ELECTRICITY INDUSTRY PARTICIPATION CODE
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

HAURAKI DISTRICT COUNCIL AND MERIDIAN ENERGY

Prepared by: Steve Woods

Date audit commenced: 24 September 2019

Date audit report completed: 16 October 2019

Audit report due date: 01-Oct-19

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EXECUTIVE SUMMARY

This audit of the Hauraki District Council Unmetered Streetlights (**HDC**) DUML database and processes was conducted at the request of Meridian Energy Limited (**Meridian**), 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, which became effective on 1 June 2017.

The database is remotely hosted by RAMM Software Ltd. The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian on a monthly basis.

The main findings are as follows:

1. In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates.
2. Submission is based on a snapshot and does not consider historic adjustments.
3. The ballasts are not recorded correctly in the RAMM database, although they are accurately added to the monthly report.
4. Submission is incorrectly allocated across the 2 ICPs.

This audit found five non-compliances and one recommendation is made. The future risk rating of 15 indicates that the next audit be completed in 12 months and I agree with this recommendation.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Deriving submission information	2.1	11(1) of Schedule 15.3	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. Submission is based on a snapshot and does not consider historic adjustments The ballasts are not recorded correctly in the RAMM database. Submission is incorrectly allocated across the 2 ICPs	Moderate	Medium	4	Identified

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
ICP identifier	2.2	11(2)(a) and (aa) of Schedule 15.3	One item of load without an ICP identifier	Strong	Low	1	Identified
All load recorded in database	2.5	11(2A) of Schedule 15.3	One additional item of load found in the field audit.	Moderate	Low	2	Identified
Database accuracy	3.1	15.2 and 15.37B(b)	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. The ballasts are not recorded correctly in the RAMM database. One item of load does not have the ICP recorded	Moderate	Medium	4	Identified
Volume information accuracy	3.2	15.2 and 15.37B(c)	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. Submission is based on a snapshot and does not consider historic adjustments The ballasts are not recorded correctly in the RAMM database. Submission is incorrectly allocated across the 2 ICPs	Moderate	Medium	4	Identified
Future Risk Rating						15	

Future risk rating	1-3	4-6	7-8	9-17	18-26	27+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Clause	Recommendation
Location of items of load	2.3	11(2)(b) of Schedule 15.3	Populate GPS coordinates for 180 items of load where this information is missing

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

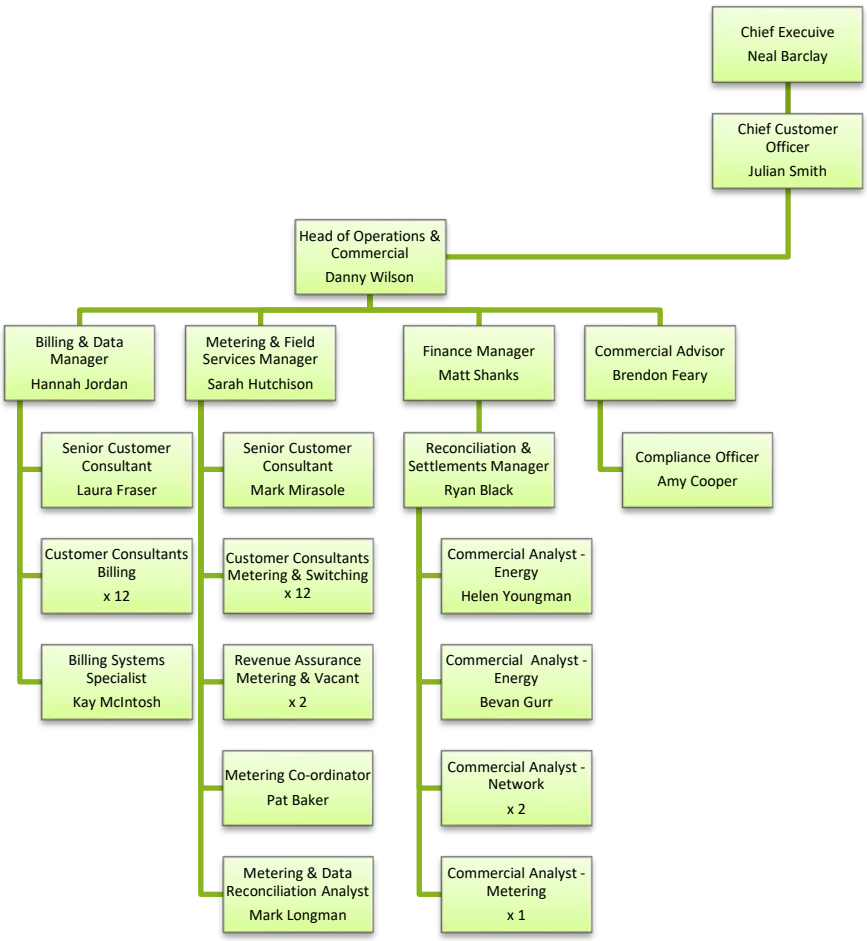
Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit commentary

Meridian confirms that there are no exemptions in place relevant to the scope of this audit.

1.2. Structure of Organisation

Meridian provided the relevant organisational structure:



1.3. Persons involved in this audit

Auditor:

Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Joel Hogan	Transport Team Leader	Hauraki DC

1.4. Hardware and Software

Section 1.8 records that Roading Asset and Maintenance Management database, commonly known as RAMM continues to be used the management of DUML. This is remotely hosted by RAMM Software Ltd. The specific module used for DUML is called "SLIMM" which stands for "Streetlighting Inventory Maintenance Management".

Power Solutions confirmed that the database back-up is in accordance with standard industry procedures. Access to the database is secure by way of password protection

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)
1000508887PC891	ST_LIGHTS-Powerco	WKO0331	NST	1,875	157,456
1099570384CNB6C	Hauraki Streetlights Counties	BOB0331	NST	33	3,510

1.7. Authorisation Received

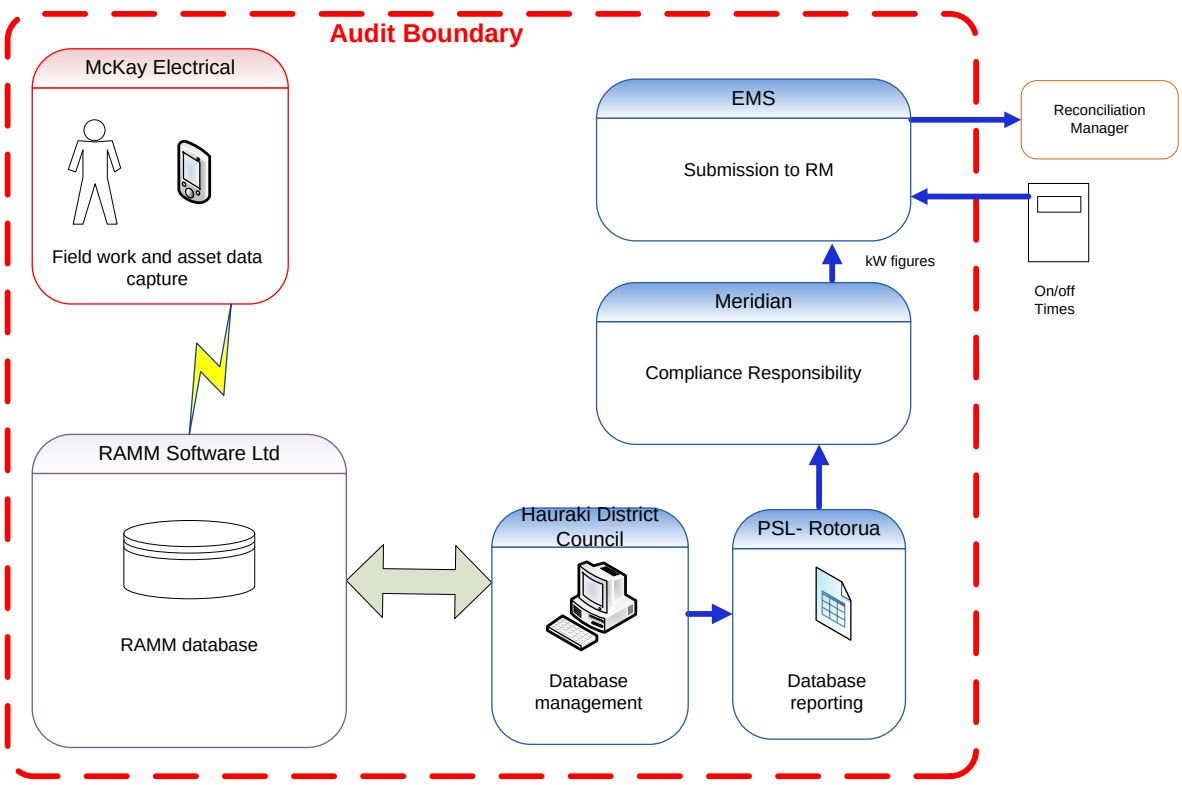
All information was provided directly by Meridian or Power Solutions.

1.8. Scope of Audit

This audit of the Hauraki District Council Unmetered Streetlights (**HDC**) DUML database and processes was conducted at the request of Meridian Energy Limited (**Meridian**), 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, which became effective on 1 June 2017.

The database is remotely hosted by RAMM Software Ltd. The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian on a monthly basis. 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 at the time of the site audit.



The field audit was undertaken of a statistical sample of 327 items of load.

1.9. Summary of previous audit

The previous audit was conducted for Genesis in May 2018 by Rebecca Elliot of Veritek Limited. The findings are shown in the table below.

Subject	Section	Clause	Non-Compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	The database accuracy is assessed to be 97.9% indicating an estimated over submission of 11,100 kWh per annum (excluding ballast). The ballasts are not recorded correctly in the RAMM database.	Still existing
All load recorded in database	2.5	11(2A) of Schedule 15.3	One additional item of load found in the field audit.	Still existing for a different light
Database accuracy	3.1	15.2 and 15.37B(b)	The database accuracy is assessed to be 97.9% indicating an estimated over submission of 11,100 kWh per annum (excluding ballast). The ballasts are not recorded correctly in the RAMM database.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	The database accuracy is assessed to be 97.9% indicating an estimated over submission of 11,100 kWh per annum (excluding ballast). The ballasts are not recorded correctly in the RAMM database.	Still existing

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 DUML database audits are completed:

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

Audit observation

Meridian 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. Compliance is confirmed.

2. DUML 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:

- *DUML 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 and the application of profiles was checked. The database was checked for accuracy.

Audit commentary

Meridian reconciles this DUML load using the DST profile. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the "burn time" which is sourced from data loggers installed on the Counties and Powerco networks. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Meridian's reconciliation participant audit and EMS' agent audit.

The capacities supplied to EMS for August 2019 were checked and confirmed to be the same as the database.

As detailed in **section 2.4**, the ballast capacities are not recorded in RAMM but are added in the monthly report. This is recorded as non-compliance.

There is some inaccurate data within the database used to calculate submissions. This is recorded as non-compliance and discussed in **section 3.1** and **3.2**.

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database.

As recorded in Section 2.2, submission information is allocated to the incorrect ICPs due to a reporting issue. There is under submission of approx. 3,600 kWh per annum against ICP 1099570384CNB6C and over submission of the same amount against ICP 1000508887PC891. The reporting was correct during the previous audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3 From: 01-Jun-17 To: 30-Apr-18	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. Submission is based on a snapshot and does not consider historic adjustments The ballasts are not recorded correctly in the RAMM database. Submission is incorrectly allocated across the 2 ICPs. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate, because they are sufficient to ensure that changes to the database are correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
All discrepancies and issues identified in this report have been raised with HDC for resolution. Meridian will work with HDC to ensure corrections are made to the database where identified.	31 Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 the correct ICP was recorded against each item of load.

Audit commentary

One item of load did not have an ICP recorded against it in the database. The details are shown below.

Street	Northing	Easting	ICP
RATA LANE	5861389.959	1836436.313	Blank

This light is installed. This was confirmed during the field audit. There is no impact on submission because reporting is based on "Light Owner" and not ICP.

The reporting to Meridian has the correct total kW, but some lights are reported against the incorrect ICPs, which are on different networks and therefore are in different balancing areas. It appears the "Light Owner" field is used for reporting rather than the ICP. When I filtered the "Light Owner" field by "Road Asset Dept" I ended up with the same kW figure of 1.197kW as was reported against ICP 1099570384CNB6C. The correct figures are shown below. The total difference is due to the timing of the reporting to Meridian vs the timing of the report I used for analysis.

	Report kW	Database kW	difference
1099570384CNB6C	1.197	2.057	0.86
1000508887PC891	117.672	116.783	0.889
Total kW	118.869	118.84	

The ICPs appear to be correct in the database, therefore compliance is achieved with this clause, but non-compliance is recorded in Section 2.1. The reporting was correct during the previous audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.2 With: Clause 11(2)(a) and (aa) of Schedule 15.3 From: 01-Jul-19 To: 11-Oct-19	One item of load without an ICP identifier Potential impact: Low Actual impact: None Audit history: None Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. There is no impact on settlement; therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
We have requested HDC add the ICP to this item single item of load	31 Dec 2019	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	

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

The database contains the nearest street address, pole numbers and Global Positioning System (GPS) coordinates for each item of load and users in the office and field can view these locations on a mapping system.
There are 180 items of load without GPS coordinates. I recommend these are populated.

Clause	Recommendation	Audited party comment	Remedial action
11(2)(b) of Schedule 15.3	Populate GPS coordinates for 180 items of load where this information is missing	We have asked HDC whether they will obtain and add these to the database as recommended.	Identified

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

The database contains two records for wattage, firstly the lamp wattage and secondly the gear wattage, which represents ballast losses. The Hauraki DC database has the lamp wattage recorded in both the

lamp and gear wattage fields. All were populated. As discussed in **section 3.1**, the ballast in RAMM is not used for submission. The correct wattages are added in the monthly report. The correct ballasts are applied but this needs to be in the database. This is recorded as non-compliance 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 327 items of load.

Audit commentary

The field audit discrepancies are detailed in the table below:

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
DEVON ST	2	2	-	1	1 x LED recorded as 150 HPS
KENSINGTON RD	16	15	-1	-	1 x light not found
MONTROSE RD	18	17	-1	-	1 x light not found
PUKAHU RD	2	1	-1	-	1 x light not found
PURIRI AVE	2	2	-	2	2 x LED recorded as 70W HPS and 150W HPS
ROBERTS ST	12	12	-	1	1 x 70W HPS recorded as 20 W LED
ROSS PL	2	3	+1	-	Additional 26W LED
SEDDON ST (SH 2)	12	11	-1	2	1 x 150W HPS not found. 1 x LED recorded as 150E HPS 1 x 250W HPS recorded as 150W HPS

Street	Database count	Field count	Light count differences	Wattage recorded incorrectly	Comments
TE AROHA RD (SH 26)	20	18	-2	3	2 x school signs now removed from field
Grand Total			-5 (net)	9	

One additional item of load was found in the field. This is recorded as non-compliance below. The database accuracy is discussed and recorded as non-compliance in **section 3.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 01-Jul-19 To: 11-Oct-19	One additional item of load found in the field audit. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate, because they are sufficient to ensure that lamp information is correctly recorded most of the time. The impact is assessed to be low as only one additional item of load was found in the field audit.

Actions taken to resolve the issue	Completion date	Remedial action status
We have requested that HDC correct the database for all discrepancies found during the field audit including additional and missing lights and incorrect wattages.	31 Dec 2019	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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.

The change management process and the compliance of the database reporting provided to Meridian is detailed in **sections 3.1** and **3.2**.

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

The RAMM database 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	Hauraki plains area
Strata	The database contains items of load in Hauraki District Council area. The area is across two networks. There were no new developments identified. The processes for the management of HDC items of load are the same, but I decided to place the items of load into three strata, as follows: 1. Amenity and car parks 2. Rural 3. NZTA 4. Paeroa 5. Waihi
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 73 sub-units.
Total items of load	327 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority.

Audit commentary

Database accuracy based on the field audit

A field audit was conducted of a statistical sample of 327 items of load. The "database auditing tool" was used to analyse the results, which are shown in the table below.

Result	Percentage	Comments
The point estimate of R	95.3	Wattage from survey is lower than the database wattage by 4.7%
R_L	91.6	

R_H	98	With a 95% level of confidence it can be concluded that the error could be between -8.4% and -2.0%

These results were categorised in accordance with the "Distributed Unmetered Load Statistical Sampling Audit Guideline", effective from 01/02/19 and the table below shows that Scenario C (detailed below) applies.

The conclusion from Scenario C is that the variability of the sample results across the strata means that the true wattage (installed in the field) could be between 8.4% lower and 2.0% lower than the wattage recorded in the DUML database. Non-compliance is recorded because the potential error is greater than 5.0%.

In absolute terms the installed capacity is estimated to be 5.0 kW lower than the database indicates.

There is a 95% level of confidence that the installed capacity is between 2 kW lower to 9 kW lower than the database.

In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates.

There is a 95% level of confidence that the annual consumption is between 9,200 kWh p.a. lower to 39,000 kWh p.a. lower than the database indicates.

Scenario	**Description**
A - **Good accuracy, good precision**	This scenario applies if: (a) R_H is less than 1.05; and (b) R_L is greater than 0.95 The conclusion from this scenario is that: (a) the best available estimate indicates that the database is accurate within +/- 5 %; and (b) this is the best outcome.
B - **Poor accuracy, demonstrated with statistical significance**	This scenario applies if: (a) the point estimate of R is less than 0.95 or greater than 1.05 (b) as a result, either R_L is less than 0.95 or R_H is greater than 1.05. There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level
C - **Poor precision**	This scenario applies if: (a) the point estimate of R is between 0.95 and 1.05 (b) R_L is less than 0.95 and/or R_H is greater than 1.05 The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within +/- 5 %

Lamp description and capacity accuracy

The ballast in RAMM is not correct and is not used for submission. The correct wattages are added in the monthly report. The correct ballasts need to be in the database. This is recorded as non-compliance below.

NZTA lighting

NZTA lighting is included in the database and was checked as part of the field audit.

ICP accuracy

One item of load does not have the ICP recorded. Other items of load appear to have the correct ICPs recorded.

Location accuracy

The location details were found to be accurate. A recommendation is made in Section 2.3 to populate GPS coordinates for all items of load.

Change management process findings

Processes to track changes to the database were reviewed.

For all new connections, "as builts" are required to be submitted to council before connection can occur. These are added to RAMM once the lights have been confirmed as connected. The current reporting practice is based on a snapshot at the end of the month, which does not cater or historic changes or delayed upates.

All fault and maintenance work is controlled by HDC and conducted by McKay Electrical through "RAMM Contractor" and once each job is completed the database is updated via field PDA's.

HDC has installed 1,250 LEDs out of 1,907 total lights.

There are no festive lights connected to the street light circuits.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.1 With: Clause 15.2 and 15.37B(b) From: 01-Jul-19 To: 11-Oct-19	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. The ballasts are not recorded correctly in the RAMM database. One item of load does not have the ICP recorded Potential impact: Medium Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**

Medium	The controls are rated as moderate, because they are sufficient to ensure that changes to the database are correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
We have requested that HDC correct the database for all discrepancies found during the field audit including additional and missing lights and incorrect wattages. We have requested that HDC include the correct ballasts in the RAMM database rather than add these outside the database. We have asked for the ICP to be added for the single item of load where this was missing.	Dec 2019	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

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 the ICP has the correct profile and submission flag
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

Audit commentary

Meridian reconciles this DUML load using the DST profile. The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from RAMM and the "burn time" which is sourced from data loggers installed on the Counties and Powerco networks. Meridian supplies EMS with the capacity information and EMS calculates the kWh figure for each ICP and includes this in the relevant AV080 file. This process was audited during Meridian's reconciliation participant audit and EMS' agent audit.

The capacities supplied to EMS for August 2019 were checked and confirmed to be the same as the database.

As detailed in **section 2.4**, the ballast capacities are not recorded in RAMM but are added in the monthly report. This is recorded as non-compliance.

There is some inaccurate data within the database used to calculate submissions. This is recorded as non-compliance and discussed in **section 3.1** and **3.2**.

Submission is based on a snapshot of the database at the end of the month and does not consider historic adjustments or the fact that lights can be livened before they are entered into the database.

As recorded in Section 2.2, submission information is allocated to the incorrect ICPs due to a reporting issue. There is under submission of approx. 3,600 kWh per annum against ICP 1099570384CNB6C and over submission of the same amount against ICP 1000508887PC891. The reporting was correct during the previous audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 and 15.37B(c) From: 01-Jul-19 To: 11-Oct-19	In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates. Submission is based on a snapshot and does not consider historic adjustments The ballasts are not recorded correctly in the RAMM database. Submission is incorrectly allocated across the 2 ICPs. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	The controls are rated as moderate, because they are sufficient to ensure that changes to the database are correctly recorded most of the time. The impact is assessed to be medium, based on the kWh differences described above.

Actions taken to resolve the issue	Completion date	Remedial action status
All discrepancies and issues identified in this report have been raised with HDC for resolution. Meridian will work with HDC to ensure corrections are made to the database where identified.	31 Dec 2019	Choose an item.
Preventative actions taken to ensure no further issues will occur	**Completion date**	

CONCLUSION

The database is remotely hosted by RAMM Software Ltd. The field work and asset data capture is conducted by McKay Electrical using Pocket RAMM. HDC manage the database and Power Solutions produce the monthly wattage report, on behalf of the HDC, and provide this to Meridian on a monthly basis.

The main findings are as follows:

5. In absolute terms, total annual consumption is estimated to be 21,800 kWh lower than the DUML database indicates.
6. Submission is based on a snapshot and does not consider historic adjustments.
7. The ballasts are not recorded correctly in the RAMM database, although they are accurately added to the monthly report.
8. Submission is incorrectly allocated across the 2 ICPs.

This audit found five non-compliances and one recommendation is made. The future risk rating of 15 indicates that the next audit be completed in 12 months and I agree with this recommendation.

PARTICIPANT RESPONSE