF11_STEP_POINT_REM	Removed step point	Continuous	red

Table 276 REF11_STEP_POINT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STEPS	Character	200	STEP_POINT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	STEP_POINT_ASSET_SUB_TYPE
NUMBER_OF_STAIRS*		Real	38.8	
STAIRS_MATERIAL*		Character	200	STAIRS_MATERIAL

* Designates mandatory attribute

Table 277 REF11_STEP_POINT Ref 11 lookup tables

Ref 11 lookup table	Values
STEP_POINT_ASSET_TYPE	STEPS
STEP_POINT_ASSET_SUB_TYPE	STAIRS STEP POINT
STAIRS_MATERIAL	CONCRETE METAL PAVERS OR CONCRETE BLOCKS STONE TIMBER

13.12 Tactile indicators

Road, path and paving assets > Tactile indicators
Tags: tactile indicators, tactile ground surface indicators

Tactile indicators are represented by a closed lightweight polyline signifying the perimeter with the **REF11_TACTILE_INDICATORS** block inserted inside with attribute information.

Table 278 Tactile indicators layers

Layer	Description	Linetype	Colour
REF11_TACTILE_INDICATORS_NEW	New tactile indicators	Continuous	141
REF11_TACTILE_INDICATORS_EXG	Existing tactile indicators	Continuous	143
REF11_TACTILE_INDICATORS_REM	Removed tactile indicators	Continuous	red

Table 279 REF11_TACTILE_INDICATORS attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TGSI	Character	200	TACTILE_INDICATORS_ASSET_TYPE
TGSI_TYPE*		Character	200	TGSI_TYPE
ASSET_SUB_TYPE*		Character	200	TGSI_SUB_TYPE
TGSI_MATERIAL*		Character	200	TGSI_MATERIAL
LOCATION*		Character	200	TGSI_LOCATION
QUANTITY*		Integer	8	
SUBSTRATE_MATERIAL*		Character	200	SUBSTRATE_MATERIAL

* Designates mandatory attribute

Table 280 REF11_TACTILE_INDICATORS Ref 11 lookup tables

Ref 11 lookup table	Values
TACTILE_INDICATORS_ASSET_TYPE	TGSI
TGSI_TYPE	DIRECTIONAL TACTILE INDICATORS HAZARD TACTILE INDICATORS
TGSI_SUB_TYPE	DISCRETE INTEGRATED
TGSI_MATERIAL	BLACK CERAMIC INTEGRATED TGSI BLACK POLYURETHANE DISCRETE TGSI GREY CERAMIC INTEGRATED TGSI YELLOW CERAMIC INTEGRATED TGSI YELLOW POLYURETHANE DISCRETE TGSI
TGSI_LOCATION	BUS STOP ESCALATOR KERB RAMP LIGHT RAIL PLATFORM RAMPS STAIRS STEPS
SUBSTRATE_MATERIAL	ASPHALT BITUMEN CERAMIC CONCRETE PAVERS PLASTIC RUBBER STEEL STONE WOOD

13.13 Vehicle Crossing

Road, path and paving assets > Vehicle Crossing
Tags: Vehicle Crossing

A Vehicle Crossing is represented by a closed lightweight polyline signifying the perimeter with the **REF11_VEHICLE_CROSSING** block inserted inside with attribute information.

Table 281 Vehicle Crossing layers

Layer	Description	Linetype	Colour
REF11_VEHICLE_CROSSING_NEW	New Vehicle Crossing	Continuous	31
REF11_VEHICLE_CROSSING_EXG	Existing Vehicle Crossing	Continuous	35
REF11_VEHICLE_CROSSING_REM	Removed Vehicle Crossing	Continuous	red

Table 282 REF11_VEHICLE_CROSSING attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	VEHICLE CROSSING	Character	200	VC_ASSET_SUB_TYPE
ASSET_TYPE*	KERB	Character	200	VC_ASSET_TYPE
SURFACE_AREA*		Real	38.8	
VEHICLE_CROSSING_MATERIAL*		Character	200	VC_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE

* Designates mandatory attribute

Table 283 REF11_VEHICLE_CROSSING Ref 11 lookup tables

Ref 11 lookup table	Values
VC_ASSET_SUB_TYPE	VEHICLE CROSSING
VC_ASSET_TYPE	KERB
VC_SURFACE	CONCRETE ENVIROMESH REINFORCED CONCRETE
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING

14 Soft landscape assets

Grass	Dryland grass, grass in consolidation phases, irrigated grass, irrigated turf, native grassland or woodland sites, non-irrigated turf and synthetic grass
Landscape area	Beaches, clay mounds, granite gravel beds, hard surfaces, native grass, shale beds, softfall, soil cells and synthetic grass
Root barrier	Root barriers
Shrub bed	Exotic shrub, garden beds, in consolidation, mixed shrubs, mulch beds only (shrubs absent), native shrubs, rain gardens and swales (waterway)
Structural soil cells	Structural soil cells and strata vaults
Structural soil	Structural soil
Tree	Laneway trees, median trees, open space trees, reserve trees and street trees

14.1 Grass

Soft landscape assets > Grass
Tags: grass

Grass is represented by a closed lightweight polyline signifying the perimeter with the **REF11_GRASS** block inserted inside with attribute information.

Table 284 Grass layers

Layer	Description	Linetype	Colour
REF11_GRASS_NEW	New grass	Continuous	90
REF11_GRASS_EXG	Existing grass	Continuous	94
REF11_GRASS_REM	Removed grass	Continuous	red

Table 285 REF11_GRASS attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
GRASS_TYPE*		Character	200	GRASS_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 286 REF11_GRASS Ref 11 lookup tables

Ref 11 lookup table	Values
GRASS_TYPE	DRYLAND GRASS GRASS IN CONSOLIDATION PHASE IRRIGATED GRASS IRRIGATED TURF NATIVE GRASSLAND/WOODLAND SITE NON IRRIGATED TURF SYNTHETIC GRASS

14.2 Landscape area

Soft landscape assets > Landscape area
Tags: landscape area, grass, granite gravel, soil cells, softfall, beach, shale bed

A landscape area is represented by a closed lightweight polyline signifying the perimeter with the **REF11_LANDSCAPE_AREA** block inserted inside with attribute information.

Table 287 Landscape area layers

Layer	Description	Linetype	Colour
REF11_LANDSCAPE_AREA_NEW	New landscape area	Continuous	140
REF11_LANDSCAPE_AREA_EXG	Existing landscape area	Continuous	144
REF11_LANDSCAPE_AREA_REM	Removed landscape area	Continuous	red

Table 288 REF11_LANDSCAPE_AREA attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	LANDSCAPE AREA	Character	200	LANDSCAPE_AREA_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	LANDSCAPE_AREA_SUB_TYPE
MATERIAL*		Character	200	LANDSCAPE_AREA_MATERIAL
SURFACE_AREA*		Real	38.8	
EDGE_MATERIAL		Character	200	LANDSCAPE_EDGE_MATERIAL
EDGE_DEPTH		Real	38.8	

* Designates mandatory attribute

Table 289 REF11_LANDSCAPE_AREA Ref 11 lookup tables

Ref 11 lookup table	Values
LANDSCAPE_AREA_ASSET_TYPE	LANDSCAPE AREA
LANDSCAPE_AREA_SUB_TYPE	BEACH CLAY MOUND GRANITE GRAVEL BED HARD SURFACE NATIVE GRASS SHALE BED SOFTFALL SOIL CELLS SYNTHETIC GRASS
LANDSCAPE_AREA_MATERIAL	ASPHALTCONCRETE CORTEN STEEL CRUSHED GRAVEL DECOMPOSED GRANITE GRAVEL METAL MULCH PLASTIC RUBBER SAND SOILWHITE RIVER GRAVEL
LANDSCAPE_EDGE_MATERIAL	ASPHALT BRICK CONCRETE CORTEN STEEL CRUSHED GRAVEL DECOMPOSED GRANITE GRAVEL METAL MULCH PLASTIC RUBBER SAND SOIL TIMBER WHITE RIVER GRAVEL

14.3 Root barrier

Soft landscape assets > Root barrier
Tags: root barrier

A root barrier is represented by a linear feature (line, lightweight polyline) with the **REF11_ROOT_BARRIER** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 290 Root barrier layers

Layer	Description	Linetype	Colour
REF11_ROOT_BARRIER_NEW	New root barrier	Continuous	162
REF11_ROOT_BARRIER_EXG	Existing root barrier	Continuous	166
REF11_ROOT_BARRIER_REM	Removed root barrier	Continuous	red

Table 291 REF11_ROOT_BARRIER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ROOT BARRIER	Character	200	ROOT_BARRIER_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	ROOT_BARRIER_SUB_TYPE
ROOT_BARRIER_LENGTH*		Real	38.8	
ROOT_BARRIER_DEPTH*		Real	38.8	

* Designates mandatory attribute

Table 292 REF11_ROOT_BARRIER Ref 11 lookup tables

Ref 11 lookup table	Values
ROOT_BARRIER_ASSET_TYPE	ROOT BARRIER
ROOT_BARRIER_SUB_TYPE	ROOT BARRIER ROOT DIRECTOR TYPE BARRIER

14.4 Shrub bed

Soft landscape assets > Shrub bed
Tags: shrub bed, garden bed, rain garden, mulch bed only, swale

A shrub bed is represented by a closed lightweight polyline signifying the perimeter with the **REF11_SHRUB_BED** block inserted inside with attribute information.

Table 293 Shrub bed layers

Layer	Description	Linetype	Colour
REF11_SHRUB_BED_NEW	New shrub bed	Continuous	82
REF11_SHRUB_BED_EXG	Existing shrub bed	Continuous	86
REF11_SHRUB_BED_REM	Removed shrub bed	Continuous	red

Table 294 REF11_SHRUB_BED attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SHRUB BED	Character	200	SHRUB_BED_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SHRUB_BED_ASSET_SUB_TYPE
LANDSCAPING_TYPE*		Character	200	LANDSCAPING_TYPE
FLORAL_BED*		Character	200	FLORAL_BED
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 295 REF11_SHRUB_BED Ref 11 lookup tables

Ref 11 lookup table	Values
SHRUB_BED_ASSET_TYPE	SHRUB BED
SHRUB_BED_ASSET_SUB_TYPE	EXOTIC SHRUB GARDEN BED IN CONSOLIDATION MIXED SHRUBS MULCH BED ONLY (SHRUBS ABSENT) NATIVE SHRUB RAIN GARDEN SWALE (WATER WAY)
LANDSCAPING_TYPE	AQUATIC PLANTING LANDSCAPED ROAD FEATURE NO LANDSCAPING
FLORAL_BED	FLORAL BED NO FLORAL BED

14.5 Structural soil

Soft landscape assets > Structural soil
Tags: structural soil

Structural soil is represented by a closed lightweight polyline signifying the perimeter with the **REF11_STRUCTURAL_SOIL** block inserted inside with attribute information.

Table 296 Structural soil layers

Layer	Description	Linetype	Colour
REF11_STRUCTURAL_SOIL_NEW	New structural soil	Continuous	32
REF11_STRUCTURAL_SOIL_EXG	Existing structural soil	Continuous	36
REF11_STRUCTURAL_SOIL_REM	Removed structural soil	Continuous	red

Table 297 REF11_STRUCTURAL_SOIL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	STRUC_SOIL_ASSET_SUB_TYPE
ASSET_TYPE*	STRUCTURAL SOIL	Character	200	STRUC_SOIL_ASSET_TYPE
STRUCTURAL_SOIL_DEPTH*		Real	38.8	
SURFACE_AREA*		Real	38.8	
STRUCTURAL_SOIL_LENGTH*		Real	38.8	
STRUCTURAL_SOIL_WIDTH*		Real	38.8	
STRUCTURAL_SOIL_MATERIAL		Character	200	
ROOTBALL_IRRIGATION_INLET		Character	200	ROOTBALL_IRRIGATION_INLET
DEEP_WATERING_INLET		Character	200	
SUPPLIER		REVIEW		

* Designates mandatory attribute

Table 298 REF11_STRUCTURAL_SOIL Ref 11 lookup tables

Ref 11 lookup table	Values
STRUC_SOIL_ASSET_SUB_TYPE	STRUCTURAL SOIL
STRUC_SOIL_ASSET_TYPE	STRUCTURAL SOIL
ROOTBALL_IRRIGATION_INLET	INITIAL ROOTBALL IRRIGATION INLET NO INITIAL ROOTBALL IRRIGATION INLET

14.6 Structural soil cell

Soft landscape assets > Structural soil cell
Tags: soil cells

A structural soil cell is represented by a closed lightweight polyline signifying the perimeter with the **REF11_STRUCTURAL_SOIL_CELL** block inserted inside with attribute information.

Table 299 Structural soil cell layers

Layer	Description	Linetype	Colour
REF11_STRUCTURAL_SOIL_CELL_NEW	New structural soil cell	Continuous	30
REF11_STRUCTURAL_SOIL_CELL_EXG	Existing structural soil cell	Continuous	34
REF11_STRUCTURAL_SOIL_CELL_REM	Removed structural soil cell	Continuous	red

Table 300 REF11_STRUCTURAL_SOIL_CELL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	STRUCTURAL SOIL CELL	Character	200	SOIL_CELL_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SOIL_CELL_ASSET_SUB_TYPE
MANUFACTURER*		Character	200	
MODEL*		Character	200	
INSTALLED_BY*		Character	200	
SUPPLIER*		Character	200	
MATERIAL*		Character	200	SOIL_CELL_MATERIAL
SURFACE_AREA*		Real	38.8	
SOIL_CELL_DEPTH		Real	38.8	
SOIL_CELL_LENGTH*		Real	38.8	
SOIL_CELL_WIDTH*		Real	38.8	
SOIL_CELL_LAYERS*		Integer	8	
SOIL_CELL_DUAL_INLET_NUMBER		Integer	8	
SOIL_CELL_DUAL_INLET_SPACING		Real	38.8	
ROOTBALL_IRRIGATION_INLET		Character	200	ROOTBALL_IRRIGATION_INLET
SOIL_CELL_STRUCTURAL_BACKFILL		Character	200	
SOIL_CELL_CONC_SLAB*		Character	200	SOIL_CELL_CONC_SLAB
FILTER_FABRIC		Character	200	SOIL_CELL_FILTER_FABRIC
DRAINAGE_LAYER		Character	200	SOIL_CELL_DRAINAGE_LAYER

* Designates mandatory attribute

Table 301 REF11_STRUCTURAL_SOIL_CELL Ref 11 lookup tables

Ref 11 lookup table	Values
SOIL_CELL_ASSET_TYPE	STRUCTURAL SOIL CELL
SOIL_CELL_ASSET_SUB_TYPE	PIPE SUPPORT STORMWATER HARVESTING FOR TREES STORMWATER TANK TREE PIT
SOIL_CELL_MATERIAL	METAL PLASTIC STAINLESS STEEL
ROOTBALL_IRRIGATION_INLET	NO ROOTBALL IRRIGATION INLET ROOTBALL IRRIGATION INLET
SOIL_CELL_CONC_SLAB	CONCRETE SLAB ABOVE SOIL CELL NO CONCRETE SLAB ABOVE SOIL CELL REINFORCED BRIDGING SLAB
SOIL_CELL_FILTER_FABRIC	NO FILTER FABRIC ABOVE SOIL CELL REINFORCED FILTER FABRIC ABOVE SOIL CELL UNREINFORCED FILTER FABRIC ABOVE SOIL CELL
SOIL_CELL_DRAINAGE_LAYER	DRAINAGE LAYER BELOW SOIL CELL NO DRAINAGE LAYER BELOW SOIL CELL

14.7 Tree

Soft landscape assets > Tree
Tags: tree, tree guard, watering coil

A tree is represented by the **REF11_TREE** block inserted at the centre of the feature with attribute information.

Table 302 Tree layers

Layer	Description	Linetype	Colour
REF11_TREE_NEW	New tree	Continuous	92
REF11_TREE_EXG	Existing tree	Continuous	96
REF11_TREE_REM	Removed tree	Continuous	red

Table 303 REF11_TREE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
MIS25_OP*		Character	200	
ASSET_TYPE*	TREE	Character	200	TREE_ASSET_TYPE
BOTANICAL_NAME*		Character	200	TREE_BOTANICAL_NAME
GENUS		Character	200	
SPECIES		Character	200	
CODE_EXISTS_IN_MIS25*		Character	200	TREE_CODE_EXISTS_IN_MIS25
NATIVE_OR_EXOTIC*		Character	200	NATIVE_OR_EXOTIC
ASSET_SUB_TYPE*		Character	200	TREE_ASSET_SUB_TYPE
REGISTERED_TREE		Character	200	TREE_REGISTRATION
PLANT_SUPPLIER*		Character	200	
PLANTING_DATE*		Date		
ROOT_BARRIER*		Character	200	ROOT_BARRIER
ROOT_BARRIER_DEPTH		Integer	8	
TREE_GUARD*		Character	200	TREE_GUARD
TREE_GRATE*		Character	200	TREE_GRATE
WATERING_COIL*		Character	200	WATERING_COIL

* Designates mandatory attribute

Table 304 REF11_TREE Ref 11 lookup tables

Ref 11 lookup table	Values
TREE_ASSET_TYPE	TREE
TREE_BOTANICAL_NAME	*Allowable values omitted for brevity.* *Refer to MIS 25, Ref 11 Toolkit 4.0 or the latest Ref 11 Data Specification spreadsheet.*
TREE_CODE_EXISTS_IN_MIS25	MIS25_OP VALUE DOES NOT EXIST IN MIS25 MIS25_OP VALUE EXISTS IN MIS25
NATIVE_OR_EXOTIC	EXOTIC NATIVE
TREE_ASSET_SUB_TYPE	LANEWAY TREE MEDIAN TREE OPEN SPACE TREE RESERVE TREE STREET TREE
TREE_REGISTRATION	CANCELLED NOT REGISTERED PROVISIONAL REGISTERED
ROOT_BARRIER	NO ROOT BARRIER ROOT BARRIER PRESENT
TREE_GRATE	NO TREE GRATE TREE GRATE PRESENT
TREE_GUARD	MESH TREE GUARD METAL TREE GUARD NO TREE GUARD PLASTIC TREE GUARD TREE GUARD PRESENT
WATERING_COIL	NO WATERING COIL WATERING COIL PRESENT

15 Street and park furniture

Artwork	Features, legal graffiti sites, mosaiced surfaces (small tiles), painting murals, sculptures, street art, tiled (large tiles) and vinyl decorative wraps
Barbecue	Electrical, gas and wood fired barbecues
Bicycle infrastructure	Bicycle cages, bicycle lockers and bike repair stations
Bicycle rack	Bicycle sculpture style, hub style, multiple racks, pole mounted circular, pole mounted semicircular shaped, rest rails, standard fin shaped, standard horseshoe shaped, standard round shaped, standard square shaped with curved ends, standard tooth shaped, standard u shaped, thin circular 'no entry' shaped and wall mounted
Drinking fountain	Drinking fountains with dog bowl, refill stations and standard drinking fountains
Flagpole	Flagpoles
Fountain	Fountains
Memorial	Features, garden beds, plaques, sculptures and seats
Minor structure	Access ramps, boot wash stations, cages, concrete bins or pens, letterboxes, lookouts, paper and cardboard cages, secured or lockable structures, shipping containers, stages, visitor book holders, visitor counters, waste bin enclosures, weather stations and wood sleepers
Notice board	Bill poster silos, fixed notice boards and free-standing notice boards
Open space bin	Compactor wheelie bins, dog waste bins, garbage wheelie bins, hand bins and recycling wheelie bins
Park feature	Bird hides, bird roosts, Canberra Centenary Trail 100 gateways, entry archways, habitat trees, historic sites, metal trees, possum runs and power poles
Park sign	Cat containment areas, conservation sites, fire signs, fitness site signs, horse signs, illegal dumping, information panel, reserve entry signs, road signs, standard park information and direction signs, timber, totem, walk markers and warning
Seat	Seats, bench seats and decorative seats
Shelter	Fixed roof, huts, pergolas, shelters, shade sails and screens
Storage structure	Fuel tanks, grey water tanks, oil tanks, septic tanks, shipping containers, silos, water tanks and water troughs
Table	Tables

15.1 Artwork

Street and park furniture > Artwork
Tags: artwork, legal graffiti site, sculpture, painting mural, street art

An artwork is represented by the **REF11_ARTWORK** block inserted at the centre of the feature with attribute information.

Table 305 Artwork layers

Layer	Description	Linetype	Colour
REF11_ARTWORK_NEW	New artwork	Continuous	50
REF11_ARTWORK_EXG	Existing artwork	Continuous	54
REF11_ARTWORK_REM	Removed artwork	Continuous	red

Table 306 REF11_ARTWORK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	ARTWORK_ASSET_SUB_TYPE
ASSET_TYPE*	ARTWORK	Character	200	ARTWORK_ASSET_TYPE
PURPOSE*		Character	200	ARTWORK_PURPOSE
DESCRIPTION		Character	200	
MATERIAL*		Character	200	ARTWORK_MATERIAL
WALL_ART*		Character	200	WALL_ART
PROTECTIVE_COATING		Character	200	PROTECTIVE_COATING
ARTIST*		Character	200	
COMMISSIONED_DATE		Date		

* Designates mandatory attribute

Table 307 REF11_ARTWORK Ref 11 lookup tables

Ref 11 lookup table	Values
ARTWORK_ASSET_SUB_TYPE	FEATURE LEGAL GRAFFITI SITES MOSAICED SURFACE (SMALL TILES) PAINTING MURAL SCULPTURE STREET ART TILED (LARGE TILES) VINYL DECORATIVE WRAP
ARTWORK_ASSET_TYPE	ARTWORK
ARTWORK_PURPOSE	AESTHETICS COMMEMORATIVE FEATURE DECORATIVE FEATURE HERITAGE HISTORIC PROPERTY LINE INFORMATION INTERACTIVE LEGAL GRAFFITI SITE LOCATION FEATURE PLAY ITEM SEATING STRUCTURAL FEATURE
ARTWORK_MATERIAL	ALUMINIUM BRASS BRASS AND CONCRETE BRICK BRONZE BRONZE AND ROCK CONCRETE FIBREGLASS METAL PAINT PLASTIC RUBBER STAINLESS STEEL STONE TILE TIMBER TIMBER AND METAL
WALL_ART	DECORATIVE ARCHITECTUAL FEATURE WALL ART
PROTECTIVE_COATING	INCLUDES PROTECTIVE COATING NO PROTECTIVE COATING

15.2 Barbecue

Street and park furniture > Barbecue
Tags: barbecue

A barbecue is represented by the **REF11_BARBECUE** block inserted at the centre of the feature with attribute information.

Table 308 Barbecue layers

Layer	Description	Linetype	Colour
REF11_BARBECUE_NEW	New barbecue	Continuous	40
REF11_BARBECUE_EXG	Existing barbecue	Continuous	44
REF11_BARBECUE_REM	Removed barbecue	Continuous	red

Table 309 REF11_BARBECUE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BARBECUE	Character	200	BARBECUE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BARBECUE_ASSET_SUB_TYPE
MAKE*		Character	200	BARBECUE_MAKE
SERIAL_NUMBER*		Character	200	
UNIT_NUMBERS*		Character	200	
HOTPLATE_COMBINATION*		Character	200	HOTPLATE_COMBINATION
HOTPLATE_MATERIAL*		Character	200	HOTPLATE_MATERIAL
BENCH_TYPE*		Character	200	BARBECUE_BENCH_TYPE
DOOR_TYPE		Character	200	BARBECUE_DOOR_TYPE
CLIMB_ACCESS*		Character	200	BARBECUE_CLIMB_ACCESS
TAP_AT_BBQ*		Integer	8	
CONSTRUCTED_BY		Character	200	

* Designates mandatory attribute

Table 310 REF11_BARBECUE Ref 11 lookup tables

Ref 11 lookup table	Values
BARBECUE_ASSET_TYPE	BARBECUE
BARBECUE_ASSET_SUB_TYPE	ELECTRIC GAS WOOD
BARBECUE_MAKE	CHRISTIE CHRISTIE 3 MODULE CHRISTIE MOD-E-04 CHRISTIE PARKSAFE ELECTRIC MODULAR BBQ LANDMARK KB200 LANDMARK KB202 MAKIN TRAX MELBOURNE BBQ CENTRE MOODIES MOODIES QUEEN NAMADGI NATIONAL PARK
HOTPLATE_COMBINATION	DOUBLE HOTPLATE SINGLE HOTPLATE
HOTPLATE_MATERIAL	ALUMINIUM CAST IRON NONE SHEET STEEL STAINLESS STEEL UNKNOWN
BARBECUE_BENCH_TYPE	BRICK CONCRETE STEEL TILE
BARBECUE_DOOR_TYPE	STANDARD DOOR WIRED DOOR
BARBECUE_CLIMB_ACCESS	ACCESS VIA BOX ACCESS VIA LOCK SURROUNDS ACCESS VIA LOW STRUCTURE ACCESS VIA TAP ACCESS VIA TAP AND WALL ACCESS VIA WALL NONE

15.3 Bicycle infrastructure

Street and park furniture > Bicycle infrastructure
Tags: bicycle infrastructure, bicycle cage, bicycle locker, bike repair station

A bicycle infrastructure is represented by the **REF11_BICYCLE_INFRASTRUCTURE** block inserted at the centre of the feature with attribute information.

Table 311 Bicycle infrastructure layers

Layer	Description	Linetype	Colour
REF11_BICYCLE_INFRASTRUCTURE_NEW	New bicycle infrastructure	Continuous	42
REF11_BICYCLE_INFRASTRUCTURE_EXG	Existing bicycle infrastructure	Continuous	46
REF11_BICYCLE_INFRASTRUCTURE_REM	Removed bicycle infrastructure	Continuous	red

Table 312 REF11_BICYCLE_INFRASTRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	CYCLE_INFRASTR_SUB_TYPE
ASSET_TYPE*	BICYCLE STRUCTURE	Character	200	CYCLE_INFRASTR_ASSET_TYPE
ACCESS_SYSTEM*		Character	200	CAGE_ACCESS_SYSTEM
NUMBER_OF_BICYCLES*		Real	38.8	
BASE_MATERIAL*		Character	200	STRUCTURE_MATERIAL
FRAME_MATERIAL*		Character	200	STRUCTURE_MATERIAL
STRUCTURE_MATERIAL*		Character	200	STRUCTURE_MATERIAL
STRUCTURE_LENGTH*		Real	38.8	
STRUCTURE_WIDTH*		Real	38.8	
STRUCTURE_HEIGHT*		Real	38.8	

* Designates mandatory attribute

Table 313 REF11_BICYCLE_INFRASTRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
CYCLE_INFRASTR_SUB_TYPE	BICYCLE CAGE BICYCLE LOCKER BIKE REPAIR STATION
CYCLE_INFRASTR_ASSET_TYPE	BICYCLE STRUCTURE
CAGE_ACCESS_SYSTEM	ELECTRONIC MYWAY CARD ACCESS MANUAL ACCESS
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER

15.4 Bicycle rack

Street and park furniture > Bicycle rack
Tags: bicycle rack, rest rail

A bicycle rack is represented by the **REF11_BICYCLE_RACK** block inserted at the centre of the feature with attribute information.

Table 314 Bicycle rack layers

Layer	Description	Linetype	Colour
REF11_BICYCLE_RACK_NEW	New bicycle rack	Continuous	41
REF11_BICYCLE_RACK_EXG	Existing bicycle rack	Continuous	45
REF11_BICYCLE_RACK_REM	Removed bicycle rack	Continuous	red

Table 315 REF11_BICYCLE_RACK attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BICYCLE RACK	Character	200	BICYCLE_RACK_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BICYCLE_RACK_ASSET_SUB_TYPE
MOUNTING*		Character	200	BICYCLE_RACK_MOUNTING
BICYCLE_RACK_MATERIAL*		Character	200	STRUCTURE_MATERIAL
NUMBER_OF_BICYCLES*		Real	38.8	
BUS_STOP_NUMBER		Character	255	

* Designates mandatory attribute

Table 316 REF11_BICYCLE_RACK Ref 11 lookup tables

Ref 11 lookup table	Values
BICYCLE_RACK_ASSET_TYPE	BICYCLE RACK
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER
BICYCLE_RACK_ASSET_SUB_TYPE	BICYCLE SCULPTURE STYLE DUAL POST REST RAIL HUB STYLE MULTIPLE FOUR RACKS MULTIPLE SEVEN RACKS MULTIPLE THREE RACKS MULTIPLE TWO RACKS POLE MOUNTED CIRCULAR POLE MOUNTED SEMI CIRCULAR SHAPED REST RAIL SINGLE POST REST RAIL STANDARD FIN SHAPED STANDARD HORSESHOE SHAPED STANDARD ROUND SHAPED STANDARD SQUARE SHAPED WITH CURVED ENDS STANDARD TOOTH SHAPED STANDARD U SHAPED THIN CIRCULAR "NO ENTRY" SHAPED WALL MOUNTED
BICYCLE_RACK_MOUNTING	DIRECT BURIED INTO GROUND STEEL BOLTED INTO GROUND WALL MOUNTED

15.5 Drinking fountain

Street and park furniture > Drinking fountain
Tags: drinking fountain, refill station

A drinking fountain is represented by the **REF11_DRINKING_FOUNTAIN** block inserted at the centre of the feature with attribute information.

Table 317 Drinking fountain layers

Layer	Description	Linetype	Colour
REF11_DRINKING_FOUNTAIN_NEW	New drinking fountain	Continuous	140
REF11_DRINKING_FOUNTAIN_EXG	Existing drinking fountain	Continuous	144
REF11_DRINKING_FOUNTAIN_REM	Removed drinking fountain	Continuous	red

Table 318 REF11_DRINKING_FOUNTAIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	DRINKING FOUNTAIN	Character	200	DRINKING_FOUNTAIN_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	DRINKING_FOUNTAIN_SUB_TYPE
DISABLED_ACCESS*		Character	200	DISABLED_ACCESS
DOG_BOWL*		Character	200	DRINKING_FOUNTAIN_DOG_BOWL
MATERIAL*		Character	200	DRINKING_FOUNTAIN_MATERIAL

* Designates mandatory attribute

Table 319 REF11_DRINKING_FOUNTAIN Ref 11 lookup tables

Ref 11 lookup table	Values
DRINKING_FOUNTAIN_ASSET_TYPE	DRINKING FOUNTAIN
DRINKING_FOUNTAIN_SUB_TYPE	DRINKING FOUNTAIN WITH DOG BOWL REFILL STATION STANDARD DRINKING FOUNTAIN
DISABLED_ACCESS	DISABLED ACCESS NO DISABLED ACCESS
DRINKING_FOUNTAIN_DOG_BOWL	INCLUDES DOG BOWL NO DOG BOWL
DRINKING_FOUNTAIN_MATERIAL	CONCRETE METAL PLASTIC

15.6 Flagpole

Street and park furniture > Flagpole
Tags: flagpole

A flagpole is represented by the **REF11_FLAGPOLE** block inserted at the centre of the feature with attribute information.

Table 320 Flagpole layers

Layer	Description	Linetype	Colour
REF11_FLAGPOLE_NEW	New flagpole	Continuous	52
REF11_FLAGPOLE_EXG	Existing flagpole	Continuous	56
REF11_FLAGPOLE_REM	Removed flagpole	Continuous	red

Table 321 REF11_FLAGPOLE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	FLAGPOLE	Character	200	FLAGPOLE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	FLAGPOLE_ASSET_SUB_TYPE

* Designates mandatory attribute

Table 322 REF11_FLAGPOLE Ref 11 lookup tables

Ref 11 lookup table	Values
FLAGPOLE_ASSET_TYPE	FLAGPOLE
FLAGPOLE_ASSET_SUB_TYPE	METAL

15.7 Fountain

Street and park furniture > Fountain
Tags: fountain

A fountain is represented by the **REF11_FOUNTAIN** block inserted at the centre of the feature with attribute information.

Table 323 Fountain layers

Layer	Description	Linetype	Colour
REF11_FOUNTAIN_NEW	New fountain	Continuous	140
REF11_FOUNTAIN_EXG	Existing fountain	Continuous	144
REF11_FOUNTAIN_REM	Removed fountain	Continuous	red

Table 324 REF11_FOUNTAIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*	FOUNTAIN	Character	200	FOUNTAIN_ASSET_SUB_TYPE
ASSET_TYPE*	WATER FEATURE	Character	200	FOUNTAIN_ASSET_TYPE
PURPOSE*		Character	200	
PUMP_MAKE*		Character	200	
ARTIST_NAME		Character	200	

* Designates mandatory attribute

Table 325 REF11_FOUNTAIN Ref 11 lookup tables

Ref 11 lookup table	Values
FOUNTAIN_ASSET_SUB_TYPE	FOUNTAIN
FOUNTAIN_ASSET_TYPE	WATER FEATURE

15.8 Memorial

Street and park furniture > Memorial
Tags: memorial

A memorial is represented by the **REF11_MEMORIAL** block inserted at the centre of the feature with attribute information.

Table 326 Memorial layers

Layer	Description	Linetype	Colour
REF11_MEMORIAL_NEW	New memorial	Continuous	53
REF11_MEMORIAL_EXG	Existing memorial	Continuous	57
REF11_MEMORIAL_REM	Removed memorial	Continuous	red

Table 327 REF11_MEMORIAL attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	MEMORIAL	Character	200	MEMORIAL_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	MEMORIAL_ASSET_SUB_TYPE
PURPOSE*		Character	200	
MATERIAL*		Character	200	MEMORIAL_MATERIAL
CONSTRUCTED_BY		Character	200	

* Designates mandatory attribute

Table 328 REF11_MEMORIAL Ref 11 lookup tables

Ref 11 lookup table	Values
MEMORIAL_ASSET_TYPE	MEMORIAL
MEMORIAL_ASSET_SUB_TYPE	FEATURE GARDEN BED PLAQUE SCULPTURE SEAT
MEMORIAL_MATERIAL	COMPOSITE FIBREGLASS METAL OTHER PAVERS OR CONCRETE BLOCKS ROCK SOIL STONE TIMBER

15.9 Minor structure

Street and park furniture > Minor structure
Tags: minor structure, stage, shipping container, cage, waste bin enclosure

A minor structure is represented by the **REF11_MINOR_STRUCTURE** block inserted at the centre of the feature with attribute information.

Table 329 Minor structure layers

Layer	Description	Linetype	Colour
REF11_MINOR_STRUCTURE_NEW	New minor structure	Continuous	192
REF11_MINOR_STRUCTURE_EXG	Existing minor structure	Continuous	196
REF11_MINOR_STRUCTURE_REM	Removed minor structure	Continuous	red

Table 330 REF11_MINOR_STRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	MINOR STRUCTURE	Character	200	MINOR_STRUCTURE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	80	MINOR_STRUCTURE_SUB_TYPE
PRIMARY_MATERIAL*		Character	200	STRUCTURE_MATERIAL
SECONDARY_MATERIAL		Character	200	STRUCTURE_MATERIAL
LENGTH*		Real	38.8	
WIDTH*		Real	38.8	
HEIGHT*		Real	38.8	

* Designates mandatory attribute

Table 331 REF11_MINOR_STRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
MINOR_STRUCTURE_ASSET_TYPE	MINOR STRUCTURE
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER
MINOR_STRUCTURE_SUB_TYPE	ACCESS RAMP BOOT WASH STATION CAGE CONCRETE BIN/PENS LETTERBOX LOOKOUT PAPER AND CARDBOARD CAGE PIPE SUPPORT SECURED/LOCKABLE STRUCTURE SHIPPING CONTAINER STAGE VISITOR BOOK HOLDER VISITOR COUNTER WASTE BIN ENCLOSURE WEATHER STATION WOOD SLEEPER

15.10 Notice board

Street and park furniture > Notice board
Tags: notice board, bill poster silo

A notice board is represented by the **REF11_NOTICE_BOARD** block inserted at the centre of the feature with attribute information.

Table 332 Notice board layers

Layer	Description	Linetype	Colour
REF11_NOTICE_BOARD_NEW	New notice board	Continuous	52
REF11_NOTICE_BOARD_EXG	Existing notice board	Continuous	56
REF11_NOTICE_BOARD_REM	Removed notice board	Continuous	red

Table 333 REF11_NOTICE_BOARD attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	NOTICE BOARD	Character	200	NOTICE_BOARD_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	NOTICE_BOARD_ASSET_SUB_TYPE
MATERIAL*		Character	200	NOTICE_BOARD_MATERIAL
COVERED*		Character	200	NOTICE_BOARD_COVER
KEY_HOLDER		Character	200	

* Designates mandatory attribute

Table 334 REF11_NOTICE_BOARD Ref 11 lookup tables

Ref 11 lookup table	Values
NOTICE_BOARD_ASSET_TYPE	NOTICE BOARD
NOTICE_BOARD_ASSET_SUB_TYPE	BILL POSTER SILO FIXED NOTICE BOARD FREE STANDING NOTICE BOARD
NOTICE_BOARD_MATERIAL	CONCRETE METAL METAL AND GLASS METAL AND PLASTIC TIMBER TIMBER AND GLASS TIMBER AND PLASTIC
NOTICE_BOARD_COVER	NO NOTICE BOARD COVER NOTICE BOARD COVER

15.11 Open space bin

Street and park furniture > Open space bin
Tags: open space bin. bin, litter bin, dog waste bin, recycling bin, garbage bin

An open space bin is represented by the **REF11_OPEN_SPACE_BIN** block inserted at the centre of the feature with attribute information.

Table 335 Open space bin layers

Layer	Description	Linetype	Colour
REF11_OPEN_SPACE_BIN_NEW	New open space bin	Continuous	51
REF11_OPEN_SPACE_BIN_EXG	Existing open space bin	Continuous	55
REF11_OPEN_SPACE_BIN_REM	Removed open space bin	Continuous	red

Table 336 REF11_OPEN_SPACE_BIN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	OPEN SPACE BIN	Character	200	BIN_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BIN_ASSET_SUB_TYPE
MATERIAL*		Character	200	DRINKING_FOUNTAIN_MATERIAL
SHROUD*		Character	200	BIN_SHROUD
SIZE_OF_BIN*		Character	200	BIN_SIZE
FIXED_LOCATION*		Character	200	BIN_FIXED_LOCATION

* Designates mandatory attribute

Table 337 REF11_OPEN_SPACE_BIN Ref 11 lookup tables

Ref 11 lookup table	Values
BIN_ASSET_TYPE	OPEN SPACE BIN
BIN_ASSET_SUB_TYPE	COMPACTOR WHEELIE BIN DOG WASTE BIN GARBAGE WHEELIE BIN HAND BIN RECYCLING WHEELIE BIN
DRINKING_FOUNTAIN_MATERIAL	CONCRETE METAL PLASTIC
BIN_SHROUD	CONCRETE SHROUD METAL SHROUD NO SHROUD PLASTIC SHROUD TIMBER SHROUD
BIN_SIZE	80 LITRES 120 LITRES 240 LITRES
BIN_FIXED_LOCATION	FIXED LOCATION NO FIXED LOCATION

15.12 Park feature

Street and park furniture > Park feature
Tags: park feature

A park feature is represented by the **REF11_PARK_FEATURE** block inserted at the centre of the feature with attribute information.

Table 338 Park feature layers

Layer	Description	Linetype	Colour
REF11_PARK_FEATURE_NEW	New park feature	Continuous	142
REF11_PARK_FEATURE_EXG	Existing park feature	Continuous	146
REF11_PARK_FEATURE_REM	Removed park feature	Continuous	red

Table 339 REF11_PARK_FEATURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PARK FEATURE	Character	200	PARK_FEATURE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PARK_FEATURE_ASSET_SUB_TYPE
PRIMARY_MATERIAL*		Character	200	STRUCTURE_MATERIAL
SECONDARY_MATERIAL		Character	200	STRUCTURE_MATERIAL

* Designates mandatory attribute

Table 340 REF11_PARK_FEATURE Ref 11 lookup tables

Ref 11 lookup table	Values
PARK_FEATURE_ASSET_TYPE	PARK FEATURE
PARK_FEATURE_ASSET_SUB_TYPE	BIRD HIDE BIRD ROOST CANBERRA CENTENARY TRAIL 100 GATEWAY ENTRY ARCHWAY HABITAT TREE HISTORIC SITE KATY GALLAGHER SEATING WALL METAL TREE POSSUM RUN POWER POLE
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER

15.13 Park sign

Street and park furniture > Park sign
Tags: park sign

A park sign is represented by the **REF11_PARK_SIGN** block inserted at the centre of the feature with attribute information.

Table 341 Park sign layers

Layer	Description	Linetype	Colour
REF11_PARK_SIGN_NEW	New park sign	Continuous	50
REF11_PARK_SIGN_EXG	Existing park sign	Continuous	54
REF11_PARK_SIGN_REM	Removed park sign	Continuous	red

Table 342 REF11_PARK_SIGN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PARK SIGN	Character	200	PARK_SIGN_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PARK_SIGN_ASSET_SUB_TYPE
SIGN_PURPOSE*		Character	200	PARK_SIGN_PURPOSE
MATERIAL*		Character	200	PARK_SIGN_MATERIAL
SIGN_TEXT*		Character	200	

* Designates mandatory attribute

Table 343 REF11_PARK_SIGN Ref 11 lookup tables

Ref 11 lookup table	Values
PARK_SIGN_ASSET_TYPE	PARK SIGN
PARK_SIGN_ASSET_SUB_TYPE	CAT CONTAINMENT AREA CONSERVATION SITE FIRE SIGN FITNESS SITE SIGN HORSE SIGNS ILLEGAL DUMPING INFORMATION PANEL METAL BLADE ON POST NO SMOKING RESERVE ENTRY MAJOR RESERVE ENTRY MINOR ROAD SIGNS TCCS STANDARD DISTRICT PARK AND URBAN OPEN SPACE INFORMATION & DIRECTION TCCS STANDARD DISTRICT PARK AND URBAN OPEN SPACE MINOR IDENTIFICATION TCCS STANDARD DISTRICT PARK MAJOR IDENTIFICATION TCCS STANDARD NEIGHBOURHOOD PARK INFORMATION & IDENTIFICATION TCCS STANDARD TOWN PARK DIRECTION TCCS STANDARD TOWN PARK IDENTIFICATION TCCS STANDARD TOWN PARK INFORMATION TIMBER TOTEM WALK MARKER WARNING
PARK_SIGN_MATERIAL	MASONRY METAL PLASTIC PLYWOOD TIMBER
PARK_SIGN_PURPOSE	ADVISORY DIRECTION DIRECTION AND RESTRICTION DISTANCE MARKER ENTRY EQUESTRIAN FIRE FITNESS INSTRUCTIONS IDENTIFICATION IDENTIFICATION AND DIRECTION IDENTIFICATION AND INFORMATION IDENTIFICATION AND RESTRICTION IDENTIFICATION, DIRECTION AND RESTRICTION IDENTIFICATION, INFORMATION AND DIRECTION IDENTIFICATION, INFORMATION AND RESTRICTION IDENTIFICATION, INFORMATION, DIRECTION AND RESTRICTION INFORMATION INFORMATION AND DIRECTION INFORMATION AND RESTRICTION

Ref 11 lookup table	Values
	INFORMATION, DIRECTION AND RESTRICTION RESTRICTION ROAD SIGN WALK MARKER WARNING

15.14 Seat

Street and park furniture > Seat
Tags: seat, bench

A seat is represented by the **REF11_SEAT** block inserted at the centre of the feature with attribute information.

Table 344 Seat layers

Layer	Description	Linetype	Colour
REF11_SEAT_NEW	New seat	Continuous	43
REF11_SEAT_EXG	Existing seat	Continuous	47
REF11_SEAT_REM	Removed seat	Continuous	red

Table 345 REF11_SEAT attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SEAT	Character	200	SEAT_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SEAT_ASSET_SUB_TYPE
MATERIAL*		Character	200	STRUCTURE_MATERIAL
FRAME_MATERIAL*		Character	200	STRUCTURE_MATERIAL

* Designates mandatory attribute

Table 346 REF11_SEAT Ref 11 lookup tables

Ref 11 lookup table	Values
SEAT_ASSET_TYPE	SEAT
SEAT_ASSET_SUB_TYPE	BENCH SEAT DECORATIVE SEAT WITH BACK
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER

15.15 Shelter

Street and park furniture > Shelter
Tags: shelter, fixed roof, hut, pergola, shade shelter, shade sail, screen

A shelter is represented by a closed lightweight polyline signifying the perimeter with the **REF11_SHELTER** block inserted inside with attribute information.

Table 347 Shelter layers

Layer	Description	Linetype	Colour
REF11_SHELTER_NEW	New shelter	Continuous	191
REF11_SHELTER_EXG	Existing shelter	Continuous	195
REF11_SHELTER_REM	Removed shelter	Continuous	red

Table 348 REF11_SHELTER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	SHELTER	Character	200	SHELTER_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SHELTER_ASSET_SUB_TYPE
MATERIAL		Character	200	STRUCTURE_MATERIAL
STRUCTURE_FINISH		Character	200	SHADE_STRUCTURE_FINISH
POST_MATERIAL		Character	200	SHADE_SAIL_POST_MATERIAL
POST_FINISH		Character	200	SHADE_SAIL_POST_FINISH
POST_SIZE		Character	200	
POST_QUANTITY		Integer	8	
CONSTRUCTION_DATE		Date		
SHADE_SAIL_QUANTITY		Integer	8	
SHADE_SAIL_MATERIAL		Character	200	SHADE_SAIL_MATERIAL
SHADE_SAIL_AREA		Real	38.8	
MINIMUM_CLEARANCE		Real	38.8	
DESIGN_LIFE		Integer	8	
IMPORTANCE_LEVEL		Character	200	SHADE_SAIL_IMPORTANCE_LEVEL
ARI		Character	200	SHADE_SAIL_ARI
VEGETATION*		Character	200	SHELTER_VEGETATION

* Designates mandatory attribute

Table 349 REF11_SHELTER Ref 11 lookup tables

Ref 11 lookup table	Values
SHELTER_ASSET_TYPE	SHELTER
SHELTER_ASSET_SUB_TYPE	FIXED ROOF HUT PERGOLA SCREEN SHADE SAIL SHADE STRUCTURE
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER
SHADE_STRUCTURE_FINISH	2 PAC PAINT GALVANISED
SHADE_SAIL_POST_MATERIAL	GALVANISED STEEL STAINLESS STEEL STEEL
SHADE_SAIL_POST_FINISH	HOT DIP GALVANISED TWO PAC PAINT
SHADE_SAIL_MATERIAL	FIRE RETARDANT CLOTH TO AS1530.2
SHADE_SAIL_IMPORTANCE_LEVEL	IMPORTANCE LEVEL 2
SHADE_SAIL_ARI	ARI100 ARI200 ARI300 ARI400 ARI500
SHELTER_VEGETATION	INCLUDES VEGETATION NO VEGETATION

15.16 Storage structure

Street and park furniture > Storage structure
Tags: storage structure, fuel tank, grey water tank, oil tank, shipping container, silo, water tank

A storage structure is represented by a closed lightweight polyline signifying the perimeter with the **REF11_STORAGE_STRUCTURE** block inserted inside with attribute information.

Table 350 Storage structure layers

Layer	Description	Linetype	Colour
REF11_STORAGE_STRUCTURE_NEW	New storage structure	Continuous	193
REF11_STORAGE_STRUCTURE_EXG	Existing storage structure	Continuous	197
REF11_STORAGE_STRUCTURE_REM	Removed storage structure	Continuous	red

Table 351 REF11_STORAGE_STRUCTURE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	STORAGE_STRUC_SUB_TYPE
ASSET_TYPE*	STORAGE STRUCTURE	Character	200	STORAGE_STRUC_ASSET_TYPE
SERIAL_NUMBER		Character	200	
PURPOSE		Character	200	STORAGE_STRUCTURE_PURPOSE
STORAGE_STRUCTURE_MATERIAL*		Character	200	STORAGE_STRUCTURE_MATERIAL
STORAGE_STRUCTURE_BASE_MAT*		Character	200	STORAGE_STRUCTURE_MATERIAL
STORAGE_STRUCTURE_SHAPE*		Character	200	STORAGE_STRUCTURE_SHAPE
STORAGE_STRUCTURE_VOLUME		Real	38.8	
STORAGE_STRUCTURE_LENGTH*		Real	38.8	
STORAGE_STRUCTURE_WIDTH*		Real	38.8	
STORAGE_STRUCTURE_HEIGHT*		Real	38.8	
STORAGE_STRUCTURE_SIZE*		Character	200	STORAGE_STRUCTURE_SIZE

* Designates mandatory attribute

Table 352 REF11_STORAGE_STRUCTURE Ref 11 lookup tables

Ref 11 lookup table	Values
STORAGE_STRUC_SUB_TYPE	FUEL TANK GREY WATER TANK OIL TANK SEPTIC TANK SHIPPING CONTAINER SILO WATER TANK WATER TROUGH
STORAGE_STRUC_ASSET_TYPE	STORAGE STRUCTURE
STORAGE_STRUCTURE_PURPOSE	OTHER BUILDING/TOILET SUPPLY FIRE IRRIGATION STOCK WATER
STORAGE_STRUCTURE_MATERIAL	BARE EARTH CONCRETE METAL PLASTIC TIMBER
STORAGE_STRUCTURE_SHAPE	CIRCULAR RECTANGULAR
STORAGE_STRUCTURE_SIZE	LARGE MEDIUM SMALL

15.17 Table

Street and park furniture > Table
Tags: table

A table is represented by the **REF11_TABLE** block inserted at the centre of the feature with attribute information.

Table 353 Table layers

Layer	Description	Linetype	Colour
REF11_TABLE_NEW	New table	Continuous	41
REF11_TABLE_EXG	Existing table	Continuous	45
REF11_TABLE_REM	Removed table	Continuous	red

Table 354 REF11_TABLE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TABLE	Character	200	TABLE_ASSET_TYPE
ASSET_SUB_TYPE*	OPEN SPACE TABLE	Character	200	TABLE_ASSET_SUB_TYPE
MATERIAL*		Character	200	STRUCTURE_MATERIAL
FRAME_MATERIAL*		Character	200	STRUCTURE_MATERIAL
LIGHTING*		Character	200	TABLE_LIGHTING

* Designates mandatory attribute

Table 355 REF11_TABLE Ref 11 lookup tables

Ref 11 lookup table	Values
TABLE_ASSET_TYPE	TABLE
TABLE_ASSET_SUB_TYPE	OPEN SPACE TABLE
STRUCTURE_MATERIAL	BRICK BRONZE AND ROCK CONCRETE CONCRETE BLOCKS FIBREGLASS HARDWOOD METAL METAL CLAD PLASTIC (TYPICALLY RECYCLED) SANDSTONE STEEL STONE TIMBER
TABLE_LIGHTING	NO TABLE LIGHTING TABLE LIGHTING

16 Traffic control device assets

Bluetooth detector	Simple UHS integrated Bluetooth detectors, standalone solar sage edge Bluetooth detectors, standalone solar sage omnia Bluetooth detectors and streetlight mounted UHS Bluetooth detector with USB extension
Feature sign	Feature signs
On-road cycle lane	On-road cycle lanes with green pavement paint and on-road cycle lanes with standard pavement surface
Priority crossing	School crossings, signalised crossings, wombat crossings (raised platforms) and zebra crossing
Sign blade	Regulatory, temporary, warning, parking, fingerboard and guide signs
Sign group	Location of one or many sign blades related to roads
Speed hump	Slim speed humps, speed cushions, speed humps, speed tables and wheel stops
Traffic camera	Traffic cameras
Traffic island	Median strips, refuge islands, roundabouts, splitter islands and verge islands
Traffic signal controller	Traffic signal controllers
Traffic signal site	Traffic signal sites
Wayfinding sign	Wayfinding signs

16.1 Bluetooth detector

Traffic control device assets > Bluetooth detector
Tags: Bluetooth detector

A Bluetooth detector is represented by the **REF11_BLUETOOTH_DETECTOR** block inserted at the centre of the feature with attribute information.

Table 356 Bluetooth detector layers

Layer	Description	Linetype	Colour
REF11_BLUETOOTH_DETECTOR_NEW	New Bluetooth detector	Continuous	211
REF11_BLUETOOTH_DETECTOR_EXG	Existing Bluetooth detector	Continuous	215
REF11_BLUETOOTH_DETECTOR_REM	Removed Bluetooth detector	Continuous	red

Table 357 REF11_BLUETOOTH_DETECTOR attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	BLUETOOTH DETECTOR	Character	200	BLUETOOTH_DETECTOR_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	BLUETOOTH_DETECTOR_SUB_TYPE
TRAFFIC_SIGNAL_ID		Character	200	
POWER_SOURCE*		Character	200	POWER_SOURCE

* Designates mandatory attribute

Table 358 REF11_BLUETOOTH_DETECTOR Ref 11 lookup tables

Ref 11 lookup table	Values
BLUETOOTH_DETECTOR_ASSET_TYPE	BLUETOOTH DETECTOR
BLUETOOTH_DETECTOR_SUB_TYPE	SIMPLE UHS INTEGRATED BLUETOOTH DETECTOR STANDALONE SOLAR SAGE EDGE BLUETOOTH DETECTOR STANDALONE SOLAR SAGE OMNIA BLUETOOTH DETECTOR STREETLIGHT MOUNTED UHS BLUETOOTH DETECTOR WITH USB EXTENSION
POWER_SOURCE	BATTERY ELECTRICAL MAINS SOLAR PANEL STREETLIGHT CABLE TRAFFIC SIGNAL CONTROL BOX

16.2 Feature sign

Traffic control device assets > Feature sign
Tags: major decorative, suburb entry, welcome to Canberra

A feature sign is represented by the **REF11_FEATURE_SIGN** block inserted at the centre of the feature with attribute information.

Table 359 Feature sign layers

Layer	Description	Linetype	Colour
REF11_FEATURE_SIGN_NEW	New feature sign	Continuous	52
REF11_FEATURE_SIGN_EXG	Existing feature sign	Continuous	56
REF11_FEATURE_SIGN_REM	Removed feature sign	Continuous	red

Table 360 REF11_FEATURE_SIGN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	FEATURE SIGN	Character	200	
ASSET_SUB_TYPE*		Character	200	FEATURE_SIGN_ASSET_SUB_TYPE
ASSET_ID		Character	200	
SIGN_NUMBER_ROADSACT		Character	200	
SIGN_PURPOSE		Character	200	PARK_SIGN_PURPOSE
SIGN_TEXT		Character	200	
MATERIAL		Character	200	PARK_SIGN_MATERIAL
WIDTH		Real	38.8	
HEIGHT		Real	38.8	
CONSTRUCTION_DATE		Date		
LOCATION		Character	200	
FACING_DIRECTION		Character	200	FACING_DIRECTION
SUBURB		Character	200	
FOOTINGS_TYPE		Character	200	FOOTINGS_TYPE
FOOTINGS_DIMENSION		Real	38.8	
FOOTINGS_DEPTH		Real	38.8	

* Designates mandatory attribute

Table 361 REF11_FEATURE_SIGN Ref 11 lookup tables

Ref 11 lookup table	Values
FEATURE_SIGN_ASSET_SUB_TYPE	MAJOR DECORATIVE SUBURB ENTRY WELCOME TO CANBERRA
PARK_SIGN_PURPOSE	ADVISORY DIRECTION DIRECTION AND RESTRICTION DISTANCE MARKER ENTRY EQUESTRIAN FIRE FITNESS INSTRUCTIONS IDENTIFICATION IDENTIFICATION AND DIRECTION IDENTIFICATION AND INFORMATION IDENTIFICATION AND RESTRICTION IDENTIFICATION, DIRECTION AND RESTRICTION IDENTIFICATION, INFORMATION AND DIRECTION IDENTIFICATION, INFORMATION AND RESTRICTION IDENTIFICATION, INFORMATION, DIRECTION AND RESTRICTION INFORMATION INFORMATION AND DIRECTION INFORMATION AND RESTRICTION INFORMATION, DIRECTION AND RESTRICTION RESTRICTION ROAD SIGN WALK MARKER WARNING
PARK_SIGN_MATERIAL	MASONRY METAL PLASTIC PLYWOOD TIMBER
FACING_DIRECTION	E ENE ESE N NE NNE NNW NW S SE SSE SSW SW W WNW WSW

Ref 11 lookup table	Values
FOOTINGS_TYPE	CANTILEVER CONCRETE CONCRETE/LMT CONCRETE/SIGNFIX LOW MAINTENANCE SAME POST SIGNFIX SLIP BASE THREADED

16.3 On-road cycle lane

Traffic control device assets > On-road cycle lane
Tags: on-road cycle lane

An on-road cycle lane is represented by a linear feature (line, lightweight polyline) with the **REF11_ON_ROAD_CYCLE_LANE** block inserted at the midpoint along one of the feature's segments with attribute information.

Table 362 On-road cycle lane layers

Layer	Description	Linetype	Colour
REF11_ON_ROAD_CYCLE_LANE_NEW	New on-road cycle lane	Continuous	43
REF11_ON_ROAD_CYCLE_LANE_EXG	Existing on-road cycle lane	Continuous	47
REF11_ON_ROAD_CYCLE_LANE_REM	Removed on-road cycle lane	Continuous	red

Table 363 REF11_ON_ROAD_CYCLE_LANE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ON ROAD CYCLE LANE	Character	200	ORC_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	ORC_SUB_TYPE
DURATHERM		Character	200	DURATHERM
ADJACENT_KERB*		Character	200	ADJACENT_KERB
ROAD_LOCATION_TYPE*		Character	200	ROAD_LOCATION
SURFACE_TYPE*		Character	200	ORC_SURFACE_TYPE
WIDTH*		Real	38.8	
LENGTH*		Real	38.8	
TRAVEL_DIRECTION		Character	200	TRAVEL_DIRECTION
TRAVEL_RESTRICTION		Character	200	TRAVEL_RESTRICTION
BICYCLE_SYMBOL		Character	200	BICYCLE_SYMBOL
RAISED_SEPERATOR		Character	200	ORC_RAISED_SEPERATOR
CYCLE_TURN_OUT		Character	200	CYCLE_TURN_OUT

* Designates mandatory attribute

Table 364 REF11_ON_ROAD_CYCLE_LANE Ref 11 lookup tables

Ref 11 lookup table	Values
ORC_ASSET_TYPE	ON ROAD CYCLE LANE
ORC_SUB_TYPE	GREEN PAVEMENT PAINT STANDARD PAVEMENT SURFACE
DURATHERM	DURATHERM TREATMENT NO DURATHERM TREATMENT
ADJACENT_KERB	ADJACENT LEFT TURN SLIP LANE ADJACENT TO HIGH TURNOVER PARALLEL PARKING ADJACENT TO KERB ARTERIAL ROAD EXIT RAMP WITH RAMP CYCLE FACILITIES ARTERIAL ROAD EXIT RAMP WITHOUT RAMP CYCLE FACILITIES NOT ADJACENT TO KERB
ROAD_LOCATION	MEDIAN SEPARATED SHOULDER
ORC_SURFACE_TYPE	ASPHALTIC CONCRETE BITUMEN CHIP SEAL CONCRETE MIX OF CONCRETE AND ASPHALTIC CONCRETE PAVERS OR CONCRETE BLOCKS REINFORCED CONCRETE
TRAVEL_DIRECTION	ONE-WAY TWO-WAY
TRAVEL_RESTRICTION	CYCLE ONLY NO RESTRICTION PEDESTRIAN ONLY
BICYCLE_SYMBOL	BICYCLE SYMBOL BICYCLE SYMBOL WITH WORD END BICYCLE SYMBOL WITH WORD LANE BICYCLE SYMBOL WITH WORD ONLY NO BICYCLE SYMBOL
ORC_RAISED_SEPERATOR	NO RAISED PAVEMENT SEPERATOR YELLOW RAISED PAVEMENT SEPERATOR
CYCLE_TURN_OUT	NO CYCLE TURN OUT YES INCLUDES CYCLE TURN OUT

16.4 Priority crossing

Traffic control device assets > Priority crossing
Tags: pedestrian crossing, priority crossing, zebra crossing, wombat crossing

A priority crossing is represented by a closed lightweight polyline signifying the perimeter with the **REF11_PRIORITY_CROSSING** block inserted inside with attribute information.

Table 365 Priority crossing layers

Layer	Description	Linetype	Colour
REF11_PRIORITY_CROSSING_NEW	New priority crossing	Continuous	41
REF11_PRIORITY_CROSSING_EXG	Existing priority crossing	Continuous	45
REF11_PRIORITY_CROSSING_REM	Removed priority crossing	Continuous	red

Table 366 REF11_PRIORITY_CROSSING attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	PRIORITY CROSSING	Character	200	PRIORITY_CROSSING_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	PRIORITY_CROSSING_SUB_TYPE
SIGNAL_ID		Character	200	
MATERIAL*		Character	200	PRIORITY CROSSING_MATERIAL
COLOURED_SURFACE_TREATMENT		Character	200	CROSSING_COLOURED_SURFACE
SURFACE_AREA*		Integer	8	
HIGH_INTENSITY_LIGHTING*		Character	200	HIGH_INTENSITY_LIGHTING
FLASHING_LIGHTS*		Character	200	FLASHING_LIGHTS
SCHOOL_NEAR_CROSSING_NAME		Character	200	

* Designates mandatory attribute

Table 367 REF11_PRIORITY_CROSSING Ref 11 lookup tables

Ref 11 lookup table	Values
PRIORITY_CROSSING_ASSET_TYPE	PRIORITY CROSSING
PRIORITY_CROSSING_SUB_TYPE	BICYCLE-ONLY PRIORITY CROSSING CHILDRENS CROSSING SIGNALISED CROSSING WOMBAT CROSSING (RAISED PLATFORM) ZEBRA CROSSING
PRIORITY CROSSING_MATERIAL	ASPHALTIC CONCRETE BRICK PAVERS CONCRETE SAME AS ROAD PAVEMENT SAME AS THRESHOLD MATERIAL
CROSSING_COLOURED_SURFACE	BRICK RED OXIDE GREEN DEGADUR
HIGH_INTENSITY_LIGHTING	HIGH INTENSITY LIGHTING NO HIGH INTENSITY LIGHTING
FLASHING_LIGHTS	FLASHING LIGHTS NO FLASHING LIGHTS

16.5 Sign blade

Traffic control device assets > Sign blade
Tags: sign, traffic sign, sign blade

A sign blade is represented by the **REF11_SIGN_BLADE** block inserted at the centre of the feature with attribute information.

Table 368 Sign blade layers

Layer	Description	Linetype	Colour
REF11_SIGN_BLADE_NEW	New sign blade	Continuous	magenta
REF11_SIGN_BLADE_EXG	Existing sign blade	Continuous	7
REF11_SIGN_BLADE_REM	Removed sign blade	Continuous	red

Table 369 REF11_SIGN_BLADE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
SIGN_BLADE_CODE*		Character	200	SIGN_CODE
SIGN_BLADE_CODE_MEANING		Character	200	
ASSET_TYPE*	ROAD SIGN BLADE	Character	200	SIGN_BLADE_ASSET_TYPE
SIGN_NUMBER_ROADSACT		Character	200	
HAND_CODE		Character	20	HAND_CODE
SIGN_TYPE		Character	200	
SIGN_SIZE		Character	5	SIGN_SIZE
SIGN_POSITION		Character	20	SIGN_POSITION
FACING_DIRECTION		Character	20	FACING_DIRECTION
DISTANCE_FROM_GROUND		Real	4	
BLADE_MATERIAL		Character	30	BLADE_MATERIAL
BLADE_MOUNTING		Character	30	BLADE_MOUNTING
BLADE_WIDTH		Real	4	
BLADE_HEIGHT		Real	4	
INSTALLED_BY		Character	30	
DATE_INSTALLED		Date		
MANUFACTURER		Character	30	
MANUFACTURE_DATE		Date		
SIGN_SUPPLEMENTARY_IND_TYPE		Character	255	

* Designates mandatory attribute

Table 370 REF11_SIGN_BLADE Ref 11 lookup tables

Ref 11 lookup table	Values
SIGN_CODE	Refer to TBC
SIGN_BLADE_ASSET_TYPE	ROAD SIGN BLADE
HAND_CODE	BOTH LEFT RIGHT
SIGN_SIZE	A B C D
SIGN_POSITION	LEFT SHOULDER LEFT TURN ISLAND MEDIAN OVERHEAD RIGHT SHOULDER SPLITTER ISLAND T-INTERSECTION
FACING_DIRECTION	E ENE ESE N NE NNE NNW NW S SE SSE SSW SW W WNW WSW
BLADE_MATERIAL	ALUMINIUM MASONRY ROUTED TIMBER
BLADE_MOUNTING	BANDIT FRISBIE BRACKETS HORSESHOE BRACKETS POLO CAP SADDLE CLAMP STREET SIGN BRACKETS WALL MOUNTED

16.6 Sign group

Traffic control device assets > Sign group
Tags: sign group

A sign group is represented by the **REF11_SIGN_GROUP** block inserted at the centre of the feature with attribute information.

Table 371 Sign group layers

Layer	Description	Linetype	Colour
REF11_SIGN_GROUP_NEW	New sign group	Continuous	51
REF11_SIGN_GROUP_EXG	Existing sign group	Continuous	55
REF11_SIGN_GROUP_REM	Removed sign group	Continuous	red

Table 372 REF11_SIGN_GROUP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	ROAD SIGN POST	Character	200	SIGN_GROUP_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SIGN_POST_ASSET_SUB_TYPE
POST_DIAMETER		Real	38.8	POST_DIAMETER
NUMBER_OF_POSTS		Integer	8	
POST_WALL_THICKNESS		Real	38.8	POST_WALL_THICKNESS
POST_GRADE		Real	38.8	POST_GRADE
FOOTINGS_DEPTH		Real	38.8	
FOOTINGS_TYPE		Character	200	FOOTINGS_TYPE
FOOTINGS_DIMENSION		Real	38.8	

* Designates mandatory attribute

Table 373 REF11_SIGN_GROUP Ref 11 lookup tables

Ref 11 lookup table	Values
SIGN_GROUP_ASSET_TYPE	ROAD SIGN POST
SIGN_POST_ASSET_SUB_TYPE	BRIDGE CANTILEVER FRANGIBLE GALVANISED STEEL CIRCULAR HOLLOW SECTION GATE MILD STEEL PIPE OVERHEAD GANTRY SAME POST SQUARE STEEL POLE TALLOWWOOD TIMBER POST UTILITY WALL
POST_DIAMETER	60.3 76.1 88.9 90 101.6 114.3 139.7 165.1
POST_WALL_THICKNESS	2.3 2.6 2.9 3 3.2 3.6 3.9 4 4.5 4.8 5 5.4
POST_GRADE	250 350
FOOTINGS_TYPE	CANTILEVER CONCRETE CONCRETE/LMT CONCRETE/SIGNFIX LOW MAINTENANCE SAME POST SIGNFIX SLIP BASE THREADED

16.7 Speed hump

Traffic control device assets > Speed hump
Tags: speed hump, wheel stop

A speed hump is represented by a closed lightweight polyline signifying the perimeter with the **REF11_SPEED_HUMP** block inserted inside with attribute information.

Table 374 Speed hump layers

Layer	Description	Linetype	Colour
REF11_SPEED_HUMP_NEW	New speed hump	Continuous	40
REF11_SPEED_HUMP_EXG	Existing speed hump	Continuous	44
REF11_SPEED_HUMP_REM	Removed speed hump	Continuous	red

Table 375 REF11_SPEED_HUMP attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	SPEED_HUMP_SUB_TYPE
ASSET_TYPE*	TRAFFIC CALMING DEVICE	Character	200	SPEED_HUMP_ASSET_TYPE
NUMBER_OF_SPEED_HUMPS*		Real	38.8	
MATERIAL*		Character	200	SPEED_HUMP_MATERIAL
ASSOCIATED_PEDESTRIAN_CROSSING		Character	200	ASSOCIATED_CROSSING
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 376 REF11_SPEED_HUMP Ref 11 lookup tables

Ref 11 lookup table	Values
SPEED_HUMP_SUB_TYPE	SLIM SPEED HUMP SPEED CUSHIONS SPEED HUMP SPEED TABLE WHEEL STOP
SPEED_HUMP_ASSET_TYPE	TRAFFIC CALMING DEVICE
SPEED_HUMP_MATERIAL	ASPHALT CONCRETE METAL PAVERS OR CONCRETE BLOCKS PLASTIC
ASSOCIATED_CROSSING	PEDESTRIAN CROSSING

16.8 Traffic camera

Traffic control device assets > Traffic camera
Tags: red light and speed camera, speed camera, traffic camera, automatic number plate recognition camera, captivaction camera, CCTV camera, heavy vehicle camera, point 2 point camera

A traffic camera is represented by the **REF11_TRAFFIC_CAMERA** block inserted at the centre of the feature with attribute information.

Table 377 Traffic camera layers

Layer	Description	Linetype	Colour
REF11_TRAFFIC_CAMERA_NEW	New traffic camera	Continuous	213
REF11_TRAFFIC_CAMERA_EXG	Existing traffic camera	Continuous	217
REF11_TRAFFIC_CAMERA_REM	Removed traffic camera	Continuous	red

Table 378 REF11_TRAFFIC_CAMERA attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_SUB_TYPE*		Character	200	TRAFFIC_CAMERA_ASSET_SUB_TYPE
ASSET_TYPE*	TRAFFIC CAMERA	Character	200	TRAFFIC_CAMERA_ASSET_TYPE
ASSET_ID		Character	200	
CONSTRUCTION_DATE		Date		
TRAFFIC_SIGNAL_ID		Character	200	
CAMERA_ATTACHMENT		Character	200	TRAFFIC_CAMERA_ATTACHMENT
NUMBER_OF_CAMERAS		Real	38.8	
POWER_SOURCE		Character	200	POWER_SOURCE
LOCATION		Character	200	
SUBURB		Character	200	

* Designates mandatory attribute

Table 379 REF11_TRAFFIC_CAMERA Ref 11 lookup tables

Ref 11 lookup table	Values
TRAFFIC_CAMERA_ASSET_SUB_TYPE	AUTOMATIC NUMBER PLATE RECOGNITION CAMERA CAPTIVACTION CAMERA CCTV CAMERA HEAVY VEHICLE CAMERA POINT 2 POINT CAMERA RED LIGHT AND SPEED CAMERA SPEED CAMERA TRAFFIC CAMERA
TRAFFIC_CAMERA_ASSET_TYPE	TRAFFIC CAMERA
TRAFFIC_CAMERA_ATTACHMENT	BOOM GATE BUILDING CAGE FENCE FREE STANDING GATE LIGHT POLE PIPE POLE STREETLIGHT COLUMN TRAFFIC SIGNAL COLUMN TRAILER MOUNTED
POWER_SOURCE	BATTERY ELECTRICAL MAINS SOLAR PANEL STREETLIGHT CABLE TRAFFIC SIGNAL CONTROL BOX

16.9 Traffic island

Traffic control device assets > Traffic island
Tags: traffic island, refuge island

A traffic island is represented by a closed lightweight polyline signifying the perimeter with the **REF11_TRAFFIC_ISLAND** block inserted inside with attribute information.

Table 380 Traffic island layers

Layer	Description	Linetype	Colour
REF11_TRAFFIC_ISLAND_NEW	New traffic island	Continuous	103
REF11_TRAFFIC_ISLAND_EXG	Existing traffic island	Continuous	107
REF11_TRAFFIC_ISLAND_REM	Removed traffic island	Continuous	red

Table 381 REF11_TRAFFIC_ISLAND attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TRAFFIC ISLAND	Character	200	TRAFFIC_ISLAND_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	TRAFFIC_ISLAND_ASSET_SUB_TYPE
REFUGE_POINT*		Character	200	REFUGE_POINT
SURFACE_MATERIAL*		Character	200	TRAFFIC_ISLAND_SURFACE
REINFORCING_TYPE		Character	200	REINFORCING_TYPE
SURFACE_AREA*		Real	38.8	

* Designates mandatory attribute

Table 382 REF11_TRAFFIC_ISLAND Ref 11 lookup tables

Ref 11 lookup table	Values
TRAFFIC_ISLAND_ASSET_TYPE	TRAFFIC ISLAND
TRAFFIC_ISLAND_ASSET_SUB_TYPE	MEDIAN STRIP REFUGE ISLAND ROUNDABOUT SPLITTER ISLAND VERGE ISLAND
REFUGE_POINT	INCLUDES REFUGE POINT NO REFUGE POINT
TRAFFIC_ISLAND_SURFACE	CONCRETE CONCRETE AND GRASS FIBRE REINFORCED CONCRETE GRASS GRAVEL PAVERS OR CONCRETE BLOCKS
REINFORCING_TYPE	GLASS FIBRE REINFORCED POLYMER NO REINFORCEMENT NON-RECYCLED PLASTIC FIBRES RECYCLED PLASTIC FIBRES STEEL FIBRES STEEL REINFORCING

16.10 Traffic signal controller

Traffic control device assets > Traffic signal controller
Tags: traffic signal controller

A traffic signal controller is represented by the **REF11_TRAFFIC_SIGNAL_CONTROLLER** block inserted at the centre of the feature with attribute information.

Table 383 Traffic signal controller layers

Layer	Description	Linetype	Colour
REF11_TRAFFIC_SIGNAL_CONTROLLER_NEW	New traffic signal controller	Continuous	212
REF11_TRAFFIC_SIGNAL_CONTROLLER_EXG	Existing traffic signal controller	Continuous	216
REF11_TRAFFIC_SIGNAL_CONTROLLER_REM	Removed traffic signal controller	Continuous	red

Table 384 REF11_TRAFFIC_SIGNAL_CONTROLLER attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TRAFFIC SIGNAL CONTROLLER	Character	200	SIGNAL_CONTROLLER_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SIGNAL_CONTROLLER_SUB_TYPE
ASSOCIATED_TSSI_ID		Character	200	
ASSET_ID		Character	200	
QUANTITY*		Real	38.8	

* Designates mandatory attribute

Table 385 REF11_TRAFFIC_SIGNAL_CONTROLLER Ref 11 lookup tables

Ref 11 lookup table	Values
SIGNAL_CONTROLLER_ASSET_TYPE	TRAFFIC SIGNAL CONTROLLER
SIGNAL_CONTROLLER_SUB_TYPE	42VAC ELV ICUPS ATSC4 ATSC4 ELV ECUPS ATSC4 ELV ICUPS ATSC4 LV ICUPS ECLIPSE PED FLASHER PSC PLUS PSC2000 PSC3000

16.11 Traffic signal site

Traffic control device assets > Traffic signal site
Tags: traffic signal site, signalized intersection

A traffic signal site is represented by the **REF11_TRAFFIC_SIGNAL_SITE** block inserted at the centre of the feature with attribute information.

Table 386 Traffic signal site layers

Layer	Description	Linetype	Colour
REF11_TRAFFIC_SIGNAL_SITE_NEW	New traffic signal site	Continuous	210
REF11_TRAFFIC_SIGNAL_SITE_EXG	Existing traffic signal site	Continuous	214
REF11_TRAFFIC_SIGNAL_SITE_REM	Removed traffic signal site	Continuous	red

Table 387 REF11_TRAFFIC_SIGNAL_SITE attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	TRAFFIC SIGNAL SITE	Character	200	SIGNAL_SITE_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	SIGNAL_SITE_SUB_TYPE
SITE_NUMBER		Character	200	
REGION*		Character	200	TRAFFIC_SIGNAL_REGION
COMMISSIONING_DATE*		Date		
CONNECTION_DATE*		Date		
MODIFICATION_DATE		Date		
LATEST_REPLACEMENT_DATE		Date		
SERVICE_PROVIDER*		Character	200	SERVICE_PROVIDER
IP_WIDE_AREA_NETWORK		Character	200	
FIXED_SIGNAL*		Character	200	FIXED_SIGNAL
BLUETOOTH_DETECTOR*		Character	200	BLUETOOTH_DETECTOR
CCTV_CAMERA*		Character	200	CCTV_CAMERA

* Designates mandatory attribute

Table 388 REF11_TRAFFIC_SIGNAL_SITE Ref 11 lookup tables

Ref 11 lookup table	Values
SIGNAL_SITE_ASSET_TYPE	TRAFFIC SIGNAL SITE
SIGNAL_SITE_SUB_TYPE	CROSS PART TIME PEDESTRIAN TEE
TRAFFIC_SIGNAL_REGION	BELCONNEN CITY GUNGAHLIN WODEN
SERVICE_PROVIDER	TELSTRA TRANSACT
FIXED_SIGNAL	FIXED SIGNAL NO FIXED SIGNAL
BLUETOOTH_DETECTOR	INCLUDES BLUETOOTH DETECTOR NO BLUETOOTH DETECTOR
CCTV_CAMERA	INCLUDES CCTV CAMERA NO CCTV CAMERA

16.12 Wayfinding sign

Traffic control device assets > Wayfinding sign
Tags: wayfinding sign

A wayfinding sign is represented by the **REF11_WAYFINDING_SIGN** block inserted at the centre of the feature with attribute information.

Table 389 Wayfinding sign layers

Layer	Description	Linetype	Colour
REF11_WAYFINDING_SIGN_NEW	New wayfinding sign	Continuous	52
REF11_WAYFINDING_SIGN_EXG	Existing wayfinding sign	Continuous	56
REF11_WAYFINDING_SIGN_REM	Removed wayfinding sign	Continuous	red

Table 390 REF11_WAYFINDING_SIGN attributes

Block attribute	Default value	Data type	Max length	Ref 11 lookup table
ASSET_TYPE*	WAYFINDING SIGN	Character	200	WAYFINDING_SIGN_ASSET_TYPE
ASSET_SUB_TYPE*		Character	200	WAYFINDING_SIGN_ASSET_SUB_TYPE
ROADSACT_SIGN_NO		Real	38.8	
CANBERRA_METRO_SIGN_NO		Character	200	
MOUNTING_TYPE*		Character	200	WAYFINDING_SIGN_MOUNTING
MOUNTED_TO		Character	200	
SIGN_INFORMATION_A1*		Character	100	
SIGN_INFORMATION_A2		Character	50	
SIGN_INFORMATION_A3		Character	50	
SIGN_INFORMATION_A4		Character	50	
SIGN_INFORMATION_A5		Character	50	
SIGN_INFORMATION_B1		Character	100	
SIGN_INFORMATION_B2		Character	50	
SIGN_INFORMATION_B3		Character	50	
SIGN_INFORMATION_B4		Character	50	
SIGN_INFORMATION_B5		Character	50	

* Designates mandatory attribute

Table 391 REF11_WAYFINDING_SIGN Ref 11 lookup tables

Ref 11 lookup table	Values
WAYFINDING_SIGN_ASSET_TYPE	WAYFINDING SIGN
WAYFINDING_SIGN_ASSET_SUB_TYPE	TYPE C2 - TOTEM TYPE F1A - FLAG - INDEPENDENT TYPE F1B - FLAG - INTEGRATED TYPE F2A - FLAG - INDEPENDENT WITH SERVICES TYPE F2B - FLAG - INTEGRATED WITH SERVICES TYPE P1 - PYLON
WAYFINDING_SIGN_MOUNTING	BASE MOUNTED CONCRETE FOOTING FIXED TO UTILITY

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