

# **CITY OF ALBANY SPATIAL DATA SPECIFICATION**

Specifications for Digital Spatial Data at the  
City of Albany

**Version 1.2**  
2017

## INDEX

1 Executive Summary .....	3
2 What is City of Albany Spatial Data Specification .....	3
3 Motivation.....	4
4 The City of Albany Spatial Data Specification-Structure .....	5
5 Responsibility of the Developer (Internal and External) .....	7
6 Responsibility of the City of Albany .....	7
7 City of Albany Spatial Standards .....	8
7.1 GDA94 / MGA Zone 50.....	8
7.2 Spatial Accuracy .....	9
8 Acceptance .....	9
8.1 Errors and Omissions .....	9
8.2 Overlapping/Omitted Asset Types.....	9
9 Deliverables .....	10
9.1 Request for Spatial Digital Data .....	10
9.2 Digital Spatial Data File Format .....	10
9.3 Submission Metadata File.....	10
9.4 Submission Media .....	11
10 Disclaimer .....	11
10.1 Intellectual Property .....	11
11 Updating the Spatial Data Specifications.....	11

## 1 Executive Summary

The specifications in these documents define the GIS (Geographical Information System) Specifications and Standards as they apply to survey, data, asset and condition rating standards, and workflows.

The key objective of this specification is to provide information to all parties (Consultants, Surveyors, and Employees) that will be dealing with delivering Asset Survey Data to the City of Albany. It outlines the specific requirements for the submission of “**As-Constructed Information**” as GIS data of newly constructed and existing City assets.

Whilst all care has been taken with the preparation of these documents it is the responsibility of the consultants, surveyors, or employees to confirm that all details are accurate, current and relevant.

## 2 What is City of Albany Spatial Data Specification

The CITY OF ALBANY SPATIAL DATA SPECIFICATION is a set of documents that defines a uniform framework for the spatial information of interest, required or legislated to be capture by local governance. This document introduce and underpins the accompanying documents in the framework. (See Section 4)

The framework is developed to support Asset Survey Data. These surveys are different to traditional feature surveys in that is focuses on capturing additional attributes and not just location of parts of a constructed feature.

The CITY OF ALBANY SPATIAL DATA SPECIFICATION is different to other AMIS (Asset Management Information Systems) in that it defines much more than just the transfer standards of digital spatial data. It also defines the procedures related to managing the spatial data, and its distribution and acquisition within the whole of the City of Albany. It is customised to this local government authority and extends into other areas of the organisation like emergency management data and land administration such as leases.

### 3 Motivation

The key objectives of the CITY OF ALBANY SPATIAL DATA SPECIFICATION is to streamline processes for receiving, handling and storing of infrastructure related to newly constructed assets either from subdivision developments or internal programs (e.g. capital works) in a GIS.

These processes increase the efficiency of information access and result in greater customer satisfaction when dealing with inquiries from engineering consultants, surveyors, developers and residents.

**Eliminate duplication of effort.** Significant duplication of effort exists in the digitising of as constructed information. This duplication exists between the private sector (who capture as constructed information), and council staff (who may digitise that information from paper plans);

**Improve process efficiency,** in the process of accepting and processing lodgements, and in checking existing data against design criteria and/or design plans;

**Improve customer service** to both internal and external customers of asset information;

**Improve the quality** of spatial information held in council systems for audit and financial requirements, as well as operational and business requirements;

**Provide a structure** for the consistent recording of all council owned assets, including those created through internal programs such as; capital works and renewals.

Support initiatives and requirements from **State and Federal Government.**

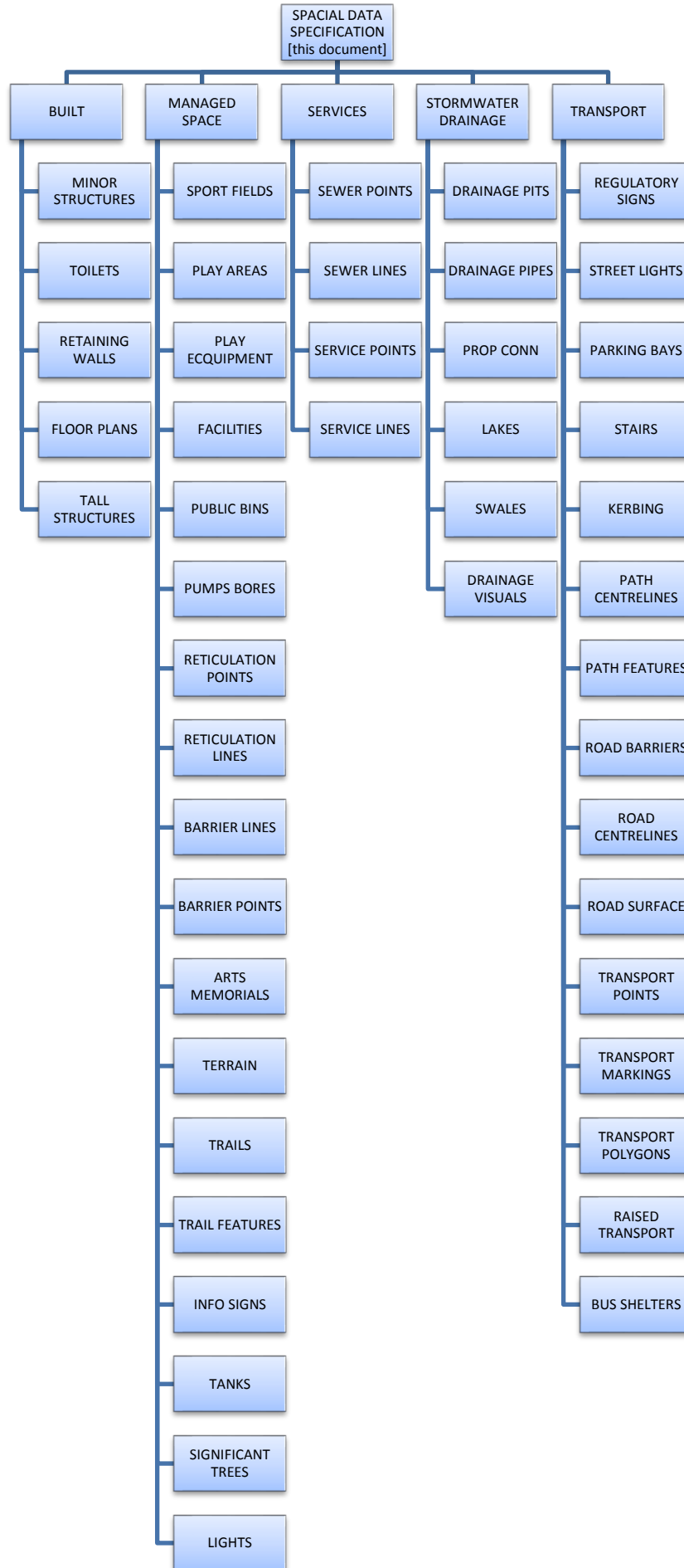
Ultimately it helps **manage and report assets better.**

## 4 The City of Albany Spatial Data Specification-Structure

The following chart is a representation and guide to the features captured in the specification framework. The groupings are not mutually exclusive, they have been grouped according to the function or standards that govern those assets.

The framework interacts as a whole and it is important to know where and why features are placed where they are. For the most part these documents will offer an explanation why a feature is placed where indicated.

It is important for users of the specification to first find where a feature is placed before assuming that it is missing or incorrect. Refer to [Section 11](#) regarding requesting changes.



## 5 Responsibility of the Developer (Internal and External)

The developer or its representative (contracted surveyor, consulting engineers, etc) shall be responsible for recording applicable data over the extent of the “As Constructed” works:

- ensuring that any information provided by the City of Albany is field verified by the consultant prior to any works being undertaken.
- ensuring that the data supplied is precise, accurate and complete.
- ensuring the data is supplied to the City within 6 weeks of work being completed unless otherwise agreed with the relevant project principal or City employee.
- ensuring that the data is provided at the appropriate spatial accuracy and required projection as specified in Section 7.

## 6 Responsibility of the City of Albany

The City of Albany shall be responsible for:

- Correctly incorporating data provided by the supplying company, into the GIS environment(s).
- Providing extracts of existing data from the GIS in a timely manner to the requesting consultant. See Section 9.1
- Informing Consultants of non-conformance in accordance with the City of Albany Spatial Data Specification in a timely manner.
- Providing a **Statement of Compliance** once the received data has passed acceptance tests.
- Implementing quality control programs (including random checks) relevant to the respective City of Albany Spatial Data Specification.

The City of Albany is NOT responsible for scaling, rotating or manipulating the supplied data. Such tasks will result in non-conformance or charged back to the consultant.

## 7 City of Albany Spatial Standards

The key principle of this specification is to provide a standardised structure to record the characteristics/attributes of each graphical element.

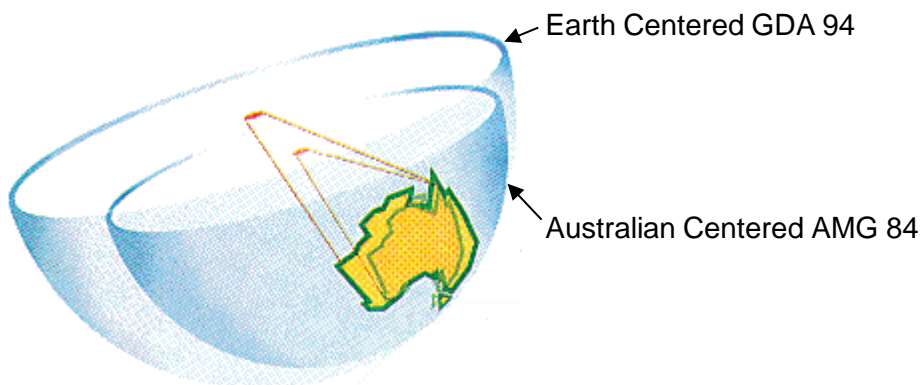
It is an expectation of the City of Albany that all providing data will be required to conform to the current Spatial Standard.

All digital 'plans' provided to the City of Albany must conform to the following datum and projection specifications:

### 7.1 GDA94 / MGA Zone 50

All graphical information is to be projected in accordance with the GDA94 / MGA Zone 50 projection (**MGA50**) ([EPSG 28350](#)), and AHD height ([EPSG 5711](#)).

The Geocentric Datum of Australia (GDA94) is the Australian coordinate system, replacing the Australian Geodetic Datum (AGD). GDA is part of a global coordinate reference frame and is directly compatible with the Global Positioning System (GPS). The map projection associated with GDA94 is the Map Grid of Australia, 1994 (MGA94), a Transverse Mercator projection, which conforms to the internationally accepted Universal Transverse Mercator Grid system. The Australian Height Datum (1971) (AHD71) (EPSG 5711) is not affected by the adoption of GDA.



The Western Australian Cabinet approved the adoption of the Geocentric Datum of Australia during 2000. The Western Australian Land Information System (WALIS) Council has been made responsible for the oversight and introduction into Western Australia of the Geocentric Datum of Australia 1994.

The applicable zones will be 50 (EPSG: 28350).

Its parameters apply for the Universal Transverse Mercator (UTM) projections:

- 6° wide zones
- Central Scale Factor 0.9996
- False Easting 500,000 m
- False Northing 10,000,000 m

There are a number of local grids (projections) that are used within Western Australia e.g. Albany Grid. In all instances where data has been transformed by the consultant it is mandatory to state the local grid the data was originally based in the metadata for that layer. The City will not accept submission other than MGA50.



## 7.2 Spatial Accuracy

The survey accuracy of individual jobs are not dictated by ASDS. It is specific to the contract requirements or relevant industry specification or standards. An 'asset survey' of a public park (bbq's, seats, etc) will logically not require an RTK or better accuracy as might be the case for a road construction engineering deliverable.

## 8 Acceptance

The City of Albany has independent processes that will take the digital spatial data and place them in their respective destinations. At the same time, quality control will check the validity (precision, accuracy & completeness) of the data.

Please note that Spatial Standards documents reflects the City of Albany's requirements for recording spatial data. Contractual and compliance requirements, such as provision of marked-up drawings, are separate to these specifications.

- ! Attributes must comply with all the specifications. Non-compliance will fail the acceptance testing.
- ! Please note that Data Validation is implied by the feature type, attribute data types and content descriptions provided. Contractors are required to ensure the data types & content is correct.
- ! The Spatial Reference System must adhere to: MGA50 & AHD.

### 8.1 Errors and Omissions

It is an expectation of the City of Albany that the developer or their representatives (consultants) verify all data prior to submission, with relation to its completeness and spatial accuracy.

Errors and omissions will result in the data being returned to the consultant for correction and a non-conformance being placed on the data submission. This may in turn result in a delay in provision of a **Statement of Compliance**.

### 8.2 Overlapping/Omitted Asset Types

The framework divides assets into categories based on certain requirements. Section 4. It is expected that assets be classified correctly since care has been taken in this framework not to allow overlaps in asset classifications. This infers that some assets might not be where logically expected due to specific reasons. Care must be taken by the consultant to interpret these ambiguities correctly.

It is acknowledged that sometimes features can be present that are not defined in the framework. In these situations, the features can be drawn, coded and noted separately. Please pre-empt this situation by communicating such anomalies to the City of Albany promptly (email: [assets@albany.wa.gov.au](mailto:assets@albany.wa.gov.au)).

## 9 Deliverables

### 9.1 Request for Spatial Digital Data

When requesting digital data from the City of Albany the requester will be required to fill out a data license agreement.

Return the agreement completed and signed. Data extraction cannot be performed without this documentation.

The counter signed license agreement will be included with the data when the processing is complete.

### 9.2 Digital Spatial Data File Format

All data is to be supplied in the format specified by the City of Albany:

1. Preferred: ESRI Shapefile, FileGDB, PersonalGDB
2. By Special Arrangement: Mapinfo TAB/MIF, geoXML
3. Not Preferred: CADD DXF/DWG + EXCEL/CSV(Attribute Table)
4. Not Acceptable: PDF or hardcopy of Plan

### 9.3 Submission Metadata File

A readme.txt file is a simple text file that contains information about the project the digital data is being provided for and must accompany every digital data submission.

Label	Description	Example
PROJECT	Project name	Wyndham Estate
STAGE	Subdivision Stage Name	Stage 3B
DATE SUBMITTED	Date the digital data submitted	31/1/2008
COMPANY	Company name taking responsibility for the data	Work Force
CONTACT	Contact name for this project	John Somebody
TELEPHONE	Telephone number	(08) 5555 1234
EMAIL	Email address (as applicable)	johns@workforceco.com.au
MAILING ADDRESS	Mailing address	Level 19 Lower St, Blackhouse Sth, WA, 6000
PHYSICAL ADDRESS	Physical business address	"As Above"
DATUM/PROJECTION	The coordinate system the data is in. Please note the City of Albany only uses GDA94 Zone 50.	GDA94 Zone 50
TRANSFORMATION	The coordinate system the data was transformed from	E.g. Albany Grid ALB94 to GDA94 Zone50
DATA FORMAT & VERSION	Details about the software and file version used to create the digital data	E.g. AutoCAD Map 2008 and QGIS
NOTES	Important notes or information to be included here.	Any other relevant information that the data custodian needs to be aware of.

## 9.4 Submission Media

The following are acceptable media for providing the digital data files.

- Email to the City of Albany. (File size limitation is 15 megabytes)
- USB devices / CD-ROM / DVD
- Include the following (as a label or in the Email):
  - Estate Name and Stage or Project Name: \_\_\_\_\_
  - Council Approval Number(s): \_\_\_\_\_
  - Authorised by: \_\_\_\_\_ Date: \_\_\_\_\_
  - Consultant Company: \_\_\_\_\_

## 10 Disclaimer

The City of Albany uses data from a range of government agencies and companies. The City bears no responsibility for the accuracy or completeness of this information and accepts no liability for its use by other parties

On occasion the City of Albany may supply consultants with digital data to assist them with their planning and design phases. It is the responsibility of the consultants to ensure that the data supplied is appropriate and applicable to the end use intended.

### 10.1 Intellectual Property

The City of Albany own the intellectual property of the developed specifications and Intellectual Property rights are not to be sold, transferred or assigned to any party without the prior written approval of the City of Albany.

These Spatial Data Specifications will be available free of charge to any organisation, entity or City employee that require it for legitimate council work.

## 11 Updating the Spatial Data Specifications

Any amendment to any of the documents or dataset structures or codes must be done by permission from the GIS Section of the City of Albany.

Changes to any of the specification documents impacts on spatial datasets, their structure, naming, location, domains (code lists), sub-types (codes) and procedures that form part of the City of Albany Spatial Data Specification framework. Any changes or deviations must be discussed with and approved by the City's GIS Section and internal stakeholders prior to making any such changes.

Requesting changes to the document can be made via eMail to [assets@albany.wa.gov.au](mailto:assets@albany.wa.gov.au). Simply attach the section or page with the amendment(s) clearly highlighted.

<b>Document Approval</b>			
<b>Document Development Officer:</b>		<b>Document Owner:</b> <i>(Member of EMT)</i>	
GIS Technical Officer		David King	
<b>Document Control</b>			
<b>Purpose:</b>	CITY OF ALBANY SPATIAL DATA SPECIFICATION – Specifications for Digital Spatial Data at the City of Albany		
<b>File Number - Document Type:</b>	LP.GLF.5 – Guideline		
<b>Synergy Reference Number:</b>	NG1766351		
<b>Meta Data: Key Search Terms</b>	GIS, SPATIAL DATA, ASSETS, AS-CONSTRUCTED, DEVELOPMENT		
<b>Status of Document:</b>	<b>Administrative decision:</b> Approved. Version 1.2		
<b>Document file details:</b>	N:\Works & Services\City Engineering\Assets\00 ASDS\01 ASDS\ASDS - Version 1.2\ALBANY_SPATIAL_DATA_SPECIFICATION_20171214.docx		
<b>Quality Assurance:</b>			
<b>Distribution:</b>	Public Document		
<b>Document Revision History</b>			
<b>Version</b>	<b>Author</b>	<b>Version Description</b>	<b>Date Completed</b>
Draft 0.0	Grant Boonzaaier	Extracts from the original Spec documents	17/02/2014
Draft 0.1	Grant Boonzaaier	Review, re-wording and formatting	10/03/2015
Draft 0.2	Grant Boonzaaier	Update workflow, submission requirements, content	15/03/2015
Draft 0.3	Rebekah Polette	Annual review. Document name changes.	18/02/2016
Draft 0.3.1	Grant Boonzaaier	Full Review for final implementation	29/04/2016
Draft 1.0	Grant Boonzaaier	Add 7.2 and update wording in 9.1	02/12/2016
Draft 1.0	Grant Boonzaaier	Update 7.2 wording. Change framework structure – page 6, removing emergency and land specifications, and managed open space layer. Review for publication	06/06/2017
1.0	Grant Boonzaaier	Publication	07/06/2017
1.2	Rebekah Polette	Added Bus Shelters to the Organisational Chart. Updated to version 1.2 in line with the suite of specifications.	14/12/2017