

ELECTRICITY INDUSTRY PARTICIPATION CODE  
DISTRIBUTED UNMETERED LOAD AUDIT REPORT

VERITEK

For

MARLBOROUGH LINES DUML DATABASE  
AND GENESIS ENERGY LIMITED  
NZBN: 9429037706609

Prepared by: Rebecca Elliot

Date audit commenced: 1 August 2022

Date audit report completed: 9 September 2022

Audit report due date: 01-Oct-22

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## TABLE OF CONTENTS

Executive summary .....	3
Audit summary .....	4
Non-compliances .....	4
Recommendations .....	4
Issues .....	4
1. Administrative .....	6
1.1. Exemptions from Obligations to Comply with Code .....	6
1.2. Structure of Organisation .....	6
1.3. Persons involved in this audit.....	7
1.4. Hardware and Software .....	7
1.5. Breaches or Breach Allegations.....	7
1.6. ICP Data .....	7
1.7. Authorisation Received .....	8
1.8. Scope of Audit .....	8
1.9. Summary of previous audit .....	9
1.10. Distributed unmetered load audits (Clause 16A.26 and 17.295F) .....	10
2. DUML database requirements.....	11
2.1. Deriving submission information (Clause 11(1) of Schedule 15.3) .....	11
2.2. ICP identifier and items of load (Clause 11(2)(a) and (aa) of Schedule 15.3) .....	12
2.3. Location of each item of load (Clause 11(2)(b) of Schedule 15.3) .....	13
2.4. Description and capacity of load (Clause 11(2)(c) and (d) of Schedule 15.3) .....	13
2.5. All load recorded in database (Clause 11(2A) of Schedule 15.3) .....	14
2.6. Tracking of load changes (Clause 11(3) of Schedule 15.3) .....	15
2.7. Audit trail (Clause 11(4) of Schedule 15.3).....	16
3. Accuracy of DUML database .....	18
3.1. Database accuracy (Clause 15.2 and 15.37B(b)) .....	18
3.2. Volume information accuracy (Clause 15.2 and 15.37B(c)) .....	20
Conclusion .....	23
Participant response .....	24

## EXECUTIVE SUMMARY

This audit of **Marlborough Lines Limited's (Marlborough Lines)** Unmetered Streetlight DUML database and processes was conducted at the request of **Genesis Energy Limited (Genesis)**, 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.

An EAM database is managed by Marlborough Lines on behalf of Marlborough District Council (MDC), Port Marlborough (PMNZ) and NZTA in relation to this load with monthly reporting to Genesis. The field work, asset data capture, and database population is conducted by Marlborough Lines' staff.

The field audit was undertaken of a statistical sample of 401 items of load on 1<sup>st</sup> September 2022. This found a high level of accuracy and the database accuracy was within the required +/-5%.

The previous audit identified that ICP 0004450157ML277 had the incorrect profile of SST applied. This has been corrected on the Registry and with an effective date of 1 April 2017. I checked the submission data for July 2022 for the two ICPs associated with the MDC database using the value submitted by Genesis and the database information and confirmed the calculation for July 2022 was correct.

The audit found five non-compliances and repeats two recommendations. The future risk rating of 15 indicates that the next audit be completed in 12 months. I have considered this in conjunction with Genesis's comments and recommend that the next audit be in 12 months from the audit due date.

The late submission of the audit report is not recorded as a non-compliance as the draft audit report was provided prior to the due date and the delay has been due to the responses being late in being received.

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	11(1) of Schedule 15.3	A correction has not been made to the estimated under submission of 31,968 kWh per annum identified in the previous audit.	Moderate	Medium	4	Identified
All load recorded in the database	2.5	11(2A) of Schedule 15.3	One additional item of load found in the field of the 401 items of load sampled.	Strong	Low	1	Identified
Tracking of load change	2.6	11(3) of Schedule 15.3	Changes not tracked in EAM.	Weak	Low	3	Identified
Audit trails	2.7	11(4) of Schedule 15.3	Audit trail not visible in EAM.	Weak	Low	3	Investigating
Volume information accuracy	3.2	15.2 and 15.37B(c)	A correction has not been made to the estimated under submission of 31,968 kWh per annum identified in the previous audit.	Moderate	Medium	4	Identified
<b>Future Risk Rating</b>						<b>15</b>	

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

### RECOMMENDATIONS

Subject	Section	Description
Location of each item of load	2.3	Correct the GPS co-ordinates to ensure they are accurate.
Database accuracy	3.1	Ensure LED light descriptions contain sufficient information to confirm the correct wattage has been applied.

### 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

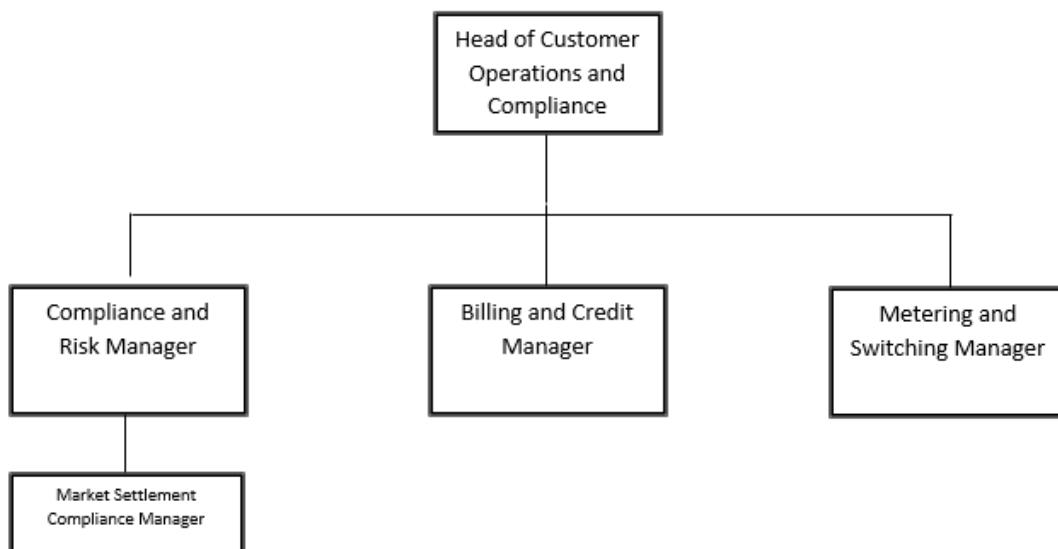
The Electricity Authority's website was reviewed to identify any exemptions relevant to the scope of this audit.

#### Audit commentary

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

### 1.2. Structure of Organisation

Genesis provided a copy of their organisational structure.



### 1.3. Persons involved in this audit

Auditor:

Name	Company	Role
Rebecca Elliot	Veritek Limited	Lead Auditor
Claire Stanley	Veritek Limited	Supporting Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Nirav Teli	DUML Data & Stakeholder Lead	Genesis Energy
Sally King	Asset Records Clerk	Marlborough Lines

### 1.4. Hardware and Software

The 'Info EAM' database is used for the management of DUML and is managed by Marlborough Lines. The database back up is in accordance with standard industry procedures. Access to the database is restricted using a login and password.

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	Profile	Number of items of load	Database wattage (watts)
0004450225ML4AC	MDC & NZTA	CST	5,320	286,840
0004450157ML277	Port Marlborough	CST	57	9,227
Total			5,377	296,067

The previous audit identified that ICP 0004450157ML277 had the incorrect profile of SST applied. This has been corrected on the Registry and with an effective date of 1 April 2017.

### 1.7. Authorisation Received

All information was provided directly by Genesis or Marlborough Lines.

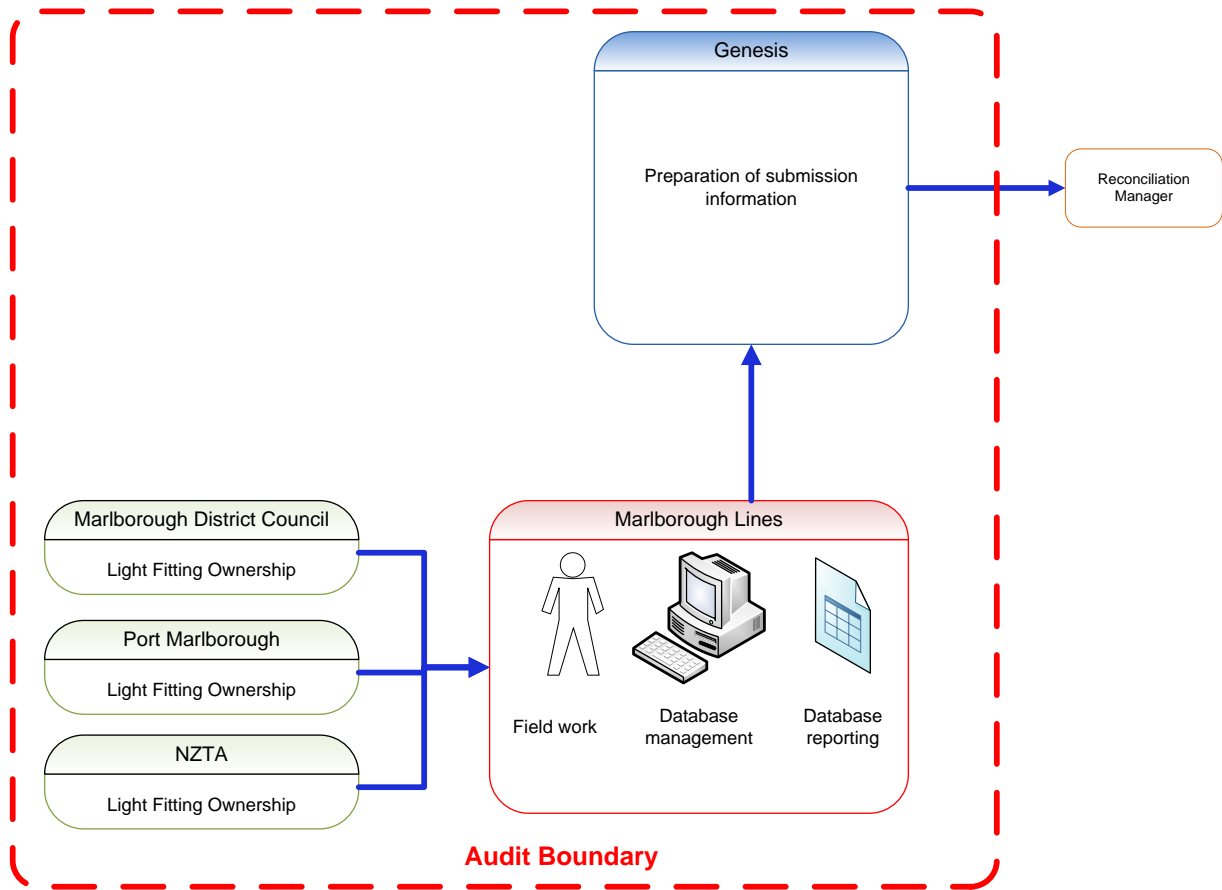
### 1.8. Scope of Audit

This audit of the Marlborough Lines database and processes was conducted at the request of Genesis, 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.

Marlborough Lines manage the installation, maintenance and database management of the DUML for MDC, NZTA and PMNZ. Reporting is provided to Genesis 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.



The field audit was undertaken of a statistical sample of 401 items of load on 1<sup>st</sup> September 2022.



## 1.9. Summary of previous audit

I reviewed the last audit report undertaken by Rebecca Elliot of Veritek Limited in November 2021. The table below records the current status of those findings.

### Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Deriving submission information	2.1	11(1) of Schedule 15.3	SST profile incorrectly applied to ICP 0004450157ML277 resulting in the incorrect burn hours being used to calculate submissions.	Cleared
			Submitted values do not match the database values resulting in an estimated under submission of 31,968 kWh per annum.	Cleared
			The monthly wattage report provided does not track changes on a daily basis and is provided as a snapshot.	Cleared
All load recorded in the database	2.5	11(2A) of Schedule 15.3	Two additional items of load found in the field of the 470 items of load sampled.	Still existing for one new item of load.
Tracking of load change	2.6	11(3) of Schedule 15.3	Changes not tracked.	Still existing
Audit trails	2.7	11(4) of Schedule 15.3	Audit trail not visible.	Still existing
Volume information accuracy	3.2	15.2 and 15.37B(c)	SST profile incorrectly applied to ICP 0004450157ML277 resulting in the incorrect burn hours being used to calculate submissions.	Cleared
			Submitted values do not match the database values resulting in an estimated under submission of 31,968 kWh per annum.	Cleared
			The monthly wattage report provided does not track changes on a daily basis and is provided as a snapshot.	Cleared

### Table of Recommendations

Subject	Section	Recommendation for Improvement	Status
Deriving submission information	2.1	Investigate the reason for the difference in the kW values found between the monthly report and the database extract provided for the audit.	Cleared
Location of each item of load	2.3	Correct the GPS co-ordinates to ensure they are accurate.	Cleared
Database accuracy	3.1	Ensure LED light descriptions contain sufficient information to confirm the correct wattage has been applied.	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**

Genesis 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. 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

Genesis reconciles the DUML load using the CST profile for ICP 0004450225ML4AC. The previous audit identified that ICP 0004450157ML277 had the incorrect profile of SST applied. This has been corrected to CST on the Registry and with an effective date of 1 April 2017.

The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from the Marlborough Lines EAM database and the “burn time” which is sourced from data loggers. The methodology is compliant.

I checked the submission data for July 2022 for the two ICPs associated with the MDC database using the value submitted by Genesis and the database information and confirmed the calculation for July 2022 was correct.

The previous audit identified a difference between the submission values and the database extract provided for the audit. I checked the July 2022 submission and found that it matched. Genesis has not carried out revisions using the updated data resulting an estimated under submission of 31,968 kWh from October 2020 to September 2021. This is recorded as a non-compliance.

The field audit indicated that the database was within the allowable +/-5% variance threshold and is therefore deemed to be accurate. This is discussed in **section 3.1**.

The monthly report provided to Genesis now includes changes that have been made through the month.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.1 With: Clause 11(1) of Schedule 15.3  From: 15-Oct-21 To: 01-Aug-22	A correction has not been made to the estimated under submission of 31,968 kWh per annum identified in the previous audit.  Potential impact: Medium  Actual impact: Low  Audit history: Multiple times  Controls: Moderate  Breach risk rating: 4		
Audit risk rating	Rationale for audit risk rating		
Medium	The controls are rated as moderate as processes to manage change capture most changes.  The impact is assessed to be medium based on the submission values detailed above.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has identified the reason due to which the volumes calculated were low and has made the required change in process to avoid this happening again. As the period where submissions need to be revised is falling outside of 14 months Genesis is unable to make the revision.		31/03/2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis has made the required change in process to correct volumes can be calculated.		31/03/2023	

## 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 DUMML database must contain:*

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

### Audit observation

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

### Audit commentary

All items of load have an ICP recorded.

### 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 DUMML database must contain the location of each DUMML item.*

### Audit observation

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

### Audit commentary

The database contains fields for the street address and GPS co-ordinates for all but 108 items of load. This has reduced from 186 in the last audit.

As noted in previous audits, some of the GPS co-ordinates are not precise in all instances e.g., one light is in the ocean but there were sufficient physical address details to make these locatable. All items of load have sufficient address details to meet the requirements of this clause.

I repeat the recommendation from the previous audit.

Description	Recommendation	Audited party comment	Remedial action
Location of each item of load	Correct the GPS co-ordinates to ensure they are accurate.	Genesis has brought this to the attention of MDC with an intent that MDC makes every effort to update accurate information	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 DUMML 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 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 fields for fitting type and lamp type in addition to a nominal lamp wattage and circuit wattage fields and all were populated for each item of load.

The accuracy of the ballast wattages used for submission are discussed in **sections 3.1** and **3.2**.

**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 401 items of load on 1<sup>st</sup> September 2022.

**Audit commentary**

The field audit discrepancies are detailed in the table below:

Street/Area	Database Count	Field Count	Lamp no. difference	No of incorrect lamp wattage	Comments
Pitchill Street	9	10	+1		1 additional 28W LED located on corner Warwick and Pitchill St
<b>Grand Total</b>	<b>5377</b>	<b>5378</b>	<b>+1</b>		

The field audit found one additional lamp of 401 items of load sampled. The accuracy of the database is discussed in **section 3.1**.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: Clause 11(2A) of Schedule 15.3 From: 15-Oct-21 To: 01-Aug-22	One additional item of load found in the field of the 401 items of load sampled. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as strong as Marlborough Lines have robust processes to ensure that changes are tracked, and this is reflected in the high level of accuracy found in the database.  The impact is assessed to be low as the database was found to be within the allowable accuracy threshold as detailed in <b>section 3.1</b> .		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has reviewed the auditors finding and have advised MDC of the discrepancy with the intent that MDC makes every effort to ensure the exceptions are rectified.		28/02/2023	Identified
Preventative actions taken to ensure no further issue will occur		Completion date	
Genesis continues to work with the council to increase accuracy levels in their database.		Continuous Improvement	

## 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

As reported in previous audits the EAM database contains a "Commission date". When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, and not the historical information showing dates of changes. The audit trail may be able to be retrieved but this is not visible as required by this clause. Marlborough Lines confirm there has been no change to this. This is recorded as non-compliance.

## Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.6 Clause 11(3) of Schedule 15.3  From: 15-Oct-21 To: 01-Aug-22	Changes not tracked in EAM. Potential impact: Low Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as weak as whilst the processes for updating the database are robust, it was not proven that the database is able to meet the requirements of the code.  The audit risk rating is low as the volume of changes is not high.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has reviewed the auditors finding and have advised MDC of requirement of visibility of tracking of change within their data base. Genesis relies on MDC to accurately maintain its database and provide information required.		28/02/2023	Identified
Preventative actions taken to ensure no further issue will occur		Completion date	
Genesis continues to work with the council to increase accuracy levels in their database.		28/02/2023	

## 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

As reported in previous audits the EAM database contains a "Commission date". When a wattage is changed in the database due to a physical change or a correction, only the record present at the time the report is run is recorded, and not the historical information showing dates of changes. The audit trail may



be able to be retrieved but this is not visible as required by this clause. Marlborough Lines confirm there has been no change to this. This is recorded as non-compliance.

**Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.7 Clause 11(4) of Schedule 15.3  From: 15-Oct-21 To: 01-Aug-22	Audit trail not visible in EAM. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are rated as weak as whilst the processes for updating the database are robust, it was not proven that the database is able to meet the requirements of the code.  The audit risk rating is low as the volume of changes is not high.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis has reviewed the auditors findings and have advised MDC of requirement of visibility of tracking of change within their data base. Genesis relies on MDC to accurately maintain its database and provide the information required.		28/02/2023	Investigating
Preventative actions taken to ensure no further issue will occur		Completion date	
Genesis continues to work with the council to increase accuracy levels in their database.		28/02/2023	

### 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	Marlborough DC, NZTA & PMNZ
Strata	The database contains items of load in Marlborough area. The processes for the management of MDC, NZTA and PMNZ items of load are the same, so I decided to place the items of load into four strata, as follows: <ol style="list-style-type: none"> <li>1. Rural,</li> <li>2. Road A - H,</li> <li>3. Road I - O, and</li> <li>4. Road P - Z</li> </ol>
Area units	I created a pivot table of the roads, and I used a random number generator in a spreadsheet to select a total of 66 sub-units.
Total items of load	401 items of load were checked.

Wattages were checked for alignment with the published standardised wattage table produced by the Electricity Authority or against LED light specifications where available.

##### Audit commentary

##### Database accuracy

A field audit was conducted of a statistical sample of 401 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	100.2%	Wattage from survey is higher than the database wattage by 0.2%
R <sub>L</sub>	100.0%	With a 95% level of confidence, it can be concluded that the error could be up to +0.9%
R <sub>H</sub>	100.9%	

These results were categorised in accordance with the “Distributed Unmetered Load Statistical Sampling Audit Guideline”, effective from 1 February 2019. The table below shows that Scenario A (detailed below) applies, and the best available estimate indicates that the database is accurate within  $\pm 5.0\%$ .

In absolute terms the installed capacity is estimated to be 1 kW higher than the database indicates.

There is a 95% level of confidence that the installed capacity is estimated to be up to 3 kW higher than the database.

In absolute terms, total annual consumption is estimated to be 2,400 kWh higher than the DUML database indicates.

There is a 95% level of confidence that the annual consumption matches the database or could be up to 11,100 kWh p.a. higher than the database indicates.

Scenario	Description
<p><b>A - Good accuracy, good precision</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) <math>R_H</math> is less than 1.05; and</li> <li>(b) <math>R_L</math> is greater than 0.95</li> </ul> <p>The conclusion from this scenario is that:</p> <ul style="list-style-type: none"> <li>(a) the best available estimate indicates that the database is accurate within <math>\pm 5\%</math>; and</li> <li>(b) this is the best outcome.</li> </ul>
<p><b>B - Poor accuracy, demonstrated with statistical significance</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of <math>R</math> is less than 0.95 or greater than 1.05</li> <li>(b) as a result, either <math>R_L</math> is less than 0.95 or <math>R_H</math> is greater than 1.05.</li> </ul> <p>There is evidence to support this finding. In statistical terms, the inaccuracy is statistically significant at the 95% level</p>
<p><b>C - Poor precision</b></p>	<p>This scenario applies if:</p> <ul style="list-style-type: none"> <li>(a) the point estimate of <math>R</math> is between 0.95 and 1.05</li> <li>(b) <math>R_L</math> is less than 0.95 and/or <math>R_H</math> is greater than 1.05</li> </ul> <p>The conclusion from this scenario is that the best available estimate is not precise enough to conclude that the database is accurate within <math>\pm 5\%</math></p>

### Lamp Wattages and Descriptions

Wattages for all items of load were checked against the published standardised wattage table produced by the Electricity Authority and found the lamp wattage including the ballast recorded in EAM are correct.

As reported in the last audit there are more than 30 different LED light types recorded in the database. The light descriptions are insufficient to confirm the correct wattage has been applied. I repeat the previous audit’s recommendation that the full light descriptions be included in the database.

Recommendation	Description	Audited party comment	Remedial action
Database accuracy	Ensure LED light descriptions contain sufficient information to confirm the correct wattage has been applied.	Genesis has brought this to the attention of MDC with an intent that MDC makes every effort to update sufficient information.	Investigating

### NZTA lighting

NZTA lights are included in the load recorded by Marlborough DC.

### Change Management

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

Marlborough Lines is the contractor for installation and maintenance of all lighting. When new subdivisions or upgrades are conducted, an “as-built” plan is provided. Lighting for new subdivisions is updated as soon as the subdivision is electrically connected and the “commissioning date” is used as the start date. Marlborough Lines carry out random field checks to confirm that the “as-built” reflects what has been installed in the field.

The fieldwork is done on a laptop in the field, and paperwork is used as a backup as required in rural areas. The technician is provided with access to all relevant information for the lamp and location details in the field. The work order comes directly from the EAM database and requires the field technician to indicate if any discrepancies are found in the field and provide the correct information. The updates in EAM are completed manually on a daily basis, and all updates are completed by the end of the month.

At the end of each month MDC extract a static report from the EAM database and do a comparison between the current month and previous months report, to identify any differences. The changes are reported to Genesis.

As detailed above the LED light descriptions are not sufficient to determine the correct wattage is recorded and I repeat the last audit’s recommendation that the full light description is used from the “as-built” drawings to update the database.

The LED rollout project is complete, and the remaining lights will be replaced as they fail with LED’s, there is no funding available currently for the NZTA lights.

Outage patrols are undertaken by Marlborough Lines on request.

### Audit outcome

Compliant

## 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, and
- checking the database extract combined with the burn hours against the submitted figure to confirm accuracy.

### Audit commentary

Genesis reconciles the DUML load using the CST profile for ICP 0004450225ML4AC. The previous audit identified that ICP 0004450157ML277 had the incorrect profile of SST applied. This has been corrected to CST on the Registry and with an effective date of 1 April 2017.

The total volume submitted to the Reconciliation Manager is based on a monthly database report derived from the Marlborough Lines EAM database and the “burn time” which is sourced from data loggers. The methodology is compliant.

I checked the submission data for July 2022 for the two ICPs associated with the MDC database using the value submitted by Genesis and the database information and confirmed the calculation for July 2022 was correct.

The previous audit identified a difference between the submission values and the database extract provided for the audit. I checked the July 2022 submission and found that it matched. Genesis has not carried out revisions using the updated data resulting an estimated under submission of 31,968 kWh from October 2020 to September 2021. This is recorded as a non-compliance.

The field audit indicated that the database was within the allowable +/-5% variance threshold and is therefore deemed to be accurate. This is discussed in **section 3.1**.

The monthly report provided to Genesis now includes changes that have been made through the month.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 Clause 15.2 and 15.37B(c)  From: 15-Oct-21 To: 01-Aug-22	A correction has not been made to the estimated under submission of 31,968 kWh per annum identified in the previous audit. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 4		
Audit risk rating	Rationale for audit risk rating		
Medium	The controls are rated as moderate as processes to manage change capture most changes. The impact is assessed to be medium based on the submission values detailed above.		
<b>Actions taken to resolve the issue</b>		<b>Completion date</b>	<b>Remedial action status</b>
Genesis has identified the reason due to which the volumes calculated were low and has made the required change in process to avoid this happening again. As the period where submissions need to be revised is falling outside of 14 months Genesis is unable to make the revision.		31/03/2023	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>		<b>Completion date</b>	
Genesis has made the required change in process to correct volumes can be calculated.		31/03/2023	

## CONCLUSION

An EAM database is managed by Marlborough Lines on behalf of Marlborough District Council (MDC), Port Marlborough (PMNZ) and NZTA in relation to this load with monthly reporting to Genesis. The field work, asset data capture, and database population is conducted by Marlborough Lines' staff.

The field audit was undertaken of a statistical sample of 401 items of load on 1<sup>st</sup> September 2022. This found a high level of accuracy and the database accuracy was within the required +/-5%.

The previous audit identified that ICP 0004450157ML277 had the incorrect profile of SST applied. This has been corrected on the Registry and with an effective date of 1 April 2017. I checked the submission data for July 2022 for the two ICPs associated with the MDC database using the value submitted by Genesis and the database information and confirmed the calculation for July 2022 was correct.

The audit found five non-compliances and repeats two recommendations. The future risk rating of 15 indicates that the next audit be completed in 12 months. I have considered this in conjunction with Genesis's comments and recommend that the next audit be in 12 months from the audit due date.

The late submission of the audit report is not recorded as a non-compliance as the draft audit report was provided prior to the due date and the delay has been due to the responses being late in being received.

## PARTICIPANT RESPONSE

It is Genesis intention to attend to the non-compliances raised in the audit. Genesis continues to build on their relationship with the council & continues to work with the council to increase accuracy levels in their database.