Local Roads Data Reconciliation Project – Questions and Answers

Stage 1 – Initial collection of local roads data from Vicmap transport Layer

What is the Local Roads Data Reconciliation Project?

The Local Roads Data Reconciliation Project (LRDRP) aims to reconcile local road length data collected by councils for the VLGGC with corresponding local road length data in Vicmap.

A pilot project involving five rural councils was undertaken by Vicmap Spatial Services and has resulted in a data model that will assist in the consistency and reliability of report metrics provided to the Commission on local roads. The data model is fully integrated with Vicmap through the Vicmap Transport layer (TR_ROADS).

The pilot involved workshops with participating councils to reconcile their respective local road datasets with Vicmap's dataset and included a thorough analysis and comprehensive consultation process with the councils involved.

Councils' local road responsibilities were captured and authority codes representing their ownership and responsibility within their municipality were assigned and added to the Vicmap Transport dataset. Using the assigned authority codes and additional analysis of segmentations and road naming conventions, Vicmap has extracted road lengths for council owned and responsible roads reportable to the Commission.

What are councils required to do to participate in the LRDRP?

Councils are required to complete the new VGC3+ tab in the 2023-24 Questionnaire by providing local road and bridge deck length the four Vicmap road classifications.

What are the road classifications being used in Vicmap for local roads? Additionally, are the Class Code descriptions changing for classes 5 & 6?

The Vicmap Transport Road Classifications have been revised for ROAD_CLASS Codes 5 and 6 and their definition in the TR_ROAD_CLASS reference table. The reason for the amendment is to simplify the classification in line with findings from the Local Roads Reconciliation Pilot Program. Further consultation was sought through recent interfaces held with the Victorian Local Government Grants Commission (VLGGC) and nominated Local Government Authorities (LGAs) to develop the revised classifications highlighted below in the VMREFTAB.TR_ROAD_CLASS Reference Table.

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Road Classification definitions being used for Vicmap are listed below:

VMREFTAB.TR_ROAD_CLASS		
ROAD_ CLASS _CODE	**ROAD_ CLASS**	**DESCRIPTION**
0	FREEWAY	Hard surface formation, high-volume, high-speed roads declared as "Freeway;" comprising dual carriageway and full access control and grade separated intersections; i.e. no direct access from adjoining properties or side roads and all crossings are by means of overpass or underpass bridges with traffic entering or leaving carriageways by means of ramps. Single carriageway sections forming part of declared freeways may be included within this category.
1	HIGHWAY	Hard surface roads which: - Are of importance in a national sense, and/or - Are of a major interstate through route, and/or - Are principal connector roads between capitals and/or major regions and/or key towns.
2	ARTERIAL	Well maintained and widely used hard surface formation roads which are major connectors between: - Freeways and/or National Highways, and/or - Major centres, and/or key towns, or - Have major tourist importance or Which main function is to form the principal avenue of communication for metropolitan traffic movements, not catered for by freeways.
3	SUB-ARTERIAL	Hard surface formation road, which acts as: - A connector between highways and/or arterial roads, or - An alternate route for class 2 roads, or - A principal avenue for massive traffic movements.
4	COLLECTOR	Hard surface or improved, loose surface formation road acting to: - Provide for traffic movement (connects class 3 to class 5), or - To distribute traffic to local street systems.
5	**ACCESS MAJOR**	**A road type that provides access to multiple properties or public land (residential or commercial). Considered to be a through access road type.**
6	**ACCESS MINOR**	**A named road that services a small number of properties or public land (residential or commercial). Considered a limited access road such as dead-end road, laneway, or service road/lane type.**
7	MAJOR TRACK	Provides access to low use visitor sites, parks, and forest areas. Can be a short term, temporary or a feeder road.

		Will cater for low travel speeds and a range of vehicles in dry weather, it may be seasonally closed. A formed (natural materials), generally dry-weather track/road that is substantially single lane and two way, or a low quality of service track with a minimum carriageway width of 4 metres. Includes forest tracks and may be restricted to four wheel-drive vehicles.
8	MINOR TRACK	Provides access primarily for four wheel-drive vehicles. Will cater for very low travel speeds and may be seasonally closed. Predominantly single lane two-way earth tracks (unformed) at or near the natural surface level, or - A very low quality of service track, predominantly not conforming to any geometric design standards. - Includes forest tracks, access to, and within, private properties. Minimum cleared width is 3 m.
9	TRAIL	Not designed for vehicular traffic.
13	PAPER ROAD	Not published as part of TR_ROAD. Published in TR_ROAD_ALL for address validation purposes only.
14	FERRY ROUTE	A route across a river or lake used by a vessel for the regular transport of vehicles or passengers from one terminal point to another.

Has the TR_ROAD_CLASS table now changed in Datashare?

This table is currently going through change management within Vicmap. Changes to this table are expected to be shared to Datashare over the next two months (October 2024).

Road Seal definitions:

No changes have been made to the TR_ROAD_SEAL Reference Table. This table is to be used in conjunction with the TR_ROAD_CLASS Reference Table to define roads and their condition.

VMREFTAB.TR_ROAD_SEAL Reference Table		
ROAD_SEAL_CODE	**ROAD_SEAL**	**DESCRIPTION**
1	SEALED	Road Sealed (sprayed seals, asphalt, or concrete)
2	UNSEALED	Road Unsealed (includes rock or processed gravel)
3	UNKNOWN	Unknown

4	NATURAL	A formed or unformed road consisting of locally available earth material not included in unsealed

There are no changes to the definitions of urban and rural split or strategic routes.

Do I need a GIS officer to participate?

A good understanding of Vicmap and the Vicmap Editing Service will be required to undertake this work.

Funding can be used for training purposes.

How much time will it take to complete this initial data work?

The amount of time will depend on how much data your council currently has stored in Vicmap, and whether that data is coded to the correct road classification and seal.

How will my council be supported to provide this additional collection of data?

To assist councils in providing local roads data in this new format, a specific allocation from the local roads grant will be provided in the 2024-25 financial year for data support.

This allocation forms part of the total local roads grant pool and will be allocated on the basis of a base amount of $10,000 per council, with the balance distributed in proportion to the total length of local roads in each council.

What format/spatial platform does my local roads data need to be in to participate?

The data needs to be available in a form of geospatial vector data format to be able to be opened in geographic information systems software. Vicmap will primarily be using ArcGIS Pro and FME to conduct works on the LGA datasets, therefore LGA Road Register Data should be submitted as a Shapefile (SHP). If you are unable to submit your data as a Shapefile a table file is also acceptable.

Along bordering councils there can be two responsible authorities (while rare) will there be an additional RESPONSIBLE_AUTH_CODE attribution column added to TR_ROADS to support the representation of this?

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Do I need to consult with my bordering councils before I start this project?

It is recommended for all councils to begin consultation with bordering councils as soon as practicable to ensure that duplication of road length on municipal borders is eliminated prior to entering the next stage of the project. Vicmap will uptake

responsibilities and coordinating responsibilities validated by councils in their Road Registers.

This includes councils that may border other states.

What about bridge decking reporting?

As part of the LRDRP, the VLGGC is working with Vicmap to also collect bridge length data in kilometres rather than the current square metres. Councils are requested to provide bridge deck lengths in the four road classifications and the combined expenditure details for maintenance and capital renewal for each of the bridge deck lengths. This expenditure data should reconcile with the data in the 2023-24 Questionnaire - ALGA1 Tab codes 21030 and 21035.

When will my council's Vicmap data inform councils local roads grants?

The VLGGC intends to move to an allocation based on road length and road-purpose hierarchy data sourced from Vicmap in 2028-29. This transition will happen over a period, include preliminary modelling and it is expected that allocations will not be fully based on the Vicmap data until 2028-29.

Stage 2 – Investigation into the reconciliation of councils two data sets

When will my council be considered in the next Stage of the project?

After the collection of local roads data in the VLGGC 2023-24 Questionnaire, Vicmap analysts will provide an initial list of councils that have the most accurate collection of data Iin the Transport layer.

Your council will be approached to consider taking on the next stage of the project which is the reconciliation of data to the VLGGC set of data, including matching segments, identifying, and correcting naming issues and finalising the reconciliation of the council's two data sets.

VLGGC would also like councils to nominate for the next stage should they feel ready to do so.

It is expected that groups of approximately 25 councils would undertake the next stage over the next three years.

How will council be supported to complete the next stage of this work?

Funding in 2025-26 to 2027-28 will be provided through a separate allocation in the VLGGC Local Roads grants component.

These allocations can be used to provide a dedicated staff member or contractor to complete the required work.

Is there training available?

Councils are expected to have a basic level of understanding on how to navigate Geographic Information Systems platforms and how to edit/append data to their Road Registers. Support for the reconciliation process through analysis and segmentation will be available through Vicmap Spatial Services.

Contact details will be provided shortly.

Will there be changes to TR_Roads segment length representation to what councils already have in the database?

Yes, where TR_ROADS have shorter segments which do not encompass the whole responsibility of the LGA and their roads data, Vicmap will try to capture these segment lengths and provide instruction to the Vicmap Maintainer to "extend" the length or "match LGA segment length" for that portion of road where possible.

There may be unique instances where this is an issue due to conflict with the other possible stakeholders that Vicmap jointly services, in such instances we endeavour to discuss all possible options with the LGA and the 3rd party to come to a resolution.

Will there be changes to the segment rules?

At this stage there will not be changes to the road segment rules in Vicmap. Vicmap will host a break in segmentation to illustrate where council authority/ownership ends to allow for only the length which council manage to be extracted.

Segmentation breaks for road class variations between datasets is an additional item which will need to be further explored during the next stage of the program.

The sheer number of edits required to incorporate segment breaks to reflect council data was not achievable during the allocated time for the pilot program or within the capacity of the Vicmap maintainer without planned notice.

With consideration of the Digital Cadastre Modelling (DCM) project will there be changes to timing the road re-alignment?

Many LGAs have already undergone the DCM project.

The way the spatial analysis is conducted, as we use road names and a varied spatial buffer which can range from 10-30 metres, regardless of the DCM project, most matches will be able to be made through the reconciliation process.

However, the pilot project highlighted significant variances in road realignment in some instances, due to Vicmap having been digitized at lower resolutions in previous years. Vicmap needs to reassess its accuracy statement.

Are parking bays included in the length calculation?

According to the VLGCC Manual "Extract Local Roads and Traffic Volume Data", parking bays are not included as a part of the length calculations. However, Vicmap Transport is able to uptake and maintain this data within Vicmap Transport for the purposes of council use.

It is recommended that council identify any parking bays in LGA roads datasets and allocate a Road alias column in which they can be identified along with service roads and laneways. This will allow Vicmap to filter out parking bays for the purposes of length extraction for the VLGGC but still include parking bay representation for council's own purposes in Vicmap.

Providing the road name, road type and locality are the same, it shouldn't matter that we may have different segments in the road centreline?

Technically it should not matter that a council has different segments in the road centreline. When this does become an issue is when Vicmap is attempting to reconcile road classes or road seals which are reliant on segmentation being accurate.

If council is confident in their road seals and road classes, Vicmap will then develop processes to adopt segment breaks to reflect the same asset conditions in TR_ROADS. Councils are to ensure that their registers do not hold redundant segmentation breaks which do not support any meaningful attribution differentiation.

Does the spatial data have to be provided as a bulk upload and do the polylines need to adhere to the Vicmap Transport Data Project Specifications? Or can it be supplied in a spec standard?

The spatial data for a council is required to be provided as a bulk upload. Councils can opt to keep their projections if they require however, it is encouraged that the council submit their data in the projection VICGRID 2020. It is preferred that the spatial data be provided as a bulk upload as this ensures all council data is reviewed for length calculation.

Did you want spatial data and aspatial data for only Council Maintained Roads or all roads within the LGA?

To submit the data for the reconciliation process we require LGA roads data as spatial data. If the LGA is hosting roads in their roads management register which other entities are responsible for maintaining- for example, Parks Victoria, DEECA, VicRoads- Vicmap is happy to receive them if they have been identified in the LGA road register.

If an LGA can, will you need to know who the Responsible Authority and Coordinating Authority are and if so, can you explain the difference between the two?

If the LGA is hosting roads in their roads management register which other entities are responsible for maintaining- for example, Parks Victoria, DEECA, VicRoads- Vicmap is happy to receive them if they have been identified in the LGA road register.

With this information Vicmap will be able to assign the responsible and coordinating authority codes accordingly. It will also be a standardised question during workshops- whether the LGA hosts any roads which they are not responsible for as a part of the data preparation exercise prior to conducting any analytics as a part of the pilot program.

Do you require the cartesian length of the road or the spherical length?

Vicmap will be extracting roads as cartesian lengths for the purposes of this pilot program.

Will each council have the support of someone like Aastha Sharma from the Vicmap Team?

As a part of the recommendations of this Pilot program, Senior Spatial Analysts such as Aastha will be present to interface with each LGA to have the council data amalgamated into Vicmap. Each LGA will have an allocated Vicmap Analyst to complete the reconciliation work. Vicmap will also have a dedicated Liaison Officer who will book in workshops with the LGAs and collect datasets for review and diagnostic work.

Is the unique ID the same as what the NHVR use for road managers?

NHVR have different IDs than to what Vicmap has allocated per council. Vicmap may undertake interfaces with the NHVR authority to allocate this to the Vicmap Transport layer as a corresponding ID.

We would like to adopt all Vicmap road classifications for internal uses. This includes PAPER ROADS. Are we able to update all of them?

You can adopt all classifications if you have the time and availability. The reconciliation is built to pick up all roads to reference them back to Vicmap Transport. While there is a focus on class codes 3,4,5,6 roads, if you advise Vicmap during the consultation, the group may be able to facilitate uptake of other categories conditional to timing and availability of resources.

Where do industrial roads sit within the Vicmap Road Class Classification?

Industrial roads will in most instances sit within the Vicmap Road Classification 5 (Access Major) and 6 (Access Minor).

How are service roads along arterial roads which are maintained by Council to be recorded?

Service roads and lanes are to be included into the Vicmap Transport layer from the LGA Road Registers submitted. During the reconciliation program a review of LGA datasets showed that other alias information can be included in the road type and road name including "P/B- Parking Bays, S/R- Service roads" amongst other items. Vicmap does endeavour to capture alias information such as this as it is useful from not only the reconciliation process but also for the purposes of other stakeholders using Vicmap such as emergency services and planning divisions.

Therefore, to make the capture of this data simpler in the reconciliation process, it is recommended that aliases such as these be put forward in a separate column. In this example below the field "Road_Type_1" is introduced as a new attribute in the LGA database which can host several aliases for roads whilst not being hosted in the road name or road type field.

ROAD_NAME	ROAD_TYPE	ROAD_TYPE_1
PILOT	STREET	S/R OR P/B

Which fields from TR_ROADS are considered to be critical for the reconciliation process and what should councils look at appending to their respective road registers?

Key fields which were used to reconcile datasets with Vicmap were the following:

1. Road Name (Do not include chainage, IDs, dashes in the same column)
2. Road Type (Identify simply as the road type or its accepted abbreviation (STREET, ST)
3. Class Code (Vicmap Road Classification REFTAB)
4. Road Seal (Vicmap Road Seal REFTAB)

ROAD_NAME	ROAD_TYPE	CLASS_CODE	ROAD_SEAL	COORDINATING_AUTH_CODE	RESPONSIBLE_AUTH_CODE
TUCKFIELD	STREET	3	1	<Null>	<Null>
MABEL	AVENUE	5	1	<Null>	<Null>
TAN	TRACK	9	2	<Null>	<Null>
TULK	STREET	5	1	<Null>	<Null>

5. Coordinating Auth Code + Responsible Auth Code Allocation (Vicmap unique allocated code per LGA)

6. Meet with neighbouring LGAs to agree on border responsibilities.

Can you comment about Boundary Roads which are having ideally some arrangements between neighbouring councils but do not appear as very precise on TR_ROAD dataset, there is always a question of who maintains that asset?

Vicmap strongly suggests that councils discuss with their bordering councils the responsibilities of their bordering roads and agree on their geometry. Vicmap will uptake this data from councils and include it into the responsible and coordinating authority. Vicmap will not be able to facilitate ownership discussions during the time the council has allocated with Vicmap to complete the reconciliation work.

Councils may have a road classification for the purposes of the Road Management Act that differs to the proposed Vicmap classes. The register of public roads relates to the Road Management Act. How has this been reconciled with the trial Councils?

For the most part it appears that the MAV road classifications are reasonably like Vicmap however their numbering system to account for each road type is in descending order while Vicmap's is in ascending order.

VLGGC staff and VSS are currently undertaking a mapping exercise to ensure that road classification definitions from other sources (including the MAV and the LGPRF) are not contrary to the Vicmap definitions.

Which act of government links directly to this project?

This project is not linked directly to an act of government.

The VLGGC's primary function is to recommend grants provided by the Commonwealth Government to councils in Victoria according to the *Local Government (Financial Assistance) Act 1995* and a set of national distribution principles.

The operations of the VLGGC are governed by the Victorian Local Government Grants Commission Act 1976

The Act establishes the VLGGC for the purpose of making recommendations of financial assistance to councils, provides for the appointment and remuneration of Commission members and specifies the general operations of the Commission, including meetings of the Commission and the annual reporting requirements.

Local roads grants are allocated to councils by the VLGGC based on an assessment of the preservation of its road assets.

Are these ownership data available to the public?

As a part of Vicmap's current business model, the Authority codes are published for Vicmap Transport on datashare as a part of the TR_ROADS dataset. Emergency

services amongst other government agencies use this data to assist in deployment of services, therefore it is made publicly available.