

WARATAH WYNYARD & CIRCULAR HEAD MUNICIPALITY



SUBMISSION OF DIGITAL AS CONSTRUCTED INFORMATION

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SUBMISSION OF DIGITAL AS CONSTRUCTED INFORMATION

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1.0 INTRODUCTION

1.1 Purpose of the Manual

Waratah Wynyard and Circular Head Councils both maintain a comprehensive Geographic Information System (hereafter *GIS*) and Asset Register (hereafter *AREG*), which lists and contains valuable information on all Council owned infrastructure as well as storing a large amount of topographic and miscellaneous data.

This manual is for the use of Private Developers, the Representatives of Private Developers and Consultants (hereafter referred to as *Consultants*) who are required to submit “As Constructed” (hereafter referred to as *ASCOM*) information to Council as part of Council’s development conditions and in accordance with the requirements of the Waratah Wynyard Council & Circular Head councils (hereafter referred to as *Council*) Planning Permits.

This manual has been written to assist Consultants in the preparation of the digital “As Constructed” information to be submitted to Council in lieu of traditional “As Constructed” paper plans. It sets out the format in which the digital files are required in order for Council to append the data to its existing GIS and AREG.

1.1.1 Responsibility of the Consultant

The consultant shall be responsible for:

- Supplying digital data in the format set out in this manual.
- Ensuring that the data supplied to Council is correct and accurate.

1.1.2 Responsibility of the Council

The Council shall be responsible for:

- Updating the Council GIS and AREG with the information supplied by the Consultant.

The Council shall not be responsible for

- Ensuring the correctness of the “As Constructed” data. Development works will not be accepted off maintenance until any incorrect data has been rectified. Any costs associated with third party claims against the Council for supply of incorrect data that has been certified by a consultant shall be recovered from that consultant. If data submitted by a consultant is found to be inconsistent with the accuracy of data specified in this manual, the Council may also recover costs associated with the rectification of the digital information.

1.2 Aim of the Manual

The aim of this manual is to assist consultants and to ensure that new data input into the Councils GIS & AREG is:

- Consistent
- Accurate
- Complete

1.3 Scope of the Manual

This manual is not intended to replace the Council’s, Planning conditions for Development Works, but is to be read in conjunction with them.

The following asset categories are considered in detail in Sections 4 to 9 of this manual.

- Roads
- Stormwater Drainage
- Parks
- Miscellaneous

1.4 Purpose of Maintaining Council's GIS and AREG

The GIS and AREG represents a significant investment by the Council. The Council is committed to ensuring that the information is maintained to a high degree of completeness and accuracy.

The Geographic Information System is used by Council for:

- Asset Maintenance Management
- Risk Management
- Capital Works Planning
- Benchmarking (i.e. comparing how well Council's assets perform against other local government's assets)
- Comparison of like assets under different circumstances
- "As Constructed" records
- Services maps of the local authority area
- Asset Valuation
- Pavement Management Strategies
- Production of Council maps and street directories
- Hydraulic Modelling

In summary, the collection of asset data is extremely important to Council as it forms the basis for many important decision making processes and activities.

1.5 General Requirements

1.5.1 Council Contact

All enquiries relating to the format of the digital information should be directed to Council's, GIS Officer.

The Consultant should contact the Council's GIS Officer where specific information for a particular asset is not covered by this manual. If an asset is not listed but ultimately becomes the responsibility of Council, attribute details required will be supplied by the Council's GIS Officer.

1.5.2 Submission of "As Constructed" Data

As Constructed information in digital format, is to be submitted to the Council's Engineering Department before works will be accepted on maintenance.

Table 1.5.2 Checklist for Submission of "As Constructed" Data is supplied to assist the consultant in compiling the required data for submission to Council.

Table 1.5.2 Checklist for Submission of “As Constructed” Data

Description	Included	Not applicable	Comments
AutoCAD Version 14 or better DWG,DXF, MapInfo tab files or compatible containing the following asset Types: Roads Stormwater drainage Parks Miscellaneous			
ASCII File/s containing point objects			
Digital copies of the attribute data forms for the following asset types: Roads Stormwater drainage Parks Miscellaneous			

2.0 DATA FORMAT

2.1 Software

The software applications noted below are the software applications preferred by Council, however, digital files that can be read by the specified software packages are acceptable.

- AutoCAD
- MapInfo
- Microsoft Access or Compatible
- Microsoft Excel or Compatible

Examples using the specified software are included in Section 11 of this manual.

2.2 Digital Plan Information

2.2.1 General

Digital plan information is to be provided to Council in the following format:

- AutoCAD DXF or DWG file
- MapInfo TAB or MIF format
- ASCII text file (point data only)

AutoCAD drawings are to be organized into separate layers for each asset type for easy translation into Council's GIS. The specifications for objects in AutoCAD drawing/DXF or MapInfo file formats are set out in Table 3.3 of this manual.

Data submitted in MapInfo format are to be in separate tables for each asset type and the data table is to contain the required relevant information as detailed for the associated individual Attribute Data Forms.

2.2.1.1 New/Modified Assets

Each new or modified object shown in the submitted drawing format should

- Be clearly identified with an asset Entry ID.
- Have a completed corresponding row in the attribute table.

2.2.1.2 Deleted Assets

Assets which have been demolished or removed during the construction of the new works shall be shown in the geographically correct location in the drawing files to enable Council to locate and delete these assets from the existing asset database. Attribute information is not necessary if the asset can be clearly identified on the plan and separated from similar objects located nearby.

2.2.2 Plan Projection

The submitted drawing format shall be set up using the coordinate system specified in Section 3.2 of this manual.

2.2.3 Plan Set-up

The scale factor used on all drawings shall be 1 unit = 1 meter.

NOTE: No movement, scaling, translation or rotation shall be applied to the objects in the drawing.

The recommended layer names and drawing specifications for each asset type are set out in Table 3.3 of this manual. Where the recommended layer names are not utilised it will be of significant assistance to Council staff if the layer names used are indicative of the information contained on the layer.

Only one submitted drawing format object shall be used to represent a single, specific asset. A consistent object type shall be used for each asset type. The object types for each asset are specified in Table 3.3 of this manual.

Text, where included in the CAD drawing, shall be separated into clearly identifiable layers.

It is preferred if the AutoCAD DWG or DXF files have the following general characteristics:

AutoCAD Version	14 or later
Dimension Planes	2
Drawing Units	Meters
Projection	MGA94
Drawing Precision	6 Decimal places
No. of Annotated Decimal Places	3
Text File Format	ASCII
Polylines	Continuous NOT curve fitted; NOT splined
Closed Polygons	Continuous NOT curve fitted; NOT splined
Points Scaling	Relative

2.2.4 Asset Numbering

An **Entry ID** shall be assigned to each asset by the consultant. The **Entry ID** shall be assigned as follows:

- Where point objects are included in the submitted drawing format the Entry ID shall be assigned to the point object as an attribute.
- Where point objects are provided in ASCII format, an Entry ID for each object is to be included in the ASCII file.
- For all other object types (lines, polylines, polygons etc.) the Entry ID is to be entered in the submitted drawing format as text, in a layer identified as text (e.g. StormwaterMainsText), adjacent to the asset.

2.2.5 Responsibility of the Consultant

The Consultant shall be responsible for

- The correctness and accuracy of the information contained in the drawing files.
- Ensuring that the drawing files are on the correct coordinate system and level datum and that the files are to true and correct scale and rotation.
- Ensuring that the assigned assets Entry ID's are correct in both the drawing and attribute files.

2.2.6 Responsibility of Council

Council shall be responsible for

- Correctly inserting the plan information into Council's existing GIS and AREG.

The Council shall not be responsible for

- Scaling, rotating, translating or otherwise manipulating the data supplied by the consultant.
- Establishing the correct asset Entry ID's.

2.3 Attribute Data

2.3.1 General

Sections 4 to 9 of this manual set out in detail the attribute information which is to be supplied to Council for each asset. Standard forms have been developed to assist the consultant in recording this information and the specific forms required are included in relevant sections of this manual. Each line of attribute information is to have a corresponding submitted drawing format object.

Example attribute data forms are included in Section 11 of this manual.

NOTE: PLEASE ENSURE THAT YOU ENABLE MACROS WITHIN EXCEL IN ORDER FOR THE DATA COLLECTION SPREADSHEET TO FUNCTION

2.3.2 Asset Numbering

The consultant shall establish a simple temporary asset numbering system which will allow the information in the attribute forms to be linked to the correct asset as follows:

- The Entry ID assigned to each row of the attribute data forms shall correspond to an Entry ID assigned to the specific asset and the number shown on digital plan of the geographic locations of assets.
- The Entry ID of each asset shall be recorded in the digital attribute form as described in Sections 4 to 9 of this manual.

2.3.3 Responsibility of the Consultant

The Consultant shall be responsible for

- The accuracy of the information contained in the digital attribute form.
- Ensuring that the Entry ID assigned to each asset by the Consultant correctly associates the attribute data with the correct asset.

2.3.4 Responsibility of Council

Council shall be responsible for

- Correctly associating the attribute information with the plan information in Council's GIS and AREG based on the information and Entry ID's supplied by the Consultant.
- Establishment of the final asset numbering system for all new assets.

The Council shall not be responsible for

- Establishing the correct Entry ID's to each asset.

3.0 SURVEY REQUIREMENTS

3.1 General Requirements

Specific survey tolerances and requirements for the submission of as constructed information to council are set in this manual. This should not be confused with the construction tolerances and requirements specified in any relevant planning conditions or applicable IPWEA subdivision standards.

3.2 Required Datum / Projection

All the “As Constructed” data provided to Council by the Consultant is to be in MGA 94 (metres) projection with the vertical datum to be in AHD.

3.3 Acceptable Tolerances

Digital “As Constructed” data recorded and supplied to Council by the Consultant shall be in accordance with Table 3.3.

TABLE 3.3 – DRAWN OBJECT TOLERANCE & ATTRIBUTE REQUIREMENTS

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) ($\pm x$ mm)	* Required Vertical Accuracy (Z) (90% confidence limit) ($\pm x$ mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Roads	Kerb/ Kerb and Channel	Lip of Kerb/Kerb and channel. Line work to be drawn in the direction of flow.	± 80 mm	± 10 mm	Continuous Polyline	RAD_KERB	ASCON_RD_KERB
	Spot levels	<ul style="list-style-type: none"> Spot levels on lip of kerb and channel Finished surface level of seal at kerb lip only Finished surface level of road crown Finished surface level at edge of seal, (where no kerb and channel is present.) 	± 80 mm	± 10 mm	Point (with the Entry ID & level as an attribute)	NA (To be supplied in a digital ASCII text file)	ASCON_SUR_PTS
	Edge of Shoulder	Edge of Shoulder	Urban ± 80 mm Rural ± 100 mm	NA	Continuous Polyline	NA	ASCON_RD_SH
	Edge of Seal	Edge of Seal	Urban ± 80 mm Rural ± 100 mm	NA	Continuous Polyline	NA	ASCON_RD_EB

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) (\pm x mm)	* Required Vertical Accuracy (Z) (90% confidence limit) (\pm x mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Roads	Road Surfacing and Pavement	Centre of road (centre line is to be segmented showing consistent pavement / surfacing construction)	Urban ± 80 mm Rural ± 100 mm	NA	Continuous Polyline (along centre line)	RAD_PAV	ASCON_RD_CL
Roads	Select Material / Subgrade Replacement	Centre of road at location of select material / subgrade replacement	NA	NA	Continuous Polyline (along centre line)	RAD_PAV	ASCON_RD_CL
Roads	Road signs	Centre of Sign	± 100 mm	NA	Point (with the Entry ID as an attribute)	RAD_SIGN	ASCON_RD_SIGN
Roads	Paved Footpaths including kerb ramps	Perimeter of footpath	± 80 mm	NA	Continuous Polyline (along centre line)	RAD_PATH	ASCON_RD_PATH
Roads	Footbridge	Perimeter of footbridge	± 80 mm	NA	Polygon (depicting extents)	RAD_PATH	ASCON_RD_BR

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) (\pm x mm)	* Required Vertical Accuracy (Z) (90% confidence limit) (\pm x mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Roads	Line Marking	Line of Line marking	Design	NA	Continuous Polyline	NA	ASCON_RD_PM
Roads	Line Marking – Pedestrian crossings / Medians / Chevrons	Perimeter of painted marking – Note a pedestrian crossing is to be enclosed with a polygon depicting the extent of the entire crossing. It is not to be represented by numerous polygons depicting The actual painted areas.	Design	NA	Polygon (depicting extents)	NA	ASCON_RD_PM
Roads	Table Drain	Invert of Table Drain. Line work to be drawn in the direction of flow.	Urban \pm 80mm Rural \pm 100mm	\pm 20 mm	Continuous Polyline	NA	ASCON_SW_OPC
Stormwater	Inlets and Outlets	Centre top of structure	Urban \pm 80mm Rural \pm 100mm	\pm 10 mm	Point or Block #	DAD_STRUCT	ASCON_SW_EOL
Stormwater	Inlet Pits & Manholes	Centre of drop	Urban \pm 80mm Rural \pm 100mm	\pm 10 mm	Point or Block #	DAD_STRUCT	ASCON_SW_MH
Stormwater	Pipes	Centre line of each pipe. Line work to be drawn in the direction of flow.	Urban \pm 80mm Rural \pm 100mm	\pm 10 mm	Continuous Polyline	DAD_PIPE	ASCON_SW_MAIN

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) (\pm x mm)	* Required Vertical Accuracy (Z) (90% confidence limit) (\pm x mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Stormwater	Roof Water Drainage Pits	Centre of pit to centre of pit	Urban \pm 80mm Rural \pm 100mm	\pm 10 mm	Point or Block #	DAD_STRUCT	ASCON_SW_MAIN
Stormwater	Open Channel	Top of bank and invert of drain. Line work to be drawn in the direction of flow.	Urban \pm 80mm Rural \pm 100mm	\pm 20 mm	Continuous Polyline	DAD_OC	ASCON_SW OPC
Stormwater	Detention/ Retention Basins	Perimeter of water body (excluding islands)	Design	NA	Polygon (depicting perimeter)	DAD_DR	ASCON_SW_RET
Stormwater	Stormwater Quality Improvement Devices	Centre or perimeter of extents of device	Urban \pm 80mm Rural \pm 100mm	\pm 20 mm	Block or Polygon (depicting perimeter)	DAD_SQID	ASCON_SW_GPT
Parks	Fence	Centreline of fence	\pm 80mm	NA	Polyline	PAD_FENCE	ASCON_PK_FENCE

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) (\pm x mm)	* Required Vertical Accuracy (Z) (90% confidence limit) (\pm x mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Parks	Signs	Centre of Sign	± 100 mm	NA	Point	PAD_FENCE	ASCON_PK_SIGN
Parks	Furniture	Centre of structure	± 80 mm	NA	Point (depicting the centre of the object)	PAD_FURN	ASCON_PK_FURNITURE
Parks	BBQ's	Centre of structure	± 80 mm	NA	Point (depicting the centre of the object)	PAD_FURN	ASCON_PK_BBQ
Parks	Equipment	Centre of the equipment	± 80 mm	NA	Point (depicting the centre of the object)	PAD_EQUIP	ASCON_PK_EQUIP
Parks	Structures	Extent of the building footprint.	± 80 mm	± 20 mm	Polygon (depicting the perimeter of the building footprint)	PAD_STRUCT	ASCON_PK_STRUCT
Miscellaneous	Development Boundary	Extent of development / Stage boundary	NA	NA	Polygon (depicting perimeter of Cadastral boundary)	MAD_BDY	ASCON_CAD

Asset Category	Asset Type	Displayed Location (Plan View)	Required Positional Accuracy (XY) (90% confidence limit) (\pm x mm)	* Required Vertical Accuracy (Z) (90% confidence limit) (\pm x mm)	Object Type (Submitted drawing format Specification)	Attribute Data Form	Preferred Layer Name
Miscellaneous	Spot Heights	<ul style="list-style-type: none"> 20m grid in cut or fill areas Changes of grade (includes open drains and road earthworks) 	\pm 80mm	\pm 10 mm	Point with the level as an attribute OR The point objects alternatively can be supplied as an ASCII file containing X,Y, and Z coordinates and object Layer name	NA	ASCON_SUR_PTS
Miscellaneous	Retaining Walls	Centre, top of wall	Urban \pm 80mm Rural \pm 100mm	NA	Polyline	MAD_RETWALL	ASCON_RETWALL

* Note: Accuracies stated are relative and related to SPM's/PSM's used for the survey control.

Note: Where objects are provided as Blocks in AutoCAD the "Insertion Point" for the block MUST be the objects attribute data collection point; i.e.: for a manhole the insertion point would be the centre of the manhole lid.

Zone Note: Refer to Figure 1 for locations of Zones

4.0 ROADWORKS

4.1 Plan Information

Digital plan information, in the format specified in Section 2.2 of this manual, is to be provided for all the road assets listed in Table 3.3.

4.2 Attribute Information

4.2.1 General

Attribute information is to be supplied for all new Road assets which ultimately become the property and responsibility of Council, in the format specified in section 2.3. These assets and the relevant form number for recording attribute data are listed in Table 3.3.

Attribute information is also to be supplied for all assets which have been modified during the construction of new assets. This includes:

- Assets which have been added (includes moving an asset's location)
- The characteristics (i.e. attributes) of assets that have been modified.

The attribute data forms have been designed to record both new assets and modified assets.

An example project has been completed using the standard attribute data forms listed below and is included in Section 11 of this manual.

4.2.2 Standard Forms

The forms and an explanation of each of the entry columns for each of the forms are included in the following sections.

4.2.2.1 Roads Attribute Data Form – Kerb / Kerb & Channel Form No. RAD_KERB
--

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

A single kerb/kerb & channel entity, in this instance, is classified as a length of K/K & C that has the same continuous attributes regardless of any pits, kerb inlets, and driveways/crossovers that are contained in that section.

4.2.2.1.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

4.2.2.1.2 Profile Type - Kerb/Kerb & Channel

Select from the various Kerb and Channel profile types as listed below;

- B1 - Barrier Kerb & Channel – 600mm
- B2 - Barrier Kerb & Channel – 450mm
- B3 - Barrier Kerb – 150mm
- C1 – Vee Channel – 900mm

- F1 – Flush Kerb – 150mm
- M1 - Mountable Kerb & Channel – 600mm
- M3 – Mountable Kerb – 305mm
- SM1 – Semi-Mountable Kerb – 600mm

4.2.2.1.3 Median/Traffic Island

Select 'YES' if the kerb is part of a Median/Traffic Island, otherwise select 'NO'.

4.2.2.1.4 Infill Type

Select the Median Infill type from the following types:

- Garden – Planted
- Garden – Grass
- Pavers
- Concrete – Plain
- Concrete – Stamped/Stencilled

4.2.2.1.5 SW Pits

Select the number of stormwater pits/inlets contained in the applicable section of kerb.

4.2.2.1.6 Crossovers

Select the number of driveways/crossovers contained in the applicable section of kerb.

4.2.2.1.7 Length

Enter the length of this Kerb or Kerb and Channel section. The length is the length of the single CAD object to which the attribute data is to be linked, including pits and crossovers.

4.2.2.1.8 Installation Date

Enter the date on which the asset was constructed. The format of the date shall be DD/MM/YYYY where, 5 March 2006 shall be represented by '05/03/2006'.

4.2.2.1.9 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

4.2.2.1.10 Asset Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

4.2.2.2 Roads Attribute Data Forms – Pavement / Surfacing Form No. RAD_PAV

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

A single pavement or surfacing entity, in this instance, is classified as a length of pavement or surfacing that has the same continuous attributes regardless of any other asset objects that are contained within that section.

4.2.2.2.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

4.2.2.2.2 Surface Type

Select the type of surfacing from those provided in the drop down which may be:

- Asphalt – 40mm
- Bitumen – 2 Coat – 14/7mm
- Bitumen – Chip – 7mm
- Bitumen – Chip – 10mm
- Bitumen – Chip – 14mm
- Bitumen – Slurry – 10mm
- Bitumen – Slurry - Reinforced Geotextile
- Concrete – Reinforced - 150mm

4.2.2.2.3 Spray Rate

Enter the pavement spray rate as litres per square metre where applicable i.e. for 2 Coat Bitumen.

4.2.2.2.4 Reinforcement

Enter the type of reinforcement used in concrete surfacing. E.g. F72 mesh. Where there is no reinforcement, this column is to be left blank.

4.2.2.2.5 Base Depth

Enter the depth of the base course pavement material.

4.2.2.2.6 Base Type

Enter the type of the base course pavement material, (As per Main Roads Standard Specification.)

4.2.2.2.7 Sub-Base Depth

Enter the depth of the sub-base course pavement material.

4.2.2.2.8 Sub-Base Type

Enter the type of the sub-base course pavement material, (As per Main Roads Standard Specification.)

4.2.2.2.9 Subgrade CBR – Soaked CBR

Enter the CBR test results, based on a 4-day soaked CBR test, of the in-situ sub-grade material upon which the pavement design was based.

4.2.2.2.10 Pavement CBR – Soaked CBR

Enter the CBR test results, based on a 4-day soaked CBR test, of the in-situ pavement material upon which the design was based.

4.2.2.2.11 Seal Width

Enter the width of the road seal from lip of K&C to lip of K&C or the seal width where no Kerb and Channel exists.

4.2.2.2.12 Length

Enter the length of this section of road based on the length of continuous pavement and surfacing material. Where there is a change in either the surfacing type or the pavement composition a new length and details are to be entered on a new line of the spreadsheet (corresponding to a new CAD object).

4.2.2.2.13 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where 5 March 1999 shall be represented by '05/03/1999'

4.2.2.2.14 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

4.2.2.2.15 Asset Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

**4.2.2.3 Roads Attribute Data Forms – Pathways
Form No. RAD_PATH**

Attributes described below are to be assigned to a single CAD entity as described in Table 3.3.

A single pathway entity, in this instance, is classified as a length of pathway that has the same continuous attributes regardless of any driveways or other asset objects that are contained within that section.

4.2.2.3.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

4.2.2.3.2 Material Type

The various types of material are listed below

- Asphalt – 30mm
- Boards – Recycled Plastic
- Boards - Timber
- Concrete - Paved
- Concrete – Pebble Render – 75mm
- Concrete - Pebble Render – 100mm
- Concrete – Pebble Render – 125mm
- Concrete – Plain – 75mm

- Concrete – Plain – 100mm
- Concrete – Plain – 125mm
- Concrete – Stamped/Stencilled – 75mm
- Concrete – Stamped/Stencilled – 100mm
- Concrete – Stamped/Stencilled – 125mm
- Concrete – Step Stones
- Gravel – 100mm

4.2.2.3.3 Width

Enter the width of the pathway

4.2.2.3.4 Length

Enter the length of the pathway

4.2.2.3.5 Crossovers

Select the number of crossovers/driveways in this section of pathway.

4.2.2.3.6 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where 5 March 1999 shall be represented by '05/03/1999'

4.2.2.3.7 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

4.2.2.3.8 Asset Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

4.2.2.4 Roads Attribute Data Forms – Signs **Form No. RAD_SIGNS**

Attributes described below are to be assigned to a single CAD entity as described in Table 3.3.

A sign entity, in this instance, is classified as an individual sign regardless of the number of supports it has. Multiple signs on the same supports must be entered separately.

4.2.2.4.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

4.2.2.4.2 MUTCD Code

Enter the numbering system for the sign specified by the Queensland Department of Main Roads in the Manual of Uniform Traffic Control Devices (MUTCD).

4.2.2.4.3 Common Name.

Enter the common name of the sign e.g.

- Stop
- Warning
- No through Road
- Speed

4.2.2.4.4 No of Supports

Enter the number of support posts the sign is attached to.

4.2.2.4.5 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where 5 March 1999 shall be represented by '05/03/1999'

4.2.2.4.6 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

4.2.2.4.7 Asset Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

5.0 STORMWATER DRAINAGE

5.1 Plan Information

Digital plan information, in the formats specified in Section 2.2 of this manual, is to be provided for all the stormwater drainage assets listed in Table 3.3

5.2 Attribute Information

5.2.1 General

Attribute information is to be supplied for all new Stormwater Drainage assets which ultimately become the property and responsibility of Council, in the format specified in section 2.3. These assets and the relevant form number for recording attribute data are listed in Table 3.3.

Attribute information is also to be supplied for all assets which have been modified during the construction of new assets. This includes:

- Assets which have been added (includes moving an asset's location)
- The characteristics (i.e. attributes) of an asset have been modified.

The attribute data forms have been designed to record both new assets and modified assets.

An example project has been completed using the standard attribute data forms and is included in Section 11 of this manual.

5.2.2 Standard Forms

The forms and an explanation of each of the entry columns for each of the forms are included in the following sections.

5.2.2.1 Drainage Attribute Data Form - Inlet Pits / Manholes, - Inter-allotment Inlet Pits Form No. DAD_STRUCT

Attributes described below are to be assigned to a single entity as described in Table 3.3.

Attribute data for pits or manholes; whether inter-allotment, subsoil or a stormwater main entity, is to be entered into this attribute sheet. A pit or manhole in this instance, is classified as a structure or object that allows surface water runoff to enter into an underground storm water network, or allows maintenance access into the underground storm water network.

5.2.2.1.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

5.2.2.1.2 Structure Type

The various asset types are listed below, to be recorded on the Attribute Data Forms:

- Single Grated Pit - SGP

- Double Grated Pit - DGP
- Grated Deflector Pit - GDP
- Kerb Profile Pit - KPP
- Side Entry Pit - SEP
- Double Side Entry Pit - DSEP
- Junction Pit - JUP
- Grated Field Pit - GFP
- Access Chamber - AC
- Inlet Headwall - IHW
- Outlet Headwall - OHW
- Subsoil Cleanout Point - SCO

5.2.2.1.3 Drainage Type

Select the drainage type for this inlet/outlet

- Culvert Cell
- Subsoil
- Inter Allotment
- Reticulation Main

5.2.2.1.4 Structure Location

Simple codes are to be entered to describe the asset location as listed below:

- **Beach** (Seaside of foreshore property boundary)
- **Open Channel** (Inlets / Outlets connection to an open channel or drain)
- **Verge** (Between back of kerb and property boundary)
- **Carriageway** (Within the road carriageway)
- **Private Property** (Within real property i.e. private property, Easement, Council Reserve or Crown land)
- **Saltwater Waterway** (Estuary)
- **Freshwater Waterway** (Non-estuarine river or stream)

5.2.2.1.5 Structure Width/Dia

This column describes the gross, overall, internal width dimension (for rectangular inlet pits) or the diameter (for circular inlet pits), whichever is applicable. The dimension is to be recorded in millimetres. If the shape of an inlet pit is not circular or rectangular or is unusual, details of the pit are to be provided in the remarks field.

5.2.2.1.6 Structure Breadth

This column describes the gross, overall, internal height dimension for rectangular inlet pits. The dimension is to be recorded in millimetres. For circular inlet pits, a value of zero must be entered. If the shape of an inlet pit is not circular or rectangular or is unusual, details of the pit are to be provided in the remarks field.

5.2.2.1.7 Structure Material

The material from which the surround has been made. Relevant material types are as follows:

- PC (*Precast*) Concrete
- CIS (*Cast in Situ*) Concrete
- PVC
- PP (Polypropylene)

5.2.2.1.8 Cover Material

Relevant Cover Materials are:

- Aluminium
- Cast Iron
- Concrete
- Concrete (Gattic)
- Fibreglass
- Polypropylene
- PVC
- Steel Bright
- Steel Galvanized

5.2.2.1.9 Pollutant Trap

Is an approved Pollutant trapping device installed Yes/No.

5.2.2.1.10 Erosion Control Type

- Stone pitched
- Cast InSitu Concrete
- Pre-Cast Concrete
- Mattress Gabion
- Cube Gabion

5.2.2.1.11 Surface Level

Record a level on the top centre of the lid or top of the inlet pit.

5.2.2.1.12 Invert Level

Record the invert level (i.e. lowest point) of the inlet pit.

5.2.2.1.13 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey.

5.2.2.1.14 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: March 1999 shall be represented by '05/03/1999'

5.2.2.1.15 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

5.2.2.1.16 Assets Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

5.2.2.2 Drainage Attribute Data Form - Pipes and Inter-allotment Pipes Form No. DAD_PIPE

Attributes described below are to be assigned to a single CAD entity as described in Table 3.3.

Attribute data for drainage pipes; whether inter-allotment, subsoil or a stormwater main entity, is to be entered into this attribute sheet. A single pipe entity, in this instance, is classified as a length of pipe that has the same continuous attributes between inlet, outlet and/or pits.

Multiple barrel pipes shall be treated as multiple entries i.e. each barrel shall have a CAD object, an Entry ID and a line of attribute information.

5.2.2.2.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

5.2.2.2.2 Dimension 1

This column describes the nominal leg dimension for RCBC's or nominal diameter (for RCP's), whichever is applicable and it is to be recorded in millimetres (*mm*). **(NOTE: For RCBC's, this field must represent the LEG dimension of the RCBC).** If the shape of a pipe is not circular or rectangular or is unusual, details of the pipe are to be provided in the remarks field.

5.2.2.2.3 Dimension 2

This column describes the nominal span dimension for RCBC's and it is to be recorded in millimetres (*mm*). For circular pipes, a value of zero must be entered. **(NOTE: For RCBC's, this field must represent the SPAN dimension of the RCBC).** If the shape of a pipe is not circular or rectangular or is unusual, details of the pipe are to be provided in the remarks field.

5.2.2.2.4 Material

The material from which the pipe is constructed. Relevant material types are as follows:

- RCP – Reinforced Concrete
- FRC
- PVC
- RCBC
- PP Ribbed
- PVC Draincoil
- HDPE Draincoil

5.2.2.2.4 Drainage Type

Select the drainage type for this pipe section

- Culvert Cell
- Sub-soil

- Inter-Allotment
- Reticulation Main

5.2.2.2.5 Length

This column represents the *slope length* of the pipe from end to end. That is, chamber dimensions shall not be included and the pipe length shall be an actual length accounting for the slope of the pipe (i.e. NOT a plan length). The length shall be recorded in meters (*m*).

5.2.2.2.6 Class

Select the pipe class.

5.2.2.2.7 Upstream Surface Level (USSL)

Record the surface level of the upstream connected structure, in metres to 3 decimal places.

5.2.2.2.8 Upstream Invert Level (USIL)

Record the pipe invert level at its upstream end in metres to 3 decimal places.

5.2.2.2.9 Downstream Surface Level (DSSL)

Record the surface level of the downstream connected structure, in metres to 3 decimal places.

5.2.2.2.10 Downstream Invert Level (DSIL)

Record the pipe invert level at its downstream end in metres to 3 decimal places.

5.2.2.2.11 Height Determined

How the Z Coordinate (*level*) was determined. E.g. *RTK GPS, Total Station*

5.2.2.2.12 Installation Date

Enter the date that the asset was constructed. The format of the date shall be YYYY/MM/DD where: 5 March 1999 shall be represented by '1999/03/05'

5.2.2.2.13 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

5.2.2.2.14 Assets Status

This refers to the status of the asset after construction

- New
- Modified
- Removed

**5.2.2.3 Drainage Attribute Data Form - Open Channels Form
Form No. DAD_OC**

Attributes described below are to be assigned to a single CAD entity as described in Table 3.3.

An open channel, in this instance, is classified as a length of open storm water drainage channel that has the same continuous attributes from start to end.

5.2.2.3.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

5.2.2.3.2 Type

The various asset types are listed below. Asset types other than those listed in the drop down are to be noted in the remarks column.

- Concrete lined
- Vegetated
- Vegetated concrete invert
- Vegetated rock invert
- Overland flow path
- Rock lined

5.2.2.3.3 Length

Represents the slope length of the channel from end to end. The length shall be recorded in meters.

5.2.2.3.4 Bottom Width

The width of the channel in meters at its base taken at a typical cross-section.

5.2.2.3.5 Top Width

The width of the channel in meters at its top taken at a typical cross-section.

5.2.2.3.6 Bankfull Depth

The distance in meters from the invert to the top of bank taken at a typical cross section.

5.2.2.3.7 Upstream Invert (USIL)

Record the channel invert at the upstream end.

5.2.2.3.8 Downstream Invert (DSIL)

Record the channel invert at the downstream end.

5.2.2.3.9 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey.

5.2.2.3.9 Installation Date

The date on which the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

5.2.2.3.10 Layer name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

5.2.2.3.11 Assets Status

- New
- Modified
- Removed

**5.2.2.4 Drainage Attribute Data Form - Detention / Retention Basins Form
Form No. DAD_DR**

Attributes described below are to be assigned to a single CAD entity as described in Table 3.3.

A Detention / Retention basin, in this instance, is classified as an area designed to temporarily store storm water runoff.

5.2.2.4.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

5.2.2.4.2 Basin Type

The various asset types to be recorded on the Attribute data forms are listed below.

- Retardation Basin – Dry
- Retardation Basin – Wet

5.2.2.4.3 Invert Level

The invert level at the deepest point in the basin, recorded in meters AHD.

5.2.2.4.4 Temporary Storage Capacity

Enter the amount of temporary storage available in the basin in cubic metres, discounting any storage used for permanent water storage.

5.2.2.4.5 Underground Storage

Record if underground storage has been used.

5.2.2.4.6 Weir

Record if there is a weir on the basin.

5.2.2.4.7 Weir Height

Record the level of the top of the weir in meters AHD

5.2.2.4.8 Weir Material

The material from which the weir is constructed. Relevant material types are as follows:

- Concrete
- Roadway
- Turf

5.2.2.4.9 Weir Length

Enter the length in meters of the weir at its recorded weir height.

5.2.2.4.10 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey

5.2.2.4.11 Installation Date

The date on which the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

5.2.2.4.12 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

5.2.2.4.13 Assets Added / Modified / Removed

This refers to the status of the asset after construction

- New
- Modified
- Removed

5.2.2.5 Drainage Attribute Data Form - Stormwater Quality Improvement Devices (SQID) Form No. DAD_SQID

A Stormwater quality improvement device, in this instance, is classified as an area or device that is designed to trap rubbish and debris at the outlet of a stormwater drainage system.

5.2.2.5.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

5.2.2.5.2 Type

The SQID type is to be recorded on the Attribute Data form and the type to be selected from the supplied list. Types are listed below.

- Primary
- Secondary

5.2.2.5.3 Manufacturer

The manufacturers name of the device.

5.2.2.5.4 Model

The manufacturer's specific model of the device.

5.2.2.5.5 Location

Simple codes are to be entered to describe the asset location as listed below:

- **Beach** (Seaside of foreshore property boundary)
- **Open Channel** (Inlets / Outlets connection to an open channel or drain)
- **Verge** (Between back of kerb and property boundary)
- **Carriageway** (Within the road carriageway)
- **Private Property** (Within real property i.e. private property, Easement, Council Reserve or Crown land)
- **Saltwater Waterway** (Estuary)
- **Freshwater Waterway** (Non-estuarine river or stream)

5.2.2.5.6 Surface Level

Record a level on the centre of the top of the cover lid in metres AHD.

5.2.2.5.7 Invert Level

Invert level of the outlet pipe in AHD.

5.2.2.5.8 Invert Level Sump

Invert level at the lowest point of the device in metres AHD.

5.2.2.5.9 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey

5.2.2.5.10 Installation Date

The date on which the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

5.2.2.5.11 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

5.2.2.5.12 Assets Added / Modified / Removed

This refers to the status of the asset after construction

- New
- Modified
- Removed

6.0 PARKS

6.1 Plan Information

Digital plan information, in the formats specified in Section 2.2 of this manual, is to be provided for all the park assets listed in Table 3.3

6.2 Attribute Information

6.2.1 General

Attribute information is to be supplied for all new park assets which ultimately become the property and responsibility of Council, in the formats specified in section 2.3 of this manual. These assets and the relevant form number for recording attribute data are listed in Table 3.3.

Attribute information is also to be supplied for all assets which have been modified during the construction of new assets. This includes:

- Assets which have been added (includes moving an asset's location)
- The characteristics (i.e. attributes) of an asset have been modified.

The Attribute Data Forms have been designed to record both new assets and modified assets.

An example project has been completed using the standard attribute data forms listed below and is included in Section 11 of this manual.

6.2.2 Standard Forms

The forms and an explanation of each of the entry columns for each of the forms are included in the following sections.

6.2.2.1 Park Attribute Data Form – Fencing & Signs Form No. PAD_FENCE
--

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for park fencing and signs is to be entered into this attribute sheet. A sign entity, in this instance, is classified as an individual sign regardless of the number of supports it has. Multiple signs on the same supports must be entered separately. A fence entity, in this instance, is any form of constructed separating barrier.

6.2.2.1.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

6.2.2.1.2 Fence Type

The Fence type is to be recorded on the Attribute Data form and the type to be selected from the supplied list. Types are listed below.

- Post & Rail
- Post & Wire

- Barrier (Protective)
- Solid Construction
- Other (See Remarks)

6.2.2.1.3 Post Material

Select the fence post material from the supplied list. Types are listed below.

- Timber
- Metal
- Clay Brick
- Concrete Case
- Concrete block

6.2.2.1.4 Panel Material

Select the fence post material from the supplied list. Types are listed below.

- Timber Paling
- Timber Sheeting
- Metal Sheeting
- Metal Weld Mesh
- Metal Chain mesh
- Metal Wire Strand
- Clay Brick
- Concrete Block
- Fibre Cement Sheeting
- No Panels

6.2.2.1.5 Length

The Length of the fence structure in m.

6.2.2.1.6 Length

The Height of the fence structure in m.

6.2.2.1.7 Boundary Fence

Is the fence structure a boundary fence.

6.2.2.1.8 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

6.2.2.1.9 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

6.2.2.1.10 Assets Added / Modified

This refers to the status of the asset after construction

- New
- Modified
- Removed

6.2.2.2 Park Attribute Data Form – Structures Form No. PAD_STRUCT
--

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for park buildings and structures is to be entered into this attribute sheet. A building or structure entity, in this instance, is classified as any building or structure within a park area that doesn't come into any other listed park asset type.

6.2.2.2.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

6.2.2.2.2 Structure Type

Select the structure type. For structure types not listed, select "Other (See Remarks)" option and enter a structure type in the Layer Name / Remarks column. Types include the following:

- Shelter
- Amenities Block
- Storage Shed
- Other (See Remarks)

6.2.2.2.3 Flooring Material

Select the floor cladding material. For flooring materials not listed, select "Other (See Remarks)" option and enter a flooring material in the Layer Name / Remarks column. Floor types include:

- Timber
- Bare Earth
- Natural Stone
- Concrete Paved
- Concrete Reinforced
- Other (See Remarks)

6.2.2.2.4 Wall Material

Select the wall material. For wall cladding materials not listed, select "Other (See Remarks)" option and enter a wall cladding material in the Layer Name / Remarks column. Wall cladding types include:

- No Walls
- Timber
- Clay Brick
- Natural Stone
- Concrete Cast
- Concrete Block
- Metal sheet Coloured
- Metal Sheet Galv/Zinc
- Fibre Cement Sheeting
- Other (See Remarks)

6.2.2.2.5 Roof Material

Select the roof cladding material. For roof cladding materials not listed, select "Other (See Remarks)" option and enter a roof cladding material in the Layer Name / Remarks column. Roof Cladding materials include:

- Timber
- Shade Cloth
- Tile Clay/Concrete
- Metal Sheet Coloured
- Metal Sheet Galv/Zinc
- Fibre Cement Sheeting
- Suspended Concrete
- Other (See Remarks)

6.2.2.2.6 Structure Length

Overall length of the structure

6.2.2.2.7 Structure Width

Overall width of the structure

6.2.2.2.8 Structure Floor RL

Enter the level of the floor in metres AHD to 3 decimal places.

6.2.2.2.9 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey.

6.2.2.2.8 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

6.2.2.2.9 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

6.2.2.2.10 Assets Added / Modified

This refers to the status of the asset after construction

- New
- Modified
- Removed

**6.2.2.3 Park Attribute Data Form – Furniture
Form No. PAD_FURN**

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for park furniture is to be entered into this attribute sheet. A furniture entity, in this instance, is any park entity that does not meet the definition as a structure, fence, BBQ, or equipment type.

6.2.2.3.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

6.2.2.3.2 Furniture Type

Select the furniture type which describes this asset. For furniture types not listed, select "Other (See Remarks)" option and enter a furniture type that best describes this asset in the Layer Name / Remarks column. The furniture types include:

- BBQ – Gas
- BBQ – Wood
- BBQ – Electric
- Table
- Bench
- Table With benches

6.2.2.3.3 Construction Material

Select the material that this furniture is constructed from. For construction material types not listed, select "Other (See Remarks)" option and enter a material in the Layer Name / Remarks column. The furniture construction material types include:

- Timber
- Metal Galv/Zinc
- Stainless Steel
- Clay Brick
- Natural Stone
- Concrete Cast
- Concrete Block
- Other (See Remarks)

6.2.2.3.4 Equipment Manufacturer

Enter the manufacturer of this asset.

6.2.2.3.5 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

6.2.2.3.6 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

6.2.2.3.7 Assets Added / Modified

This refers to the status of the asset after construction

- New
- Modified
- Removed

6.2.2.5 Park Attribute Data Form – Equipment Form No. PAD_EQUIP
--

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for park equipment is to be entered into this attribute sheet. An equipment entity, in this instance, is classified as any item which can be used for play or exercise within a park area, that doesn't come into any other listed park asset type.

6.2.2.5.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

6.2.2.5.2 Equipment Type

Select the equipment type that best suits this park equipment asset. For equipment types not listed, select Other option and enter a type in the Layer Name / Remarks column.

6.2.2.5.3 Description

Enter a description for this equipment which details what this equipment is, does or is used for.

6.2.2.5.4 Model Information

Enter any model information including numbers and names.

6.2.2.5.5 Manufacturer

Enter the Manufacturer name and details of this equipment.

6.2.2.5.6 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

6.2.2.5.7 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

6.2.2.5.8 Assets Added / Modified

This refers to the status of the asset after construction

- New
- Modified
- Removed

7.0 MISCELLANEOUS

7.1 Plan Information

Digital plan information, in the formats specified in Section 2.2 of this manual, is to be provided for all the miscellaneous assets listed in Table 3.3

7.2 Attribute Information

7.2.1 General

Attribute information is to be supplied for all new miscellaneous assets which ultimately become the property and responsibility of Council, in the formats specified in Section 2.3 of this manual. These assets and the relevant form number for recording attribute data are listed in Table 3.3.

Attribute information is also to be supplied for all assets which have been modified during the construction of new assets. This includes:

- Assets which have been added (includes moving an asset's location)
- The characteristics (i.e. attributes) of an asset have been modified.

The Attribute Data Forms have been designed to record both new assets and modified assets.

An example project has been completed using the standard attribute data forms listed below and is included in Section 11 of this manual.

7.2.2 Standard Forms

The forms and an explanation of each of the entry columns for each of the forms are included in the following sections.

7.2.2.1 Miscellaneous Attribute Data Form – Retaining Walls Form No. MAD_RETWALL

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for retaining walls are to be entered into this attribute sheet. A retaining wall, in this instance, is classified as a wall of any sort or size that has been constructed to retain, hold back or support earthworks.

7.2.2.1.1 Entry ID.

Entry ID's are to be assigned by the consultant and shall consist of a unique alphanumeric value. Each asset shall have an Entry ID assigned to it whether the asset is a new asset or an existing asset which has been modified.

7.2.2.1.2 Setback

Select the batter setback as specified in degrees from the vertical.

7.2.2.1.3 Maximum Wall Height

Enter the RL on the highest point on the wall in metres AHD to 3 decimal places.

7.2.2.1.4 Construction Type**7.2.2.1.5 Construction Type**

Select the wall construction type from those provided in the drop down list. If the construction type is not listed, enter the type in the Layer Name/Remarks field.

7.2.2.1.6 Manufacturer

Enter the manufacturer details for the wall construction materials

7.2.2.1.7 Construction Materials

Select the material that the wall is constructed from.

7.2.2.1.8 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

7.2.2.1.9 Height Determined

How the Z Coordinate (level) was determined. E.g. RTK GPS, Spirit Level Survey

7.2.2.1.10 Installation Date

Enter the date that the asset was constructed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

7.2.2.1.11 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

7.2.2.1.12 Assets Added / Modified

This refers to the status of the asset after construction

- New
- Modified
- Removed

7.2.2.1 Miscellaneous Attribute Data Form – Development Boundary Form No. MAD_DEVBDY

Attributes described below are to be assigned to a single drawing entity as described in Table 3.3.

Attribute data for property boundaries are to be entered into this attribute sheet. A retaining wall, in this instance, is classified as a wall of any sort or size that has been constructed to retain, hold back or support earthworks.

7.2.2.1.1 Development Name

Enter the name and stage number of this development.

7.2.2.1.2 Developer

Enter the name and details of the consultant responsible for the construction of this development.

7.2.2.1.3 Installation Date

Enter the date that this subdivision was completed. The format of the date shall be DD/MM/YYYY where: 5 March 1999 shall be represented by '05/03/1999'

7.2.2.1.4 Layer Name/Remarks

Enter the name used for this AutoCAD layer and any other remarks relevant to this asset.

7.2.2.1.5 Data Source

Enter the name and details of the consultant providing the As Constructed data for this development.

8.0 ZONE MAPS

The maps contained on the following pages depict the Zones for the purpose of the positional accuracy requirements as specified in this document, only.

NOTE: Circular head council designated URBAN maps will be updated in the next version of this manual. Until then the following areas should be treated as URBAN for the purposes of ASCON submission

- **Smithton**
- **Stanley**
- **Arthur River**
- **Forest**
- **Scotchtown**
- **Irishtown**
- **Mengha**

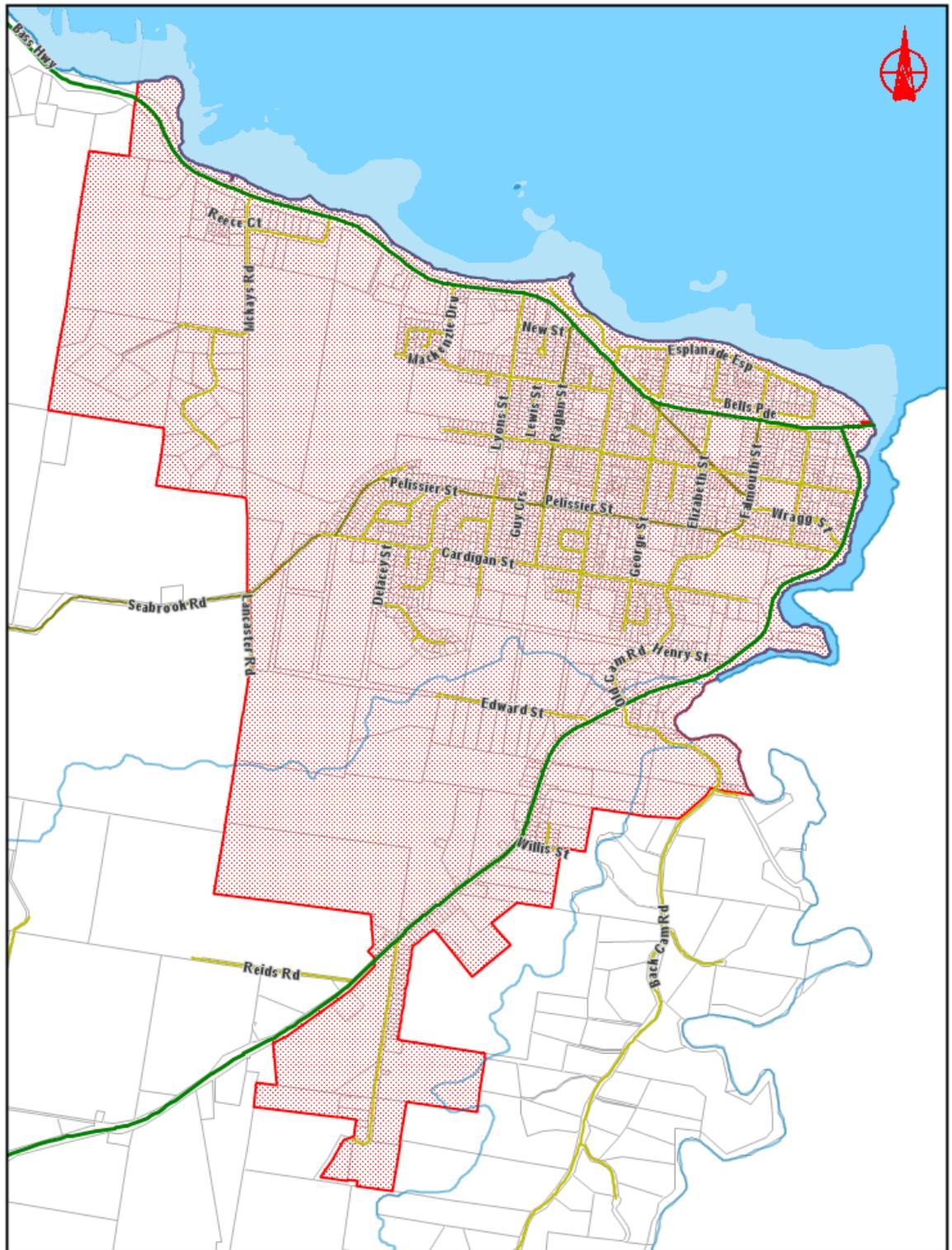


FIGURE 1a - Somerset Urban Classified Area (ASCON Submissions)

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0 1
Kilometres
Scale 1 : 19,300 (A4 Original Size)
Universal Transverse Mercator (UTM) projection, GDA94, AMS Zone 55



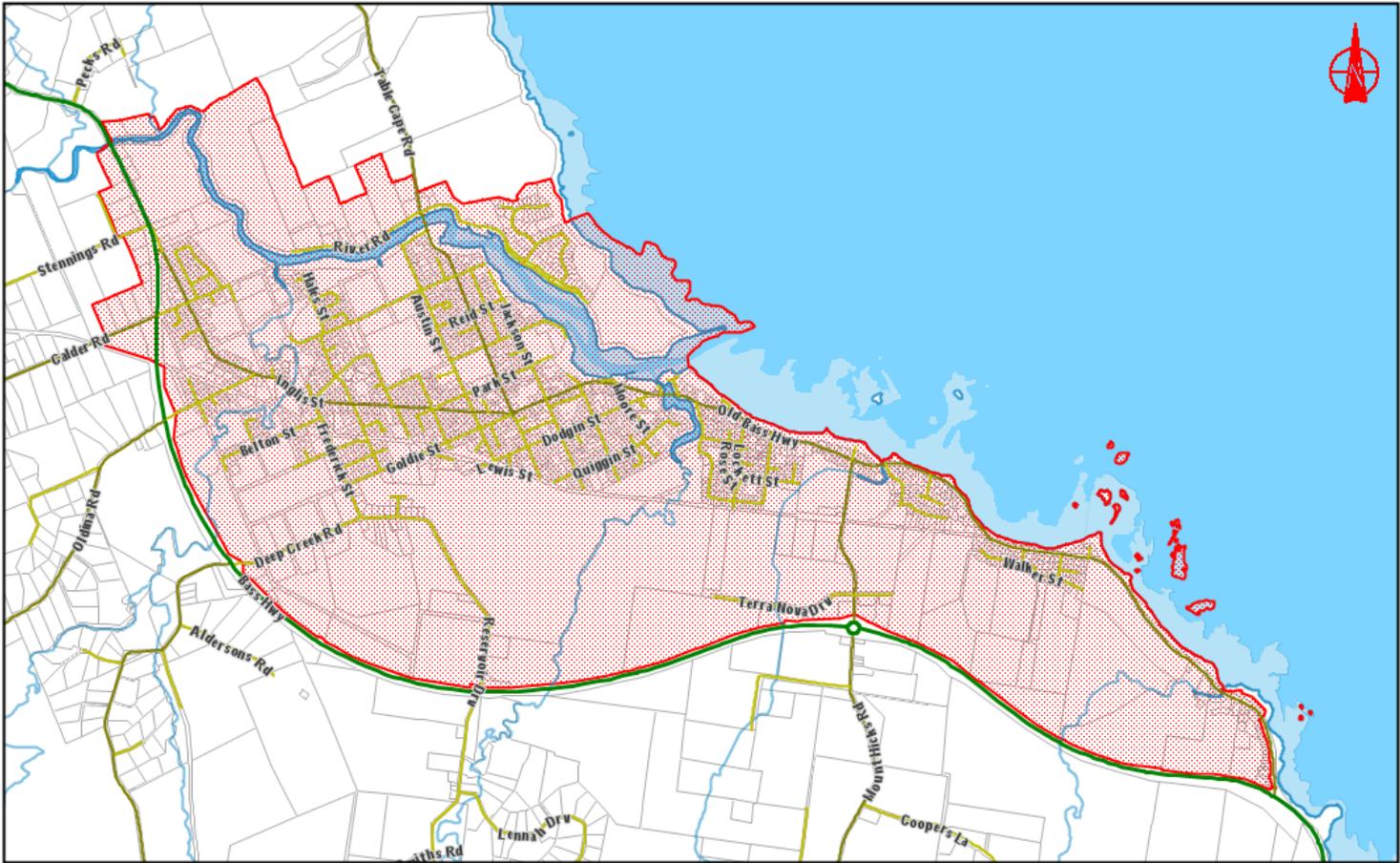


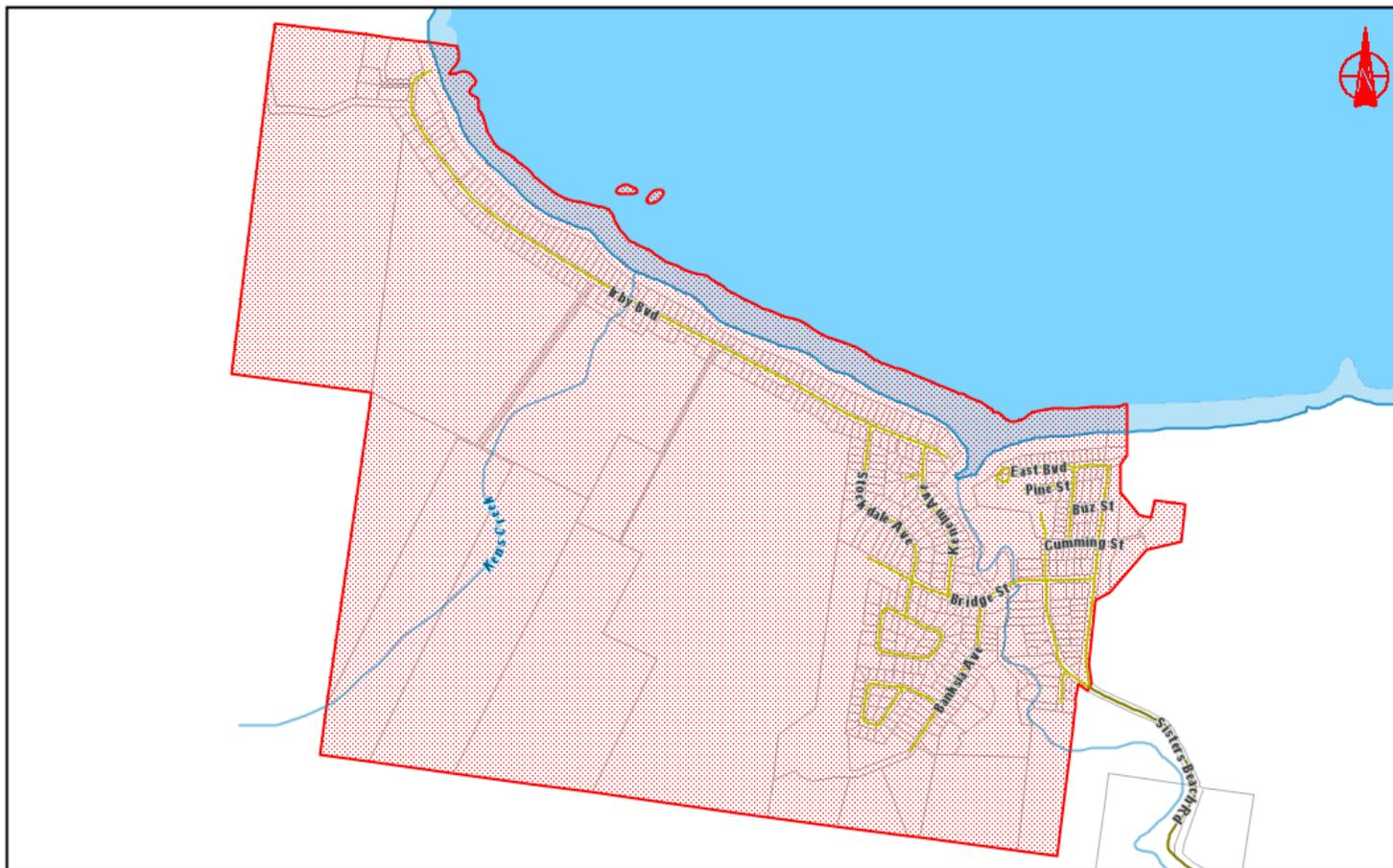
Figure 1f - Wynyard Urban Classified Area (ASCON Submission)

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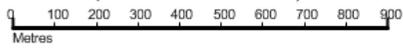


Scale 1 : 30,600 (A4 Original Size)
 Universal Transverse Mercator (UTM) projection, GDA94, AMG Zone 56





**FIGURE 1b - Sisters Beach Urban Classified Area
(ASCON Submission)**



Scale 1 : 12,500 (A4 Original Size)
Universal Transverse Mercator (UTM) projection, GDA94, AMG Zone 55

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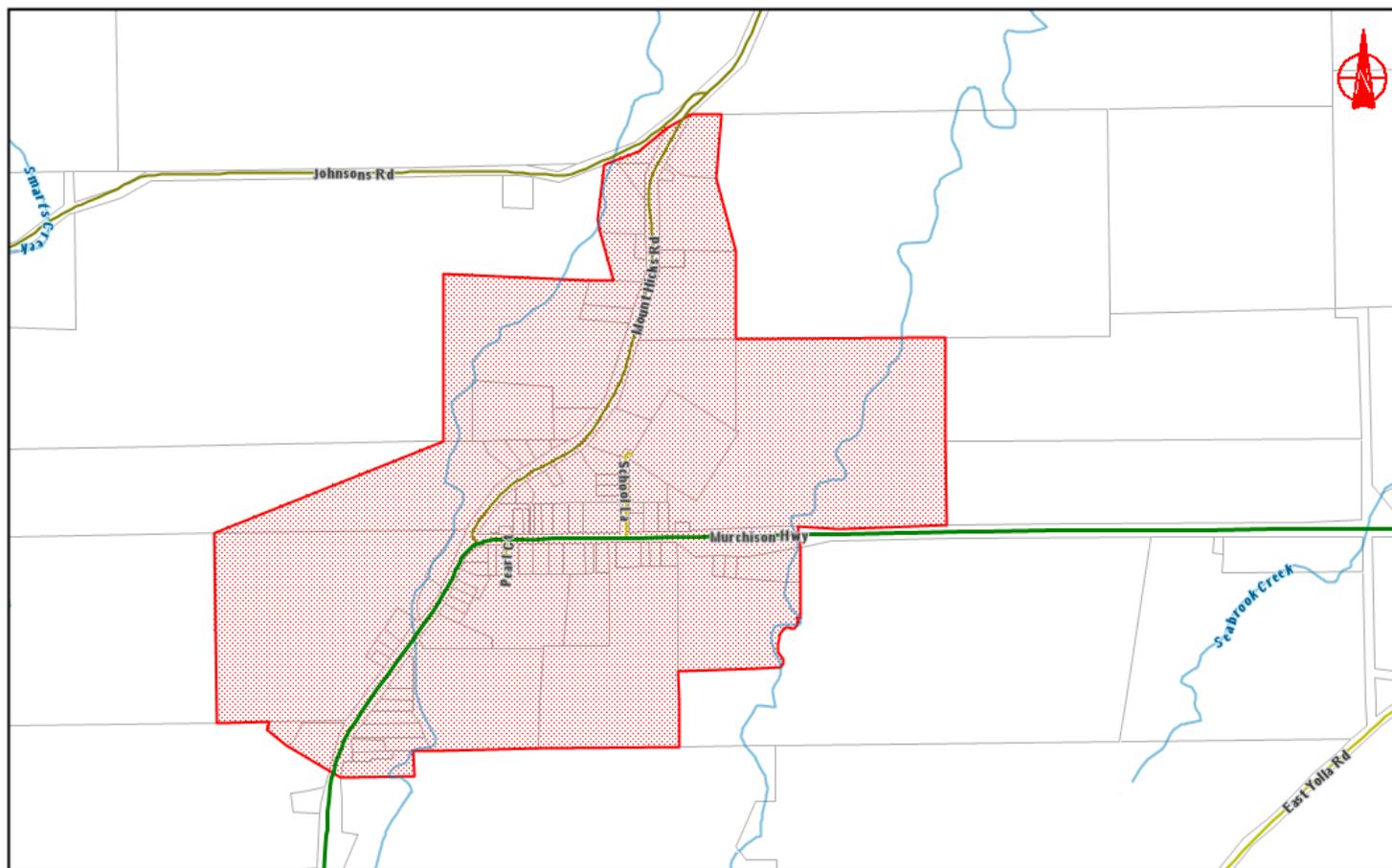
**FIGURE 1c - Boat Harbour Beach Urban Classified Area
(ASCON Submission)**

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Scale 1 : 6,200 (A4 Original Size)
Universal Transverse Mercator (UTM) projection, GDA94, AMG Zone 95





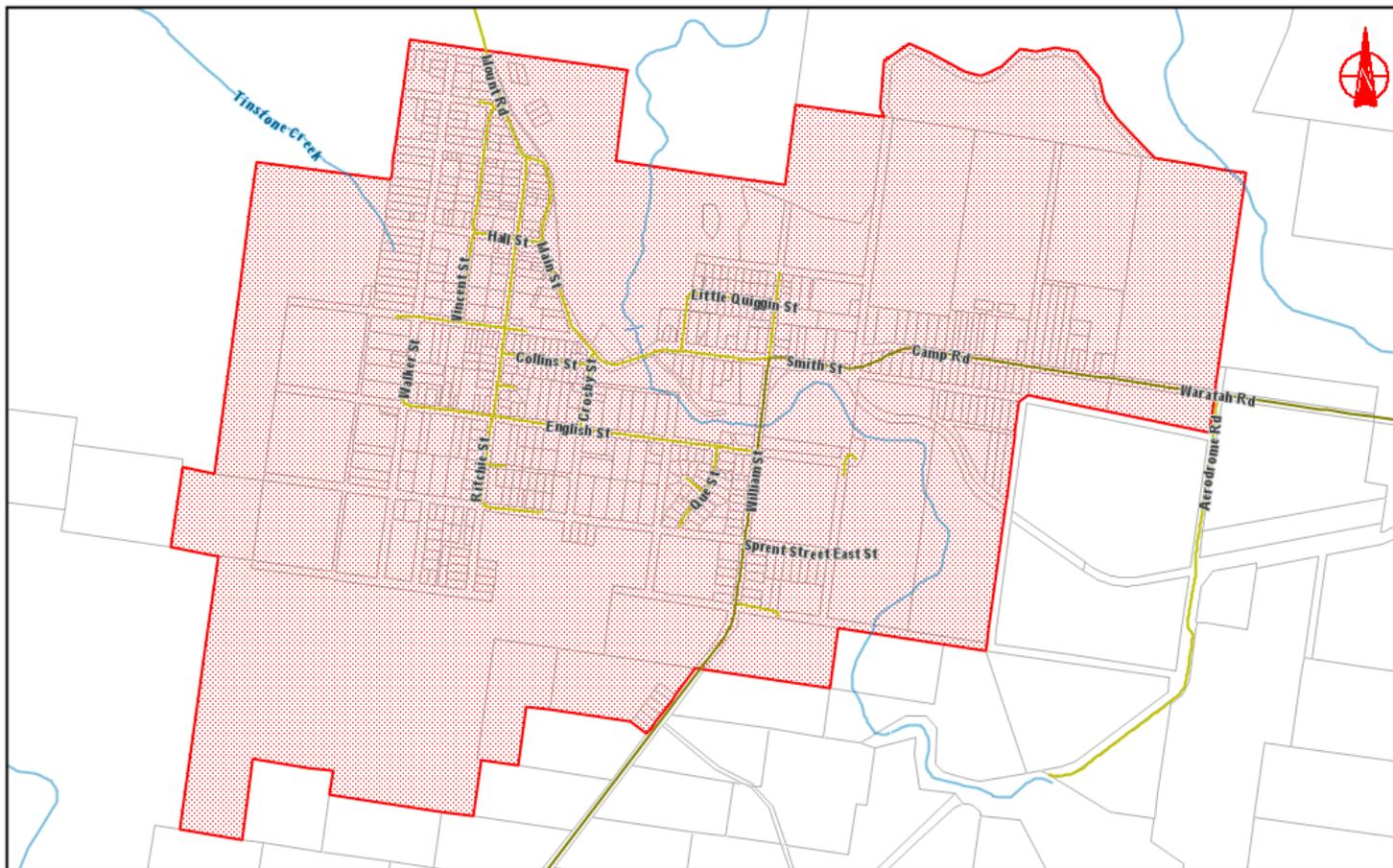
**Figure 1d - Yolla Urban Classified Area
(ASCON Submission)**



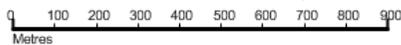
Scale 1 : 10,000 (A4 Original Size)
Universal Transverse Mercator (UTM) projection, GDA94, AMG Zone 56

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**Figure 1e - Waratah Urban Classified Area
(ASCON Submission)**



Scale 1 : 12,500 (A4 Original Size)
Universal Transverse Mercator (UTM) projection, GDA94, AMG Zone 56

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9.0 WORKED EXAMPLES

NOTE: The data contained on the following pages are examples only and are not to be regarded as true or actual.

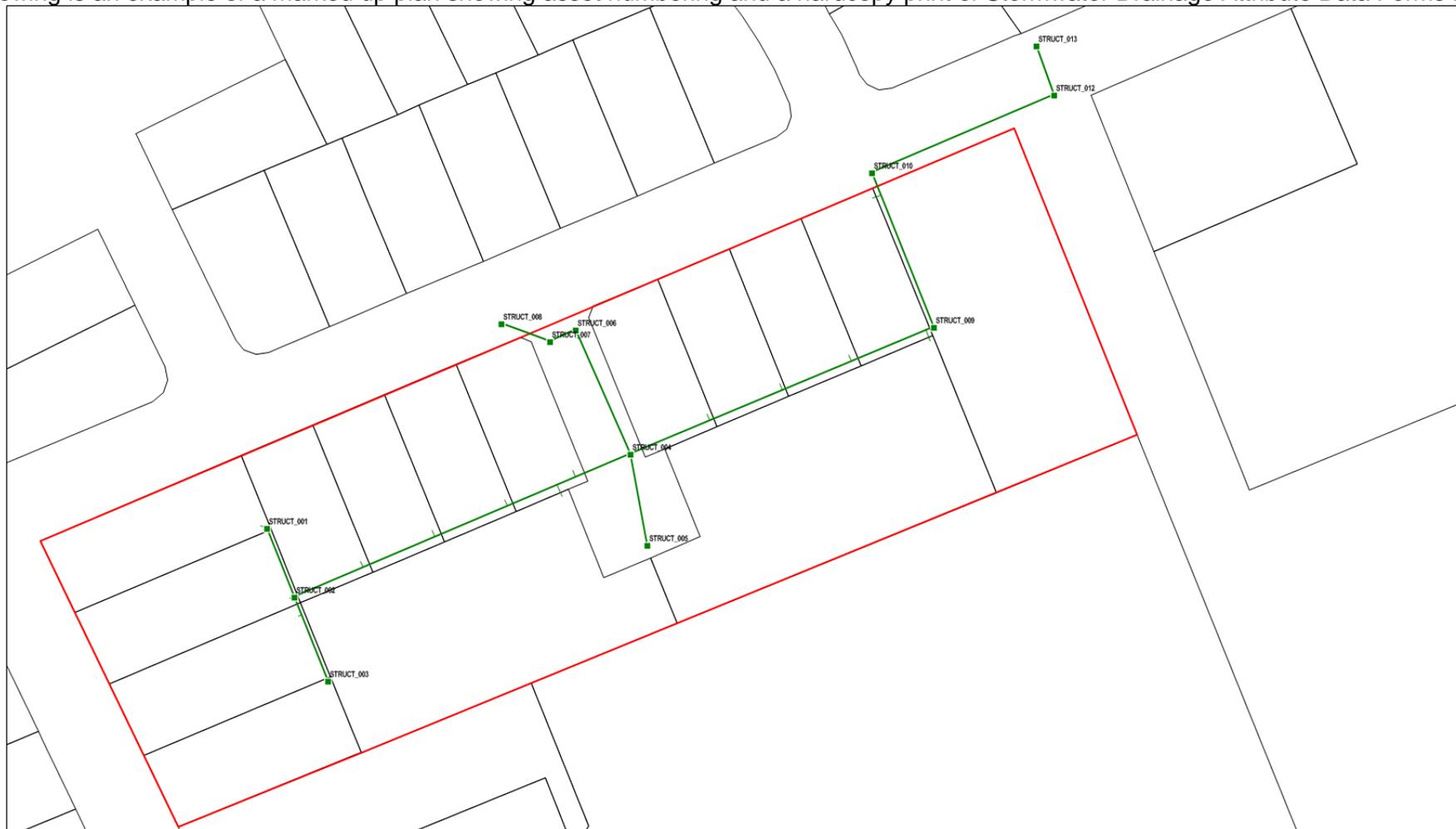
9.1 Roads

The following is an example of a marked up plan showing asset numbering and a hardcopy print of Roads Attribute Data Forms follow.

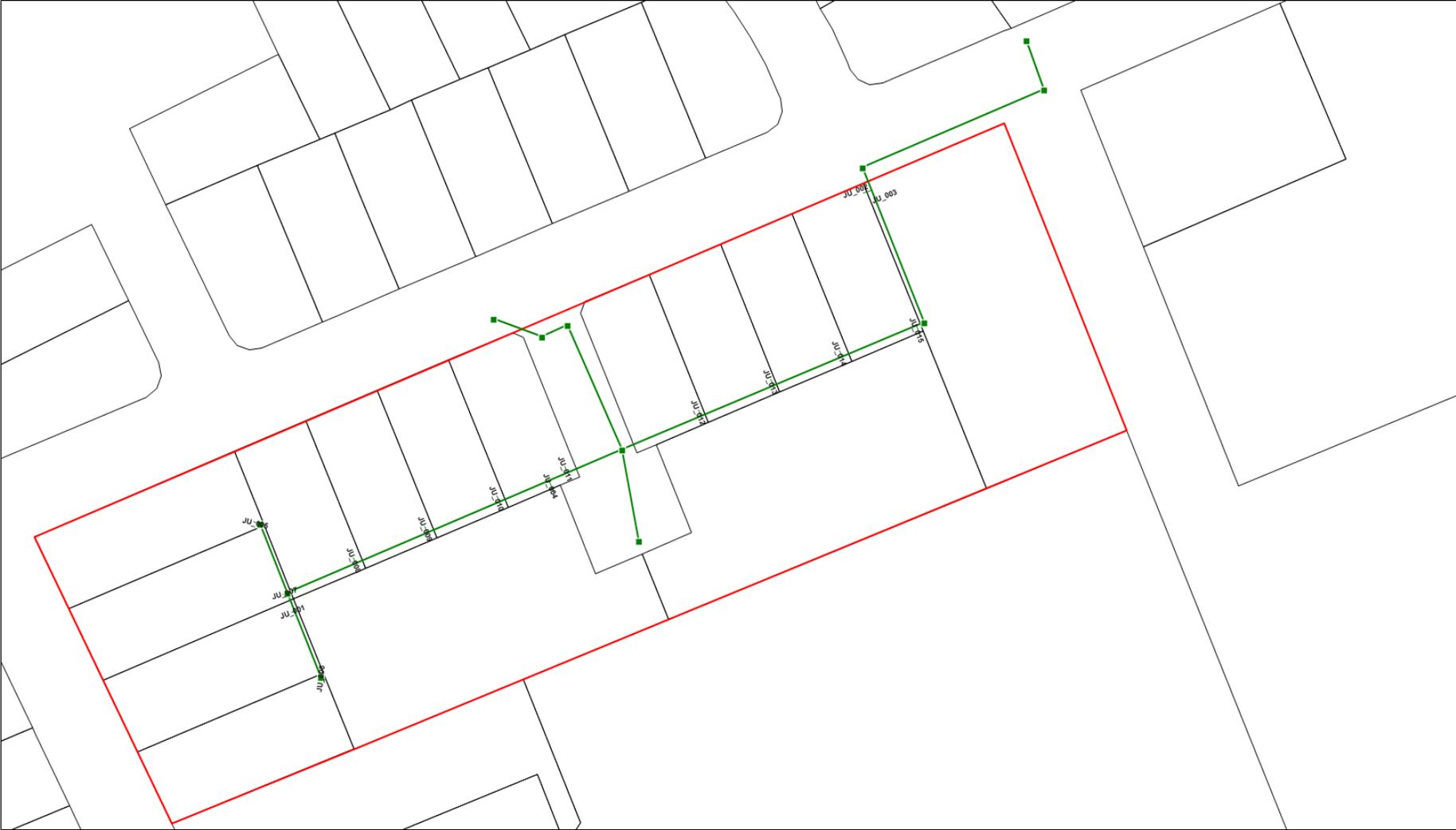


9.2 Stormwater Drainage

The following is an example of a marked up plan showing asset numbering and a hardcopy print of Stormwater Drainage Attribute Data Forms follow.







9.5 Miscellaneous

The following is an example of a marked up plan showing asset numbering and a hardcopy print of Miscellaneous Attribute Data Forms follow.



