Geospatial Data Dictionary

Western Australian Land Information Authority

LANDGATE

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1.1 Introduction

The purpose of this document is to describe the attributes and domain ranges of geospatial data that can be extracted from Landgate's corporate databases in ESRI Shapefile format.

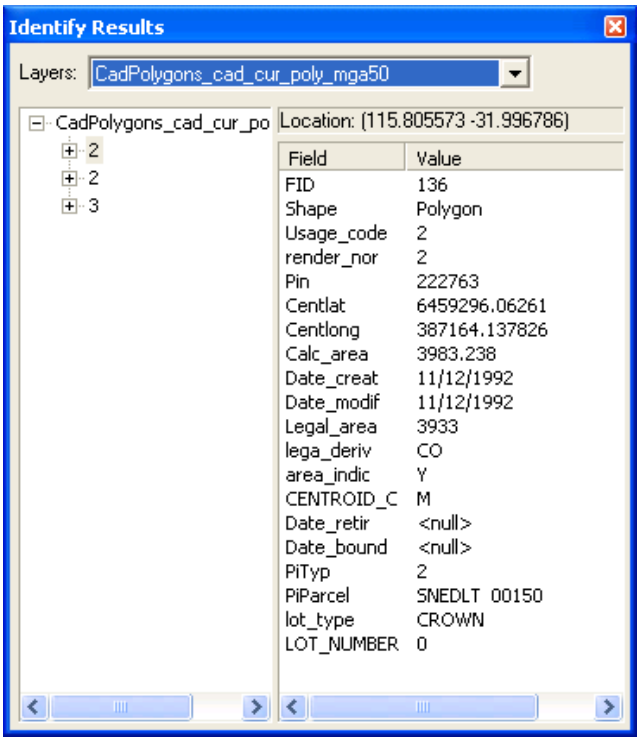
1.2 Data Issues

Users of Landgate shapefile data should be aware of the following issues with respect to the data:

1.3 Attribute Names

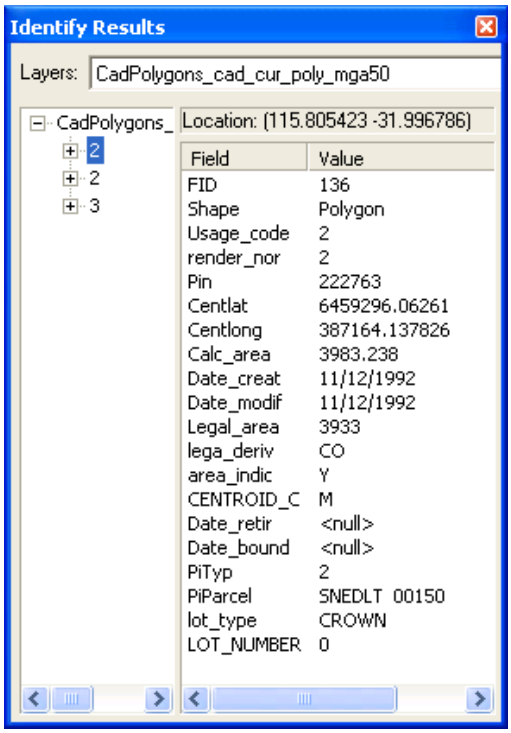
Users of Landgate shapefile data will notice that in some instances, theme table columns have unusual names. This occurs because ArcView has a 10 character column name limit that it enforces by truncating the names of data added to the theme table.

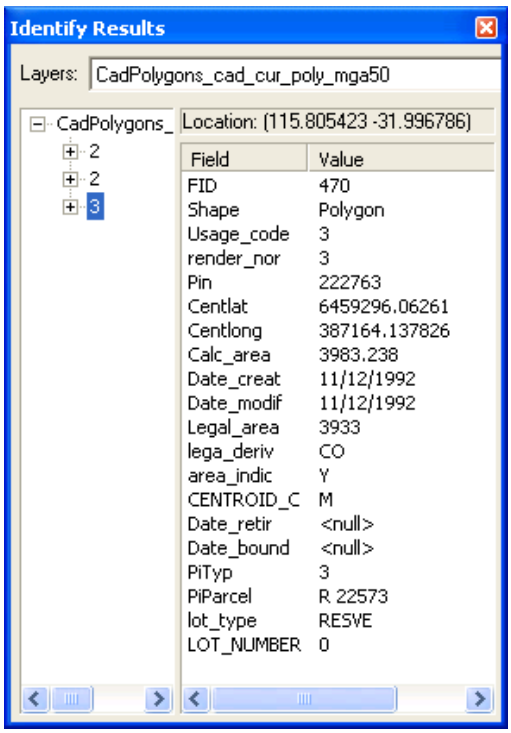
Effects of this behaviour can be seen in the Field column of the Identify Results screen snaps below:



1.4 Multiple Polygon Shapes

Where a Polygon has multiple parcel identifiers, such as a Crown Reserve over a Crown Allotment, polygon shapefiles will contain duplicate shape number records for that polygon – one record for each parcel identifier. See following example of Reserve 22573 over South Nedlands Lot 150.





1.5 Polygon Attribute Dictionary (Cadastral & Easement)

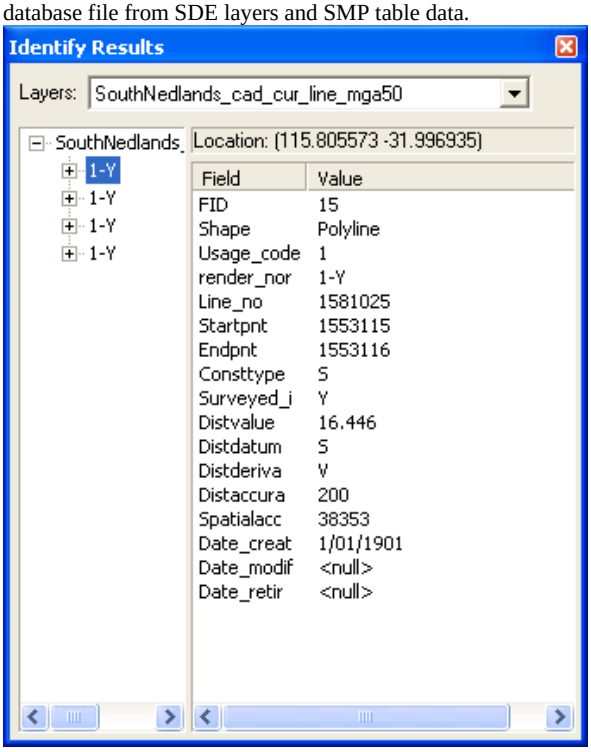
Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
FID	FID	Feature identifier number	
Shape	Shape	An area defined by one or more polygons or a sequence of connected points and lines. Individual polygon areas comprising the shape are not necessarily adjacent. The shape may change over time, with portions added or removed from the total shape, or amendments to polygons that make up the shape.	
Usage_code	Usage_Code	Is a code describing the purpose of the area shape eg signifying a Cadastral Lot.	Lot on Survey (Type 1) – 1 Crown Allotment (Type 2) – 2 Reserve – 3 Lease (Land Act) – 4 Purchase Lease (LAA) – 4 Reserve Lease (LAA) – 4 Road Lease (LAA) – 4 Pastoral Lease (LAA) – 4 Option to Purchase (LAA) – 4 General Lease (LAA) – 4 Aboriginal Lease (LAA) – 4 Subdivision Lease (LAA) – 4 Government Agency Lease (LAA) – 4 Acquisition Lease (LAA) – 4 Profit a Prendre (LAA) – 4 Licences (LAA) – LLI Easements (LAA) – LET Public Access Route (LAA) – 4 Option to Lease Granted (LAA) – 4 State Forest –5 Unallocated Crown Land – 6 Closed Road – 7 Drain Reserve – 8 Timber Reserve –9 Railway – 10 Water Isolation – 11 Tramway – 12 Public Road – 13 Marine Park – 14 Stock Route – 15 Survey Strata – 16 Building Strata – 19 No PI – 20 Easement – 21 Easement (Lodged)- 21 Parent of Survey Strata – 22

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
Render_Nor	Render_normal	Is a character string that contains components, such as the usage code, as required for drawing the polygon/areashape's colour and symbol type in a normal view.	Same as Usage Code.
PIN	Polygon_Number	Is the unique polygon identifier assigned at capture that provides a link between the spatial & tenure data.	
CentLat	Centroid_latitude	Is the latitude coordinate for the centroid of the area shape / polygon, in decimal degrees.	
CentLong	Centroid_longitude	Is the longitude coordinate for the centroid of the area shape / polygon, in decimal degrees.	
Calc_area	Calculated area	Is the area in square metres of the area shape as calculated by the system.	
Date_creat	Date time created	Date the polygon was added to the system database. This is disseminated in NORM POLY file as DATECRTD.	
Date_modif	Date time modified	Is the date that the polygon was last modified. For a new polygon this will be the same as the date created.	
Legal_area	Area	Is the legal, keyed in or other derived area in square metres – not necessarily the same as the CALCULATED AREA. The method of derivation of area is given in AREA DERIVATION METHOD.	Not necessary for all types of shapes. Units are square metres.
Legal_deriv	Area_derivation_method	Is the method of determining the AREA (not CALCULATED AREA) of the polygon or area shape.	0 - UN -area unavailable 1 - CO -by coordinates 2 - AN -by angle and distance 3 - AZ -by mid azimuth and distance 4 - BR -by bearing and distance 5 - KY -by key in

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
Area_indic	Area_Derivation_Indicator Flag	Is a yes/no flag indicating whether or not the legal AREA (not CALCULATED AREA) uses derived, described or approximate data.	
CENTROID_C	Centroid Coordinate Method	Is the method by which the centroid of the polygon is derived	M - Mathematical'= calculated O - Optical = positioned by eye
Date_retir	Date time retired		
Date_bound	Date time boundary modified		
PITYP	PITYP	A number describing the type of the PI. A type 1 is for survey/lot, type 2 for crown allotments and a type 3 is for miscellaneous PI's (*eg*. Reserves, vacant crown land).	
PIPARCEL	PIPARCEL	17 Char parcel identifier. The major part of the PI. There are 3 different PI formats identified by the PITYP field. These 3 different types of PI are referred to as i) survey lot, ii) crown allotment and iii) miscellaneous.	
Lot_type	Lot type	A code to indicate the type of lot as specified by the PI. Does not indicate land tenure (ownership)	CROWN = Crown allotment EASMT = Easement FHOLD = Plan or diagram LEASE = Leasehold OTHER = Miscellaneous RESVE= Reserve ROAD = Road SSPLN = Survey Strata Plan STPLN = Strata plan
Lot_number	Lot Number	Lot number from the PIPARCEL.	

2 Line Data

The following Identify Results graphic shows shapefile lines attributes that have been concatenated into a single database file from SDE layers and SMP table data.



The attributes – Shape, Usage_Code, Render_Normal and Line_no all come from SDE drawing layers.

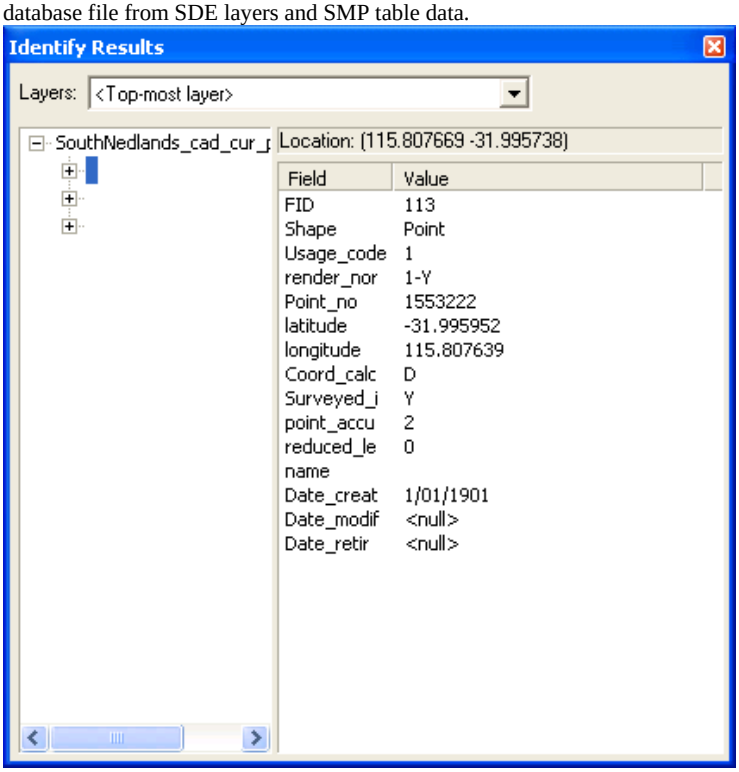
2.1 Line Attribute Dictionary (Cadastral, Control, Easement & Mines)

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
FID	FID	Feature identifier number	
Shape	Shape	Shape Number	
Usage_code	Usage_Code	Is a code describing the purpose of the line eg signifying a Cadastral Road Frontage.	Road Boundary –1 Normal Boundary – 2 Water Boundary –3 Group Boundary – 4 HWM Boundary – 6 LWM Boundary – 7 Network Construct - 11 Poly Tie Construct – 12 Easement Boundary – 21 RO Construct – 13 Non Geodetic Connection – 43 Non Geodetic Precal – 44 Non Geodetic Connection – 46 GDA94 RO Construct Mines– 63 Mining District – 55 Mining Field – 56 Current Mining – 60 Superceded Mining Level 1– 17 – 61 to 77 Construct Mining – 78
Render_nor	Render_Normal	Is a concatenated character string which contains components, such as the usage code and a surveyed/unsurveyed identifier, as required for drawing the line's colour and symbol type in a normal view.	Same a Usage Code.
Line_no	Line Number	Is a system generated consecutive number that uniquely identifies a line.	
Startpnt	Start_Point_Number	The point number from which a line starts.	
Endpnt	End_Point_Number	The point number at which a line ends.	

Consttype	Construct_Type	Is a code that determines the physical construction characteristics of a line. It determines whether additional definition information (other than the end points) is required.	M, P, S, C, T M - meridian line – line along a meridian of longitude. P - parallel line - a line along a parallel of latitude. S - other straight line (not a meridian or parallel line) - a line that is described by the shortest distance between its end points, that is not a meridian or parallel line. C - circular arc - a line representing the whole, or part, of the circumference of a circle drawn in a clockwise direction between the end points of a line and around an arc centre point. T – topographic string - a complex line represented by a series of connected points. Topographic strings can be used to represent physical objects such as rivers, coastlines etc.
Surveyed_I	Surveyed_Indicator	Is a single Y/N character indicating whether or not the line is surveyed.	
Distvalue	Distance_Value	Is the distance in metres. For arcs it is the arc distance, for topographic strings it is the sum of the distances between consecutive string points.	
Distderiva	Distance_Derivation	Numbers are the codes used in SCDB DISTTYP, characters are the codes used in CSD file.	(1) M = Measured (2) C = Calculated (3) V = Derived (4) D = Described – Unsurveyed. eg legal description (5) A = Approximate - eg scaled
Distdatum	Distance_Datum	Is a character code describing the datum for the distance	G = Ground level S = Spheroid
Distaccura	Distance_Accuracy	Is an estimate of the accuracy of the length of a line as given in DISTANCE VALUE expressed as a ratio. For example a distance accuracy of 1000 means that the line length is expected to be accurate to plus or minus 1/1000 of its given value	
SpatialAcc	Spatial accuracy	Is a thematic attribute – as a function of distance, scale, and end point coordinates.	
Date_creat	Date time created	Date the line was added to the system database.	
Date_modif	Date time modified	Is the date that the line was last modified. For a new line this will be the same as the date created.	
Date_retir	Date time retired		

3 Point Data

The following Identify Results graphic shows shapefile point attributes that have been concatenated into a single database file from SDE layers and SMP table data.



The attributes – Shape, Usage_Code, Render_nor and Point_no all come from SDE drawing layers.

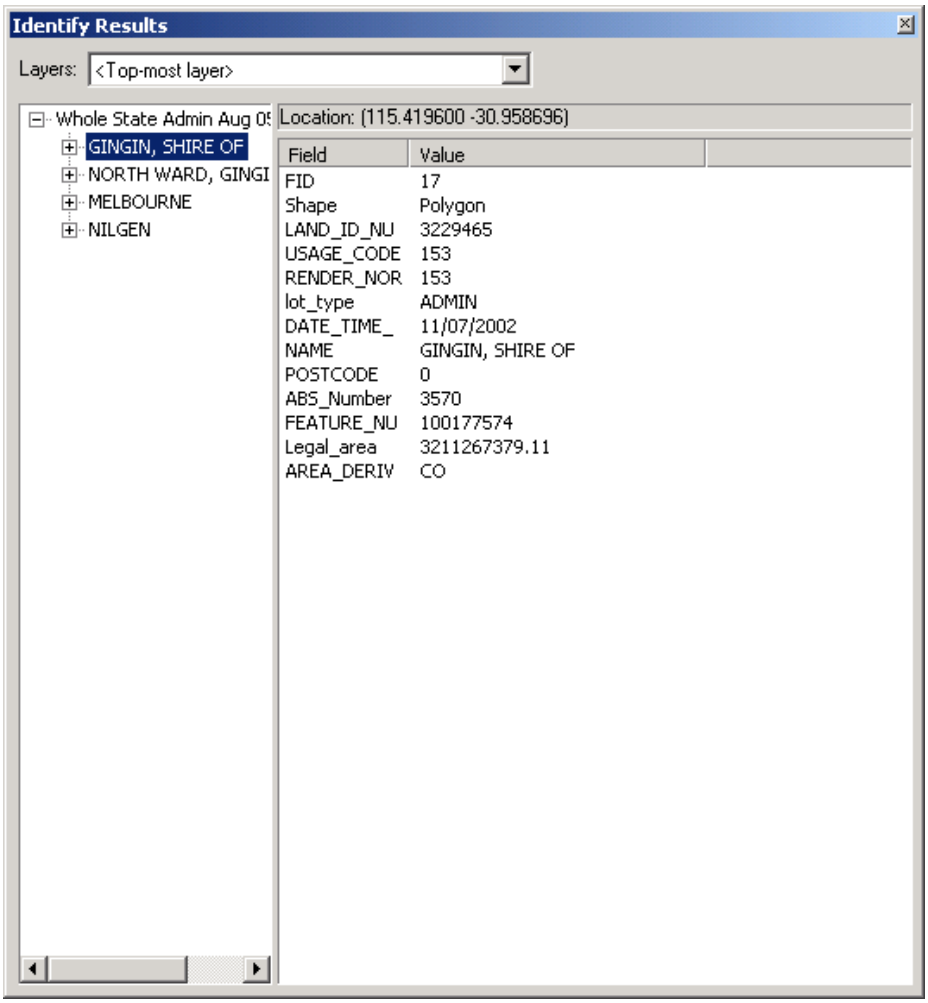
3.1 Point Attribute Dictionary(Cadastral, Control, Easement & Mines)

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
FID	FID	Feature identifier number	
Shape	Shape	Shape Number	
Usage_code	Usage_Code	Is a code describing the purpose of the point eg signifying a Cadastral Road Frontage.	Road Boundary –1 Normal Boundary – 2 Water Boundary –3 Group Boundary – 4 HWM Boundary – 6 LWM Boundary – 7 Network Construct - 11 Poly Tie Construct – 12 Easement Boundary –21 SSA Permanent Survey Mark – 41 SSA Permanent Control Mark – 41 Non Geodetic Connection – 43 Non Geodetic TC Mark – 44 Geodetic SSM – 45 Geodetic Bench Mark – 46 Geodetic TC Mark – 47 Geodetic Reference Mark – 48 Non Geodetic – 49 General Mining – 60 Superceded Mining – 61 Construct Mining – 78
Render_Nor	Render_Normal	Is a concatenated character string which contains components, such as the usage code and a surveyed/unsurveyed identifier, as required for drawing the point's colour and symbol type in a normal view.	Same a Usage Code.
Point_no	Point_Number	Is a system generated consecutive number that uniquely identifies a point.	
Latitude	Latitude	Is the latitude coordinate in decimal degrees.	
Longitude	Longitude	Is the longitude coordinate in decimal degrees	

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
Coord_calc	Coordinate_Calculation_Method	Is a code specifying how the point coordinates were created.	D – Digitised, coords captured by digitising analog map sheets. T – Traverse, coords captured by Angle/Distance or Azimuth/Distance input based on a known start point and/or finish point. F – Transformation, coords determined by shifting, scaling or rotating to/from a fixed set of points. K – Numeric, Keyed in coords. G - Graphical Construct, coords based on data created using Coordinate Geometry (COGO) techniques. L - Least Square Adjustment, coords determined by defining, processing and adjusting a Least Square network.
Surveyed_i	Surveyed_Indicator	A yes/no flag indicating whether or not the point was surveyed.	Y, N
Point_acc	Point_Accuracy	Is the perceived accuracy of a point expressed in metres. It determines how much influence the point has, or will have, on an adjustment.	
Reduced_le	Reduced_Level	Is the height of a point expressed as a vertical displacement in metres from Mean Sea Level (MSL).	
Name	Name	Is the optional name for a point.	
Date_creat	Date time created	Date the line was added to the system database.	
Date_modif	Date time modified	Is the date that the line was last modified. For a new line this will be the same as the date created.	
Date_retir	Date time retired		

3.2 Administrative Data (polygons)

The following Identify Results graphic shows shapefile polygons attributes that have been concatenated into a single database file from SDE layers



3.3 Polygon Attribute Dictionary (Administrative Areas)

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
FID	FID	Feature identifier number.	
Shape	Shape	Shape type	
LAND_ID_NU	Land Identification Number	A unique identifier for a land parcel.	
USAGE_CODE	Usage Code	Is a code describing the purpose of the polygon eg signifying a locality area	LGA Town-site – 151 Postal Locality – 152 LGA – 153 LGA Ward - 154 Land Division – 166 Land District – 167 Agricultural Area – 168 Suburban Area – 169 Estate Area – 170 Town-site Land Act – 171 Marine Park – 177 Marine Nature Reserve – 178 Marine Management Area - 179 Water Control Area – 185 Port Authority – 190 Infrastructure Corridor - 195 MLA-160 Special Settlement Area – 172 Pre Gazetted LGA Ward – 155 State Border – 165 River Park Area – 173 Development Control Area – 174 State Forest – 175 Timber Reserve – 176 Marine and Harbour Area – 191 Railway Corridor – 194 Native Title NNTT – 196 Native Title Federal Court – 197 Native Title Determinations – 198 Native Title ILUA – 149
RENDER_NOR	Render_Normal	A concatenated character string which contains components, such as the usage code as required for drawing the point's colour and symbol type in a normal view.	
lot_type	Lot Type	A code to indicate the type of lot - ADMIN	
DATE_TIME	Date Time	The date the polygon was last amended.	
Name	Name	Administrative area name.	
POSTCODE	Postcode	Postcode will only be populated for Localities (usage code of 152)	

Abbreviated Column Name	Unabbreviated Column Name	Description	Domain
ABS_Number	Australian Bureau of Statistics Number	A number assigned by the Australian Bureau of Statistics to Local Government Areas.	
FEATURE_NU	Feature_Number	Is a system generated consecutive number that uniquely identifies a polygon	
Legal_area	Area	Is the legal, keyed in or other derived area in square metres – not necessarily the same as the CALCULATED AREA. The method of derivation of area is given in AREA DERIVATION METHOD.	Not necessary for all types of shapes. Units are square metres.
Area_Deriv	Area_derivation_method	Is the method of determining the AREA (not CALCULATED AREA) of the polygon or area shape.	0 - UN -area unavailable 1 - CO -by coordinates 2 - AN -by angle and distance 3 - AZ -by mid azimuth and distance 4 - BR -by bearing and distance 5 - KY -by key in

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3.3.1 Land

The families that land can belong to are as follows:

ADM – Administrative Areas
CAD – Cadastral
SUP – Superseded
SUR – Surround

The following table describes the families, usage types and corresponding mainframe levels for land.

Family	Usage Type	Usage Type Description	Status	Mainframe Level	PI
CAD	1	Transfer of Land Act (Type 1)	I	1	PI Type = 1
	1	Transfer of Land Act (Type 1)	L	101	
	2	Land Act (Type 2)	I	2	PI Type = 2
	3	Reserve (Type 3 – R)	I	3	PI Type = 3 and col 1 of PI Parcel = 'R'
	4	Lease (Type 3 – L) [More lease types need to be added. See LJ and page 29 in Data Views document.]	I	4	PI Type = 3 and col 1 of PI Parcel = 'L'
	5	State Forest (Type 3 – F)	I	5	PI Type = 3 and col 1 of PI Parcel = 'F'
	6	Unallocated Crown Land (Type 3 – V)	I	6	PI Type = 3 and col 1 of PI Parcel = 'V'
	7	Closed Road (Type 3 – C)	I	7	PI Type = 3 and col 1 of PI Parcel = 'C'
	8	Drain Reserve (Type 3 – D)	I	8	PI Type = 3 and col 1 of PI Parcel = 'D'
	9	Timber Reserve (Type 3 – O)	I	9	PI Type = 3 and col 1 of PI Parcel = 'O'

Family	Usage Type	Usage Type Description	Status	Mainframe Level	PI
	10	Railway (Type 3 – A)	I	10	PI Type = 3 and col 1 of PI Parcel = 'A'
	11	Water Feature (Type 3 – W)	I	11	PI Type = 3 and col 1 of PI Parcel = 'W'
	12	Tramway (Type 3 – T)	I	12	PI Type = 3 and col 1 of PI Parcel = 'T'
	13	Road Isolation (Type 3 – P)	I	13	PI Type = 3 and col 1 of PI Parcel = 'P'
	14	Marine Reserve (Type 3 – M)	I	14	PI Type = 3 and col 1 of PI Parcel = 'M'
	15	Stock Route (Type 3 – S)	I	15	PI Type = 3 and col 1 of PI Parcel = 'X'
	16	Surveyed Strata	I	New	LAND_TYPE = 'SSPLN'
	17	Crown Grant in Trust	I	New	
	19	Building Strata	I	New	LAND_TYPE = 'STPLN'
	20	No Parcel Identifier	I	20 (No PI)	No PI