

ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT



For

NZTA OTAGO QLDC RAMM DATABASE
AND MANAWA

NZBN: 9429038917912

Prepared by: Steve Woods

Date audit commenced: 7 December 2022

Date audit report completed: 2 February 2023

Audit report due date: 8 February 2023

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EXECUTIVE SUMMARY

This audit of the **NZTA Otago (NZTA) Queenstown Lakes District council (QLDC)** DUML database and processes was conducted at the request of **Manawa Energy Limited (Manawa)** in accordance with clause 15.37B. The purpose of this audit is to verify that the volume information is being calculated accurately, and that profiles have been correctly applied.

The audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

The database is remotely hosted by thinkproject New Zealand Limited. The RAMM database is managed by QLDC. QLDC provide a monthly report to Manawa of this database.

Manawa reconciles this DUML load using the STL profile. Submissions are based on the database information with on and off times derived from data logger information. Wattages are derived from a database extract Manawa receives monthly.

I recalculated the submissions for November 2022 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

New Connection work is notified by consultants on behalf of NZTA to QLDC. McKay Electrical have been engaged by NZTA to do the streetlighting maintenance for the Queenstown Lakes DC area.

An issue was raised in the last two audit reports that identified approximately 30 lamps recorded in the NZTA database against ICP 0000027638CECB5, that were also recorded against ICP 0000486695CE506. This was investigated by QLDC, and these were removed from the database in November 2021. Manawa have confirmed that no revisions of the duplicated lights have been made resulting in an estimated over submission for the available 14-month revision period of 23,120 kWh.

A further 31 lamps were incorrectly recorded against ICP 0000027638CECB5 (NSP FKN0331) and should have been recorded against ICP 0000486695CE506 (NSP CML0331). These have been removed and added to the correct ICP in November 2021. Manawa have confirmed no revisions been carried out to correct the submitted volumes against ICP 0000027638CECB5 for the available 14-month revision period resulting in an estimated 17,103 kWh of submission against the incorrect ICP and therefore the incorrect balancing area. These ICPs are in different balancing areas so this will impact submission accuracy. This is also discussed in the NZTA Otago Aurora DUML audit report.

The Central Otago NZTA database which is also Manawa's client is due to be audited in March 2023. Manawa have advised that they will complete the revisions for the over submission and the incorrectly submitted volumes against ICP 0000027638CECB5 when it is confirmed that the new database is complete and accurate for Central Otago NZTA for ICP 0000486694CE943 and 0000486695CE506.

The field audit was undertaken of a statistical sample of 125 items of load was undertaken on 31 January 2023. This found that the wattage is recorded correctly in the database. There were no items missing from the database.

The audit found three non-compliances and makes no recommendations. The future risk rating of 12 indicates that the next audit be completed in 12 months. I have considered this in conjunction with Manawa's responses and recommend that the next audit be in 12 months.

The matters raised are detailed below:

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	Clause 11(1) of Schedule 15.3	Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period. Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Moderate	Medium	4	Investigating
Database accuracy	3.1	Clause 15.2 and 15.37B(b)	Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period. Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Moderate	Medium	4	Investigating
Volume information accuracy	3.2	Clause 15.2 and 15.37B(c)	Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period. Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Moderate	Medium	4	Investigating

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Future Risk Rating						12	

Future risk rating	0	1-4	5-8	9-15	16-18	19+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Recommendation
		Nil

ISSUES

Subject	Section	Description	Issue
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

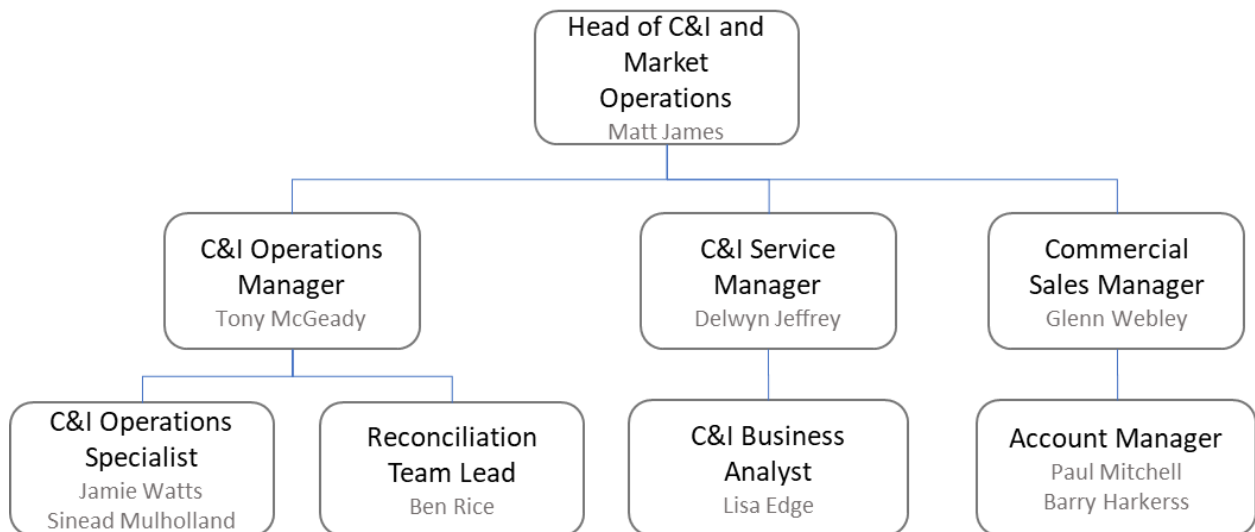
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

Audit commentary

There are no exemptions in place relevant to the scope of this audit.

1.2. Structure of Organisation

Manawa provided a copy of their organisational structure.



1.3. Persons involved in this audit

Auditors:

Name	Company	Role
Steve Woods	Veritek Limited	Lead Auditor
Claire Stanley	Veritek Limited	Supporting Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Lisa Edge	Business Analyst – Commercial and Industrial	Manawa Energy
Roger Hughes	Contract Data Engineer	Queenstown Lakes District Council

1.4. Hardware and Software

The SQL database used for the management of DUML is remotely hosted by thinkproject New Zealand Limited. The database is commonly known as “RAMM” which stands for “Road Assessment and Maintenance Management”. The specific data used for DUML is held in the Streetlight tables. thinkproject New Zealand Limited backs up the database and assists with disaster recovery as part of their hosting service.

Pocket RAMM is used in the field by McKay Electrical.

Access to the database is secure by way of password protection.

Systems used by the trader to calculate submissions are assessed as part of their reconciliation participant audits.

1.5. Breaches or Breach Allegations

There are no breach allegations relevant to the scope of this audit.

1.6. ICP Data

ICP Number	Description	NSP	Profile	Number of items of load	Database wattage (watts)
0000027638CECB5	Central Otago State Highways FKN0331	FKN0331	STL	329	50,475

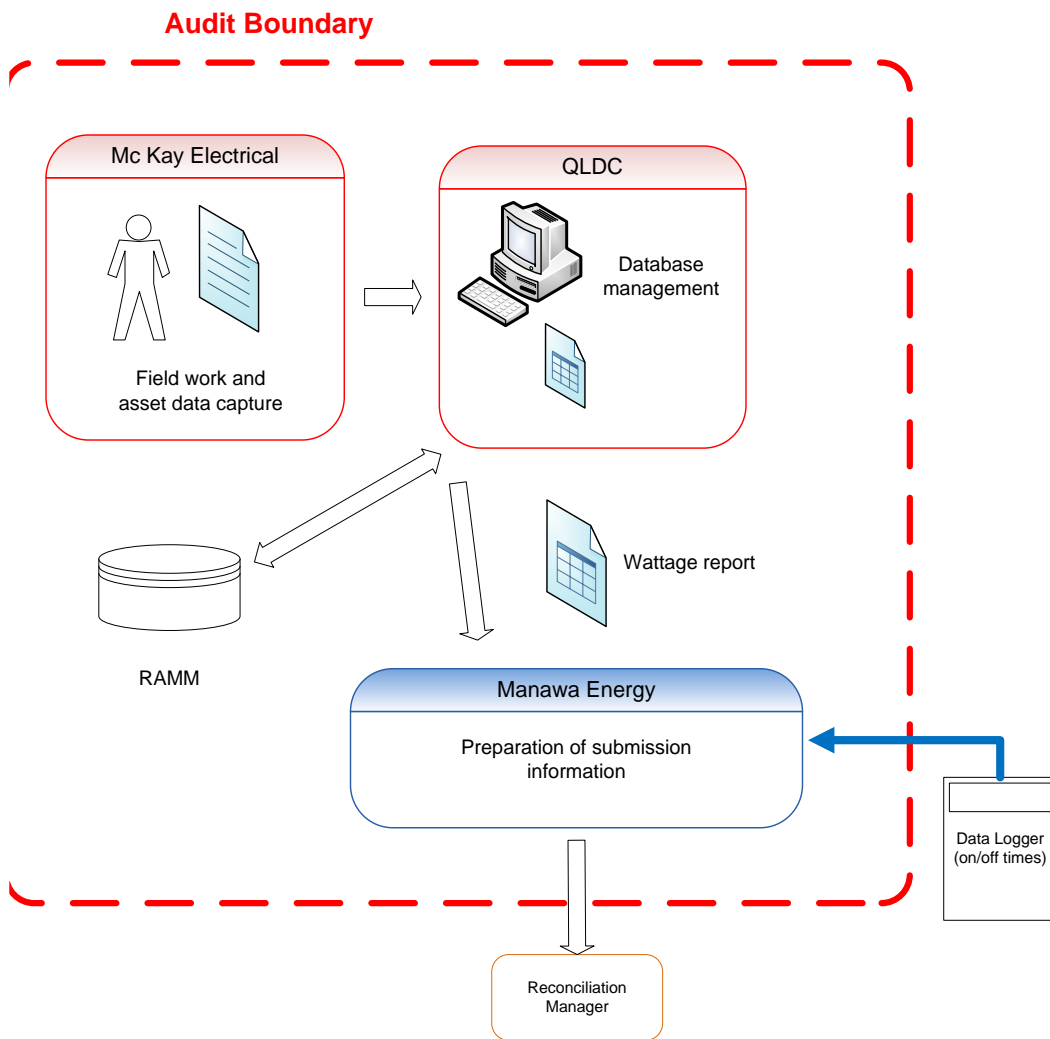
1.7. Authorisation Received

All information was provided directly by Manawa and QLDC.

1.8. Scope of Audit

The database is managed by Queenstown Lakes DC and the data is held in RAMM. McKay Electrical have been engaged by NZTA to do the streetlighting maintenance for the Queenstown Lakes DC area. Pocket RAMM is used in the field to issue work and record changes in the field, the results are captured directly into RAMM.

The scope of the audit encompasses the collection, security and accuracy of the data, including the preparation of submission information based on the database reporting. The diagram below shows the audit boundary for clarity.



The field audit was undertaken of a statistical sample of 125 items of load on 31 January 2023.

1.9. Summary of previous audit

The previous audit was completed in February 2022 by Rebecca Elliot of Veritek Limited. That audit found four non-compliances and one recommendation. The current status of that audit's findings is detailed below:

Table of Non-Compliance

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.	Still existing
			Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Still existing
			The database is not confirmed as accurate with a 95% level of confidence with a potential under submission of approximately be 9,900 kWh per annum.	Cleared
All load recorded in the database	2.5	Clause 11(2A) of Schedule 15.3	Five additional lights were found in the field.	Cleared
Database accuracy	3.1	15.2 and 15.37B(b)	The database is not confirmed as accurate with a 95% level of confidence with a potential under submission of approximately be 9,900 kWh per annum.	Cleared
			Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.	Still existing
			Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Still existing
			LED lights recorded with insufficient descriptions to confirm lamp wattage.	Cleared

Subject	Section	Clause	Non-Compliance	Status
Volume information accuracy	3.2	15.2 and 15.37B(c)	Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.	Still existing
			Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.	Still existing
			The database is not confirmed as accurate with a 95% level of confidence with a potential under submission of approximately be 9,900 kWh per annum.	Cleared

Subject	Section	Recommendation	Status
Database Accuracy	3.1	Continue to work with QLDC and McKay Electrical to provide LED light details.	Cleared

1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F)

Code reference

Clause 16A.26 and 17.295F

Code related audit information

Retailers must ensure that DUMML database audits are completed:

1. by 1 June 2018 (for DUMML that existed prior to 1 June 2017)
2. within three months of submission to the reconciliation manager (for new DUMML)
3. within the timeframe specified by the Authority for DUMML that has been audited since 1 June 2017.

Audit observation

Manawa have requested Veritek to undertake this streetlight audit.

Audit commentary

This audit report confirms that the requirement to conduct an audit has been met for this database within the required timeframe.

Audit outcome

Compliant

2. DUMML DATABASE REQUIREMENTS

2.1. Deriving submission information (Clause 11(1) of Schedule 15.3)

Code reference

Clause 11(1) of Schedule 15.3

Code related audit information

The retailer must ensure the:

- *DUMML database is up to date*
- *methodology for deriving submission information complies with Schedule 15.5.*

Audit observation

The process for calculation of consumption was examined.

Audit commentary

Manawa reconciles this DUMML load using the STL profile. Submissions are based on the database information with on and off times derived from data logger information. Wattages are derived from a database extract Manawa receives monthly.

I recalculated the submissions for November 2022 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

An issue was raised in the last two audit reports that identified approximately 30 lamps recorded in the NZTA database against ICP 0000027638CECB5, that were also recorded against ICP 0000486695CE506. This was investigated by QLDC, and these were removed from the database in November 2021. Manawa have confirmed that no revisions of the duplicated lights have been made resulting in an estimated over submission for the available 14-month revision period of 23,120 kWh.

A further 31 lamps were incorrectly recorded against ICP 0000027638CECB5 (NSP FKN0331) and should have been recorded against ICP 0000486695CE506 (NSP CML0331). These have been removed and added to the correct ICP in November 2021. Manawa have confirmed no revisions been carried out to correct the submitted volumes against ICP 0000027638CECB5 for the available 14-month revision period resulting in an estimated 17,103 kWh of submission against the incorrect ICP and therefore the incorrect balancing area. These ICPs are in different balancing areas so this will impact submission accuracy. This is also discussed in the NZTA Otago Aurora DUMML audit report.

The Central Otago NZTA database which is also Manawa's client is due to be audited in March 2023. Manawa have advised that they will complete the revisions for the over submission and the incorrectly submitted volumes against ICP 0000027638CECB5 when it is confirmed that the new database is complete and accurate for Central Otago NZTA for ICP 0000486694CE943 and 0000486695CE506.

The monthly report is provided with additional information containing any changes made through the month. The database contains a "light date added" and a "lamp date changed".

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3</p> <p>From: 01-Dec-21 To: 07-Dec-22</p>	<p>Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.</p> <p>Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.</p> <p>Potential impact: Medium Actual impact: Medium Audit history: Twice Controls: Moderate Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Medium</p>	<p>The controls are rated as moderate as processes to manage change capture most changes.</p> <p>The impact is assessed to be medium due to the impact on submission.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>We made a correction in November 2021 to remove these 30 lights from ICP 0000027638CECB5.</p> <p>However, we are yet to get confidence that the lights recorded against 0000486695CE506 and the other NZTA Central Otago ICP of 0000486694CE943 are complete and accurate, and therefore have decided not to complete historical washups on any of the 3 NZTA Central Otago ICPs.</p> <p>The potential effective of this is that for the 14 months prior to us removing these 30 lights from ICP 0000027638CECB5, we have in fact over submitted for the equivalent of these 30 lights.</p> <p>We've been advised that NZTA – via the work being completed by their consultant Kara – that they expect to have the allocation of lights against 0000486694CE943 and 0000486695CE506 sorted and understood by March 2023.</p>		<p>April 2023</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Continue to build on the good relationship we have with QLDC who provide the monthly report to Manawa of this database, to ensure accuracy. The spreadsheet is now imported into an inhouse database (SLIM) where duplicate lights (Light ID's) can be identified easily.</p>		<p>April 2023</p>	

2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3)

Code reference

Clause 11(2)(a) and (aa) of Schedule 15.3

Code related audit information

The DUML database must contain:

- *each ICP identifier for which the retailer is responsible for the DUML*
- *the items of load associated with the ICP identifier.*

Audit observation

The database was checked to confirm an ICP is recorded for each item of load.

Audit commentary

All items of load had an ICP recorded as required by this clause.

Audit outcome

Compliant

2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3)

Code reference

Clause 11(2)(b) of Schedule 15.3

Code related audit information

The DUML database must contain the location of each DUML item.

Audit observation

The database was checked to confirm the location is recorded for all items of load.

Audit commentary

Street addresses and GPS coordinates are recorded for all items of load.

Audit outcome

Compliant

2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3)

Code reference

Clause 11(2)(c) and (d) of Schedule 15.3

Code related audit information

The DUML database must contain:

- *a description of load type for each item of load and any assumptions regarding the capacity*
- *the capacity of each item in watts.*

Audit observation

The database was checked to confirm that it contained a field for lamp type and wattage capacity and included any ballast or gear wattage and that each item of load had a value recorded in these fields.

Audit commentary

Lamp type description, lamp wattage and ballast wattage are included in the database. This was populated in the database for all items of load. The accuracy of this is examined in **section 3.1**.

Audit outcome

Compliant

2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3)

Code reference

Clause 11(2A) of Schedule 15.3

Code related audit information

The retailer must ensure that each item of DUML for which it is responsible is recorded in this database.

Audit observation

The field audit was undertaken of a statistical sample of 125 items of load on 31 January 2023.

Audit commentary

The wattage is recorded correctly in the database for the sample of lights checked. There were no items missing from the database.

The accuracy of the database is discussed in **section 3.1**.

Audit outcome

Compliant

2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3)

Code reference

Clause 11(3) of Schedule 15.3

Code related audit information

The DUML database must track additions and removals in a manner that allows the total load (in kW) to be retrospectively derived for any given day.

Audit observation

The process for tracking of changes in the database was examined.

Audit commentary

The RAMM database functionality achieves compliance with the code.

Audit outcome

Compliant

2.7. Audit trail (Clause 11(4) of Schedule 15.3)

Code reference

Clause 11(4) of Schedule 15.3

Code related audit information

The DUML database must incorporate an audit trail of all additions and changes that identify:

- *the before and after values for changes*
- *the date and time of the change or addition*

- *the person who made the addition or change to the database*

Audit observation

The database was checked for audit trails.

Audit commentary

RAMM has a complete audit trail of all additions and changes to the database information.

Audit outcome

Compliant

3. ACCURACY OF DUML DATABASE

3.1. Database accuracy (Clause 15.2 and 15.37B(b))

Code reference

Clause 15.2 and 15.37B(b)

Code related audit information

Audit must verify that the information recorded in the retailer's DUML database is complete and accurate.

Audit observation

The DUML Statistical Sampling Guideline was used to determine the database accuracy. The table below shows the survey plan.

Plan Item	Comments
Area of interest	NZTA Otago lights on the Aurora network (QLDC)
Strata	The database contains items of load Otago Aurora network area. The area has two distinct sub-groups of urban and rural. The processes for the management of NZTA Aurora Otago items of load are the same, but I decided to place the items of load into two geographical strata, as follows: <ol style="list-style-type: none">1. Frankton, and2. Queenstown.
Area units	I created a pivot table of the roads in each area, and I used a random number generator in a spreadsheet to select a total of 22 sub-units.
Total items of load	125 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority against the database or in the case of LED lights against the LED light specification.

The change management process and timeliness of database updates was evaluated.

Audit commentary

A field audit was conducted of a statistical sample of 125 items of load.

The wattage is recorded correctly in the database for the items of load in the field audit. There were no items missing from the database.

Lamp description and capacity accuracy

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority in the database and found all wattages were correct.

The previous audit identified made a recommendation to populate the database with the LED description, this has been completed.

ICP Accuracy

As discussed in **sections 2.1** and **3.2** the last two audit reports identified approximately 30 lamps recorded in the NZTA database against ICP 0000027638CECB5, that were also recorded against ICP 0000486695CE506. This was investigated by QLDC, and these have been removed from the database in November 2021, as they should only be recorded against NZTA Central Otago ICP0000486695CE506

A further 31 lamps were incorrectly recorded against ICP 0000027638CECB5 (NSP FKN0331) and should have been recorded against ICP 0000486695CE506 (NSP CML0331). These have been removed and added to the correct ICP in November 2021. Manawa have confirmed no revisions been carried out to correct the submitted volumes against ICP 0000027638CECB5 for the available 14-month revision period resulting in an estimated 17,103 kWh of submission against the incorrect ICP and therefore the incorrect balancing area. These ICPs are in different balancing areas so this will impact submission accuracy. This is also discussed in the NZTA Otago Aurora DUMML audit report.

The Central Otago NZTA database which is also Manawa's client is due to be audited in March 2023. Manawa have advised that they will complete the revisions for the over submission and the incorrectly submitted volumes against ICP 0000027638CECB5 when it is confirmed that the new database is complete and accurate for Central Otago NZTA for ICP 0000486694CE943 and 0000486695CE506.

Change management process findings

The processes were reviewed for new lamp connections and the tracking of load changes due to faults and maintenance.

The database contains a "light date added" and a "lamp date changed", the monthly report is provided with changes made through the month.

The database is managed by QLDC, and the data is held in their RAMM system.

McKay Electrical is the contractor for QLDC. Pocket RAMM is used in the field to issue work and record changes in the field into RAMM for maintenance and repairs.

New Connection work is notified by consultants on behalf of NZTA to QLDC to the Contract Data Engineer at QLDC to update into the RAMM database.

No festive lighting is connected to the Aurora NZTA unmetered streetlight network.

A monthly submission report is provided by QLDC to Manawa.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b)</p> <p>From: 01-Dec-21 To: 07-Dec-22</p>	<p>Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.</p> <p>Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.</p> <p>Potential impact: Medium</p> <p>Actual impact: Medium</p> <p>Audit history: Twice</p> <p>Controls: Moderate</p> <p>Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
<p>Medium</p>	<p>The controls are rated as moderate as controls will mitigate risk most of the time.</p> <p>The impact is assessed to be medium, based on the kWh differences described above.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>We made a correction in November 2021 to remove these 30 lights from ICP 0000027638CECB5.</p> <p>However, we are yet to get confidence that the lights recorded against 0000486695CE506 and the other NZTA Central Otago ICP of 0000486694CE943 are complete and accurate, and therefore have decided not to complete historical washups on any of the 3 NZTA Central Otago ICPs.</p> <p>The potential effective of this is that for the 14 months prior to us removing these 30 lights from ICP 0000027638CECB5, we have in fact over submitted for the equivalent of these 30 lights.</p> <p>We've been advised that NZTA – via the work being completed by their consultant Kara – that they expect to have the allocation of lights against 0000486694CE943 and 0000486695CE506 sorted and understood by March 2023.</p>		<p>April 2023</p>	<p>Investigating</p>
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Continue to build on the good relationship we have with QLDC who provide the monthly report to Manawa of this database, to ensure accuracy. The spreadsheet is now imported into an inhouse database (SLIM) where duplicate lights (Light ID's) can be identified easily.</p>		<p>April 2023</p>	

3.2. Volume information accuracy (Clause 15.2 and 15.37B(c))

Code reference

Clause 15.2 and 15.37B(c)

Code related audit information

The audit must verify that:

- *volume information for the DUML is being calculated accurately*
- *profiles for DUML have been correctly applied.*

Audit observation

The submission was checked for accuracy for the month the database extract was supplied. This included:

- checking the registry to confirm that all ICPs have the correct profile and submission flag, and
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

Audit commentary

Manawa reconciles this DUML load using the STL profile. Submissions are based on the database information with on and off times derived from data logger information. Wattages are derived from a database extract Manawa receives monthly.

I recalculated the submissions for November 2022 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

An issue was raised in the last two audit reports that identified approximately 30 lamps recorded in the NZTA database against ICP 0000027638CECB5, that were also recorded against ICP 0000486695CE506. This was investigated by QLDC, and these were removed from the database in November 2021. Manawa have confirmed that no revisions of the duplicated lights have been made resulting in an estimated over submission for the available 14-month revision period of 23,120 kWh.

A further 31 lamps were incorrectly recorded against ICP 0000027638CECB5 (NSP FKN0331) and should have been recorded against ICP 0000486695CE506 (NSP CML0331). These have been removed and added to the correct ICP in November 2021. Manawa have confirmed no revisions been carried out to correct the submitted volumes against ICP 0000027638CECB5 for the available 14-month revision period resulting in an estimated 17,103 kWh of submission against the incorrect ICP and therefore the incorrect balancing area. These ICPs are in different balancing areas so this will impact submission accuracy. This is also discussed in the NZTA Otago Aurora DUML audit report.

The Central Otago NZTA database which is also Manawa's client is due to be audited in March 2023. Manawa have advised that they will complete the revisions for the over submission and the incorrectly submitted volumes against ICP 0000027638CECB5 when it is confirmed that the new database is complete and accurate for Central Otago NZTA for ICP 0000486694CE943 and 0000486695CE506.

The monthly report is provided with additional information containing any changes made through the month. The database contains a "light date added" and a "lamp date changed".

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c)</p> <p>From: 01-Dec-21 To: 07-Dec-22</p>	<p>Revisions not carried out for duplicated lights resulting in an estimated over submission of 23,121 kWh over the available 14-month revision period.</p> <p>Revisions not carried out to correct the volumes for the available 14-month revision period resulting in approximately 17,103 kWh of submission against the incorrect balancing area.</p> <p>Potential impact: Medium Actual impact: Medium Audit history: Twice Controls: Moderate Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
Medium	<p>The controls are rated as moderate as processes to manage change capture most changes.</p> <p>The impact is assessed to be medium due to the impact on submission.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>We made a correction in November 2021 to remove these 30 lights from ICP 0000027638CECB5.</p> <p>However, we are yet to get confidence that the lights recorded against 0000486695CE506 and the other NZTA Central Otago ICP of 0000486694CE943 are complete and accurate, and therefore have decided not to complete historical washups on any of the 3 NZTA Central Otago ICPs.</p> <p>The potential effective of this is that for the 14 months prior to us removing these 30 lights from ICP 0000027638CECB5, we have in fact over submitted for the equivalent of these 30 lights.</p> <p>We've been advised that NZTA – via the work being completed by their consultant Kara – that they expect to have the allocation of lights against 0000486694CE943 and 0000486695CE506 sorted and understood by March 2023.</p>		April 2023	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>Continue to build on the good relationship we have with QLDC who provide the monthly report to Manawa of this database, to ensure accuracy. The spreadsheet is now imported into an inhouse database (SLIM) where duplicate lights (Light ID's) can be identified easily.</p>		April 2023	

CONCLUSION

The database is remotely hosted by thinkproject New Zealand Limited. The RAMM database is managed by QLDC. QLDC provide a monthly report to Manawa of this database.

Manawa reconciles this DUMML load using the STL profile. Submissions are based on the database information with on and off times derived from data logger information. Wattages are derived from a database extract Manawa receives monthly.

I recalculated the submissions for November 2022 using the data logger and the database information. I confirmed that it was calculated accurately based on the database and data logger information.

New Connection work is notified by consultants on behalf of NZTA to QLDC. McKay Electrical have been engaged by NZTA to do the streetlighting maintenance for the Queenstown Lakes DC area.

An issue was raised in the last two audit reports that identified approximately 30 lamps recorded in the NZTA database against ICP 0000027638CECB5, that were also recorded against ICP 0000486695CE506. This was investigated by QLDC, and these were removed from the database in November 2021. Manawa have confirmed that no revisions of the duplicated lights have been made resulting in an estimated over submission for the available 14-month revision period of 23,120 kWh.

A further 31 lamps were incorrectly recorded against ICP 0000027638CECB5 (NSP FKN0331) and should have been recorded against ICP 0000486695CE506 (NSP CML0331). These have been removed and added to the correct ICP in November 2021. Manawa have confirmed no revisions been carried out to correct the submitted volumes against ICP 0000027638CECB5 for the available 14-month revision period resulting in an estimated 17,103 kWh of submission against the incorrect ICP and therefore the incorrect balancing area. These ICPs are in different balancing areas so this will impact submission accuracy. This is also discussed in the NZTA Otago Aurora DUMML audit report.

The Central Otago NZTA database which is also Manawa's client is due to be audited in March 2023. Manawa have advised that they will complete the revisions for the over submission and the incorrectly submitted volumes against ICP 0000027638CECB5 when it is confirmed that the new database is complete and accurate for Central Otago NZTA for ICP 0000486694CE943 and 0000486695CE506.

The field audit was undertaken of a statistical sample of 125 items of load was undertaken on 31 January 2023. This found that the wattage is recorded correctly in the database. There were no items missing from the database.

The audit found three non-compliances and makes no recommendations. The future risk rating of 12 indicates that the next audit be completed in 12 months. I have considered this in conjunction with Manawa's responses and recommend that the next audit be in 12 months.

Participant response

Manawa is pleased with the findings of this audit. Having separated this NZTA Otago QLDC ICP from the 2 remaining NZTA Otago ICPS we are pleased to have demonstrated that the DUML lights in this QLDC region were in fact able to be accurately managed.

We will continue to work with our project contact at NZTA to map the lights and maintain the accuracy of the remaining two ICPS (0000486694CE943 and 0000486695CE506) and get confidence in the remaining NZTA DUML load in the region. This is expected to be available in March 2023.

We note the main finding of this audit is that Manawa has not corrected historic revisions, which have been identified as a small over submission across the last 14 months. This over-submission is a cost to Manawa, but we are focussed on ensuring we understand the full picture of light volumes against all 3 ICP's in the region. In the meantime, the current and future submissions for the QLDC ICP are correct.