



ORGANISATION AUDIT REPORT
Toitū carbonreduce certification programme
Verification



Organisation:
Lyttelton Port Company Limited

Lead Auditor	Pieter Fransen
Team members	Katrina Pipe
Verification firm	Toitū Envirocare
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Report date	11 November 2022
Report reviewed by	Billy Ziemann, Toitū Envirocare, 11 May 2023

AUDIT OBJECTIVES

The objective of the audit was to determine if the organisation's GHG measurement (emissions data and calculations), GHG emissions management and reductions and marketing meets the criteria for Programme certification.

RESPONSIBILITIES

The responsible party is responsible for the preparation and fair presentation of the GHG statement in accordance with the criteria.

The verifier is responsible for expressing an opinion on the GHG statement based on the verification activities undertaken.

AUDIT CRITERIA AND SCOPE

The audit criteria and scope are detailed in the following table:

Audit criteria	Programme Technical Requirements 3.1, Certification Mark Guide v 3.0, Technical requirements Audit v3.0, ISO 14064-1:2018, ISO 14064-3:2019
Audit date	06/10/2022
Reporting year	01/07/2021 - 30/06/2022
Base year	01/07/2017 - 30/06/2018
Consolidation methodology	Operational control
Materiality threshold	5%
GHG statement (certification claim)	Toitū carbonreduce organisation certified: Lyttleton Port Company Limited. Toitū carbonreduce certified means measuring emissions to ISO 14064-1:2018 and Toitū requirements; and managing and reducing against Toitū requirements.
Intended users	Christchurch City Holdings Limited
Registered office address	Waterfront House, 37-39 Gladstone Quay, Lyttleton, Christchurch, 8082, New Zealand
Locations visited	None
Audit Type	Verification only
Activities undertaken remotely	Planning, Audit, Reporting

CONCLUSION

The following total emissions have been verified:

Emissions summary by scopes	All market-based emissions	Mandatory Programme Boundary	Additional emissions	All location-based emissions	Units
Category 1	8,843.26	8,843.26	0.00	8,843.26	tCO ₂ e
Category 2*	0.00	0.00	0.00	1,751.41	tCO ₂ e
Category 3	694.49	694.49	0.00	694.49	tCO ₂ e
Category 4	299.25	294.55	4.71	299.25	tCO ₂ e
Total inventory:	9,837.00	9,832.29	4.71	11,588.41	tCO₂e
Emissions intensity:	60.82	60.79	0.00	0.00	tCO ₂ e/\$M. ¹

* Market-based emission

An assessment of materiality was made against the defined threshold. From this analysis it is concluded that the stated emissions are free from material error.

This is the fifth year of reporting under the Toitū carbonreduce programme. An absolute reduction in Category 1 and 2 emissions of 1,300.42 tCO₂e has occurred against base year. A reduction in emissions intensity (for Category 1, 2 and mandatory Category 3 and 4 emissions) 6.88 tCO₂e/\$M has been achieved based upon a 5-year rolling average, adjusted for inflation.

Lyttleton Port Company Limited consumed 14,584,570.13 kWh of electricity in the report period. As Lyttleton Port Company Limited Purchased Renewable Energy Certificates (REC) from a hydro-electricity generator, for all its power usage, it can use a '0' emission factor that reflects the electricity generated from that renewable source. Using the market-based method (which incorporates a residual supply-mix emission factor) total electricity emissions equate to 0 tCO₂e. If the location-based method had been used for all electricity (i.e., the grid average emissions factor) electricity emissions would equate to 1,751.41 tCO₂e.

SCOPE AND BOUNDARIES

The scope of the emissions inventory includes all activities within the operational boundaries of Lyttleton Port Company Limited.

Activities excluded from inventory include but are not limited to:

- General Operations - Refrigerants
- Courier - transport fuel
- Project Management Office - construction

Reasons for exclusion are *de minimis* and level of control or influence.

¹ Not adjusted for inflation. Adjusted values available upon request.

VERIFICATION PROCEDURES

Verification evidence-gathering procedures for the stated emission sources are as follows:

Verification Level	Emissions sources
<p>Detailed review: Verification from reported emissions back to actual source data in accordance with the appropriate data sampling protocols (checking supplier or other source data, calculations, scope and boundaries of data, date ranges, emissions factors and key assumptions). The extent to which the verification was conducted varied depending on level of controls noted at the emission source level.</p>	<p>Diesel use Electricity</p>
<p>Limited review (Sense checks): Professional judgment that the reported emissions are of the correct order of magnitude; that all emissions factors are correct; that stated <i>de minimis</i> sources are appropriately justified. The extent to which the verification was conducted varied depending on level of controls noted at the emission source level.</p>	<p>Incineration of clinical waste Air travel domestic (average) Air travel short haul (econ) CO2 Diesel Diesel Electricity distributed T&D losses Electricity Freight Road (estimated total CO2e) Petrol premium Petrol regular Rental car spend (Passenger vehicles - default age) Taxi (regular) Waste disposal recycling of Paper Waste landfilled LFGR Mixed waste Water supply Water supply Diesel Electricity distributed T&D losses Electricity Petrol regular Waste disposal recycling of Paper Waste landfilled LFGR Mixed waste Water supply Water supply Air travel domestic (average) Air travel long haul (business) Air travel short haul (econ) Diesel Electricity distributed T&D losses Petrol regular Petrol stationary commercial Taxi (regular) Waste disposal recycling of Paper Waste landfilled LFGR Mixed waste Water supply Water supply Air travel domestic (average) Air travel long haul (business) Air travel short haul (econ) Air travel short haul b/f class Diesel commercial Diesel Electricity distributed T&D losses Electricity Freight Road van (average)</p>

Verification Level	Emissions sources
	Petrol premium Petrol regular Rental car spend (Passenger vehicles - default age) Taxi (regular) Waste disposal recycling of Paper Waste landfilled LFGR Mixed waste Water supply Water supply Air travel domestic (average) Electricity distributed T&D losses Electricity Air travel CO2 gas use Diesel commercial Electricity & distributed T&D losses Freight Rail Freight Road LPG stationary commercial Petrol use Rental car use Taxi use Waste disposal recycling of Paper Waste landfilled LFGR Mixed waste Water supply

AUDIT SUMMARY

The audit was conducted in accordance with the Programme Verification Guidelines including ISO 14064-3:2019 and the Verification and Sampling Plan.

As part of the audit, the below criteria/documents were reviewed:

Criteria/documents	Status
Organisational boundaries	Meets scheme requirements.
Application of the accounting principles	Meets scheme requirements.
Emissions Inventory and Management report: part 1	Meets scheme requirements.
Emissions Inventory and Management report part 2	Meets scheme requirements.
Use of the Toitū carbonreduce programme logo	Meets scheme requirements.
The requirement to maintain a complaints procedure	Meets scheme requirements.
Purchase of renewable energy certificates meets programme criteria for target setting/offsetting	Yes
Success of remote audit process (where relevant)	Where audit activities have been undertaken using remote/ICT based approaches, it is confirmed that the methods used allowed all relevant audit activities to be undertaken effectively.

A total of 2 non-conformances, 10 minor non-conformances and 2 observations were raised during this visit. Full details of the findings are given in the findings log below.

Using our Data Quality Assessment tool for analysing data against completeness and assumed uncertainty an inventory “quality” can be classified as follows:

- High
- Good
- Fair
- Poor

From the analysis conducted your inventory is classified as: High

Certification to Toitū carbonreduce programme “certified organisation” is recommended. This is not subject to any further client actions.

CONCLUSION

Please refer to the separate Audit Opinion document for further information. The certification claim, along with the assurance level and any qualifications raised summarises the result of the audit process.

Level of Assurance	Reasonable.
Qualifications	The opinion is unmodified.

FINDINGS LOG

Date issued:	7/10/2022
Lead Auditor:	Pieter Fransen
Auditor:	Katrina Pipe
Company issued to:	Lyttleton Port Company Limited

A finding marked NCR must be corrected before audit can be closed out, unless otherwise approved by the Programme
A finding marked mNCR is not required to be corrected for this verification, but may need to be addressed/checked for your next inventory, or it may become a NCR. You may voluntarily correct a mNCR for completeness
A finding marked Obs is an observation or recommendation from the verifier that may be helpful to you
--- corrective actions are expected to be closed out within 15 days of the date raised---

Ref #	Issue	Status	Type	Comments / Agreed Corrective Actions	Date closed	Evidence sighted to close out the issue where corrective action required.
NCR1	Freight - Port to Midland: MLW report provided with km for fills and L used. Total is correct, but incorrect unit/EF used. Material difference 1.67%	Closed	NCR	Please update in emange using litres of diesel used.	11/11/2022	Inventory updated
NCR2	Revenue - differs to amount reported in annual report	Closed	NCR	Please update to 161.74 \$M	03/11/2022	Updated in emange
mNCR1	IMR: parts incomplete or could be improved include – Availability - (of report to relevant intended users or interested parties) Management involvement - monthly dashboard updates could be added Performance against plan - no information provided yet. Could transfer completed projects in Table 8 to Table 6	Closed	NCR	Strongly recommend the IMR be updated as much as possible especially Tables 7, 8 & 15.	01/11/2022	Majority closed out - see mNCR9 for remaining items

Ref #	Issue	Status	Type	Comments / Agreed Corrective Actions	Date closed	Evidence sighted to close out the issue where corrective action required.
	<p>Carbon reduction targets (listed) - could be transferred to Table 7</p> <p>Table 7 Reduction targets - some KPIs appear to be absolute, complete intensity and/or absolute target amounts (tCO2/\$M or #containers, L or kg respectively)</p> <p>Table 8 Projects to reduce - update completion dates (advance due dates if relevant or transfer to Table 6); complete co-benefits, consequences, Actions to minimise (if applicable)</p> <p>Table 10 KPIs - add metrics notes in section 2.7 (e.g. For Container terminal - tCO2/#containers moved)</p> <p>Table 13 - confirm leakage of refrigerants is an actual activity; add supplier info to Cat 1 & 2 activities/check others</p> <p>Table 14 - Excluded emissions - not yet completed</p>					
mNCR2	Air travel - total verified differs to total reported for all classes of travel. Only domestic travel class evident in emanage as upload file for emanage did not have short or long-haul travel coded in. Immaterial difference 0.06%, mainly a classification/data management issue.	Open	mNCR	Update in emanage for Domestic ANZ = 147375 pkm, HoT=1492 pkm; Short haul business HOT = 733 pkm, economy - ANZ = 35,889 pkm, HOT=9827 pkm; Long haul HOT = 35,314 pkm		Different amounts entered to that verified - still immaterial
mNCR3	Water supply - Amounts reported relate to the prior year.	Open	mNCR	To obtain more up to date data next year.		
mNCR4	Freight - City depot to Port activity report provided. 4 emails detailing monthly litre usage reported by NZExp. Error in unit and emission factor used. Immaterial difference 0.27%	Closed	mNCR	Suggest changing units to L and ensure Diesel fuel emission factor used.	11/11/2022	Inventory updated

Ref #	Issue	Status	Type	Comments / Agreed Corrective Actions	Date closed	Evidence sighted to close out the issue where corrective action required.
mNCR5	Freight Corporate - NZ Courier report total tkm reported includes van, truck, air, & ferry. While correct there are separate emission factors for each type of transport. Noted that NZC calculated kgCO ₂ e = 1,358. Immaterial difference 0.001%	Open	mNCR	Option is to use the NZC calculated kgCO ₂ e =1350 amount, or calculate emission using emission factors for each activity (tkm for each of van, truck, air, ferry)		
mNCR6	Port services - Electricity T&D losses - T&D losses doesn't match Port Services electricity. Reported 4,152,841 kWh vs verified 3,112,548 kWh Resulting in a variance of 0.09% - immaterial	Open	mNCR	Optional to update to 3,112,548 kWh		
mNCR7	Incineration of clinic waste - reported 100t vs verified 0 t. Immaterial	Open	mNCR	Remove/exclude amount or update with Interwaste medical waste amount of 351 t		
mNCR8	IMR Table 3 - market-based reporting not applicable -The IMR section 1.2.1 notes that Lyttleton Port Company Limited aligns to location-based reporting for tracking energy related emissions. In emanage there is a checkbox in Setup to select/unselect market-based reporting i.e., account of offsets purchased. However, this should be considered in conjunction with Meridian RECs if used. Another step in emanage under Renewables tab must be completed.	Open	mNCR	To update emanage to indicate correct reporting options.	11/11/2022	IMR updated
mNCR9	IMR: parts incomplete or could be improved include – A1.2.3 Supplementary results - add not about Meridian RECs, the amount (kWh), certificate availability, and how treated (used to offset Cat 2)	Open	mNCR	Complete remaining sections prior to next audit		

Ref #	Issue	Status	Type	Comments / Agreed Corrective Actions	Date closed	Evidence sighted to close out the issue where corrective action required.
	Table 17 - Significance criteria - complete assessment for indirect emissions using the Toitū assessment tool provide (Emanage guidance) - ensure emissions included and excluded identified and the latter is justified					
mNCR10	IMR Table 7 Reduction targets - Noted solid waste reduction set against 1920 total (not base year). Target would be 55.4 tCO2 against base year total. Also 2030 target for cat 1,2, 3, 4 is 40 tCO2e higher than base year. Note Technical requirement R5.10 The Participant shall explain the selection of the Base Year. NOTE: The base year may be changed upon review for continued appropriateness as a basis of comparison. Any change to base year shall be applied for in writing to the Programme with justification as to why it is no longer representative. R5.11 The Base Year shall be recalculated through a Base Year Restatement process where significant changes have occurred to one or more of the following: <ul style="list-style-type: none"> • The organisational or reporting boundaries (i.e., merger, acquisition, or divestiture) • Calculation methodologies or emissions factors • Discovery of errors or omissions in the emission source input data and the effect of the changes result in more than 5% change in the combined emissions across Categories. The Base Year may be recalculated if the effect of the changes results in 1-5% change in the combined 	Open	mNCR	Revise and update		

Ref #	Issue	Status	Type	Comments / Agreed Corrective Actions	Date closed	Evidence sighted to close out the issue where corrective action required.
	emissions across Categories. The organisation shall document base-year recalculations in subsequent GHG inventories.					
Obs1	Data management - errors with air travel data transfer from upload file	Open	Obs	Check emange to ensure emission activities and amounts are correct esp. after data transfer/upload		
Obs2	Data management - allocation total activities amount to business units not shown in evidence.	Open	Obs	Suggest showing how data is apportioned to BUs where applicable		

NOTES

1. The detailed audit findings and calculations are given in the Verification Plan and Working Papers associated with this audit. These contain proprietary verification methodologies and remain confidential to Toitū Envirocare.
2. The audit is based upon sampling and as such nonconformities may exist that have not yet been identified.
3. We have reviewed the company's GHG emissions inventory for the period. The inventory is based on historical information which is stated in accordance with the requirements of ISO 14064-1:2018 and the scheme Technical Requirements.
4. The scope of the review was limited to personnel interview, analytical review procedures applied to GHG emissions data, and review of the input of data into the emissions inventory. Based on our review the inventory is compliant with the requirements of ISO 14064-1:2018.
5. A **non-conformance (NCR)** indicates that the auditor has found a non-conformance with scheme Technical Requirements (audit criteria) and requires you to take the appropriate corrective action and provide evidence of this correction within two weeks. This may require resubmission of an updated Emissions Inventory and Management report.
6. A **minor non-conformance (mNCR)** which the auditor has found which is not material to the outcome of the inventory, but to which a failure to address in the preparation of future inventories could lead to a major Non-Conformance (NCR).
7. **Observations** made by your auditor are strongly advised but the actions are not required for the organisation to be recommended for certification.
8. Neither Toitū Envirocare nor the auditor has any interest in the organisation, other than in our capacity as assurance providers. We have not carried out any work with this business prior to this review other than conducting the previous verification.
9. This report has been prepared solely for the use of the organisation and Toitū Envirocare as part of an application for Toitū carbonreduce programme certification. It may be relied on solely by the organisation and Toitū Envirocare for that purpose only. Toitū Envirocare does not accept or assume any responsibility to any person other than the organisation in relation to the statements or findings expressed or implied in this report.
10. Any correspondence regarding this audit report should be directed to your Lead Auditor.
11. A copy of this report has been provided to the nominated client contact.
12. A copy of this report may be made available to intended users upon request.