Topographic Extracts

Large Scale

Spatial Files

Data Dictionary

Version 1.3 FINAL

Prepared by
Data Management Group

Date Updated:
31st March 2014

DOCUMENT CONTROL

Version	Status	Date	Author	Description of Version
Version 0.1	Draft	26/02/2014	Data Management Group	First DRAFT
Version 0.2 and 0.5	Draft	6/03/2014	Data Management Group	Major structural change to document and additional descriptions included.
Version 1.0 – 1.2	FINAL Draft	21/03/2014	Data Management Group	Final for review.
Version 1.3	FINAL	7/04/2014	Data Management Group	FINAL for release

TABLE OF CONTENTS

1 OVERVIEW

1.1 HOW TO USE THIS DOCUMENT

1.1.1 Document Structure

This document has been structured in the following way:-

1. Overview (this section)
   a. How to search within this document
   b. Geodatabases, a table containing the themes and the associated Feature Classes (Datasets)

Common Attributes – all Feature Classes have similar attributes/field names, except for shapes that are specific to that class type, such as shape_length for lines.

2. Workspace – for editors of information, includes generic tables that are provided as part of the Geodatabase themes
3. Unique Attributes sections for each theme of Geodatabase which are those attributes found in the Feature classes specific to those theme which are:
   a. Cultural
   b. Transport
   c. Hydrographic
   d. Ground Surface
4. Attribute Values – a list of all the values, including those that are not valid for the **Large Scale** Topographic data. All values that are not valid for Large Scale are filled in with grey. Also includes for each of the attribute values a list of associated Feature Classes where the features are found.
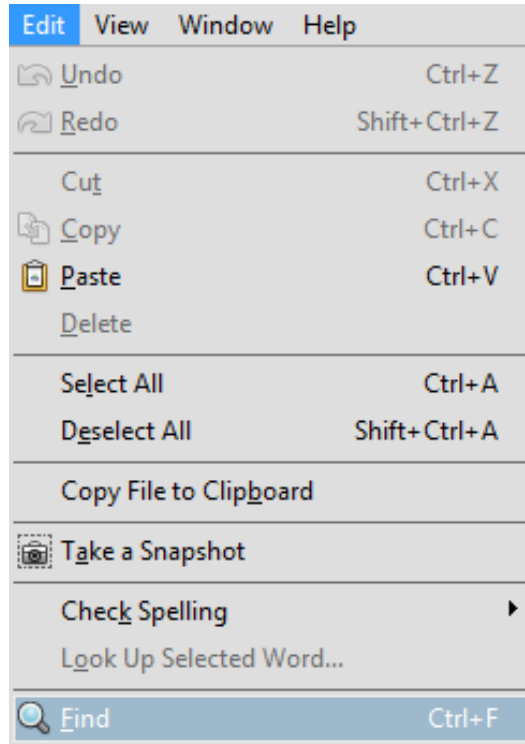   **Note**: Medium Scale Topographic Data Dictionary is available separately

1.1.2 Linked Attributes/field names to attribute values:

This document includes hyperlinks to relevant Attribute values. The link can be identified by any field name/attribute that is underlined. Clicking on the underlined work will take you directly to the relevant attribute values.

1.1.3   Searching for Features

If looking for a particular feature, such as rocks, lakes, hospitals, do a search on the particular feature you are looking for using the CNTRL + F or Edit menu, select "Find".

These features are part of the attribute values tables (which includes the domain values – the actual feature) at the end of the document.

Each feature is linked from the field name/attribute from the theme and feature class where this feature can be found. Each attribute value tabled includes a list of what feature class contains these features at the top of each table.

Please note that that some attributes have no spaces in between them or may have an underscore "_" between the words, for example, an attribute may appear as:

- AboriginalOutstation
- SalineCoastal
- NewspaperPublishing
- Scan_Vectorise
- Telephone_Emergency

1.2 GEODATABASES

Landgate provide geodatabase feature datasets, which are a collection of feature classes stored together so they can participate in topological relationships with each other.

The themes are listed below with the class type and Feature classes (datasets) supplied within each theme.

This document has been sectioned according to the Theme names and each of these sections highlight the field name/attributes unique to each of the feature class datasets.

Themes/Class Name	Feature Class
CULTURAL	CulturalFeaturePoint
	CulturalFeaturePolygon
	CulturalFeatureLine
	Building Polygon
	GeneralFacilityPolygon
	IndustrialFeaturePoint
	IndustrialFeaturePolygon
	IndustrialFeatureLine
	MineFeaturePoint
	MineFeaturePolygon
	TowerPoint
	TowerPolygon
TRANSPORT	BridgeTunnelPolygon
	BridgeTunnelLine
	GeneralTransportPolygon
	GeneralTransportPoint
	GeneralTransportLine
	RailSegment
	RoadSegment
	TransportFacilityPoint
	TransportFacilityPolygon
HYDROGRAPHIC	FrameworkLine
	InlandFlatPolygon
	WaterPolygon
	WaterPoint
	WaterLine
GROUND SURFACE	ElevationPoint
	ContourLine
	BreakLine
	MorphologyPolygon
	MorphologyPoint
	MorphologyLine

1.3 COMMON ATTRIBUTES (FIELD NAMES)

All feature classes have the following common attributes/field name.

Note that some of the field names listed are only applicable to particular class types - point, line and polygon, such as shape length, rotation point, and height.

Attribute/Field Name	Description	Associated Attribute Values Y/N
OBJECTID	A system generated number for an object	N
DATEFEATURECREATED	The date/time the record for the feature was initially created. This is a system managed attribute – cannot be changed by the user.	N
CREATEDBY	The user name/account that created the feature record. This is a system managed attribute – cannot be changed by the user.	N
DATEFEATUREMODIFIED	The date/time the feature was modified (spatial or aspatial). This is a system managed attribute – cannot be changed by the user.	N
MODIFIED BY	The user name/account that modified the feature record (includes modification and deletion). This is a system managed attribute – cannot be changed by the user.	N
DATEFEATURERETIRED	The date/time the record for a feature is deleted. This is a system managed attribute – cannot be changed by the user.	N
ACCESSLEVEL	The user accessibility level.	Y
METADATAID	A unique identifier that links to the metadata table. This is a system managed attribute – cannot be changed by the user other than though the appropriate interface (metadata management).	N
FEATURETEXT	Temporary field (80 characters) to hold feature text that has been migrated from legacy data. This text will eventually be replaced by a valid NameID and set to <Null>.	N
DATEREVIEWED	The date/time the record for a feature has been reviewed. This is a system managed attribute – cannot be changed by the user.	N
NAMEID	An identifier that equates to a pointer in the Geographic names register (database) that references the feature's name. For Tower Point dataset the valid id is >0, or -99 unknown or -98 not applicable	N
SYSTEMID	Only applicable for Hydrography theme. Value is -98 not applicable	N
GLOBALID	A unique identifier that remains associated with a feature for the life of that feature. A "GlobalD" will not change as a result of minor maintenance operations for example, a feature will retain its current "GlobalID" if the digitised co-ordinates describing its geometry are replaced by more accurate values, or the feature's name is changed.	N

Attribute/Field Name	Description	Associated Attribute Values Y/N
	Global ID and GUID ESRI field data types store GUID values which are a 36 character sequence of hexadecimal digits enclosed in curly braces e.g. {6B29FC40-CA47-1067-B31D-00DD010662DA}. GUID values are used to uniquely identify each feature within and across geodatabases. Global ID field values are automatically populated and maintained by ArcGIS, this differs to GUID field values which must be manually attributed. Global IDs are a prerequisite for geodatabase replication. This is a system managed attribute – cannot be changed by the users.	
FCSubType	Feature class sub type is used with other unique field names to distinguish different types of features. Refer to the Theme sections and Attribute Values.	N
HEIGHT	The vertical distance, in metres, from its base to its top. In the case of a building on a building the height is from the base of the building – ground level. (WA) Valid heights are great than or equal to 10 and less than or equal to 300 metres. An unknown height value is indicated by the value -99.	N
SYMBOLROTATION	Rotation of the symbolised feature. Expressed in decimal degrees, positive in a clockwise direction from the positive Y-axis.	N
BASELEVEL	An unknown value is indicated by the value -99.	N
TEMPID	A programmatically controlled system value. Not editable and of no consequence to users.	N
SHAPE	Polygon point count – number of points for the polygon ring count – number of enclosed rings for the polygon	N
SHAPELENGTH	Shape length in meters	N
SHAPE_AREA	Shape area in meters	N

2 WORKSPACE

2.1 TABLES

There are a number of generic tables that are supplied with all Geodatabases (Cultural, Transport, Hydrographic, GroundSurface).

These are listed below with the associated attribute/field names.

2.1.1 FeatureInstanceMetadata

Attribute/Field Name	Description	Associated Attribute Values Y/N
OBJECTID	A system generated number for an object	N
METADATAID	A Feature Number is a unique number, which is automatically assigned to every recorded feature when it is entered into the GEONOMA database. This number is unique and cannot be duplicated. Note: the GENOMA "FeatureNumber" maps to the "NameID" in the Topographic Database.	
CAPTUREMETHOD	Identifies the method used to capture the feature's spatial extent.	Y
DATASOURCE	Identifies the program/source that was used to identify the feature.	Y
ELEVATIONACCURACY	An estimate of the accuracy of the elevation for the feature, in metres, based on 90% of well-defined points. The estimate is calculated using the Root Mean Square error and the Linear Map Accuracy Standard Factor. Refer to Data Accuracy Calculation table for further information.	Y
PLANACCURACY	An estimate of the absolute accuracy of the horizontal coordinates for the feature, in metres. The estimate is calculated using the Root Mean Square error and the Circular Map Accuracy Standard Factor. Refer to Data Accuracy Calculation table for further information.	Y
SPATIALRELIABILITYDATE	The date of the source information from which the feature's planimetric position was last verified or modified.	N
ATTRIBUTERELIABILITYDATE	The date of the source information from which the feature's attribute values were last validated or modified.	N
TARGETDISPLAYSCALE	The scale at which the feature was originally captured and displayed.	Y
DATACUSTODIAN	The data custodian/owner	Y
GLOBALID	A unique identifier that remains associated with a feature for the life of that feature. A "GlobalD" will not change as a result of minor maintenance operations for example, a feature will retain its current "GlobalID" if the digitised co-ordinates describing its geometry are replaced by more accurate values, or the	N

Attribute/Field Name	Description	Associated Attribute Values Y/N
	feature's name is changed. Global ID and GUID ESRI field data types store GUID values which are a 36 character sequence of hexadecimal digits enclosed in curly braces e.g. {6B29FC40-CA47-1067-B31D-00DD010662DA}. GUID values are used to uniquely identify each feature within and across geodatabases. Global ID field values are automatically populated and maintained by ArcGIS, this differs to GUID field values which must be manually attributed. Global IDs are a prerequisite for geodatabase replication. This is a system managed attribute – cannot be changed by the users.	

2.1.2 Geonoma_Location_V

Table of current feature names (approved and non-approved) extracted from the Geographic Names Register (GEONOMA).

Attribute/Field Name	Description	Associated Attribute Values Y/N
Feature_Map_Xref_ID	A system generated number for an object	N
Feature_Number	A Feature Number is a unique number, which is automatically assigned to every recorded feature when it is entered into the GEONOMA database. This number is unique and cannot be duplicated. Note: the GENOMA "FeatureNumber" maps to the "NameID" in the Topographic Database.	N
Map_Number	The map on which the geographic feature is located. Conventional map numbers are used.	N
Locality	The official Locality name. Localities which are considered to be a part of the metropolitan area are known as Suburbs, and those which fall outside of this area are known as Bounded Localities.	N
ABS_LGA_Number	An LGA Number is a unique four-digit number, which has been assigned to the Local Government Authority name by the Australian Bureau of Statistics.	N
LGA_Name	The official Local Government Authority name. In the form: BELMONT, CITY OF VICTORIA PARK, TOWN OF KALAMUNDA, SHIRE OF	N
Latitude	Latitude is defined as the angle formed by the intersection of a line perpendicular to the Earth's surface at a point and the plane of the Equator. Points north of the Equator have positive latitude values, while points south have negative values. Latitude values range from -90 to +90 degrees.	N

Attribute/Field Name	Description	Associated Attribute Values Y/N
	In this case the value is expressed in decimal degrees.	
Longitude	A meridian, or line of longitude, is formed by a plane that passes through the point and the North and South poles. The longitude value is defined by the angle between that plane and a reference plane. The reference plane is known as the prime meridian. The most common prime meridian passes through Greenwich, United Kingdom. Longitude values range from -180 (west of the meridian) to +180 (east of the meridian) degrees. In this case the value is expressed in decimal degrees.	N
Easting	A Universal Transverse Mercator (UTM) rectangular coordinate recorded in meters. The origin of each UTM zone is the central meridian. The value given to the central meridian is a false easting of 500,000.	N
Northing	A UTM rectangular coordinate recorded in meters. The origin of each UTM zone is the equator. The value given to the equator is a false northing of 10,000,000.	N
Zone_	A Map Zone relates to the Universal Transverse Mercator Grid. For the Universal Transverse Mercator System, the globe is divided into 60 zones, each spanning six degrees of longitude. Each zone has its own central meridian from which it spans 3 degrees west and 3 degrees east. The origin of each zone is the equator and its central meridian.	N

2.1.3 Geonoma_Name_V

Table of current feature names (approved and non-approved) extracted from the Geographic Names Register (GEONOMA).

Attribute/Field Name	Description	Associated Attribute Values Y/N
GEONOMA_ID	A system generated number for an object	N
FEATURE_NUMBER	A Feature Number is a unique number, which is automatically assigned to every recorded feature when it is entered into the GEONOMA database. This number is unique and cannot be duplicated. Note: the GENOMA "FeatureNumber" maps to the "NameID" in the Topographic Database.	N
Full_Name	The name of the feature, in Title Case e.g. a road name – Boulder, a stream e.g. Linfarne Brook	N
Name	The name of the feature, in Capitals e.g. a road name – BOULDER, a stream e.g. LINFARNE BROOK	N
Display_Name	The name of the feature, in Title Case e.g. a road name – Boulder, a stream e.g. Linfarne	N

Attribute/Field Name	Description	Associated Attribute Values Y/N
	Brook	
Road_Type	The suffix of a road name (e.g. ST)	N
Road_Suffix	A road's cardinal directional indicator (e.g. W)	N
Road_Suffix_Description	Cardinal direction description (e.g. West)	N
Derived_Name	The name of the feature (concatenation of field) in the case of a road. E.g. BOULDER ST West All other feature classes Derived_name = Name	N
Description	Null	N
Name_Type	The Name Type is an administrative field used to determine if a feature is current or archived (e.g. C, U).	N
Feature_Class	A Feature Class is a classification, which is assigned to all features stored within the GEONOMA computer system. This classification is then used to categorise features into 'like' groups, for example, streams, rivers and creeks all have the feature class of STREAM (STRM), Place of worship have a feature class of WSHP. Note: These feature class do not equate to the Topographic Database feature classes; they are independent of the topographic data. Users of the topographic data should use the topographic database feature classes.	N
Feature_Class_Category	A – Admin, R – Roads, T - Topography	N
Feature_Class_Description	English descriptions of the feature class codes/categories. e.g. "Place of worship" for the feature class of "WSHP"	N

2.2   TECHNICAL NOTES

The model is made up of two components - a set of UML diagrams (PDF or JPEG) and this data dictionary (PDF). The model was developed in Visio 2002 and is available on request, subject to Departmental approval.

- Geodatabase versioning is used to support optimistic locking strategies, manage transactions and provide detached editing capability. Thus, although not specifically referenced in the model, this functionality in itself affords compliance with the incremental update requirements defined by the ICSM Topographic Working Group.
- The model contains the following component types: abstract classes, feature classes (spatial), object classes (aspatial), relationship classes, class subtypes and attributes controlled by fixed value domains.
- All features have a unique, persistent identifier called "GlobalID". This value is guaranteed unique across all Geodatabase feature classes and remaining unchanged throughout the life of the feature (subject to business rules).
- Some feature attributes have been included in anticipation of a future requirement and availability. However it may be some time before these attributes are populated.

2.3 CONVENTIONS AND DEFAULTS

2.3.1 Coordinate System

• The coordinate system for the database has been defined as:

- Coordinates - Lat/Long (Geographic)
- Datum - GDA94
- Geometry types do not have M or Z
- High Precision Database
- Extent:
  Practical physical extents for Western Australia

    Minimum Longitude: 93 Degrees Maximum Longitude: 131 Degrees

    Minimum Latitude: -46 Degrees Maximum Latitude: -8 Degrees

  Database Extents (limits calculated based on precision)

    Min X - 399.999999991152 Degrees Max X 159383152.222656 Degrees

    Min Y - 399.999999982305 Degrees Max Y 159383152.222656 Degrees

- Dataset Tolerance:

    XY Tolerance 0.000000035390258 Degrees (approx. 3.8mm)

- Dataset Precision:

    XY Resolution 0.000000017695129 Degrees (approx. 1.9mm)

- Minimum length between vertices

    XY Tolerance 0.000000035390258 Degrees (approx. 3.8mm)

2.3.2 2D versus 3D Data Structures

All data has been model as 2D, however provision has been made for certain features, in particular, contours (land surface and bathymetric), spot heights and soundings to have an "Elevation" or altitude (height above a reference datum – AHD) as an attribute. Certain features can also have a "Height" (the vertical distance from its base to its top).

2.3.3 Domain Table entries

Domain list cater for both 'Not Applicable" (-98) and "Unknown" (-99) definitions; however the assignment of these is subject to business rules – refer to the attribute values.

2.3.4 Feature Attributes

- All relief elevations have been assigned a default value of 1500 (Null); greater than the highest peak in Western Australia.
- The stream hierarchy numeric attribute has been assigned a default value of 9999 (Null).
- All other numeric attributes, where applicable, have been assigned a default value of –99 ("Unknown").
- Symbol Rotation. Point symbols should be created in the geographic coordinate system (i.e. positive Y-axis is 0 degrees). The symbol should be orientated in the direction of the positive Y-axis. A number of exceptions exist where the symbol has been created in the direction of the positive X-axis. Within the ESRI environment these symbols have been rotated 90 degrees in the Table of Content to make them conform with the "Geographic" coordinate axis. ALL rotation angles in the database relate to the "Geographic" coordinate system.

- Defaults attributes for all features have been predefined. To assist editors in selecting appropriate feature attributes please refer to the Data Load Files (lists the feature attribute assigned when the computer aided drafting (CAD) files were loaded).

2.3.5 Mapping Specification

The data dictionary provides information about the feature attributes and their valid combinations. For specific information on capture rules please refer to The Australian Topographic Specification – All Scales (ATSAS Draft 3, 1984 – National Mapping Council) and Symbolisation – All Scales (SYMBAS 1988 – Royal Australian Survey Corp).

3 CULTURAL

With all or some of the common field name/attributes shown in the Overview section of this document, feature classes may have unique field names and attribute values.

The unique attributes are listed in the table following with links (where applicable) to the Attribute Values section of this document.

The Feature Classes for Cultural represented in the table following are:

- CulturalFeaturePoint
- CulturalFeaturePolygon
- CulturalFeatureLine
- BuildingPolygon
- GeneralFacilityPolygon
- IndustrialFeaturePoint
- IndustrialFeaturePolygon
- IndustrialFeatureLine
- MineFeaturePoint
- MineFeaturePolygon
- TowerPoint
- TowerPolygon

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document)	Unique Attribute Description
Building Polygon A relatively permanent structure roofed and/or usually walled. Multiple points that describe the feature's perimeter.	BUILDINGTYPE	The building type values in the large scale database are not applicable/unknown, however they may contain a value in the future. A link has been provided to the building types attributes values for reference **CAPTURE TIP**: Show outline of buildings that have a side greater than 20m in length. Show large buildings isolated within Built Up Area e.g. shopping centre, hospitals, and industrial complexes.
	BUILDINGVISABILITY	Whether the building is clearly visible
	BUILDINGSTATUS	Whether the building is complete or under construction
	CULTURALFEATURETYPE	The type of cultural feature
CulturalFeatureLine Topographic features whose primary characteristics are of a general cultural type - lines	BUILDINGTYPE	The building type values in the large scale database are not applicable/unknown, however they may contain a value in the future. A link has been provided to the building types attributes values for reference
	BUILDINGVISABILITY	Whether the building is clearly visible
	BUILDINGSTATUS	Whether the building is complete or under construction
	CULTURALFEATURETYPE	The type of cultural feature
CulturalFeaturePoint	CULTURALFEATURETYPE	The type of cultural feature

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document)	Unique Attribute Description
Topographic features whose primary characteristics are of a general cultural type - points		
CulturalFeaturePolygon Topographic features whose primary characteristics are of a general cultural type - polygons	CULTURALFEATURETYPE	The type of cultural feature
GeneralFacilityPolygon Topographic features whose primary characteristics relate to a single or group of buildings and associated facilities functioning together as a unit	FACILITYTYPE	The facility type such as hospitals, educational facilities
IndustrialFeaturePoint Topographic features whose primary characteristics are of a general industrial type - points.	INDUSTRIALFEATURETYPE	The industrial feature type such as pipelines or dams
IndustrialFeaturePolygon Topographic features whose primary characteristics are of a general industrial type - Polygons.	INDUSTRIALFEATURETYPE	The industrial feature type such as pipelines or dams
IndustrialFeatureLine Topographic features whose primary characteristics are of a general industrial type - Lines.	INDUSTRIALFEATURETYPE	The industrial feature type such as pipelines or dams
MineFeaturePoint Topographic features whose primary characteristics relate to mining - points	MINEFEATURE	For mines, the Large scale mine type will be "1"
	SUBSTANCEMINED	For mines, the substance type may not be known therefore it is -99 otherwise the default is "14" construction materials
	OPERATIONALSTATUS	For mines, the operational status is not used therefore it is -99. Codes may be used in the future
MineFeaturePolygon Topographic features whose primary characteristics relate to mining - polygons	MINEFEATURE	For mines, the Large scale mine type will be "1"
	SUBSTANCEMINED	For mines, the substance type may not be known therefore it is -99 otherwise the default is

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document)	Unique Attribute Description
		"14" construction materials
	OPERATIONALSTATUS	For mines, the operational status is not used therefore it is -99. Codes may be used in the future
TowerPoint A tall framework or structure, the elevation of which is functional. A single point is shown at the feature's centre	TOWERTYPE	The type of tower such as chimneys or communication towers
TowerPolygon A tall framework or structure, the elevation of which is functional.	TOWERTYPE	The type of tower such as chimneys or communication towers

4 TRANSPORT

Each theme may or may not have feature classes for types of point, Line and/or polygon. In most cases, the attributes/field names for each type are the same with some having additional unique attributes.

Feature Classes for Transport (Datasets within the Geodatabase), that are represented in the table are:

- RailSegment
- GeneralTransportPolygon
- GeneralTransportPoint
- GeneralTransportLine
- TransportFacilityPolygon
- TransportFacilityPoint
- BridgeTunnelPolygon
- BridgeTunnelLine

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
RailSegment Topographic features whose primary characteristics relate to railway lines. (WA)	RAILTYPE	
GeneralTransportPolygon Topographic features whose primary characteristics are of a general transport nature.	TRANSPORTTYPE	The type of transport feature
GeneralTransportPoint Topographic features whose primary characteristics are of a general transport nature.	TRANSPORTTYPE	The type of transport feature
GeneralTransportLine Topographic features whose primary characteristics are of a general transport nature.	TRANSPORTTYPE	The type of transport feature
TransportFacilityPolygon Topographic features whose primary characteristics are of a Transport facility type	TRANSPORTFACILITYTYPE	All values are "4" which is bus facility and sub type "4" bus shelter. Other codes may be used in the future
TransportFacilityPoint Topographic features whose primary characteristics are of a transport facility type	TRANSPORTFACILITYTYPE	All values are "4" which is bus facility and sub type "4" bus shelter. Other codes may be used in the future
BridgeTunnelPolygon Topographic features whose primary characteristics relate to bridges and tunnels	HEADROOM	The maximum vehicle height (metres, >= 3) at a crossing, expressed in metres. (Modified NSW) Default value is Unknown (-99).
	TRAFFICABLEWIDTH	The maximum vehicle width (metres, >= 3) of a crossing. (Modified NSW) Default value is Unknown (-99).
	LOADCAPACITY	The maximum vehicle weight (tonne, >= 3) of a crossing,

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
		expressed in tonnes. (Modified NSW) Default value is Unknown (-99).
	STRUCTURENUMBER	The Main Roads Western Australian's structure number (> 0) for the crossing. (WA) Default value is Unknown (-99).
	BRIDGETUNNELTYPE	The type of bridge tunnel
BridgeTunnelLine Topographic features whose primary characteristics relate to bridges and tunnels	HEADROOM	The maximum vehicle height (metres, >= 3) at a crossing, expressed in metres. (Modified NSW) Default value is Unknown (-99).
	TRAFFICABLEWIDTH	The maximum vehicle width (metres, >= 3) of a crossing. (Modified NSW) Default value is Unknown (-99).
	LOADCAPACITY	The maximum vehicle weight (tonne, >= 3) of a crossing, expressed in tonnes. (Modified NSW) Default value is Unknown (-99).
	STRUCTURENUMBER	The Main Roads Western Australian's structure number (> 0) for the crossing. (WA) Default value is Unknown (-99).
	BRIDGETUNNELTYPE	The type of bridge tunnel

5 HYDROGRAPHIC

The Topographic features who primary characteristics that relate to hydrography. Included in the Hydrography Themes are:

- Inland Water Feature
- Inland Flat Feature
- Framework Feature

Each theme may or may not have feature classes for types of point, Line and/or polygon. In most cases, the attributes/field names for each type are the same with some having additional unique attributes.

In its generalised usage, Topographic features within Hydrographic have primary characteristics that pertain to measurement and description of any waters (water resources that are useful or potentially useful to humans).

Feature Classes for Hydrographic, which are represented in the table following are:

- WaterPolygon
- WaterPoint
- WaterLine
- InlandFlatPolygon
- FrameworkLine

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
WaterPolygon In its generalised usage, Topographic features whose primary characteristics pertain to measurement and description of any waters (water resources that are useful or potentially useful to humans).	PERENNIALITY	Whether the feature contains water seasonally or all year
	ORIGIN	Where the water is from
	HIERARCHYDOWNSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the source (1) and increasing towards the mouth. (WA) 9999 (default value) indicates the hierarchy has not been assigned.
	HIERARCHYUPSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the mouth (1) and increasing towards the source. (WA) 9999 (default value) indicates the hierarchy has not been assigned.

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
	WATERCOURSETYPE	The type of water course such h as river or flood area
	SALINITYCODE	Whether the water is fresh, brackish
	WATERPOLYGONTYPE	Whether the water is a dam or lake
	RIGHTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks
	LEFTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks
WaterPoint In its generalised usage, Topographic features whose primary characteristics pertain to measurement and description of any waters (water resources that are useful or potentially useful to humans).	PERENNIALITY	Whether the feature contains water seasonally or all year
	ORIGIN	Where the water is from
	HIERARCHYDOWNSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the source (1) and increasing towards the mouth. (WA) 9999 (default value) indicates the hierarchy has not been assigned.
	HIERARCHYUPSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the mouth (1) and increasing towards the source. (WA) 9999 (default value) indicates the hierarchy has not been assigned.
	WATERCOURSETYPE	The type of water course such h as river or flood area
	SALINITYCODE	Whether the water is fresh, brackish
	WATERPOINTTYPE	Whether the water is a dam or lake
	RIGHTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
	LEFTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks
WaterLine In its generalised usage, Topographic features whose primary characteristics pertain to measurement and description of any waters (water resources that are useful or potentially useful to humans).	PERENNIALITY	Whether the feature contains water seasonally or all year
	ORIGIN	Where the water is from
	HIERARCHYDOWNSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the source (1) and increasing towards the mouth. (WA) 9999 (default value) indicates the hierarchy has not been assigned.
	HIERARCHYUPSTREAM	Value from 1-9999 indicates the feature's hierarchy, starting from the mouth (1) and increasing towards the source. (WA) 9999 (default value) indicates the hierarchy has not been assigned.
	WATERCOURSETYPE	The type of water course such h as river or flood area
	SALINITYCODE	Whether the water is fresh, brackish
	WATERLINETYPE	Whether the water is a dam or lake
	RIGHTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks
	LEFTBANKCONDITION Refer BANKCONDITIONTYPE	Condition of the waterway banks
InlandFlatPolygon Water features that relate to low lying areas in the interior of a country.	FLATTYPE	Value for this dataset is 1 = subject to inundation – Low lying land usually adjacent to lakes or watercourses, which is regularly covered with floodwater for short periods. (AUSLIG) This is the default InlandFlatType.
	INLANDFLATFEATURE	Whether the feature is subject

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
		to flooding
	WATERCOURSETYPE	The type of water course such as river or flood area
	SALINITYCODE	Not known - 99
FrameworkLine Topographic features that relate to the Western Australian land/sea boundary. (WA)	FRAMEWORKTYPE	The type of framework feature

6 GROUND SURFACE

The Topographic Transport features who primary characteristics that relate to ground surface of the Earth, both exposed and underwater.

Included in the Hydrography Themes are:

- Morphology
- Elevation

Each theme may or may not have feature classes for types of point, Line and/or polygon. In most cases, the attributes/field names for each type are the same with some having additional unique attributes.

Feature Classes for Ground Surface, which are represented in the table following are:

- MorphologyLine
- MorphologyPoint
- MorphologyPolygon
- ElevationPoint
- BreakLine
- ContourLine

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
MorphologyLine Topographic features whose primary characteristics relate to landform - lines	MORPHOLOGYLINETYPE	Topographic features whose primary characteristics relate to a landform
	RELATIONSHIPTOWATERSURFACE	Above or below
MorphologyPoint Topographic features whose primary characteristics relate to landform - points	MORPHOLOGYPOINTTYPE	Topographic features whose primary characteristics relate to a landform
	RELATIONSHIPTOWATERSURFACE	Above or below
MorphologyPolygon Topographic features whose primary characteristics relate to landform - polygon	MORPHOLOGYPOLYGONTYPE	Topographic features whose primary characteristics relate to a landform
	RELATIONSHIPTOWATERSURFACE	Above or below
ElevationPoint Topographic features with known elevation	ELEVATION	The height, in metres, relative to a reference datum - Australian Height Datum (AHD). (WA) The default is 1500 which is outside the valid range >= -5 and <= 1255
	DATUMDIFFERENCE	0 (zero) as default. LandSurfaceContour's relate to the Australian Height Datum

Feature Class and Class Type	Unique Attribute/Field Name (linked to Attribute Values section in this document if applicable – attribute underlined)	Unique Attribute Description
Breakline A digital line depicting surface levels along a particular course. Designed to aid in the production of Digital Elevation Models (DEM) where sudden changes in surface height are encountered.	DATUMDIFFERENCE	0 (zero) as default. LandSurfaceContour's relate to the Australian Height Datum
ContourLine Imaginary line joining points of equal elevation relative to a datum.	CONTOURTYPE	This domain provides a list of valid values for classifying the different types of contour lines - i.e. Auxiliary, Formline, Regular.

7 ATTRIBUTE VALUES

This section provides the associated Attribute values where it is shown in the theme section tables with the link from the Attribute/Field Name underlined.

Also shown prior to each table is the related Feature Class (datasets) the attribute values pertain to.

ACCESSLEVEL

Feature Classes: All

Values	Description
0 = Public	Data for public use. This is the default
10 =Public (licensed)	Data for public use but under license with Army.
11 =Public (licensed)	Data for public use but under license with DMP.
12 =Public (licensed)	Data for public use but under license with DEC.
13 =Public (licensed)	Data for public use but under license with Water Corporation.
14 =Public (licensed)	Data for public use but under license with Western Power.
20 =Level 1 Restriction (Low)	Data not for public use. For internal LANDGATE use only, under license with DMP.
21 =Level 1 Restriction (Low)	Data not for public use. For internal LANDGATE use only, under license with Water Corporation.
22= Level 1 Restriction (Low)	Data not for public use. For internal LANDGATE use only, under license with Western Power.
23 =Level 1 Restriction (Low)	Data not for public use. For DEC use only. DEC to specify who can have access to this category of data. Note: refer to conditions associated with AccessLevel 24.
24 =Level 1 Restriction (Low)	Data not for public use. For internal LANDGATE use only. Provides alignment to DEC restricted roads (i.e. used to ensure road connectivity is preserved). Note: if AccessLevel 23 data is suppressed so should AccessLevel 24 data.
40 =Level 2 Restriction (Medium)	Data not for public use. Medium restriction dissemination policy.
60 =Level 3 Restriction (High)	Data not for public use. Highly restricted dissemination policy.
80 =Secure	Data not for public use. Data totally restricted.

BANKCONDITIONTYPE

Feature Classes: WaterPolygon, WaterPoint, WaterLine

Values	Description
Pristine (1)	WRC to supply definition.
Disturbed (2)	WRC to supply definition.
Eroded (3)	WRC to supply definition.
Degraded (4)	WRC to supply definition.
NotApplicable (-98)	The BankConditionType is not relevant for the particular feature.
Unknown (-99)	The BankConditionType is not known for the particular feature; however a value may be populated in the future.

BUILDINGTYPE

Feature Classes: BuildingPolygon, CulturalFeatureLine

Values	Description
Abattoir (1)	An establishment where animals are slaughtered for food. (CGNA)
AboriginalOutstation (54)	A station in a remote or sparsely populated location. (CGNA)
AgedCare (2)	A facility that specialises in the care of persons that are show the effects or the characteristics of increasing age. (Modified Merriam-Webster Dictionary)
AircraftHanger (3)	A building at an airport in which aircrafts are maintained or stored. (WA)
AmbulanceStation (4)	The facility in which ambulance vehicles and equipment are stationed or intended to be stationed.(NSW)
ArtCraftGallery (5)	A facility used as a place set apart for the keeping, exhibition, and study of objects of artistic interest. (NSW)
AviationBuilding (6)	A building at an airport used to conduct aviation transport business. (WA)
AviationTerminal (7)	A building at an airport where passengers transfer from ground transportation to the facilities that allow them to board airplanes. (Modified WIKIPEDIA)
BroadcastingStation (53)	The site, studios, offices etc of an organisation for broadcasting programs (radio etc.). (WA)
BusStation (8)	An extensive combination of bus stops in one location. (WIKIPEDIA)
CarPark (9)	An area designated for the parking of motor vehicles. (CGNA)
Clubhouse (10)	A facility used for providing hospitality services to members. The provision of food and beverages is a major activity. This may include providing gambling, sporting and other social entertainment facilities. (NSW)
Commercial (11)	An area occupied with or engaged in commerce (buying and/or selling) or work intended for commerce. (Modified Merriam-Webster Dictionary)
ConcertHall (12)	A building used for public performance (e.g. music or dancing). (Modified Merriam-Webster Dictionary)
Courthouse (13)	A facility used for holding courts of law and the operation or

Values	Description
	administration of judicial authorities and commissions. (NSW)
Crematorium (14)	An establishment for the incineration of corpses. (Modified Your Dictionary)
ExplosiveMagazine (15)	A building where ammunition is kept. (Modified Your Dictionary)
Factory (16)	A building(s) usually with equipment where goods are manufactured. (CGNA)
FireStation (17)	A facility in which firefighting vehicles and equipment is stationed or intended to be stationed. (Modified NSW)
GovernmentBuilding (18)	A building in which State or Federal business is conducted. (WA)
GovernmentHouse (19)	The residence for a governor. (WIKIPEDIA)
HarbourBuilding (20)	A building adjacent to a harbour. (WA)
Homestead (21)	A main residence on a horticultural or agricultural farm. (CGNA)
Hospital (22)	An institution in which the sick or injured persons are given medical or surgical treatment. (CGNA)
Hotel (23)	A facility that provides lodging, usually on a short-term basis. (Modified WIKIPEDIA)
Library (24)	A facility used as a place set apart to contain books and other literary material for reading, study and reference. (NSW)
MarineLandingBuilding (25)	A building, adjacent to a waterway, used by the boat transportation industry. (WA)
MeteorologicalStation (26)	A facility designed for making meteorological observations. (WA)
MunicipalBuilding (27)	A facility built to conduct Council business and accommodate council administrative staff. (Modified WIKIPEDIA).
Museum (28)	A facility for the keeping, exhibiting, and study of objects of scientific, artistic, and historical interest. (NSW)
Observatory (29)	A facility designed for making observations of astronomical or other natural phenomena. Excludes meteorological observations (Modified NSW)
ParliamentHouse (30)	A building in which a state or national Parliament sits. (Modified WIKIPEDIA)
PlaceOfWorship (31)	A facility used for the activity of public religious worship.(NSW)
PoliceStation (32)	A facility used as the headquarters of a police force, or of a branch of a police force. (NSW)
PostOffice (33)	A facility whose primary business is to handle and service mail and associated supplies of equipment. (NSW)
PowerStation (34)	The building(s) and equipment necessary for the generation of electric power. (DIGEST)
PowerSubStation (35)	A facility, along a power line route, in which electric current is transformed and/or distributed. DIGEST
Prison (36)	A building(s) in which persons are legally committed to, while awaiting trial or for punishment. (CGNA).
PumpingStation (37)	A facility to move solids, liquids or gases by means of pressure or suction.(DIGEST)
RailwayBuilding (38)	A building, adjacent to a railway, used by the railway industry. (WA)
Refinery (39)	A building or the equipment used for refining or processing specific products. (WIKIPEDIA)
RepeaterStation (40)	A building housing devices that amplifies, reshapes, retimes, or performs a combination of any of these functions on a digital input signal for retransmission. (Modified WIKIPEDIA)
Residential (41)	A residential dwelling. (WA)

Values	Description
School (42)	A place or establishment where instruction is given, especially one for children. (CGNA)
ServiceStation (43)	A facility that sells fuel for road motor vehicles. (Modified WIKIPEDIA)
SewerageTreatment (44)	A facility used to treat sewage/waste water.(NSW)
Shopping (45)	The concentration of retailing and other service activities at a nodal and accessible point. (CGNA)
Silo (46)	An enclosed container, used for storing grain or fodder. (DIGEST)
Stadium (47)	An enclosed athletic or sports ground with tiers of seats for spectators. (CGNA)
TAFE (48)	A facility used for providing education or instruction in technical, business or trade subjects at a post-secondary level. (NSW)
Theatre (49)	A facility consisting of a stage or other focal point , and an area where audiences can be seated.(Modified ICSM)
Toilet (50)	A toilet is a plumbing fixture devised for the disposal of bodily wastes. (Modified WIKIPEDIA)
University (51)	A facility for conduction teaching and research at a diploma, undergraduate or postgraduate level. (NSW)
WaterTreatment (52)	A facility where water is purified to produce water that is pure enough for human consumption. (Modified WIKIPEDIA)
Unknown (-99)	The BuildingType is not known for the particular feature; however a value may be populated in the future. This is the default BuildingType.
Values in grey text are not applicable in the Large Scale Topographic Database.	

BRIDGETUNNELTYPE

Feature Classes: BridgeTunnelLine, BridgeTunnelPolygon

Class Type	fcSubtype	Description	Domain Value	Description
Line	7	BridgeEdge	Bridge (1)	A structure erected over a depression or obstacle to carry traffic. (Modified ICSM) This is the default BridgeAndTunnelType.
			Tunnel (2)	An underground or underwater passage. (ICSM)
			BridgeEdge (3)	A line defining the edge of a structure erected over a depression or obstacle to carry traffic or some facility such as a pipeline. (ICSM)
			NotApplicable (-98)	Only applicable to BridgeTunnelPolygon feature class.
			Unknown (-99)	This is an invalid attribute for BridgeTunnelType.
	8	FootBridgeEdge		
Polygon	9	Bridgepad		

BUILDINGSTATUS

Feature Classes: BuildingPolygon, CulturalFeatureLine

Values	Description
Constructed (1)	A fully completed structure no longer in the process of construction. (WA)
UnderConstruction (2)	A structure in the process of construction which will become a building (WA)
NotApplicable (-98)	Does not apply to this feature.
Unknown (-99)	The BuildingStatusType is not known for this feature.

BUILDINGVISIBILITY

Feature Classes: BuildingPolygon, CulturalFeatureLine

Values	Description
TotallyVisible (1)	A feature is not concealed by any other feature or object at the time of capture. (WA)
Obscured (2)	A feature is partially concealed by any other feature or object at the time of capture. (WA)
NotApplicable (-98)	Does not apply to this feature.
Unknown (-99)	The BuildingVisibilityType is not known for this feature.
Values in grey text are not applicable (invalid) in the Large Scale Topographic Database.	

CAPTUREMETHOD

Feature Classes: N/A – Workspace table

Values	Description
24	DigitalElevationModel
1	DirectPhotogrammetricCapture
2	GlobalPositioningSystem
7	MathematicalInterpolation
3	OnScreenDigitising
4	Scan_Vectorise
5	TableDigitising
6	Various

CONTOURTYPE

Feature Classes: ContourLine

Values	Definition	Description
1	Auxiliary	Supplementary to "Standard" contours - differs from the standard contour interval. (WA)
2	Formline	Lines, resembling "Standard" contour lines, drawn to present a conception of the shape of the terrain without regard of the true vertical accuracy. (WA)
4	HighWaterMark	The highest level reached by a body of water that has been maintained for a sufficient period of time to leave evidence on the landscape. (WA)
3	Standard	A line, which represents an imaginary line on the earth's surface joining points of equal elevation relative to a datum. (WA) This is the default ContourType.
-99	Unknown	This is an invalid attribute for ContourType

CULTURALFEATURETYPE

Feature Classes: BuildingPolygon, CulturalFeatureLine, CulturalFeaturePoint, CulturalFeaturePolygon

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
Polygon	-98	2	Swimming Pool			
	5	3	Cleared Area	1	ClearedLine	A cleared path (straight line) within surrounding vegetation. (WA)
				2	FireBreak	A strip of ploughed or cleared land made to check the spread of fire. (CGNA)
				3	GrassedArea	A grassed open area where passive recreation occurs. (WA)
				4	PavedWaterCatchment	An area prepared and set aside for the collection of rainfall run-off. (WA)
				5	PreparedPlayingSurface	A prepared open area where sporting events, exercises, or games occur. (WA)
				6	RifleRange	A tract of land on which rifle shooting contests are held. (CGNA)
				7	SeismicLine	A graded path in a straight line for the purpose of exploration. (AUSLIG)

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
				-99	Unknown	The ClearingType is not known for this feature.
	1	4	Disturbed Ground	1	Earthworks	An area where site excavations and construction are taking place. (Modified Webster Dictionary) This is the default DisturbedGroundType.
				2	RubbishTip	An area where there is a gradually accumulated of refuse. (Modified Merriam-Webster Dictionary)
				3	Stockpile	An area where there is a gradually accumulated reserve of some type. (Modified Merriam-Webster Dictionary)
				-99	Unknown	
	11	6	Vegetation Area	1	Bushland	Land having a cover of trees, shrubs, or both. (SDTS)
				3	MarketGarden	A farm devoted to the production of vegetables for the market. (Merriam-Webster Dictionary)
				4	NativeForest	A bounded area of land covered mainly with native trees. (Modified CGNA)
				5	Nursery	A plot of ground in which young plants are reared for transplantation, especially trees. (CGNA)
				2	Orchard	An area covered by an orderly planting of trees, vines or bushes which yield fruits, nuts or other edible products.(AUSLIG)
				6	PinePlantation	An area covered with coniferous trees planted in an orderly pattern. (AUSLIG)
				7	Plantation	An area covered by systematic plantings of trees, which yield fruits, nuts or other products. (DIGEST)
				8	Reafforestation	An area that has undergone or is in the

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
						process of undergoing the action of renewing forest cover by planting seeds or young trees. (WA)
				9	RiceField	An area periodically covered with water used for growing rice.(DIGEST)
				11	TreeCanopy	Refers to the extent of the outer layer of leaves of an individual tree or group of trees. (WA)
				10	Vineyard	An area covered by an orderly planting of trees, vines or bushes which yield fruits, nuts or other edible products. (AUSLIG)
				-99	Unknown	This is an invalid attribute for CulturalFeatureType.
	4	11	PointofInterest	1	AboriginalSite	
				2	Grave	A structure erected or maintained as a memorial to a person or event.(DIGEST)
				3	HistoricSite	Land reserved or dedicated for its historical significance even though it may be used for other purposes. (Modified ANZLIC)
				4	Monument	A structure erected or maintained as a memorial to a person or event.(DIGEST)
				5	ProminentTrees	A significant tree that has cultural significance. (WA)
				6	Ruin	The remains of a fallen building, or of anything in a state of destruction or decay. (CGNA) This is the default PointOfInterestType.
				7	Shipwreck	A site at which a wrecked ship or its parts are located. (Modified Merriam-Webster Dictionary)
				-99	Unknown	This is an invalid attribute for CulturalFeatureType.

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
	-98	14	Steps			
	-98	15	Landing			
	-98	18	Ramp			
	6	8	Race Track	1	Athletic	
				2	BMX	
				3	CarOrMotorcycle	
				4	Cycling	
				5	Dog	
				6	Horse	
				7	Trotting	
				-99	Unknown	
Line	1	9	Fence	1	Fence	A manmade barrier of relatively light structure used as an enclosure or boundary. (DIGEST) This is the default for FenceType for CulturalFeatureLine.
				2	Gate	A structure to prevent entrance or passageway. (ICSM) This is the default for FenceType for CulturalFeaturePoint.
				4	RetainingWall	A structure that holds back soil or rock to prevent downslope movement or erosion and provide support for vertical or near-vertical grade changes.
				6	RetainingWallWithFence	A man made structure that holds back soil or rock with a fence directly on top of and along its length. (WA)
				5	Wall	A solid vertical linear construction usually of stone or brick acting as a barrier or support. (WA)

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
				3	Yard	
				-99	Unknown	
	-98	16	Sign			
Point	-98	2	Swimming Pool			
	2	10	Services	5	Barbecue	An outdoor cooking facility associated with parks and recreation areas. (WA)
				2	Telephone_Emergency	Telephone installed/configured for emergency use only. (WA)
				3	Telephone_Public	Telephone installed for public use. (WA)
				4	Toilet	A structure with fixtures that consists usually of a water-flushed bowl and seat and is used for defecation and urination. (Modified Merriam-Webster Dictionary)
				-99	Unknown	This is an invalid attribute for CulturalFeatureType.
	-99	12	Navigational Aid	1	Bouy	A floating object moored to the seafloor, as an aid to navigation or for other specific purposes. (CGNA)
				2	LitBeacon	A prominent specially constructed object forming a conspicuous mark as a fixed visual (lit) to navigation. (Modified CGNA)
				3	Lighthouse	A building or structure housing a light used as a navigation aid to shipping. (AUSLIG) This is the default NavigationAid.
				4	UnlitBeacon	A prominent specially constructed object forming a conspicuous mark as a fixed visual (unlit) to navigation. (Modified CGNA)
				5	RadioBeacon	A prominent specially constructed object forming a conspicuous

Class Type	Cultural Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
						mark as a fixed electronic aid to navigation. (Modified CGNA)
				6	Windsock	A visual device used to provide wind information.(DIGEST)
				-99	Unknown	This is an invalid attribute for CulturalFeatureType.
	-98	16	Sign			
	-98	17	Ticket Meter			
Values filled with grey are not valid for Large Scale						

DATACUSTODIAN

Feature Classes: N/A – Workspace table

Values	Description
7	ARMY
1	DAFWA – Department Agriculture and Foods WA
2	DEC – Department of Environment and Conservation
4	DMP – Department of Mines and Petroleum
6	DOW – Department of Water
8	GA
3	LANDGATE
10	MRWA – Main Roads
5	WC – Water Corporation
9	WP – Western Power

DATASOURCE

Feature Classes: N/A – Workspace table

Values	Description
1	1:2000TopographicSeriesByLANDGATE
6	1:50000TopographicSeriesByLANDGATE
9	1:100000TopographicSeriesByDMP
10	1:100000TopographicSeriesByDOW
7	1:50000TopographicSeriesByDOW
8	1:100000TopographicSeriesByGA
18	1:50000TopographicSeriesByDEC
3	1:25000TopographicSeriesByLANDGATE
2	1:5000TopographicSeriesByLANDGATE
4	1:25000TopographicSeriesByDEC
5	1:25000TopographicSeriesByDOW
16	1:50000TopographicSeriesByARMY
11	CadastralDatabase
12	CitiesAndTownsSeriesByLANDGATE
19	ConceptPlan
28	DECRoadAssetManagement
24	DigitalElevationModel
22	GasOilPipelinesByDMP
25	GeographicNamesRegister
13	MetropolitanStreetSmartDirectoryByLANDGATE
14	MetropolitanWallMapByLANDGATE
17	ModifiedAMBIS1:100000Data
27	MRWA_IRIS
26	OrthoImagery

Values	Description
23	PlantationsByDEC
15	StateMapSeriesByLANDGATE
20	TransmissionLinesByWP
21	WaterPipelinesByWC

ELEVATIONACCURACY

Feature Classes: N/A – Workspace table

MAPPING SCALE	CONTOUR INTERVAL	RMS(metres)		LINEAR MAP ACCURACY STANDARD FACTOR	90% OF "WELL DEFINED"POINTS WILL BE WITHIN (METRES)	
		CONTOURS	SPOTHEIGHTS ("WELL DEFINED")	LMAS AT THE 90%CONFIDENCE LEVEL	CONTOURS	HAND/SCAN DIGITISED OR DERIVED
1:25,000	5	1.67	0.83	1.6449	2.7	1.4
1:50000	10	3.34	1.66	1.6449	5.5	2.7
1:100000	20	6.68	3.32	1.6449	11.0	5.5

VERTICAL ACCURACY (based on DEM Data)

PHOTOGRAPHY SCALE OR DATA	CONTOUR INTERVAL	RMS(metres)	LINEAR MAP ACCURACY STANDARD FACTOR	90% OF "WELL DEFINED"POINTS WILL BE WITHIN (METRES)	
			LMAS AT THE 90%CONFIDENCE LEVEL	DERIVED CONTOURS[**]	DEM POSTS("WELL DEFINED")
STRTM DATA		9.73	1.6449	16.0	
1:40000	2	1	1.6449	1.6	1.6

[**]The accuracy of the contours derived from the DEM will be influenced by a number (not exhaustive) of factors:

1. DEM Grid spacing which dictates whether pinnacles and depressions are sampled or not
2. Whether the DEM has been edited to remove heighting errors
3. Accuracy of the posts
4. The area (cleared or vegetated)
5. Contour generation method (exact interpolation with or without smoothing)
6. Degree of contour editing after generation

Due to the lack of research on the quantitative effect of these factors, the accuracy of the derived contours (for the 1:40,000 scale data) has been stated to be equivalent to the accuracy of the DEM Posts. These accuracy statements exclude gross errors

SRTM = Shuttle Radar Topography Mission DEM data

FACILITYTYPE

Feature Classes: GeneralFacilityPolygon, CulturalFeatureLine

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
3	1	Educational Facility	9	AdminEducationalSupport	A facility that provides administration or support to educational facilities. (WA)
			1	CombinedPrimarySecondary	A facility used for full-time primary and secondary instruction of children, typically aged 6 to 17. (Modified NSW)
			2	Kindergarten	A facility used for the tuition of young children (usually under the age of 5) prior to preschool. (WA)
			4	PreSchool	A facility used for the tuition of young children prior to school age, usually children age of five. (Modified NSW)
			3	PrimarySchool	A facility used for full-time primary instruction of children, typically aged 6 to 11. (Modified NSW)
			5	SecondarySchool	A facility used for full-time secondary institution of children, typically aged 12 to 17. (NSW)
			10	SpecialisedStudies	A facility used for providing specialised teaching (curriculum). (WA)
			6	SpecialSchool	A facility used for the education of children with special needs. (NSW)
			7	TAFE	A facility used for providing education or instruction in technical, business or trade subjects at a post-secondary level. (NSW)
			8	University	A facility for conduction teaching and research at a diploma, undergraduate or postgraduate level. (NSW
			-99	Unknown	This is an invalid attribute for FacilityType.
6	2	Hospital Facility	2	Children	A facility that specialises in the medical care and treatment of sick or injured children. (WA)
			3	CombinedGeneralEmergency	A facility that can provide both general medical care and emergency medical care and

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
					treatment of sick or injured persons.(Modified NSW)
			4	Dental	A facility that specialises in dental care. (WA)
			5	Emergency	A facility that can provide emergency medical care and treatment of sick or injured persons.(Modified NSW)
			6	General	A facility used for medical care and treatment of sick or injured persons. (Modified NSW)
			7	Psychiatric	A facility used for the psychiatric treatment of mentally ill persons. (NSW)
			8	Rehabilitation	A facility that specialises in the medical care associated with post treatment rehabilitation.(WA)
			9	Women	A facility that specialises in the medical care of women. (WA)
			-99	Unknown	This is an invalid attribute for FacilityType.
3	3	Community Facility	25	BotanicGarden	
			3	CemeteryAndCrematorium	A place or area for burying the dead. (CGNA)
			17	PrisonAndDetentionCentre	
			19	ZoologicalGardens	
			-99	Unknown	
8	4	Recreational Facility	1	AquaticCentre	
			20	BirdAndWildlifeSanctuary	
			2	Campsite	
			3	CaravanAndTouristPark	A bounded area in which caravans are, or can be, parked, or where caravan type accommodation can be obtained. Domestic facilities may be provided. (CGNA)
			7	Cinema_Theatre	A venue that hosts theatrical performances or motion-picture screening. (Web)
			17	DogRacing	
			4	EquestrianCentre	An area set aside for equestrian activities. (WA)
			5	GolfCourse	

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
			10	HorseRacing	
			6	MotorRacing	
			21	OffRoadVehicleArea	
			8	ParkOrReserve	A place set aside for recreational or preservation of a cultural or natural resource. (ICSM) This is the default for RecreationalFacilityType.
			16	RaceCourse	
			11	ShootingComplex	
			12	ShowGround	
			15	SportsCentre	
			14	SportsStadium	
			18	TheatreAndConcertHall	
			19	ThemePark	
			-99	Unknown	
1	5	Industrial Facility	37	Abattoir	
			1	AluminaRefinery	
			2	AquaCulture	
			4	Battery	A stone crushing works for ore extraction, as used on gold-fields. (CGNA)
			3	Brickworks	A place where bricks are made. (CGNA)
			29	CementPlant	The equipment, including the fixtures, machinery, tools and often the building needed to produce a dry powder substance used to bind the aggregate materials of concrete. (WA)
			31	Depot_Bus	
			21	Depot_Maintenance	
			25	Depot_Storage	
			23	Factory	

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
			22	GoldRefinery	
			32	GrainStorage	
			28	IntensiveAnimalProduction	
			5	IronOreProcessor	
			6	LPGPlant	
			30	MineralSandProcessingPlant	
			7	NickelRefinery	
			8	NickelSmelter	
			9	OilProcessingPlant	
			10	OilRefinery	
			11	PowerStation_FossilFuel	
			33	PowerStation_Hydro	
			34	PowerStation_Other	
			12	PowerSubStation	A facility, along a power line route, in which electric current is transformed and/or distributed. DIGEST)
			24	Printing	
			27	PumpStation	
			36	RoadTrainAssemblyArea	
			13	Sawmill	
			15	SewageTreatmentPlant	
			14	ShipYard	
			16	SiliconSmelter	
			17	SteelRollingMill	
			18	ValveStation	
			26	Warehouse	
			35	WasteDisposal	

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
			19	WasteWaterProcessingPlant	A facility used to treat waste water.(Modified NSW)
			20	WaterProcessingPlant	A facility used to treat drinking water.(Modified NSW)
			-99	Unknown	
7	7	Commercial Facility	1	Broadcasting	A facility for broadcasting radio or television programs. The site, studios, offices, etc. of such an organisation. (Modified ICSM)
			2	ChildCare	A facility that provides daytime training, supervision, recreation for children of preschool age. (Modified Web)
			3	Finance	A facility that provides the commercial activity of providing funds and capital. (Modified Web)
			4	Hospitality	A facility that includes the hotel, restaurant, entertainment, and resort industry. (Modified Web)
			5	PetrolStation	A commercial business that specialises in the dispensing of motor vehicle fuel – diesel, petroleum and gas. (WA)
			6	RetirementEstate	A facility that provides accommodation to retired persons. (WA)
			7	Telecommunication	A facility that uses electromagnetic channels to transmit or receive signals for voice, data, and video communications. (Modified Web)
			-99	Unknown	This is an invalid attribute for FacilityType.
1	6	Defence Facility (may also be referred to as Building Complex Point)	1	AirForceBase	An area owned and operated by the government as an Air Force Base. (WA)
			2	ArmyBase	An area owned and operated by the government as an Army Base. (WA)
			4	DefencePracticeArea	An area owned and operated by the government as a Naval Base. (WA)
			3	NavalBase	A tract of land on which the military conducts practice exercises. (Modified CGNA)
			-99	Unknown	This is an invalid attribute for FacilityType.

Facility Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
Values in grey are not valid for the Large Scale database					

FRAMEWORKTYPE

Feature Classes: FrameworkLine

Framework Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
6	3	Coastline	1	HighWaterMar	The ordinary high water mark at spring tides, and when applied to mother water, means the ordinary high water mark at winter level. (Land Act)
			2	LowWaterMark_Inland	The ordinary low water mark at spring tides with respect to tidal waters. (Land Act)
			3	LowWaterMark_Island	The ordinary low water mark at spring tides with respect to tidal waters. (Land Act)
			4	LowWaterMark_Mainland	The ordinary low water mark at spring tides with respect to tidal waters. (Land Act)
			5	TopographicCoastline	The line of contact between the ocean/sea and the land as best interpreted from aerial photography. In SYMBAS this line has previously been defined as "A line depicting the coast at mean high water.", however there is no guarantee that the photography from which the line was interpreted was taken at the time of mean high water.
			6	WaterLine	A line depicting the boundary of a hydrographic area feature. (AUSLIG)
			-99	Unknown	This is an invalid attribute for FrameworkType.
2	4	Marine Construction Line	1	Breakwater	A natural or artificial structure along a COAST capable of checking the force of the waves, thereby reducing beach erosion or sheltering vessels from rough seas.(CGNA)
			2	Groyne	A structure which protects a harbour or beach from forces of the sea. (DIGEST) This is the default MarineConstructionType.
			3	Mole	A massive structure of masonry or large stones serving as a PIER or BREAKWATER, or both.

Framework Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
					(CGNA)
			4	SeaWall	A solid structure usually of concrete masonry or earth, built to prevent erosion or encroachment by the sea.(AUSLIG)
			-99	Unknown	This is an invalid attribute for FrameworkType.

Feature Classes: IndustrialFeaturePolygon, IndustrialFeaturePoint, IndustrialFeatureLine, CulturalFeatureLine

Class Type	Industrial Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
Polygon	4	1	Storage Tank	1	Gas	
				2	Oil	
				3	Waste	
				4	Water	
				-99	Unknown	The StorageSubstanceType is not known for the particular feature; however a value may be populated in the future.
	3	2	Pondage	1	SaltEvaporator	A flat area, usually segmented, used for the commercial production of salt by evaporation. (AUSLIG)
				2	SewageTreatmentPond	A flat area, usually segmented, used for the treatment of sewage / waste water. (WA)
				3	Sump	A pit or well into which surplus water is channelled. (ATSAS)
				4	TailingPond	A man made construction designed to safely store waste products associated with the processing of an ore. (ATSAS)
				-99	Unknown	This attribute is invalid for IndustrialFeatureType.
	-98	11	Spillway			
	3	3	Utility Access Point	2	ElectricalPole	A wooden or metal structure used to support overhead wires or other equipment such as transformers and street lights. (WA)
				1	Hydrant	A source of water provided by most communities to enable fire-fighters to tap into

Class Type	Industrial Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
						the municipal water supply to assist in extinguishing a fire. (WIKIPEDIA)
				3	Manhole	The top opening to an underground chamber used to house an access point for making connections or performing maintenance on underground utility services. (WIKIPEDIA)
				4	RailwayElectricalPole	A vertical support for electrified cable necessary for the passage of an electrically powered railway carriage. (WA)
				5	ServiceBox	A small on- or in-ground secured container providing service access to housed electronic/junction mechanisms. (WA)
				6	StormWaterGrate	An unobtrusive in-kerb entry point or frame of metal bars covering the surface entry point to a below-ground storm water drainage system. Normally associated with roads and any other sealed surface area. (WA)
				-99	Unknown	
	-98	5	Conveyor Belt			
	-99	12	Pipe Rack			
Line	-99	7	Pipeline Petroleum	1	Gas	This is the default PipelinePetroleumType.
				2	GasAndCondensate	When gas is removed from the field and pressure reduced, some of the heavier hydrocarbons (fractions) condense depending on the pressure. This liquid condensate can be refined as if it were

Class Type	Industrial Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
						very light crude oil. (WIKIPEDIA).
				3	GasAndCondensateAndWater	
				4	Oil	
				5	OilAndGas	
				6	OilAndGasAndWater	
				-99	Unknown	The PipelinePetroleumType is not known for the particular feature; however a value may be populated in the future
	-98	8	Pipeline Water			
	-99	9	Pipleline Other	3	Chemical	A pipeline constructed to transport waste, chemical in nature. (WA)
				1	Sewerage	A pipeline constructed to transport sewerage. (WA)
				2	StormWater	A pipeline constructed to transport stormwater. (WA)
				-99	Unknown	The PipelineOtherType is not known for the particular feature; however a value may be populated in the future.
	-98	10	Dam Wall			
	-98	13	Gantry Rail			
Point	3	3	Utility Access Point	1	Hydrant	A source of water provided by most communities to enable fire-fighters to tap into the municipal water supply to assist in extinguishing a fire. (WIKIPEDIA)
				2	ElectricalPole	A wooden or metal structure used to support overhead wires or other equipment such as transformers and street lights. (WA)

Class Type	Industrial Feature Type	fcSubtype	Definition	Domain Values	Domain Meaning	Description
				3	Manhole	The top opening to an underground chamber used to house an access point for making connections or performing maintenance on underground utility services. (WIKIPEDIA)
				4	RailwayElectricalPole	A vertical support for electrified cable necessary for the passage of an electrically powered railway carriage. (WA)
				5	ServiceBox	A small on- or in-ground secured container providing service access to housed electronic/junction mechanisms. (WA)
				6	StormWaterGrate	An unobtrusive in-kerb entry point or frame of metal bars covering the surface entry point to a below-ground storm water drainage system. Normally associated with roads and any other sealed surface area. (WA)
				-99	Unknown	This is an invalid attribute for IndustrialFeatureType.
	-98	13	Gantry			

INLANDFLATFEATURE

Values	Description
SubjectToFlooding (2)	Low lying land usually adjacent to lakes or watercourses, which is irregularly covered with floodwater for short periods. (WA)
SubjectToInundation (1)	Low lying land usually adjacent to lakes or watercourses, which is regularly covered with floodwater for short periods. (AUSLIG) This is the default InlandFlatType.
Unknown (-99)	This is an invalid attribute for FlatType.

MORPHOLOGYPOINTTYPE

Feature Classes: MorphologyPoint

Values	Description
Blowhole (6)	A hole near the sea-shore which has been formed in the roof of a CAVE, and through which air and possibly water are forced by the rising tide. (CGNA)
Cave (1)	A naturally formed, subterranean open area or chamber. (ICSM)
Crater (2)	A bowl shaped natural depression with steep slopes at the rim, formed by volcanic activity or meteor impact. (AUSLIG)
Reef (3)	An area of rock or coral that is exposed between mean high water and lowest tide, or just below approximate lowest tide, which is visually prominent or a hazard to shipping. (AUSLIG)
Rock (4)	An isolated rock formation or monolith either on land or in the sea or waterbody. (ICSM)
Sink (5)	A hole, or funnel shaped cavity made in the earth by the action of water on the soil, rock, or underlying strata. (ICSM)
Unknown (-99)	This is an invalid attribute for MorphologyType
Values in grey text are not applicable (invalid) in the Large Scale Topographic Database.	

MORPHOLOGYLINETYPE

Feature Classes: MorphologyLine

Values	Description
Breakaway (1)	Steep cliffs connecting the old and new plateaux formed by the collapse of the edges of a tabletop. (CGNA)
Cliff (2)	A high, steep, or overhanging face of rock. (ICSM) This is the default MorphologyLineType.
Cutting (3)	An excavation of the Earth's surface to provide passage for a road, railway, canal, drain, etc. (ICSM)
Embankment (4)	An artificial bank of earth and or stone built above the natural surface. (ICSM)
EmbankmentBottom (10)	The bottom of an artificial bank of earth and or stone built above the natural surface. (WA)
EmbankmentTop (11)	The top of an artificial bank of earth and or stone built above the natural surface. (WA)
Fault (5)	A fracture in the earth's crust with displacement on one side of the fracture relative to the other. (ICSM)
Ledge (6)	A flat, usually level, shelf of rock occurring part way up a steep mountain side or cliff. (ICSM)
Levee (7)	A low earth wall erected to restrain floodwaters or to

Values	Description
	contain irrigation water. (AUSLIG)
RockRidge (8)	A long and narrow rocky upland with steep sides. (modified ICSM)
SandRidge (9)	Sand drifts in long ridges tending parallel to and elongating in the direction of the prevailing winds. (ICSM)
Unknown (-99)	This is an invalid attribute for MorphologyType
Values in grey text are not applicable (invalid) in the Large Scale Topographic Database.	

MORPHOLOGYPOLYGONTYPE

Feature Classes: MorphologyPolygon

Values	Description
Crater (5)	A bowl shaped natural depression with steep slopes at the rim, formed by volcanic activity or meteor impact. (AUSLIG)
DistortedSurface (1)	An area over which vehicular movement is difficult or impossible due to the fractured nature of the ground, or rock debris lying on the surface. (AUSLIG)
Sand (2)	An area predominantly covered with sand and devoid of vegetation. (ICSM) An area of submerged sand in the SEA or a RIVER often exposed at low tide. (Modified CGNA)
Rock (3)	An isolated rock formation or monolith either on land or in the sea or waterbody. (ICSM) This is the default MorphologyPolygonType.
Reef (4)	An area of rock or coral that is exposed between mean high water and lowest tide, or just below approximate lowest tide, which is visually prominent or a hazard to shipping. (AUSLIG)
Unknown (-99)	This is an invalid attribute for MorphologyPolygonType

ORIGIN

Feature Classes: WaterPolygon, WaterPoint, WaterLine

Values	Description
Manmade (1)	Manufactured, created, or constructed by human beings. (WA)
Natural (2)	Exists normally in nature. (WA)
NotApplicable (-98)	The HydroOrigin is not relevant for the particular feature.
Unknown (-99)	This is an invalid attribute for Origin.

PERENNIALITY

Feature Classes: WaterPolygon, WaterPoint, WaterLine

Values	Description
Nonperennial (1)	Only contains water for several months of the year, or contains water intermittently. (Modified AUSLIG)
Perennial (2)	Normally contains water for the whole year. (Modified AUSLIG)
NotApplicable (-98)	The PerennialityType is not relevant for the particular feature.
Unknown (-99)	The PerennialityType is not known for the particular feature; however a value may be populated in the future.

PLANIMETRIC ACCURACY

Feature Classes: N/A – Workspace table

MAPPING SCALE	RMS(metres)		CIRCULAR MAP ACCURACY STANDARD FACTOR	90% OF "WELL DEFINED"POINTS WILL BE WITHIN (METRES)	
	DIRECT STEREO CAPTURE	HAND/SCAN DIGITISED(0.25mm AT MAP SCALE)*	CMAS AT THE 90%CONFIDENCE LEVEL	DIRECT STEREO CAPTURE	HAND/SCAN DIGITISED OR DERIVED
1:2000	0.25		2.146	0.5	
1:25000	3.13	6.2	2.146	6.7	13.3
1:50000	6.26	12.5	2.146	13.4	26.8
1:100000	12.52	25	2.146	26.9	53.7

Additional errors associated with Hand Digitised and Scanned data include (over and above photogrammetric instrument setup):

1) *Drafting errors (machine plot)*
2) *Digitiser setup errors*
3) *Digitising errors*

RAILTYPE

Feature Classes: RailSegment

Values	Description
Railway (2)	One track only.
Tramway (3)	A system of grooved tracks laid in urban streets, forming routes for the conveyance of passengers in trams. (CGNA)
MonoRail (1)	A rail-based transportation system based on a single rail, which acts as its sole support and its guideway. (WIKIPEDIA)
NotApplicable (-98)	The RailType is not relevant for the particular feature.
Unknown (-99)	The RailType is not known for the particular feature; however a value may be populated in the future.

RELATIONSHIPTOWATERSURFACE

Feature Classes: MorphologyLine, MorphologyPoint, MorphologyPolygon

Values	Description
Above (1)	Always above water level
Awash (2)	Exposed or submerged depending on the water level
Below (3)	Always below water level. (WA)
Unknown (-99)	This is an invalid attribute for RelationshipToSurfaceWater

SALINITYCODE (type)

Feature Classes: WaterPolygon, WaterPoint, WaterLine,InlandFlatPolygon

Values	Description
1	Fresh
4	High_Brackish
7	High_Saline
8	Hyper_Saline
5	Low_Saline
3	Marg_Brackish
2	Marginal

Values	Description
6	Mid_Saline
-99	NotApplicable UnknownOnly contains water for several months of the year, or contains water intermittently. (Modified AUSLIG

TARGETDISPLAYSCALE

Feature Classes: N/A - Workspace Tables

Values
1:1000 (1000)
1:2000 (2000)
1:5000 (5000)
1:20000 (20000)
1:25000 (25000) This is the default value.
1:50000 (50000)
1:100000 (100000)

TOWERTYPE

Feature Classes: TowerPoint, TowerPolygon

Values	Description
Chimney (1)	A prominent structure containing a passage or flue for discharging smoke and gases from combustion. (DIGEST)
Communication (2)	A relatively tall structure used for transmitting and/or receiving electronic communication signals.(DIGEST) This is the default TowerType.
Electrical (3)	A tall framework or structure that is used to support electrical cables. (WA)
Fire (4)	A tall framework or structure that is used as a visual observation point for the location of fires. (modified ICSM)
Intake (5)	A tower, predominantly below water surface level, used for the intake of water. (DTDB Technical Manual)
Lookout (6)	A tall framework or structure that is used as a visual observation point. (ICSM)
WindGenerator (7)	A tower, which incorporates a machine by which mechanical energy generated by the wind, is changed into electrical energy. (WA)
Control (8)	An elevated tower within an airport used by air traffic controllers for the visual observation of aircraft. (Web)
Unknown (-99)	This is an invalid attribute for TowerType.

Feature Classes: GeneralTransportPolygon, GeneralTransportPoint, GeneralTransportLine

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
Polygon	2	6	Runway	5	DisusedLandingGround	A facility that has a distinct runway but is no longer in use. (WA)
				4	Hardstanding	A specially prepared or designated area on an airfield for the use of taxiing or parking aircraft. (SYMBAS)
				1	Hellipad	A place for helicopters to land and takeoff. (CGNA)
				2	LicensedRunway	A licensed runway where there is movement of aircraft and the receipt and discharge of cargo. (Modified AUSLIG)
				3	UnlicensedLandingGround	Unlicensed facility with clearly marked runway but no airport facility. (AUSLIG) This is the default RunwayType.
				-99	Unknown	This is an invalid attribute for TransportType.
	-98	11	Crossover			
	4	5	Shipping Construction	1	BoatRamp	A sloping construction to facilitate launching or retrieving vessels from water. (AUSLIG)
				4	BoatRampPad	A sloping construction to facilitate launching or retrieving vessels from water. (AUSLIG)
				2	Jetty	A structure projecting into a body of water for use as a promenade or as a platform alongside which vessels may be secured for loading and unloading passengers and cargo. (AUSLIG)

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
						This is the default ShippingConstructionType.
				3	Wharf	Any structure on a waterfront, designed to make it possible for vessels to lie alongside and take or unload cargo, passengers etc. (ICSM)
				-99	Unknown	This is an invalid attribute for TransportType.
	6	7	Traffic Control Device	1	TrafficLight	An electrically operated visual signal (as a system of coloured lights) for controlling traffic (Merriam-Webster dictionary) This is the default TrafficControlDevice Type.
				2	LevelCrossing	A place where a road and railway intersect at the same level. (NSW)
				5	TrafficLightPole	One or more coloured signal lights used to control the flow of traffic, especially at road intersections. (WA)
				6	ArresterBed	An area of special material designed to stop a runaway vehicle. (WIKIPEDIA)
				4	LevelCrossingWithSignal	Signal lights used to control the flow of traffic at the intersection of road and railway lines. (WA)
				3	LevelCrossingWithGateAndSignal	Signal lights and a controlled barrier to access, used to control the flow of traffic at the intersection of road and railway lines. (WA)
				-99	Unknown	This is an invalid attribute for TransportType.
Line	3	1	Road Crossing	1	Adit	The entrance or exit of a tunnel. (NSW)

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
				2	CattleGrid	A structure constructed across a road (normally a grate) to restrict the movement of animals. (WA)
				3	Causeway	An embanked surface usually traversing areas subject to inundation, constructed to facilitate a road or railway. (ICSM) This is the default RoadCrossingType for the Line Sub Type.
				4	Culvert	A structure usually under a road or railway to provide for the flow of water. (ICSM) This is the default RoadCrossingType for the Point Sub Type.
				8	CulvertEdge	A line defining the edge of a sewer or drain crossing under a road, track, or embankment. (DIGEST)
				5	Dam	A road crossing a large man made structure of earth, masonry, etc. built across a stream to impound water for any purpose. (Modified CGNA)
				6	Ford	A point at a shallow or flat portion of a watercourse where a crossing may be affected.(Modified AUSLIG)
				7	Underpass	A passage under a road for pedestrians. (WA)
				-99	Unknown	This is an invalid attribute for TransportType.
	2	2	Rail Crossing	1	Adit	The entrance or exit of a tunnel. (NSW)
				2	Culvert	A structure usually under a road or railway to provide for the flow of water.

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
						(ICSM) This is the default RailCrossingType for Point Sub Type.
				4	CulvertEdge	A line defining the edge of a sewer or drain crossing under a road, track, or embankment. (DIGEST)
				3	Underpass	A passage under a railway for pedestrians. (WA)
				-99	Unknown	This is an invalid attribute for TransportType.
	2	3	Other Crossing	1	Adit	The entrance or exit of a tunnel. (NSW)
				2	Bridge	A structure erected over a depression or obstacle to carry traffic or some facility such as a pipeline. (ICSM) This is the default OtherCrossingType.
				3	FlyingFox	A conveyor system in which carrier units run on wire cables strung between supports. (AUSLIG)
				4	Footbridge	A structure erected over a depression or obstacle to carry foot traffic. (AUSLIG)
				5	Underpass	A passage under a way (other than a road or railway) for pedestrians. (WA)
				6	Tunnel	An underground or underwater passage. (ICSM)
				7	Culvert	A structure usually under a feature other than a road or railway to provide for the flow of water. (Modified ICSM)
				10	FootBridgeEdge	
				-99	Unknown	This is an invalid attribute for TransportType.
	7	4	Trail	1	AllUsageModes	All of the below. This is the default TrailType.
				2	Cycleway	A thoroughfare for bicycles. (Merriam-

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
						Webster dictionary)
				7	FootpathEdge	A line defining the edge of a pedestrian walkway usually paved. (WA)
				4	HorseTrail	A track or path for passage by horse from one point to another; does not include roads or highways. (Modified CGNA)
				5	OffRoadCycleway	A track or path only suitable for off road cycles. (WA)
				6	WalkTrail	
				-99	Unknown	This is an invalid attribute for TransportType.
	2	5	Shipping construction	1	BoatRamp	A sloping construction to facilitate launching or retrieving vessels from water. (AUSLIG)
				4	BoatRampPAd	A sloping construction to facilitate launching or retrieving vessels from water. (AUSLIG)
				2	Jetty	A structure projecting into a body of water for use as a promenade or as a platform alongside which vessels may be secured for loading and unloading passengers and cargo. (AUSLIG) This is the default ShippingConstructionType.
				3	Wharf	Any structure on a waterfront, designed to make it possible for vessels to lie alongside and take or unload cargo, passengers etc. (ICSM)
				-99	Unknown	This is an invalid attribute for TransportType.

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
	-98	8	Traffic Sign			
	-98	9	Rail Station Platform			
	-98	10	Railway buffer			
Point	4	1	Road crossing	1	Adit	The entrance or exit of a tunnel. (NSW)
				2	CattleGrid	A structure constructed across a road (normally a grate) to restrict the movement of animals. (WA)
				3	Causeway	An embanked surface usually traversing areas subject to inundation, constructed to facilitate a road or railway. (ICSM) This is the default RoadCrossingType for the Line Sub Type.
				4	Culvert	A structure usually under a road or railway to provide for the flow of water. (ICSM) This is the default RoadCrossingType for the Point Sub Type.
				8	CulvertEdge	A line defining the edge of a sewer or drain crossing under a road, track, or embankment. (DIGEST)
				5	Dam	A road crossing a large man made structure of earth, masonry, etc. built across a stream to impound water for any purpose. (Modified CGNA)
				6	Ford	A point at a shallow or flat portion of a watercourse where a crossing may be affected.(Modified AUSLIG)
				7	Underpass	A passage under a road for pedestrians.

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
						(WA)
				-99	Unknown	This is an invalid attribute for TransportType.
	2	2	Rail Crossing	1	Adit	The entrance or exit of a tunnel. (NSW)
				2	Culvert	A structure usually under a road or railway to provide for the flow of water. (ICSM) This is the default RailCrossingType for Point Sub Type.
				4	CulvertEdge	A line defining the edge of a sewer or drain crossing under a road, track, or embankment. (DIGEST)
				3	Underpass	A passage under a railway for pedestrians. (WA)
				-99	Unknown	This is an invalid attribute for TransportType.
	3	7	Traffic Control Device	1	TrafficLight	An electrically operated visual signal (as a system of coloured lights) for controlling traffic (Merriam-Webster dictionary) This is the default TrafficControlDevice Type.
				2	LevelCrossing	A place where a road and railway intersect at the same level. (NSW)
				5	TrafficLightPole	One or more coloured signal lights used to control the flow of traffic, especially at road intersections. (WA)
				6	ArresterBed	An area of special material designed to stop a runaway vehicle. (WIKIPEDIA)
				4	LevelCrossingWithSignal	Signal lights used to control the flow of traffic at the intersection of road and railway lines. (WA)

Class Type	Trans Type	fcSubtype	Definition	Domain Values	Domain meaning	Description
				3	LevelCrossingWithGateAndSignal	Signal lights and a controlled barrier to access, used to control the flow of traffic at the intersection of road and railway lines. (WA)
				-99	Unknown	This is an invalid attribute for TransportType.
	-98	8	Traffic Sign			
	-98	9	Rail Sign			
	-98	10	Rail Signal			

WATERCOURSETYPE

Feature Classes: WaterPolygon, WaterPoint, WaterLine,InlandFlatPolygon

Values	Description
MajorRiver (2)	WRC to supply definition.
MinorRiver (3)	WRC to supply definition.
InundationArea (10)	WRC to supply definition.
NotApplicable (-98)	The WaterCourseType is not relevant for the particular feature.
Unknown (-99)	The WaterCourseType is not known for the particular feature; however a value may be populated in the future.

WATERLINETYPE

Feature Classes: WaterLine

fcSubType	Description	Domain Value	Description
6	Watercouse		
8	WaterLineConstruction	Channel (1)	A manmade watercourse used for irrigation and drainage purposes. (CGNA) This is the default WaterLineConstructionType.
		Drain (2)	An artificially constructed watercourse designed for the purpose of removing surplus water from the land surface. (CGNA)
		NotApplicable (-98)	The WaterLineConstructionType is not relevant for the particular feature.
		Unknown (-99)	This is an invalid attribute for WaterBodyType.

WATERPOINTTYPE

Feature Classes: WaterPoint

fcSubType	Description	Domain Value	Description
5	WaterPointStructure	Bore (1)	A deep vertical hole of a small diameter made to obtain water; or to ascertain the nature of the underlaying strata. (CGNA)
		BoreAndWindmill (2)	A deep vertical hole of a small diameter made to obtain water; or to ascertain the nature of the underlaying strata. Equipped with a windmill for pumping. (Modified CGNA)

fcSubType	Description	Domain Value	Description
		Pump (3)	An apparatus or machine for raising or driving fluids, as by means of a piston, plunger, or rotating vanes. (Modified NSW)
		Tank (4)	A structure used for the storage of fluids. In this particular case – water. (ICSM)
		TankAndWindmill (5)	A structure used for the storage of fluids. In this particular case – water. Equipped with a windmill for pumping. (Modified ICSM)
		Well (6)	A pit or hole dug or bored into the earth, for the extraction of oil, water, other fluids or gases. (CGNA)
		WellAndWindmill (8)	A pit or hole dug or bored into the earth, for the extraction of oil, water, other fluids or gases. Equipped with a windmill for pumping. (Modified CGNA)
		Windmill (7)	A wind driven system of vanes attached to a tower like structure (excluding wind generated power plants). (DIGEST)
		Unknown (-99)	This is an invalid attribute for WaterPointType.

WATERPOLYGONTYPE

Feature Classes: WaterPolygon

fcSubType	Description	Domain Value	Description
1	Waterbody	Claypan (1)	A depression in the ground which retains water. (ICSM)
		EarthDam (2)	An earthen structure in generally undrained areas, built to contain water for stock purposes. (CGNA)
		Estuary (3)	That part of a river between the limit of tidal influence and the mouth. (ICSM)
		Lake (4)	A body or water surrounded by land. (DIGEST)
		Pool (5)	A small body of still or standing water, permanent or temporary, often in the bed of an intermittent watercourse, and sometimes spring fed, chiefly one of natural formation. (CGNA)
		Reservoir (6)	A body of water collected and stored behind a constructed barrier for some specific use. (AUSLIG)

fcSubType	Description	Domain Value	Description
		WaterCourse (7)	A large body of water, usually permanent and forming part of a watercourse. (WA)
		Wash (8)	That part of a streambed that is usually dry and contains water only during or after a rainstorm. (Modified USGS)
		Unknown (-99)	This is an invalid attribute for WaterPolygonType and WaterPointType. 0 is the default.
2	wetland	Marsh (1)	A tract of low lying land, flooded at times and generally swampy. (CGNA)
		Swamp (2)	A tract of low-lying land which is permanently saturated with moisture, and is usually overgrown with vegetation. (CGNA)
		Unknown (-99)	This is an invalid attribute for WaterPolygonType Type.
8	WaterLineConstruction	Channel (1)	A manmade watercourse used for irrigation and drainage purposes. (CGNA) This is the default WaterLineConstructionType.
		Drain (2)	An artificially constructed watercourse designed for the purpose of removing surplus water from the land surface. (CGNA)
		NotApplicable (-98)	The WaterLineConstructionType is not relevant for the particular feature.
		Unknown (-99)	This is an invalid attribute for WaterBodyType.