VERITEK

Electricity Industry Participation Code Audit Report

For

Genesis Energy Limited

Marlborough District Council
Marlborough NZTA & Port of Marlborough

Distributed Unmetered Load

Prepared by Rebecca Elliot – Veritek Ltd

Date of Audit: 16&17/08/17

Date Audit Report Complete: 5/05/18

Executive Summary

This audit of the Marlborough District Council (MDC), Port of Marlborough and Marlborough NZTA DUML 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, which became effective on 01/06/17.

Marlborough Lines manage the installation, maintenance and database management of all Marlborough District Council, NZTA and Port Marlborough NZ Ltd (PMNZ) DUML on their network. They provide a monthly report to Genesis.

Analysis of the field audit found 93.9% of the database data in the field. This will result in an estimated over submission by 136,100 kWh per annum. Analysis of the database identified 1,049 items of load had a ballast discrepancy when compared to the standardised wattage table. The incorrect ballasts indicate an estimated 17,923.25 kWh over submission per annum. The combined estimated over submission for Marlborough DC & Port & NZTA is 154,023.25kWh per annum.

The audit found seven non-compliances and makes one recommendation. The future risk rating of 36 indicates that the next audit be completed in three months. The matters raised are detailed below:

Table of Non-Compliance

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	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum.	Weak	High	9	Investigating
ICP Identifier	2.2	11(2)(a) of Schedule 15.3	ICPs not recorded against each item of load.	Moderate	Low	2	Investigating
Location of each item of load	2.3	11(2)(b) of Schedule 15.3	490 items of load not locatable.	Moderate	Low	2	Investigating
All Load recorded in the Database	2.5	11(2A) of Schedule 15.3	Two lights found in the field not recorded in the database.	Moderate	Low	2	Investigating

Subject	Section	Clause	Non-compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Tracking of Load Changes	2.6	Clause 11(3) of Schedule 15.3	Festive lighting recorded as connected all year.	Weak	Low	3	Investigating
Database Accuracy	3.1	Clause 15.2 & 15.37(b)	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum.	Weak	High	9	Investigating
Volume Information Accuracy	3.2	Clause 15.2 & 15.37(c)	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum.	Weak	High	9	Investigating
					Future Risk Rating	36	
					Indicative Audit Frequency	3 months	

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

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
Tracking of load change	2.6	11(3) of schedule 15.3	Conduct a field audit to confirm new lights installed match the "as builts" submitted.	

Persons Involved in This Audit:

Auditor:

Rebecca Elliot
Veritek Limited
Electricity Authority Approved Auditor

Other personnel assisting in this audit were:

Name	Title	Company
Craig Young	Excellence Leader - Reconciliation	Genesis Energy
Jason Null	Contracts Manager	Marlborough Lines
Robert Miller	Title unknown	Marlborough Lines
Sally King	Asset Records Clerk	Marlborough Lines

Contents

1.1 List of ICPs

The following ICPs are relevant to the scope of this audit:

ICP	Description	Profile	NSP	No. of items of load
0004450225ML4AC	MDC & NZTA	SST	BLN0331	4,973
0004450157ML277	Port Marlborough	SST	BLN0331	64

1.2 Exemptions from Obligations to Comply with the code (Section 11 of Electricity Industry Act 2010)

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.

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

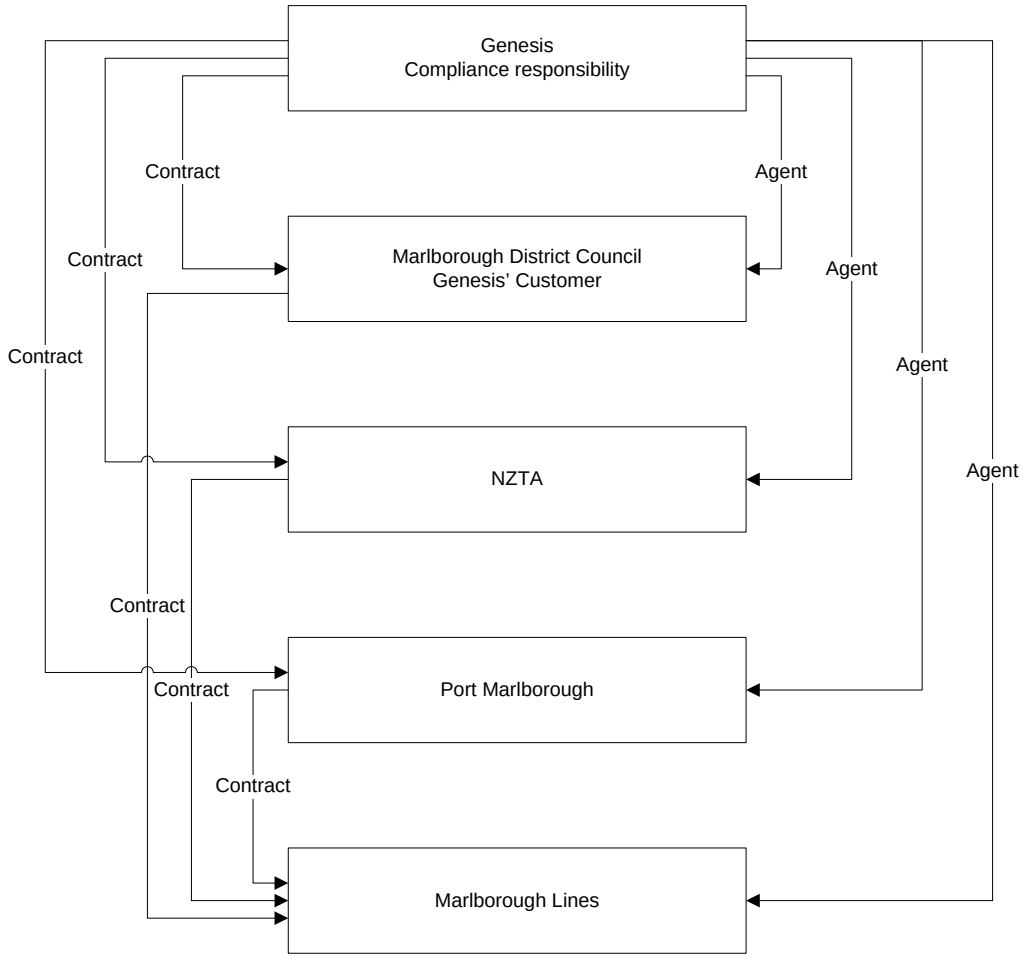
1.3 Supplier List

Marlborough Lines is considered an agent under this clause and Genesis clearly understands that the use of agents does not release them from their compliance obligations.

The relationship between Genesis and Marlborough Lines is complicated by the fact that the contractual relationship exists between Genesis and MDC, NZTA & PMNZ and between these parties and Marlborough Lines. There is no direct contractual relationship between Genesis and Marlborough Lines.

This is not seen as an issue, if the processes for updating the database are robust and have appropriate validation controls in place. This is discussed further in **Section 3.3**.

The diagram below shows the relationships from a compliance and contractual perspective.



1.4 Hardware and Software

The database used by Marlborough Lines is commonly known as "Info EAM". This has been used since October 2015.

Marlborough Lines confirmed that the database back-up is in accordance with standard industry procedures, which includes servers at two locations with backup tapes rotated between the different premises. 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 Distributed unmetered load audits (Clauses 16A.26 & 17.295F)

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 particular database within the required timeframe. Compliance is confirmed.

1.7 Separate distributed unmetered load audit (Clause 16A.8(4))

Retailers must ensure that DUML audits are reported in a separate audit report.

Audit Observation
Genesis has requested Veritek to undertake this street lighting audit.

Audit Commentary
The audit report for this DUML database is separate from other audit reports. Compliance is confirmed.

1.8 Summary of Previous Audit

Genesis provided a copy of the report of the previous audit conducted in 2016 by Steve Woods of Veritek Limited. Two non-compliances were found. The current status of this is detailed below:

Table of Non-Compliance

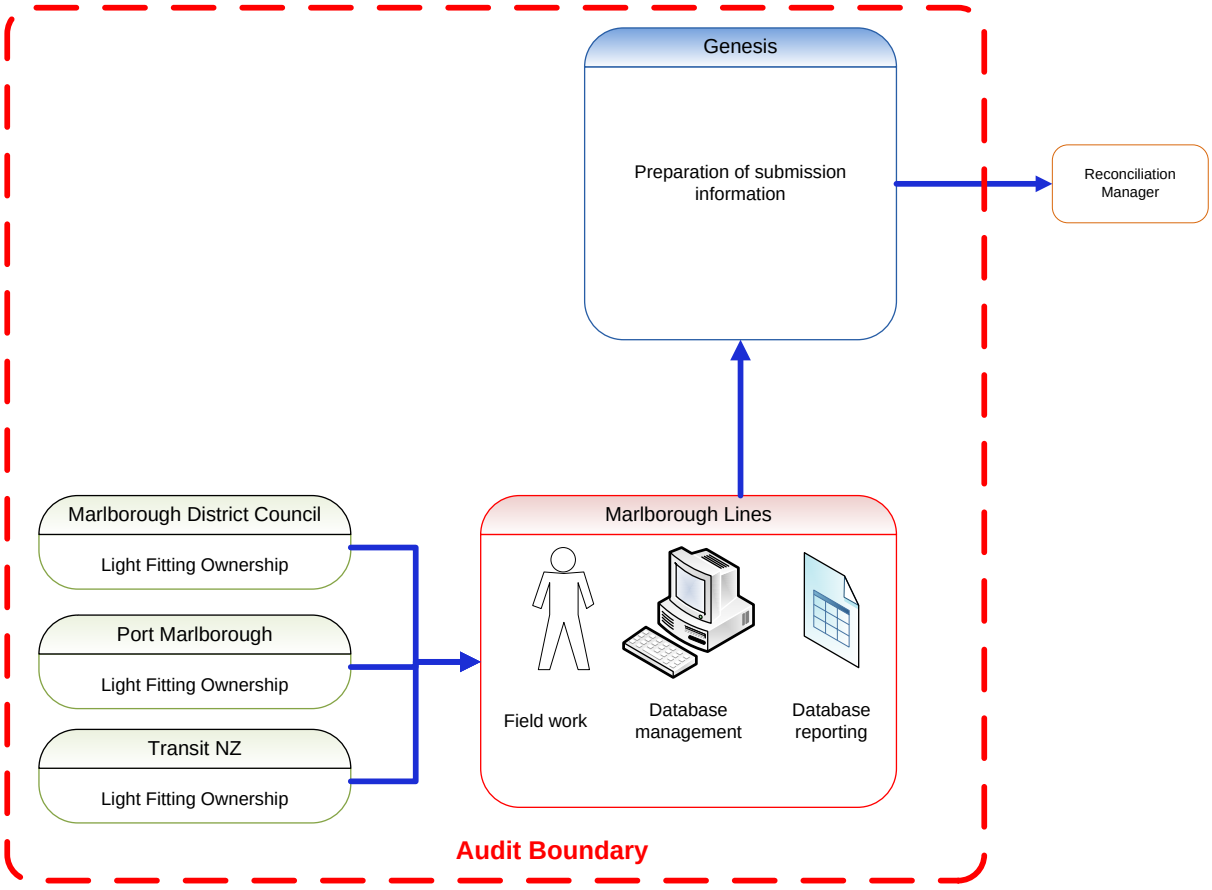
Subject	Section	Clause	Non compliance	Status
Capacity of load	2.2.4	11(3) of schedule 15.3	Ballast wattage in the report but not actually in the database.	Cleared
Tracking of load changes	2.3	11(3) of schedule 15.3	Examine the Christmas lighting processes to ensure the lighting is appropriately recorded when it is on. Check the accuracy of the festoon lighting quantities.	Still existing Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Remedial Action
			Nil	

1.9 Scope of Audit

Marlborough Lines manage the installation, maintenance and database management of the DUML for Marlborough District Council (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 audit was conducted in accordance with the audit guidelines for DUML audits version 1.1.

The field audit was undertaken of 306 lights using the statistical sampling methodology. The field selection included five different population groups of:

- new
- urban
- rural
- NZTA
- Port Marlborough Ltd.

There were 23 blocks selected across the population groups.

1.10 Data Transmission (Clause 20 of Schedule 15.2)

The monthly reporting from Marlborough Lines to Genesis is by way of email attachment that is zipped.

2. DUML database requirements

2.1 Deriving Submission Information (Clause 11(1) of Schedule 15.3)

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. The DUML database was examined to confirm it was up to date.

Audit Commentary
Genesis reconciles this load under the SST profile using the monthly report provided by Marlborough Lines. Genesis derives the hours of operation from data logger. I checked the calculation for the month of August and confirmed compliance.

As detailed in **section 3.1,** the DUML database auditing tool provided a result indicating the field data was 93.9% of the database data. This will result in an estimated over submission of 136,100 kWh per annum.

As detailed in **section 3.1**, analysis of the database identified 1,049 items of load had a ballast discrepancy when compared to the standardised wattage table. The incorrect ballasts indicate an estimated 17,923.25 kWh over submission per annum.

Non-compliance	Description
Audit Ref: 2.1 With: 11(1) of schedule 15.3 From: entire audit period	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum. Potential impact: High Actual impact: High Audit history: None Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**
High	Controls are rated as weak due to the variances found from the field audit and the incorrect ballasts used for submission. The audit risk rating is high due to the volume of over submission occurring.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis will request that the data supplied be updated to reflect the correct ballasts.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will validate the ballasts as best as possible, Genesis will advise database administrator of any corrections required.	10/2018	

2.2 ICP Identifier (Clause 11(2)(a) of Schedule 15.3)

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 all ICPs were recorded against each item of load.

Audit Commentary

The analysis found that the ICP is not populated against each item of load. The only ICPs populated are those that related to private lights and these are excluded in the monthly reporting to Genesis. There is only one NSP, and only one ICP per NSP per customer and the owner is identified in the database per item of load, however this is recorded as non-compliance.

Non-compliance	Description
Audit Ref: 2.2 With: 11(2)(a) of Schedule 15.3 From: entire audit period	ICPs not recorded against each item of load. Potential impact: Low Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as moderate and the audit risk rating is low, as there is only one NSP and only one ICP per customer and the light owner is recorded against each item of load.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis have requested that each item of load within the database have an ICP accurately assigned based on nsp.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will advise of any missing information found in the information delivered.	10/2018	

2.3 Location of Each Item of Load (Clause 11(2)(b) of Schedule 15.3)

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. This can also include GPS co-ordinates.

Audit Commentary

The database contains a reference to the nearest street address. 490 items of load did not have the nearest street address details recorded, or any details in the "vicinity" field. This is because the "vicinity" field in the old database (called WASP) was too long to transfer due to the character limit in the new SL Vicinity system. This is recorded as non-compliance.

Non-compliance	Description
Audit Ref: 2.3 With: 11(2)(b) of Schedule 15.3 From: entire audit period	490 items of load not locatable. Potential impact: Low Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	The controls are rated as moderate as the vicinity details are still retrievable in the previous WASP system for these historic items of load. The audit risk rating is low, as this affects only 1% of the total database and is an historic issue.		
Actions taken to resolve the issue		Completion date	Remedial action status
Genesis have requested that each item of load within the database have an ICP accurately assigned based on nsp.		10/2018	Investigating
Preventative actions taken to ensure no further issues will occur		Completion date	
Genesis will advise of any missing information found in the information delivered.		10/2018	

2.4 Description of Load Type (Clause 11(2)(c) & (d) of Schedule 15.3)

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 including any ballast or gear wattage has been applied correctly and that it aligns with the published standardised wattage table produced by the Electricity Authority.

Audit Commentary

The database contains a field for lamp type and this is populated appropriately. The database contains two fields for wattage, firstly the manufacturers rated wattage and secondly the "circuit wattage". The "circuit wattage" is expected to be a calculated figure, which accounts for any variation from the rated wattage and includes losses associated with ballasts. These were checked and found all were populated. There were some errors in ballasts and some unusual lamp wattages that need to be confirmed. This is recorded as non-compliance in **section 3.1**. Compliance is confirmed for this clause.

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

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 306 lights using the statistical sampling methodology.

Audit Commentary

The field audit findings are detailed in the table below:

Street	Field count	Network Marlborough database count	Light count differences	Wattage recorded incorrectly	Comments
New - Blenheim					
Camborne Cres	7	7			
Westwood Subdivision	10	10			
Battys Road	5	5			
Birchwood Ave	7	7			
Urban - Havelock					
Cook Street	4	4			
Rose Street	7	5	+2		2 additional lights found in the field.
Howick Street	7	7			
Grant Place	1	1			
Douslin Place	4	4			
Alma Street	14	14			
Oudenarde Street	3	3			
Havelock Street	20	20			
Fairbourne Drive	1	1			
Inkerman Street	19	19			
Olwyn Place	3	3			
Goodman Street	4	4			
South Street	11	11			
Parker Street	3	3			
McLauchlan Street	4	8	-2		2 less lights found in the field
Clouston Gardens	3	3			
Balmoral Mews	4	4			
Kensington Place	9	13	-4		
Nottinghill Drive	10	15	-5		
Fyffe Street	9	9			
Hammond Place	5	5			
Liverpool Street	11	11			
Moana View Road	14	15	-1		1 less light found in the field
Matai Place	1	1			
Wellington Street	6	14	-8		8 less lights found in the field
Otago Street	7	7			
Rural					
Ferry Road	8	8			
Gouland Road	4	4			
Dodson Street	1	1			
March Street	2	2			

Street	Field count	Network Marlborough database count	Light count differences	Wattage recorded incorrectly	Comments
Nursery Street	2	2			
Isobel Place	3	3			
Pembers Road	1	1			
Hunters Road	1	1			
Blind Creek Road	1	1			
Moenui Road	4	4			
Queen Charlotte Dr	2	2			
NZTA					
SH1 (Kaparu Rd area)	3	3			
SH1 (Ward Beach Rd area)	3	3			
SH1 (Awatere Bridge area)	5	5			
SH6 (Camerons Rd area)	3	4	-1		1x 150W SON not located in the field
SH6 (Mahers Rd area)	2	2			
Port of Marlborough					
Havelock Marina entrance	3	3			
Ngati Kuia Dr	7	7			
Hura Kopapa Cres	4	4			
Rangitane Dr	5	5			
Picton Marina	0	8	-8		8 lights unable to locate - insufficient location description
TOTAL	277	306	33		

The field audit found 33 light discrepancies. The accuracy of the database is assessed in **section 3.1**. There were two lights missing from the database, therefore not all load is recorded in the database as required by this clause and this is recorded as non-compliance below.

Non-compliance	Description
Audit Ref: 2.5 With: 11(2A) of Schedule 15.3 From: entire audit period	Two lights found in the field not recorded in the database. 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 as the tracking of load changes will mitigate risk most of the time, but the field audit found that there is room for errors to occur. The audit risk rating is low, as there were only two lights out of a sample of 306 or 0.006% of the sample checked found to be missing from the database.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis have requested that each item of load within the database have an ICP accurately assigned based on nsp.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will advise of any missing information found in the information delivered.	10/2018	

2.6 Tracking of Load Changes (Clause 11(3) of Schedule 15.3)

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

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 and this is used to populate the database. Lighting for new subdivisions is energised as soon as the subdivision is energised. The notification period for streetlighting appears to be within approx. one month based on a sample checked during the audit. Light numbers are assigned based on "as builts" in the database but are marked as NYI "not yet in service". Actual locations are recorded once the final "as built" is received. No specific field checks are done in relation to these and I recommend that a field audit is carried out to confirm that the "as builts" reflect what has been installed in the field. No errors were found with the new items of load checked in the field audit.

Recommendation	Description	Audited party comment	Remedial action
Regarding: Clause 11(3) of schedule 15.3	Conduct a field audit to confirm new lights installed match the "as builts" submitted.	Genesis will request a review of this process.	Investigating

The processes were reviewed for ensuring that changes in the field are notified through to Marlborough Lines. A database check is included as part of the lamp replacement process. The job sheet comes directly from the EAM database and requires the field crew to indicate if any discrepancies are found and need to be updated. I viewed a sample of job sheets during the audit to confirm the process.

An LED rollout for council to replace the existing lights is under discussion at the council. Some lights will be replaced with LED but this depends on lighting parts available for the lamp in question. Outage patrols are conducted on a periodic basis for MDC, Port and NZTA lights. The MDC patrols are every three months for main roads on a rolling basis and for NZTA these are every month.

As reported in the previous audit, Christmas lighting is used in Blenheim. These are in the form of decorative festoon lights with white lamps during the year and coloured lamps during the Christmas season. Some of the festoons are on all year round and others are only connected during the Christmas season. I recommend the underlying processes are examined to ensure all Christmas lighting is appropriately recorded for the period it is on. I also recommend this opportunity is used to confirm the accuracy of the festoon lighting quantities. I was unable to determine which items of load are only connected for part of the year, therefore I cannot calculate the submission impact but it was indicated that the volume of lights in this category is small. Non-compliance is recorded in relation to the festive lighting that is recorded as connected all year but is only connected during the Christmas period.

Non-compliance	Description
Audit Ref: 2.6 With: 11(3) of Schedule 15.3 From: entire audit period	Festive lighting recorded as connected all year. Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are rated as weak as the festive lighting is not recorded correctly and there is no process to manage this in the database. The audit risk rating is low, as the volume of lights connected throughout the year is small.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis have requested that each item of load within the database be tracked appropriately.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will advise where possible of any potential issue, however we rely on contacted and any 3rd parties to ensure changes are accurately noted.	10/2018	

2.7 Audit Trail (Clause 11(4) of Schedule 15.3)

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

Marlborough Lines info-EAM system records each action undertaken by the operator recording all additions and changes to the database information. Compliance is confirmed.

3. Accuracy of DUML database

3.1 Database Accuracy (Clause 15.2 & 15.37(b))

The 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 & PMNZ
Strata	The database contains items of load in Marlborough area. The area has four distinct sub regions of Marlborough urban and rural, NZTA and PMNZ. The processes for the management of MDC, NZTA and PMNZ items of load are the same, but I decided to place the items of load into five strata, as follows: 1. New 2. Urban 3. Rural 4. NZTA 5. Port Marlborough Ltd.
Area units	I gridded a geographical map for each population group and then selected 23 blocks containing 51 roads proportionally across the different strata.
Total items of load	306 items of load were checked.

Audit Commentary

The DUML database auditing tool provided a result indicating the field data was 93.9% of the database data. This will result in an estimated over submission by 136,100 kWh per annum.

I checked the wattages and ballasts being applied and found 1,049 items of load had a ballast discrepancy when compared to the standardised wattage table. The incorrect ballasts indicate an estimated 17,923.25 kWh over submission per annum.

This is detailed in the table below:

Row Labels	3.8	9	14	15	18	20	22	23	25	26	58	59.4	62	90	99	100	114	172	250	279	500	Total lights	Correct wattage	Database wattage	Correct wattage	Difference
Compact Fluoro																										
23								13														13	TBC			
Compact Fluoro BC																										
18-20					9																	9	TBC			
Compact Fluoro ES																										
18-20					2																	2	TBC			
23								3														3	TBC			
Dulux D fluoro																										
13					7																	7	TBC			
18										6												6	TBC			
Dulux L fluoro																										
18						61																61	TBC			
Dulux Mini-twist fluoro																										
11			6																			6	TBC			
Dulux S fluoro																										
9				8																		8	TBC			
Elliptical M/H																										
100																12						12	114	1200	1368	168
Fluoro Tube																										
20											2											2	29	116	58	-58
GES Elliptical SON																										
150																		194				194	168	33368	32592	-776
220																			4			4	TBC			
250																				38		38	278	10602	10564	-38
50													7									7	66	434	462	28
70														3			1					4	83	384	332	-52
GES Tubular SON																										
150																		431				431	168	74132	72408	-1724
250																				121		121	278	33759	33638	-121
70														236								236	83	21240	19588	-1652
MV S/B																										
500																					1	1	530	500	530	30
Sox SON																										
18									3													3	24.5	75	73.5	-1.5
																							Total watts			-4196.5
																							Annualised kWh			- 17,923.25

The combined estimated over submission for Marlborough DC, Marlborough NZTA & Marlborough Port is 154,023.25kWh per annum.

Non-compliance	Description
Audit Ref: 3.1 With: 15.2 & 15.37(b) From: entire audit period	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum. Potential impact: High Actual impact: High Audit history: None Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**
High	Controls are rated as weak due to the variances found from the field audit and the incorrect ballasts used for submission. The audit risk rating is high due to the volume of over submission occurring.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis will request that the data supplied be updated to reflect the correct ballasts.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will validate the ballasts as best as possible, Genesis will advise database administrator of any corrections required.	10/2018	

3.2 Volume Information Accuracy (Clause 15.2 & 15.37(c))

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

Audit Commentary

Genesis reconciles this load under the SST profile using the monthly report provided by Marlborough Lines. Genesis derives the hours of operation from data logger. I checked the calculation for the month of August and confirmed compliance.

As detailed in **section 3.1,** the DUML database auditing tool provided a result indicating the field data was auditing tool provided a result indicating the field data was 93.9% of the database data. This will result in an estimated over submission by 136,100 kWh per annum.

As detailed in **section 3.1**, analysis of the database identified 1,049 items of load had a ballast discrepancy when compared to the standardised wattage table. The incorrect ballasts indicate an estimated 17,923.25 kWh over submission per annum.

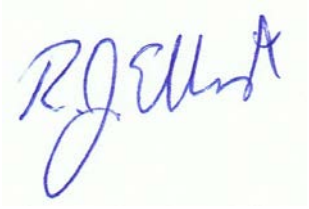
Non-compliance	Description
Audit Ref: 3.2 With: Clause 15.2 & 15.37(c) From: entire audit period	Accuracy ratio is 93.9% indicating over submission of 136,100 kWh per annum. 1,049 items of load with the incorrect ballast applied indicating over submission of 17,923.25 kWh per annum. Combined estimated over submission of 154,023.25kWh over submitted per annum. Potential impact: High Actual impact: High Audit history: None Controls: Weak Breach risk rating: 9
Audit risk rating	**Rationale for audit risk rating**
High	Controls are rated as weak due to the variances found from the field audit and the incorrect ballasts used for submission. The audit risk rating is high due to the volume of over submission occurring.

Actions taken to resolve the issue	Completion date	Remedial action status
Genesis have requested that each item of load within the database have an ICP accurately assigned based on nsp.	10/2018	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Genesis will advise of any missing information found in the information delivered.	10/2018	

4. Conclusions

Analysis of the field audit found 93.9% of the database data in the field. This will result in an estimated over submission by 136,100 kWh per annum. Analysis of the database identified 1,049 items of load had a ballast discrepancy when compared to the standardised wattage table. The incorrect ballasts indicate an estimated 17,923.25 kWh over submission per annum. The combined estimated over submission for Marlborough DC, Marlborough NZTA & Port is 154,023.25kWh per annum.

The audit found seven non-compliances and makes one recommendation. The future risk rating of 36 indicates that the next audit be completed in three months.



Rebecca Elliot
Veritek Limited
Electricity Authority Approved Auditor

5. Genesis Energy Comments