Product Name: Transport-Roads (LGATE-012)

Description:	**LGATE- 012 -** This road centreline dataset is derived from the Road segment layer of Landgate's medium scale Topographic GeoDatabase (TGDB). It is a comprehensive depiction of the state's road and tracks system. All named segments link to Landgate's Geonoma Database via Name_ID. The dataset is maintained daily in the TGDB.
Date Last Reviewed:	5th March 2014
Last Reviewed By:	Landgate Data Management Group

Ref	Field Name	Field Type	Description	Associated Attribute Values Y/N
1	OGC_FID	Integer	Feature Identifier Number	N
2	THE_GEOM	Geometry	A system-generated ID created upon loading the SDE layer into PostGIS.	N
3	ACCESS LEVEL	Variable Character	The user accessibility level.	Y
4	ATTRIBUTERELIABILITYDATE	Date	The date of the source information from which the feature's planimetric position was last verified or modified.	N
5	CAPTUREMETHOD	Variable Character	Identifies the method used to capture the feature's spatial extent.	Y
6	DATACUSTODIAN	Variable Character	The Data Custodian.	Y
7	DATASOURCE	Variable Character	Identifies the program/source that was used to identify the feature.	Y
8	DATEFEATURECREATED	Date	The date/time the record for the feature was initially created. This is a system managed attribute and cannot be changed by the user.	N
9	DATEFEATUREMODIFIEDDATE	Date	The date/time the feature was modified (spatial or aspatial).This is a system managed attribute and cannot be changed by the user.	N
10	DATEFEATURERETIREDDATE	Date	The date/time the record for a feature is deleted. This is a system managed attribute and cannot be changed by the user.	N
11	DECCATEGORY	Variable Character	Indicates the functional purpose of the road as determined by DEC. Refer to DEC Road Operational Guidelines Subject to DEC business rules (attributes assignment is the responsibility of DEC).	Y
12	DECTYPE	Variable Character	Indicates the strategic purpose of the road as determined by DEC. Refer to DEC Road Operational Guidelines Subject to DEC business rules (attributes assignment is the responsibility of DEC). To be populated in the future. NOTE: There is a dependency (synchronisation requirement) with the ROADACCESSRIGHT table.	Y
13	DIRECTIONCATEGORY	Variable Character	Indicates the traffic flow direction.	Y

Ref	Field Name	Field Type	Description	Associated Attribute Values Y/N
14	ELEVATIONAC CURACY	Variable Character	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
15	FCSUBTYPE	Variable Character	Is a name given to a generic term used to describe a broad group of features (e.g. pools, ponds, & lakes all have a feature class name of LAKE).	Y
16	GEOGRAPHIC_ NAME	Variable Character	Is a complete name given to a feature. For approved names, this is the name given to a feature either by appearance on a survey map approved by the crown or by EXECUTIVE COUNCIL gazettal.	N
17	GEONOMA_ID	Variable Character	Index field	N
18	LANECOUNT	Variable Character	An indication of whether two vehicles can safely pass each other without having to move off the formed road surface. This information is based on the over 6 metre, Two Or More Lanes", and under 6 metre "One Lane"" category in the original topographic data. Dual Carriageways are classified as "Two Or More Lanes".	Y
19	MAPCLASSIFIC ATION	Variable Character	The Metropolitan Street Directory classification. Originally sourced from MRWA information, it has been streamlined to suit the Publication and extended into the rural areas (Travellers Atlas classifications. These two publications should be used as the source of this classification. Logical extensions of the classification are the responsibility of the Geospatial Maintenance Group in LANDGATE with consultation with MRWA.	Y
20	METADATAID	Variable Character	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
21	MRWACLASSIF ICATION	Variable Character	Based on the MRWA Road Network Maps. This classification was originally added to service the need for a whole of state road hierarchy. It is not meant to replicate the MRWA system needs. The critical categories are "Highway" and "Main". Note that some roads have been assigned "Highway" and "Main" unlike the original MRWA data to provide a continuous feature (e.g. around about may be classified as "Main".)	Y
22	MRWAROADN UMBER	Variable Character	Main Roads Western Australia's road number. Although termed a number it is in fact a string (maximum of 10 Characters).Assignment is the responsibility	N

Ref	Field Name	Field Type	Description	Associated Attribute Values Y/N
			of MRWA. The default value is Null.	
23	PLANACCURACY	Variable Character	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
24	ROADACCESSRIGHT	Variable Character	Indicates who has the right to use the road. To be assigned with input from MRWA, DEC and LGA's. Public/Private determined by overlaying RCL with cadastral casements and investigating anomalies. GEONOMA is another source for anomaly investigation/resolution. NOTE: There is a dependency (synchronisation requirement) with the ROADDECTYPE table.	Y
25	ROADCUSTODIAN	Variable Character	Indicates who is responsible for the road.	Y
26	ROADSTATUS	Variable Character	The indicator for whether a road is trafficable.	Y
27	ROADSURFACE	Variable Character	The road surface structure.	Y
28	ROADUSAGE	Variable Character	Indicates the type of vehicle that can use the road.	Y
29	SPATIALRELIABILITYDATE	Date	The date of the source information from which the feature's planimetric position was last verified or modified.	N
30	SPEEDLIMIT	Variable Character	The posted (or legal) speed limit for the section of road.	N
31	TARGETDISPLAY	Variable Character	The scale at which the feature was originally captured and displayed.	Y
32	TRACKHIERARCHY	Variable Character	Indicates the level of importance assigned to the track. To be ssigned with input from DoIR.	Y

Attribute Values

Attribute Name: ACCESSLEVEL

Values	Description	
	Access Right	**Data**
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 Access Level 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.

Attribute Name: CAPTUREMETHOD

Values	Description
DIRECTPHOTOGRAMMETRICCAPTURE (1)	
GLOGALPOSITIONINGSYSTEM (2)	
MATHEMATICALINTERPOLATION (7)	
ONSCREENDIGITISING (3)	This is the default value.
SCAN_VECTORISE (4)	
TABLEDIGITISING (5)	
VARIOUS (6)	

Attribute Name: DATA ACCURACY CALCULATION

PLANIMETRIC ACCURACY

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*

VERTICAL ACCURACY

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

Attribute Name: DATACUSTODIAN

Values	Description
DAFWA (1)	Department of Agriculture and Food
ARMY (7)	Australia Defence Force
DEC (2)	Department of Environment and Conservation
LANDGATE (3)	Western Australia Land Information Authority (trading as LANDGATE) This is the default value
DMP (4	Department of Mines and Petroleum
GA (8)	Geoscience Australia
WC (5)	Water Corporation
DOW (6)	Department of Water
WP (9)	Western Power
MRWA (10)	Main Roads Western Australia

Attribute Name: DATASOURCE

Values
1:2000TopographicSeriesBy LANDGATE (1)
1:5000TopographicSeries By LANDGATE (2)
1:25000TopographicSeries By LANDGATE (3) This is the default value
1:25000TopographicSeriesByDEC (4)
1:25000TopographicSeriesByDOW (5)
1:50000TopographicSeriesByARMY (16)
1:50000TopographicSeriesByDEC (18)
1:50000TopographicSeriesByLANDGATE (6)
1:50000TopographicSeriesByDOW (7)
1:100000TopographicSeriesByDMP (9)
1:100000TopographicSeriesByGA (8)
1:100000TopographicSeriesByDOW (10)

Values
Cadastral Database (11) Survey Data
Concept Plan (19) Un-surveyed Data
Cities And Towns Series By LANDGATE (12)
DECRoadAsset Management (28)
DigitalElevationModel (24)
GasOilPipelinesByDMP (22)
GeographicNamesRegister (25)
MetropolitanStreetSmartDirectoryByLANDGATE (13)
MetropolitanWallMapByLANDGATE (14)
ModifiedAMBIS1:100000Data (17)
MRWA_IRIS (27)
OrthoImagery (26)
PlantationsByDEC (23)
StateMapSeriesByLANDGATE (15)
TransmissionLinesByWP (20)
WaterPipelinesByWC (21)

Attribute Name: DECCATEGORY

Values	Description
A_MAJORROAD (1)	Major road; Commonly provides for main movements through a region.
B_SECONDARYROAD (2	Secondary road; Generally provides for moderate use areas in a region.
C_MINORROAD (3)	Minor road; Provides a link to moderate and low usage areas.
D_INTERNALROAD (4)	Internal road; Provides for internal access for low use areas.
E_TRACK (5)	Track; Provides access primarily for four-wheel drive vehicles.
NOTAPPLICABLE (-98)	The DECCATEGORY is not relevant for the particular feature. This is the default DECCATEGORY value.
Unknown (-99)	The DECCATEGORY is not known for the particular feature; however a value may be populated in the future

Attribute Name: DECTYPE

Values	Description
DESIGNATED_PUBLICACCESS (1)	Roads that are primarily used to provide access for the general public and are considered of high importance. Visitor access to recreational sites, community thoroughfares, private property and coastal/river access.
OPERATIONAL_OPENTOPUBLIC (2)	Roads that are primarily used for DEC related activities although they are not closed to the public. Roads required for management purposes including fire prevention and suppression activities or are important for timber harvesting or other industry operations. Most State Forest roads and tracks, National Parks and Reserve boundaries and management tracks, firebreaks etc.
OPERATIONAL_RESTRICTEDACCESS(3)	Roads that are subject to restricted access and are not open to the public without authorization. Access may be restricted due to DEC policies or regulations, such as control of disease and weeds, public safety during mining or timber harvesting activities. Access is restricted through adequate signage and gating where necessary. Any roads in the Disease Risk Area (DRA), mine exclusion zones and temporary exclusion zones for timber harvesting activities.

Values	Description
UNMAINTAINED (4)	Roads that have no perceived functional value and are unworthy of further maintenance. The condition of these roads is unknown and may become untrafficable. Roads excluded from asset management including relegated roads.
DECROAD_MAINTAINEDBYOTHER AGENCY (5)	Roads on DEC Managed Lands that are maintained by an agency other than DEC. These roads may be open to the public or restricted. These roads are maintained under an agreement between DEC and another party (frequently a Local Government Authority).Such arrangements may be to facilitate public or private access to a non-DEC site via DEC Managed Lands..
NONDECROAD_MAINTAINEDBYDEC (6)	Roads not on DEC Managed Lands that are maintained by DEC. These roads may be open to the public or restricted. These roads are maintained under an agreement between DEC and the road custodian. Such arrangements may be to facilitate access for DEC management purposes or for public access through non DEC Managed Lands to a DEC site.
Not Applicable (-98)	The DECTYPE is not relevant for the particular feature. This is the default DECTYPE value.
Unknown (-99)	The DECTYPE is not known for the particular feature; however a value may be populated in the future.

Attribute Name: DIRECTIONCATEGORY

Values	Description
Bi-directional (1)	Traffic can flow in either (both) directions. (WA)
One Way To From (2)	Traffic can only flow in one direction (in the direction of the vector) (WA)
One Way From To (3)	Traffic can only flow in one direction (in the opposite direction of the vector).(WA)
Not Applicable (-98)	The Direction Category is not relevant for the particular feature.
Unknown (-99)	The Direction Category is not known for the particular feature; however a value may be populated in the future This is the default Direction Category.

Attribute Name: LANECOUNT

Values	Description
ONELANE (1)	Two vehicles cannot pass each other without both having to move off the formed surface. (WA)
TWOORMORELANES (2)	Two vehicles can pass each other without having to move off the formed surface. (WA)This is the default LANECOUNT.
NOTAPPLICABLE (-98))	The LANECOUNT is not relevant for the particular feature.
UNKNOWN (-99)	The LANECOUNT is not known for the particular feature; however a value may be populated in the future.
UNKNOWN (-99)	

Attribute Name: MAPCLASSIFICATION

Values	Description
Arcade (13)	A passage or walkway, often including retailers. (WA)
Freeway (1)	Those roads whose main function is to provide for major regional and inter-regional traffic movement and carry large volumes of generally fast moving traffic. (Modified MRWA)
State Highway (9)	Those roads, excluding National Highways, whose main function is to form the principal avenue of communication for movements, between a capital city and adjoining States and their capital cities or, between a capital city and key towns, or between key towns. Within the metropolitan area this category includes those roads whose main function is to form the principal avenue of communication for massive traffic movements. (Modified MRWA)
Laneway (11)	Predominantly those roads that were previously classed as a "right of way". They generally have some practical restriction on traffic usage as they are narrow in nature. (WA)
Main (10)	Those roads, excluding National Highways and State Highways, whose function is to provide an avenue of communication for movements, between important centres and National Highways and Highways and/or key towns, or between important centres, or of an

Values	Description
	arterial nature within a town in a rural area. (Modified MRWA)
Mall (6)	A sheltered walk or promenade, a section of ROAD closed to vehicular traffic for a promenade.(CGNA)
Minor (5)	Those roads whose main function is to provide access to abutting property. (Modified MRWA)This is the default for Map Classification.
Minor Arterial (12)	Those roads whose main function is to provide through access within urban areas. The major linkage between main and minor roads.
National Highway (8)	Those roads which form the principal avenue for communication between major regions of the Commonwealth, including direct connections between capital cities. (Modified MRWA)
Track (7)	An unimproved road that does not form part of the public communication system, but which provides access to individual properties or areas used for pastoral or industrial purposes. The surface of which may vary from poorly surfaced, to tracks beaten by the passage of vehicles.(Modified CGNA)
Not Applicable (-98)	The Map Classification is not relevant for the particular feature
Unknown (-99)	The Map Classification is not known for the particular feature; however a value may be populated in the future.

Attribute Name: MRWACLASSIFICATION

Values	Description
LOCALROAD (1))	MRWA classification based on their "State Road Network" and "Road Surface" maps. (WA)This is the default MRWACLASSIFICATION.
HIGHWAY (2)	MRWA classification based on their "State Road Network" and "Road Surface" maps. (WA)
MAINROAD (3)	MRWA classification based on their "State Road Network" and "Road Surface" maps. (WA).
NOTAPPLICABLE (-98)	The MRWACLASSIFICATION is not relevant for the particular feature
UNKNOWN (-99)	This is an invalid attribute for MRWACLASSIFICATION

Attribute Name: NAME_ID

Values	Description
Number greater than 0	Valid GEONOMA_ID
-98	Not Applicable. Indicates the feature will never have a name. This is the default.
-99	Unknown. Indicates the feature can possibly have a valid name but it is not known at the point of capture. This attribute type needs to be resolved and assigned "NotApplicable" or a valid GEONOM_ID.

Attribute Name: ROADACCESSRIGHT

Values	Description
DEC_DISEASERESTRICTEDACCESS(1))	A road or track within Disease Risk Area and designated as having restricted access (except for pedestrians and holders of permits issued by the DEC). Access to these roads or tracks may be blocked by obstacles or gates.
DEC_MANAGEMENTACCESS (2)	A road or track for DEC use only. They are generally in national parks and are usually gated to restrict public access.
DEC_FIREACCESS (5)	A road or track designated as "fire access" by DEC.
PRIVATE (3)	Restricted for the use of a group.
PUBLIC (4)	For general use. This is the default for ROADACCESSRIGHT.
RESTRICTED (6)	A road or track not intended for general use.
NOTAPPLICABLE (-98)	The ROADACCESSRIGHT is not relevant for the particular feature.
UNKNOWN (-99)	The ROADACCESSRIGHT is not known for the particular feature; however a value may be populated in the future.

Attribute Name: ROADCUSTODIAN

Values	Description
DEC (1)	Department of Environment And Conservation. Note: Department names change with time; however this attribute will remain constant.
LGA (2)	Local Government Authority.

Values	Description
MRWA (3)	Main Roads Western Australia. Note: Department names change with time; however this attribute will remain constant.
Private (4)	Belonging to an individual company or group.
Not Applicable (-98)	The Road Custodian is not relevant for the particular feature.
Unknown (-99)	The Road Custodian is not known for the particular feature; however a value may be populated in the future. This is the default for Road Custodian

Attribute Name: ROADEDGETYPE

Values	Description
KERBED (1)	A sealed road or area with raised concrete edging defining its width. (WA)
UNKERBED (2)	A sealed or unsealed road without raised concrete edging defining its width. (WA)
UNKNOWN (-99)	The ROADEDGETYPE is not known for this feature.

Attribute Name: ROADFEATURE

Values	Description
ARCADE (9)	
CONNECTOR (4)	
NAMECONNECTOR (7)	
ONOFFRAMP (3)	
ONOFFRAMPOVERPASS (10)	
OVERPASS (2)	
ROAD (1)	THIS IS THE DEFAULT SUB TYPE
ROUNDABOUT (5)	
TRACK (6)	
UNDERGROUNDROAD (8)	

Attribute Name: ROADSTATUS

Values	Description
Operational (1)	The road is trafficable. (WA)This is the default for Road Status.
Relegated (3)	The road is no longer in use (overgrown), however could be used by heavy vehicles in a case of an emergency (DEC specific). (WA)
Trafficability Unknown(4)	The trafficability of the road is unknown. (WA)
Under Construction (2)	The road is not trafficable. (WA)
Not Applicable (-98)	The Road Status is not relevant for the particular feature.
Unknown (-99)	The Road Status is not known for the particular feature; however a value may be populated in the future.

Attribute Name: ROADSURFACE

Values	Description
Sealed(1)	Surface comprising, brick, concrete, or tar. (WA)This is the default Road Surface.
Unsealed (2)	Surface other than brick, concrete, or tar. (WA)
Not Applicable (-98)	The Road Surface is not relevant for the particular feature.
Unknown (-99)	The Road Surface is not known for the particular feature; however a value may be populated in the future.

Attribute Name: ROADUSAGE

Values	Description
4WheelDrive (1)	Suitable for only four-wheel drive vehicles. (Modified NSW)
All Vehicle (2)	Suitable for all vehicles. (WA)This is the default Road Usage.
Bus Lane Only (3)	Designated for Bus use only. (WA)
Not Applicable (-98)	The Road Usage is not relevant for the particular feature.
Unknown (-99)	The Road Usage is not known for the particular feature; however a value may be populated in the future.

Attribute Name: SPEEDLIMIT

Values	Description
10km/hr (10)	10km/hr.
20km/hr (20)	20km/hr
30km/hr (30)	30km/hr.
40km/hr (40)	40km/hr
50km/hr (50)	50km/hr.
50km/hr_inBUA_110km/hr_out BUA (51)	50km/hr_inBUA_110km/hr_outBUA
50km/hr_40km/hr_SchoolZone (59)	50km/hr_40km/hr_SchoolZone
60km/hr (60)	60km/hr
60km/hr_40km/hr_SchoolZone (69)	60km/hr_40km/hr_SchoolZone
70km/hr (70)	70km/hr
70km/hr_40km/hr_SchoolZone (79)	70km/hr_40km/hr_SchoolZone
80km/hr (80)	80km/hr
80km/hr_40km/hr_SchoolZone (89)	80km/hr80km/hr_40km/hr_SchoolZone
90km/hr (90)	90km/hr
100km/hr (100)	100km/hr
110km/hr (110)	110km/hr
Not Applicable (-98)	The Speed Limit is not relevant for the particular feature.
Unknown (-99)	The Speed Limit is not known for the particular feature; however a value may be populated inthe future.

Attribute Name: TARGETDISPLAYSCALE

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

Values
1:25000 (25000))
1:50000 (50000)
1:100000 (100000)

Attribute Name: TRACKHIERARCHY

Values	Description
Driveway (3)	Access way from the road to the dwelling. (WA)
Major (1)	Tracks of significant importance. (WA)
Minor (2)	Tracks of no significant importance. (WA)
Not Applicable (-98)	The Track Hierarchy is not relevant for the particular feature. The default Track Hierarchy.
Unknown (-99)	This is an invalid attribute for Track Hierarchy.