



CLIMATE-RELATED DISCLOSURES

Quayside Holdings Limited FY24





STATEMENT OF COMPLIANCE

Quayside Holdings Limited (Quayside) is pleased to present its inaugural climate-related disclosures (“the Report”), which have been prepared for the reporting period 1 July 2023 to 30 June 2024

Climate Reporting Entity

As a “Climate Reporting Entity” under section 461P of the Financial Markets Conduct Act (“FMCA”), Quayside has prepared the climate-related disclosures set out in this report in accordance with the Aotearoa New Zealand Climate Standards CS1, CS2 and CS3 issued by the External Reporting Board (XRB) (collectively referred to as NZ CS 1-3), as well as the applicable provisions in Part 7A of the FMCA. In doing so, Quayside has prepared group climate-related disclosures for Quayside, its subsidiaries, and controlled entities.

Use of adoption provisions in NZ CS 2

Quayside has relied on a number of the adoption provisions available under NZ CS2, which exempt Quayside from having to comply with a number of specific NZ CS 1 disclosure requirements in this first year of reporting. The specific adoption provisions relied on for this FY 24 include the following:

Adoption provisions 1 and 2 - Current and anticipated financial impacts

Quayside made use of adoption provisions 1 and 2 as this made it possible to focus on thoroughly identifying climate-related risks and opportunities in FY24 and dedicate the necessary attention to financial quantification in the lead up to FY25

Adoption provision 3 - Transition planning

Quayside also used adoption provision 3 to allow sufficient time to properly assess the climate-related risks and opportunities identified in FY24 and to develop an

effective transition plan with the Bay of Plenty Regional Council (“BOPRC”), in line with council-controlled trading organisation governance requirements under the Local Government Act 2002.

Adoption provision 4 - Scope 3 GHG Emissions

While Quayside has started measuring its Scope 3 emissions in FY24, Quayside will not be reporting Scope 3 emissions in this report. Quayside will continue its efforts to define a sensible approach to measure its Scope 3 emissions. Quayside intends to report its Scope 3 emissions in FY25 as appropriate.

Adoption provisions 5 and 6 - Comparatives

As this is Quayside’s first year of preparing climate related disclosures, it lacks the historical data necessary to meet the comparative disclosure requirements of NZ CS 1 in FY24.

Adoption provisions 7 - Analysis of trends

For the reasons noted in relation to adoption provision 5 and 6, FY24 is Quayside’s baseline year for climate reporting purposes. Reporting of trends will be provided from FY25 onwards.

Approved on behalf of Quayside’s Board of Directors on 24 October 2024

Mark Wynne
Board Chair

Keiran Horne
ARC Chair

Disclaimer

This report contains Quayside’s inaugural mandatory climate-related disclosures (“CRD”) provided for FY24 in accordance with the External Reporting Board’s Aotearoa New Zealand Climate Standards 1 to 2 (also referred to as NZ CS 1-3).

Pursuant to the requirements of NZ CS1-3, this report includes a range of forward-looking statements, including climate-related scenarios, assumptions, projections, forecasts, estimates, and judgments about climate-related risks, opportunities, impacts, and related matters, as well as Quayside’s future intentions, metrics, and targets. Significantly, such statements are often:

- Based on early and evolving assessments of current and future data, which may be incomplete or estimated—particularly in areas such as climate change projections and socio-economic anticipated outcomes/forecasts.
- Subject to high levels of inherent uncertainty, as they are typically driven by numerous dynamic factors, many of which are interconnected, complex, non-linear, and unpredictable (e.g. variable and/or chaotic), especially over the medium- to long-term time horizons discussed in this report.

Accordingly, all forward-looking statements set out in this CRD report (whether they relate to climate-related risks and opportunities or otherwise):

- Are not facts, nor are they intended to constitute capital growth, earnings guidance, or any other advice or guidance (legal, financial, tax or otherwise).
- Pertain to outcomes that may arise under stipulated climate change scenarios set out within, which, as noted in NZ CS 1, “...are not intended to be probabilistic or predictive, or to identify the ‘most likely’ outcome(s) of climate change. They are intended to provide an opportunity for entities to develop their internal capacity to better understand and prepare for the uncertain future impacts of climate change”.
- Are inherently uncertain and subject to limitations, particularly as to inputs, available data and information (including that which Quayside has derived from relevant sector climate change scenarios), all of which are likely to change and evolve.
- May not eventuate (in full or in part), and where they do, may be materially more or less significant than is anticipated or indicated in this report.
- May have omitted to identify or include (in full or part) material climate-related risks, opportunities and impacts that do eventuate.

Owing to the above, all climate-related forward-looking statements in this CRD report may be less reliable than statements contained in Quayside’s non-climate-related annual reporting.

Notwithstanding the above, this CRD report represents Quayside’s best estimate and current understanding of future climate-related eventualities as at the date of publication. Subject to the various practical challenges and limitations above, Quayside has used all reasonable endeavours to ensure the accuracy and completeness of this report (subject to specified omissions in reliance of the adoption provision in NZ CS 2), but strongly cautions against undue reliance being placed on representations within for the reasons noted above.

To the maximum extent permitted by law, Quayside and its directors, officers, employees and contractors shall not be liable for any loss or damage arising in any way from or in connection with any information provided or omitted as part of this report.



STAGED APPROACH TO CLIMATE REPORTING

Quayside is taking a staged approach to developing its climate related disclosure capability over several reporting cycles. In the first mandatory reporting cycle, our focus is on building robust foundational Climate-related Disclosure systems, capability and knowledge, which are then built on and refined in years two and three.

2024 (complete)	State 1: Context	Establish Quayside's climate context and develop a fit-for-purpose Climate Risk Framework (i.e. suite of processes, methods and tools) to enable Quayside to identify, assess, manage and report on its climate-related risks and opportunities in an effective, compliant and responsible manner.
	Stage 2: Identification	Identify Quayside's key climate related risks and opportunities using a combination of the traditional risk screening and climate scenario methods outlined on pages 16 of this climate disclosure report. Related to the above, review and update Quayside's climate scenarios developed in FY24 (e.g. based on any updates or changes to the sector scenarios that its climate scenarios were in part based on and any other information pertinent to re-assessing or refining the drivers and driver outcomes that Quayside's three climate scenarios are comprised of).
	Stage 3: Assessment	Carrying out a qualitative assessment of the asset level climate-related risks and opportunities identified at STAGE 2 above in accordance with the process and methods outlined at pages 17 to 19 of this climate disclosure report. Using the findings from the above, to begin prioritising climate-related risks and opportunities for the purpose of preparing its FY24 climate related disclosures and to provide the information Quayside required to determine significance, urgency, and availability/feasibility of response options as part of its transition plan development in the lead up to FY25.
2025	Stage 2: Continued Identification	Update and refresh Quayside's identified climate-related risks and opportunities based on: <ul style="list-style-type: none"> • Any material changes to its strategy, risk management framework or external climate context (e.g. updated NIWA climate projections and new/emergent transition drivers). • New insights gained from the entities it has investments in, as well as other participants in key sectors that Quayside investments relate to. • New or updated standard sector scenarios that may be released or re-issued.
	Stage 3: Continued Assessment	Update the detailed assessment findings at the individual asset and portfolio levels from FY24. Develop a more advanced and detailed assessment of Indirect Non-Port Assets (i.e. listed assets and managed private equity). Develop and implement a robust and defensible evidence based approach to quantifying current and anticipated impacts. It is anticipated that this will entail an initial foundational approach that is then added to/refined/augmented over subsequent reporting cycles.
	Stage 4: Management	Develop and begin to implement Quayside's inaugural Transition Plan in accordance with the requirements of NZ CS1 and in coordination with key stakeholders including the Port of Tauranga, Bay of Plenty Regional Council (BOPRC) and others. Review and agree Quayside's priority climate related risks and opportunities based on a combination of the findings from STAGE 3 as well as the significance, urgency, and availability/feasibility of response options. Develop the necessary protocols for integrating Quayside's transition plan interventions (as applicable) at the operational level (e.g. as part of transaction due diligence).
2026	Stage 2 and 3: Continued Identification and Assessment	Update and refresh Quayside's identified climate-related risks and opportunities as per the process noted above for FY25. Utilise emerging qualitative and quantitative data to improve assessment of financial impacts, particularly those arising from current and emergent risks and opportunities.
	Stage 4: Continued Management	Update and refine 2025 transition planning, taking into account the performance of any initiatives implemented. Identify and select preferred action and pathways, with corresponding metrics and targets, for longer term risks and opportunities.



CONTENTS

5. INTRODUCTION

6. GOVERNANCE

- 07. Overview
- 08. Governance
- 10. Management

11. RISK MANAGEMENT

- 12. Our Risk Framework
- 14. Stage 1: Framework design and integration
- 16. Stage 2: Risk and opportunity identification
- 17. Stage 3: Risk and opportunity assessment

20. STRATEGY

- 21. Quayside's business model and strategy
- 25. Overview of Quayside's climate scenarios
- 28. Port of Tauranga ("PoT") climate related risks and opportunities
- 33. Indirect non-Port climate related risks and opportunities
- 35. Direct non-Port climate related risks and opportunities

37. METRICS & TARGETS

- 38. Quayside's GHG Inventory
- 42. Metrics and Targets

44. APPENDICES





INTRODUCTION

Quayside is pleased to present our inaugural Climate-Related Disclosure Report (“**the Report**”), which is intended to be read in conjunction with Quayside Annual Report 2024. The Report was prepared as a consequence of the mandatory Aotearoa Climate Standards regime and in consideration of our shareholder priorities as discussed in its Annual Plan. In fact, in setting its strategic direction and priorities, the BOPRC (which is the 100% shareholder of Quayside) identified climate change as one of the three key impact areas to address due to its current and anticipated impact on the community.¹

This report shares progress on our efforts to integrate climate risk and opportunity considerations into our enterprise-wide thinking.

The physical and transition risks of climate change are expected to intensify over the next 10 to 20 years, with potentially material implications for economies and capital markets. At Quayside, we believe that climate change is a long-term systemic risk, and if not understood and managed, it can have a material impact on portfolio risk and returns, precluding

Quayside from successfully delivering on its mandate. Based on this understanding, the Quayside Board, with the support of the Audit and Risk Committee (“**ARC**”) and management commit to developing an understanding of the impacts of climate (risk and opportunities) not only from a decarbonization perspective but also in consideration of the specific ecosystem within Quayside is operating.

In 2022, Quayside started working towards the preparation of our inaugural Climate Disclosure Statement. In 2023, we worked closely with external consultants to understand the complexity of the analysis required for our portfolio and develop plans for how we will transition to a meaningful climate risk assessment and performance target/reporting model considering the materiality for the Group. In 2024, we made further progress in integrating climate considerations into our risk management activities and portfolio construction activities leading to the issuance of this report.

This report was developed in alignment with the Port of Tauranga (“**PoT**”), given the material

exposure and strategic nature of the investment. While we fully understand the risks related to a single asset concentration, the PoT is well positioned to manage its exposure to climate risk and more importantly, well positioned to take advantage of direct and indirect transition opportunities. This, along with the pursuit of further diversifying our non-Port portfolio, supports Quayside’s determination to build resiliency to climate-related risks and opportunities.

Building on the experience of the years 2023 and 2024, the financial year ending June 2025, will be crucial for Quayside to define its Transition Plan and further develop an understanding of Quayside’s carbon emission profile.

In this Report, we are fully relying on New Zealand Climate Standard 2 Adoption Provision 4 and Quayside will only disclose Quayside Scope 1 and 2 emissions. Notwithstanding the above, we are conscious of the impact that Scope 3 emissions will have on the Quayside GHG Inventory, mainly driven by the dominant role that will be played by Quayside Financed Emissions.

Ngā hiahia ai ki te
tīmatanga ā ka kite ai
tātou i te mutunga

You must understand
the beginning if you
wish to see the end

1. BOPRC 2023/2024 Annual Plan ([Annual Plan 2022-2023 \(boprc.govt.nz\)](https://www.boprc.govt.nz))



GOVERNANCE DISCLOSURE



OVERVIEW

Quayside Governance and Management Structure

Quayside is on an active journey to develop and evolve the role that its governance body plays in overseeing climate-related risks and opportunities, and the role that its senior leadership team plays in assessing and managing them.

Consequently, as Quayside's understanding and capabilities in this respect mature and embed, the respective responsibilities of the Board, Senior Leadership Team, and the wider organisation—summarised in the diagram to the right and detailed on the next page—are expected to evolve over time.

As Quayside is a council controlled trading organisation (“CCTO”), its internal governance oversight and management role arrangements are informed by the broader governance, accountability, and reporting statutory framework that the Local Government Act 2002 requires all CCTOs to comply with, key components of which include:

- Annual preparation of a Statement of Intent outlining Quayside's objectives, activities, financial forecasts, and performance targets. This document, agreed upon with the council, helps monitor performance and ensures alignment with community goals.
- Financial and non-financial reporting to the BOPRC, so that BOPRC and the public can track Quayside's performance and ensure it is acting in the public interest.
- Giving the BOPRC the power to, amongst other things:
 - i. Influence Quayside's strategic direction and achieve alignment between the two entities by issuing a Statement of Expectation (“SOE”) under the Local Government Act provisions for CCTO planning.
 - ii. Determine the role of Quayside's directors, and appoint members to the board for the purpose of overseeing the organisation and ensuring its strategic direction aligns with BOPRC's community objectives.

BOARD OF DIRECTORS

Meets 6 times per year

The Board's core responsibilities include setting and overseeing:

- Quayside's overall strategic direction, investment strategy, and statement of intent.

- Quayside's approach to identifying, assessing and managing risks and opportunities including those that are climate-related.

AUDIT & RISK COMMITTEE (“ARC”)

Meets quarterly

Board sub-committee with specific delegated functions relating to the oversight and monitoring of risks and opportunities, including climate-related risks and opportunities.

SENIOR LEADERSHIP TEAM

Responsibility for the management of risks and opportunities is delegated to members of Quayside's Senior Leadership Team. This includes responsibility for ensuring that Quayside

is identifying, assessing, managing, and escalating climate-related risks and opportunities, in accordance with applicable Board approved processes, and policies.

WIDER QUAYSIDE TEAM

Day-to-day responsibility for monitoring, identifying, assessing (as applicable) climate-related risks and opportunities (e.g. associated with portfolio assets and potential

transactions), implementing board approved transition plan strategies, controls and related measures, and monitoring Quayside's progress against approved climate-related targets.



GOVERNANCE

Board oversight of climate-related risks and opportunities

Core board responsibilities include setting and overseeing Quayside's:

- Approach to risks and opportunities (including climate-related risks and opportunities); and
- Strategic direction, which includes considering how climate-related risks and opportunities should inform Quayside's strategy (as set out in its Statement of Intent and Investment Strategy),

Quayside's Board Charter was recently updated to include specific climate-related disclosure responsibilities, which include:

a. Ensuring Quayside has and maintains:

- Fit for purpose climate-related risk and opportunity systems and internal controls
- The resources and expertise that it needs to identify, assess, and manage climate-related risks and opportunities effectively;

b. Receive ARC updates on climate related risks and opportunities, transition planning measures and progress against transition metrics and targets and all other climate related matters;

c. Consider and approves Quayside's

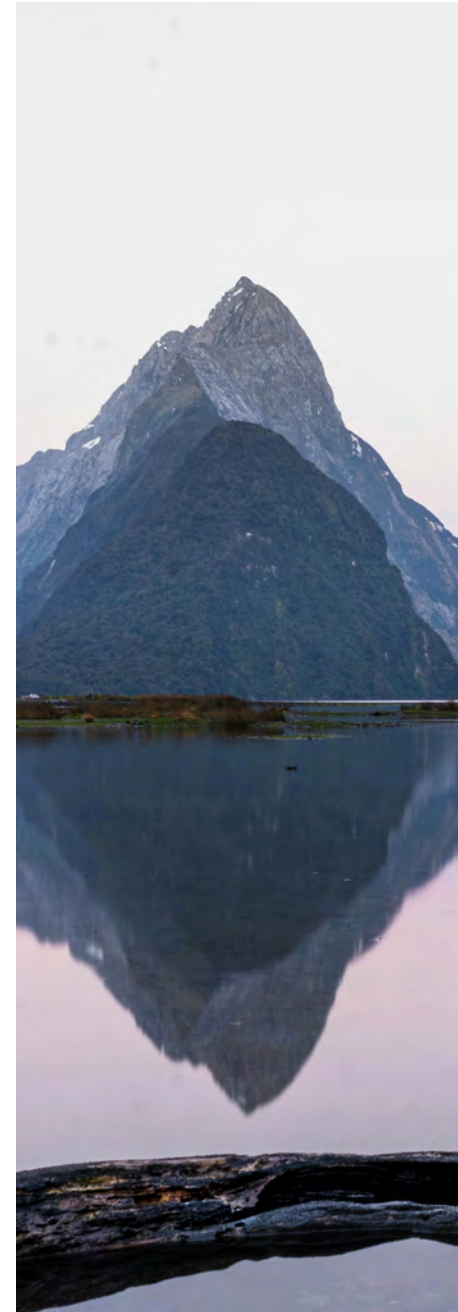
- Annual climate-related risk and opportunity identification and assessment findings
- Transition Plan and metrics/targets used to measure and manage climate related risks
- Annual climate related disclosures
- Climate related incentives in the remuneration of the Executive.

Quayside's enterprise risk management framework ("ERMF"), aligned with the Joint Australian/New Zealand International Standard for Risk Management (AS/NZS ISO 31000:2009), defines specific Board responsibilities for overseeing risk management, including climate-related risks and opportunities. This encompasses determining Quayside's risk profile, investment risk appetite, tolerance levels, and the risk matrix.

As noted in the Risk Management section, the distinct nature of climate-related risks and opportunities required several deviations from the standard ERMF approach to risk analysis and evaluation (see page 12, and 17 to 19 of the Risk Management disclosure below). These adjustments have been reviewed and endorsed by the Board to ensure the integration of Quayside's approach to managing climate-related risks and opportunities within its ERMF (as per the Risk Management requirements set out at paragraphs 17 and 18 of NZ CS1).

Audit and risk Committee

The ARC is a board standing committee which is tasked with assisting the Board in fulfilling its responsibilities for identifying, assessing, monitoring, and managing all material risks and opportunities, climate-related or otherwise. This includes carrying out the climate-related disclosure responsibilities set out in recent Board Charter update (also outlined on this page), in accordance with its functions and responsibilities as set out in Quayside's ERMF, which, in practice include:



Skills and competencies

Quayside Board of Directors are appointed by its shareholder BOPRC. As a CCTO, appointments are made in accordance with the BOPRC Appointment and Remuneration Policy to ensure the Board has the skill, knowledge and experience to guide the organisation, and furthermore assist the BOPRC to achieve its Climate Change Action Plan.

Members of our Board have had significant experience in material activities connected to energy transition such as thermal heat conversions from fossil fuels to renewable energy sources, carbon sequestration tenders to reduce net emissions and lock-in the pricing of carbon liabilities under the ETS.

As part of wider governance requirements, the Quayside Board are committed to further upskilling their knowledge of regional, national and global climate change issues by means of external education provided by industry bodies and associations as well as imparting their experience on boards of organisations that are leading the way in New Zealand on research and intelligence into climate change for example Aotearoa Circle and Antarctica NZ.

In November 2023, the Quayside Board reviewed an internal version of the CRD report to prepare for its first mandatory report. In March 2024, an externally facilitated workshop was held to deepen the Board's understanding of the economic, business, and legal impacts of climate change on Quayside and related externalities. By May 2024, Quayside management presented its scenario selection approach and Key Transition Drivers to the ARC, which the Board endorsed in July 2024. The Board is now regularly updated by management on climate risks and opportunities, with external advisors engaged as needed to ensure access to the latest information for effective oversight.



GOVERNANCE

Audit and risk Committee cont'd

- Providing recommendations to the Board in respect of the necessary tools and resources to identify and manage risks (i.e. the points of departure noted in the Risk Management Section below);
- Review a list of the Group's key strategic risks in a risk register for management to report to the Board (including all material physical and transition (climate-related) risks and opportunities identified by the Senior Leadership Team);
- Carrying out a biannual review of the risk register including control measures and treatment tasks (which in context of climate-related risks and opportunities, will include measures implemented pursuant to Quayside's Transition Plan, which is to be disclosed as part of its FY25 climate-related disclosures);
- Ensuring management reporting provides the Board with an appropriate level of detail on key strategic risks, new/emerging risks and identifies changes to existing risks (including climate-related risks and opportunities);
- Overseeing compliance with regulatory requirements and best practice, including the Aotearoa New Zealand Climate Disclosure Standards (i.e. NZ CS 1-3), and ensuring appropriate alignment with relevant XRB and TCFD guidance.

While the latter function does not expressly reference compliance with NZ CS 1-3, it includes overseeing the preparation and review of Quayside's annual climate-related disclosures.

Remuneration and climate performance

Quayside's People, Culture and Safety Committee ("PCS") – is the Board Committee in charge of setting the approach to remuneration for the Company's employees. This includes incorporating climate-related targets in the Short-Term Incentive ("STIs") component of remuneration. These targets have been agreed for the FY25.

The Senior Leadership Team Remuneration, in fact, is strictly related to Quayside's long-term strategy, with the KPIs and STIs developed to align SLT performance to our three-year objectives.

From FY25, a portion of the STIs was set upon achievement of climate-related measures. In particular, CEO, CIO, GM Finance remuneration is now linked to climate transition. Also, all of the SLT members (including GM Operations and GM Property), will have to participate in the formulation of a Transition Plan to manage current climate-related risks exposure across the portfolio. CEO, GM Finance and CIO will also need to fully incorporate climate transition considerations into SIPO and Strategic Asset Allocation.

Monitoring progress against metrics and targets

As outlined in the statement of compliance on page 2 above, Quayside is making use of the financial impact quantification and transition planning adoption provisions.

As part of Quayside CRD critical path, the majority of targets will be set in due course as part of the Transition Plan development process in the lead up FY25. It is anticipated that financial quantification carried out also in preparation of its FY25 climate disclosure will inform the identification and prioritisation targets.

As per the accountability mechanisms outlined at pages 7 to 9 above, the Board and ARC will be responsible for monitoring managements progress towards achieving Quayside's eventual targets once they have been reviewed and ratified by the Board.





MANAGEMENT'S ROLE

Management's role in assessing and managing climate-related risks and opportunities

The Quayside Senior Leadership Team's responsibilities and functions (as delegated by the Board) are set out in Quayside's ERMF and directly delegated via PCS incorporating climate-related targets in the Short-Term Incentive (STIs) component of remuneration.

In the context of climate related risks and opportunities, these entail Senior management, led by the GM of Finance, with support from consultants as required:

- Developing the processes, methods, tools, and expertise used to identify, assess, manage, monitor, and report on Quayside's climate-related risks and opportunities (i.e. that underpin implementation of the five stage process set out on page 12).
- Reporting to the ARC on a quarterly basis and escalating climate-related matters as required.
- Preparing Quayside's climate disclosures, transition planning, and metrics and targets.
- Ensuring the business is identifying, assessing, managing, monitoring, and escalating climate-related risks and opportunities, in accordance applicable (ARC/board approved) processes, policies, and transition plans.

Wider Quayside organisation

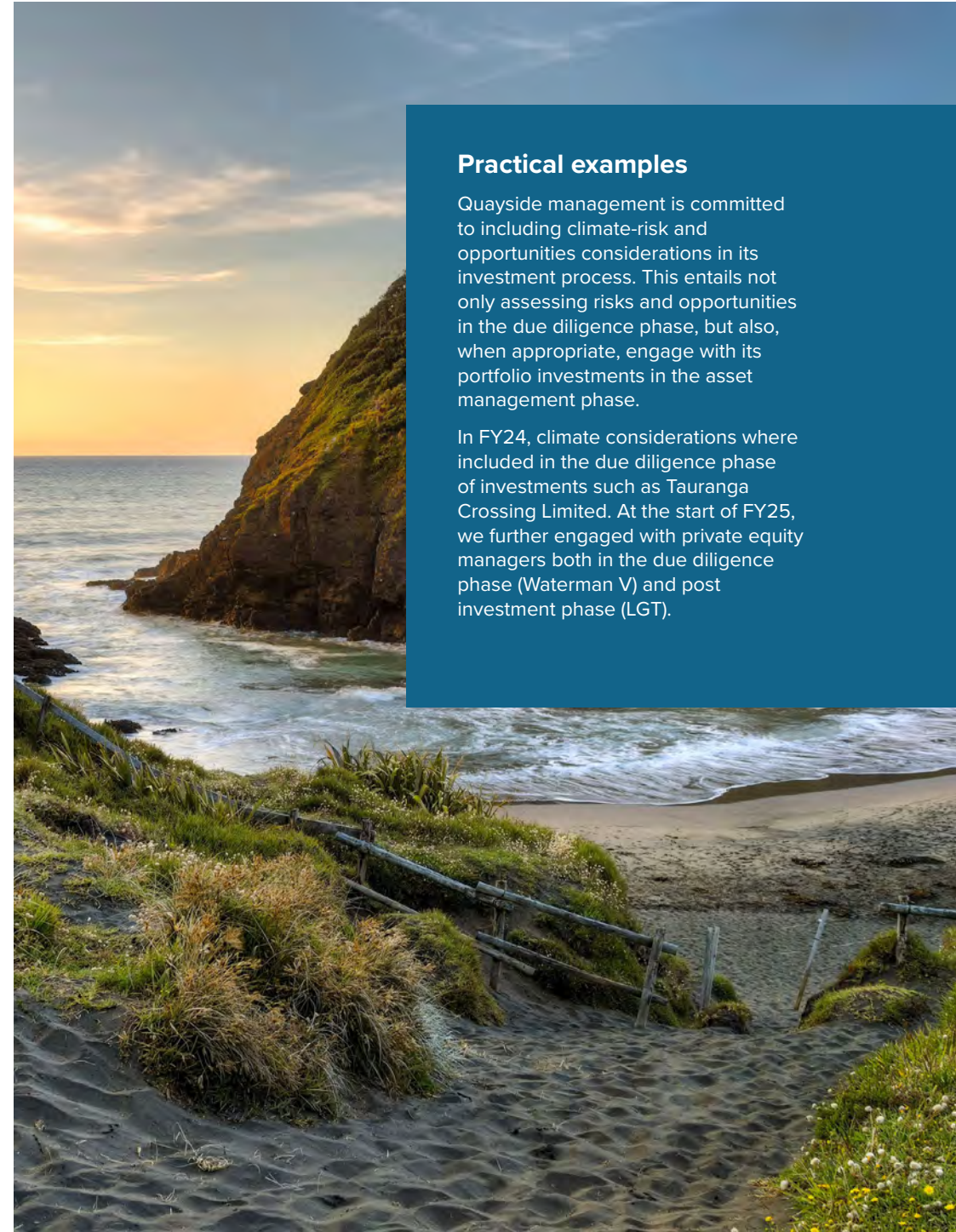
The wider organisation's role is also a climate-related outworking of the relevant provisions of Quayside's ERMF. To this end, the responsibilities of the broader Quayside team include:

- Day-to-day monitoring, identification, and assessment (as applicable) of climate-related risks and opportunities (e.g. associated with existing portfolio assets and potential transactions).
- Assisting with the preparation of annual climate disclosures, as well as any updates/revisions to Quayside's transition plan, and metrics and targets (as applicable).
- Implementing board approved transition plan strategies, controls and related measures, as well as monitoring Quayside's progress against approved targets.

Practical examples

Quayside management is committed to including climate-risk and opportunities considerations in its investment process. This entails not only assessing risks and opportunities in the due diligence phase, but also, when appropriate, engage with its portfolio investments in the asset management phase.

In FY24, climate considerations were included in the due diligence phase of investments such as Tauranga Crossing Limited. At the start of FY25, we further engaged with private equity managers both in the due diligence phase (Waterman V) and post investment phase (LGT).





RISK MANAGEMENT



OUR RISK FRAMEWORK

Risk is central to our business. Quayside invests for a risk-adjusted return, so naturally, identifying, understanding and managing risk is pivotal to our everyday practice.

Effective risk management allows us to take investment risk and to navigate complex enterprise risks, whether they are a product of climate change specifically, broader enterprise risks (e.g. operational, market, regulatory, financial and cyber security risks), or cumulative and compounding impacts arising from interactions between climate and other enterprise risks. Consequently, managing risk is essential to achieving our investment goals, ensuring that our investments are in line with our risk appetite and that we remain compliant with all relevant legal and regulatory requirements.

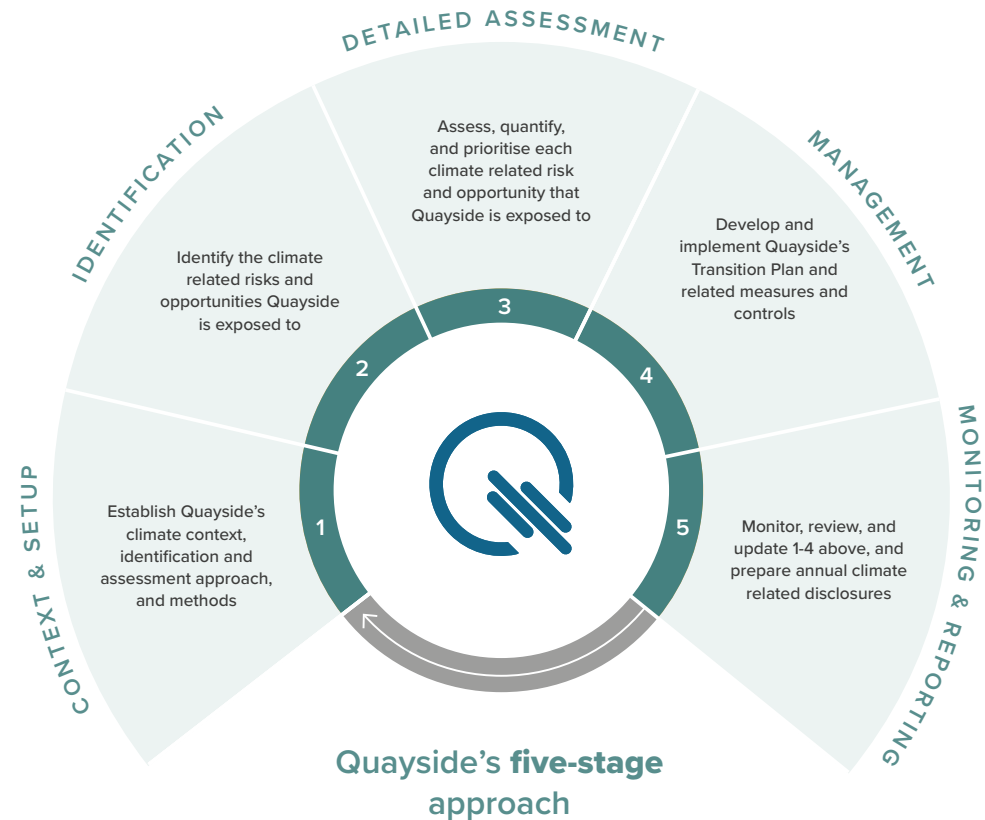
Integrating climate into our enterprise risk framework (“ERMF”)

As the physical effects of climate change intensify and the changes associated with the transition to a low-carbon future become more widespread and impactful, we expect climate-related risks and opportunities to feature more prominently as part of everyday enterprise and portfolio risk management. Accordingly, Quayside is working with external experts and the Port of Tauranga (also referred

to as the PoT) to develop an approach to identifying, assessing, and managing climate-related risks and opportunities, which is:

- Integrated into its existing enterprise risk management framework (i.e. rather than treating it as a standalone process); and
- Equipped to contend with the unique nature of climate change and its associated socio-economic impacts, which often limit the suitability traditional risk management methods and tools (particularly those associated with the identification and assessment of risks)

This work culminated in the development of Quayside’s 5-STAGE process for identifying, assessing, managing, and reporting on climate-related risks and opportunities, which is based on prevailing risk management best practices and international standards (e.g. ISO 31000, 14090, and 14091) making easy to integrate into Quayside’s existing ERMF. Importantly, this approach also includes key steps and requirements from the XRB’s “Staff Guidance, Entity Level Scenario Development” (“**XRB Guidance**”), which have been carefully integrated into STAGES 2 and 3, as well as best practices and methods recommended by the IPCC and TCFD. An overview of this integration work is provided on the following page.



Point of departure example:

Quayside has endeavoured to minimise differences in the way it deals with climate related risk on the one hand and typical enterprise risks on the other to best enable integration. However, there are some points of departure that are essential.

For example, under STAGE 3, Quayside has replaced the “likelihood” and “consequence” assessment framework (which is core to most ERMFs) with the International Panel on Climate Changes “exposure”, “vulnerability” and “impact” approach. This variation was warranted however, as climate risk best practice prioritises exposure, vulnerability, and impact over likelihood and consequence due to the complexity, uncertainty, and dynamic nature of climate risks.

Refer to page 19, where this is addressed in detail.



IDENTIFYING AND ASSESSING OUR CLIMATE- RELATED RISK AND OPPORTUNITIES

The specific methods and tools that Quayside has used to identify and assess climate-related risks and opportunities fall under **STAGES 1-3** of its 5 STAGE approach. Initially developed in 2023 as part of early work to build Quayside's climate reporting capability, these STAGES, which are summarised below, were then refined when preparing this FY24 disclosure.

Mā te kimi ka kite, Mā
te kite ka mōhio, Mā
te mōhio ka mārama

Seek and discover.
Discover and know.
Know and become
enlightened



STAGE 1

CLIMATE CONTEXT, SETTINGS, AND STAKEHOLDERS

This stage involves establishing our climate context and developing a tailored approach—specifically our 5-STAGE framework, along with the appropriate methods and tools—that is aligned with Quayside’s specific circumstances, thereby ensuring it is fit for purpose. It also includes collaborating with key internal stakeholders to embed the process and initiate the implementation of subsequent stages.

Establishing the climate context involves taking steps to understand Quayside’s:

- Internal climate landscape: including its business model, strategy, ERMF, investment portfolio structure, and pertinent details about each of its portfolio assets (e.g. geographic locations, sectors, strategic function and associated details).
- External climate landscape which included:
 - i. Climate data and projections and information regarding existing, emergent, and anticipated transition drivers that are potentially relevant to its portfolio assets.
 - ii. Mapping the value chains that key portfolio assets belong to (e.g. key elements that each is comprised of). Examples of PoT value chains, which also informed assessment of relevant Direct Non-Port Assets are provided in the Appendices.

Developing/refining Quayside’s 5-STAGE approach entailed using its context assessment findings to:

- Agree key settings, including the:
 - i. Purpose and objectives of this 5-STAGE approach and the outcomes it produces.
 - ii. Scope and granularity of the climate-related risk and opportunity identification and assessment STAGES.
 - iii. Time horizons that Quayside climate-related risks and opportunities are assessed over.
- Identify suitable, processes, methods and tools: for identifying and assessing climate-related risks and opportunities at the individual asset and portfolio levels.

Alignment with XRB Guidance:

Project setup work undertaken: aligns with steps 1.1 to 1.4 of the XRB Guidance.

Context assessment: meets the preliminary requirements in step 1.9 of the XRB Guidance, and the requirements of step 2.2 of the same in full.

Objectives and settings: this work also satisfies the requirements in steps 1.7, 2.3, and 2.4 of the XRB Guidance.

Stakeholder engagement and data gathering work: also undertaken as part of STAGE 1 (e.g. briefing, engaging, and up-skilling stakeholders, and obtaining initial insights as part of the context assessment) were also tantamount to meeting the requirements set out at steps 1.5, 1.6, 1.8, 1.10 of the XRB Guidance.



Te Kāwai Ārahi Pūrongo Mōwaho
EXTERNAL REPORTING BOARD



STAGE 1

Time horizons

Time horizons were based on Quayside's investment strategy and planning cycles, the investment life-cycle of portfolio assets (e.g. anticipated time-frame from acquisition to divestment), financed emission reduction targets, and ability to divest under-performing assets (i.e. inherent adaptive capacity):

Time Horizon	Port of Tauranga/PoT ¹	Non-Port Assets
Short-term:	0-5 years: in line with the PoT's budget and business planning cycle.	0-3 years: In line with Quayside's strategic planning cycle.
Medium-term:	5-25 years: in line with the PoT's long-term strategy, and net-zero targets.	3-10 years: In line with the investment time-frames for illiquid portfolio assets (e.g. private equity and real assets investments).
Long-term:	25-50 years: in line with long-term infrastructure asset life planning and strategic outlook.	10-35 years: in line with the inter-generational purpose and objectives of Quayside's strategy and its long-term strategic investment in the PoT.

1. The PoT is a long-term/inter-generational strategic asset for Quayside's sole shareholder, the Bay of Plenty Regional Council. Quayside mandate and investment strategy reflects this. Accordingly, it was appropriate to adopt the PoT's time-horizons in full.

Scope and granularity

The scope and granularity of our risk and opportunity identification and assessment process was informed by the "fair presentation", "value chain", and "materiality" general requirements in NZ CS 3. Investment strategy, portfolio composition, asset exposure, and practical constraints applicable to specified asset categories also informed how these settings were defined:

Port of Tauranga/PoT ²	Direct Non-Port Assets	Indirect Non-Port Assets
Quayside is working directly with the PoT to establish how current and anticipated impact's arising from climate-related risks and opportunities identified by the PoT on a bottom-up basis, will or may impact Quayside's portfolio (see page 18). Accordingly, Quayside has adopted the PoT's scope and granularity settings in full, when assessing portfolio level impacts arising from PoT risks and opportunities.	A 'bottom up' climate-related risk and opportunity identification and assessment was carried out on a full value chain basis for significant directly held private equity and real assets (see pages 22 and 34 for a list of Direct Commercial asset categories). For practical reasons, assessment granularity varied according to value and strategic importance. ³	Listed asset climate-related risks and opportunities were identified and assessed by GICS industry and sub-industry on a top-down basis. For managed private equity, Quayside is in the process of engaging with its managers to get a better understanding of its indirect exposure to climate risks and opportunities. Active engagement is in place with managers corresponding to ca. 70% of the value in the asset class as at 30 June 2024.

2. The PoT comprises approximately 75% of Quayside's portfolio on a capital value at risk basis, and is a long-term strategic asset which is central to achieving Quayside's core objectives. Hence adopting the PoT's detailed and full value chain based approach.

3. The granularity to which upstream and downstream climate-related risks and opportunities were identified and assessed across the value chain did vary between assets however, based on the capital value at risk ("VaR") and materiality considerations (i.e. greater the VaR, and, in turn, the materiality of current and anticipated climate-related risks and opportunities, the more granular the value chain assessment).



STAGE 2

IDENTIFY CLIMATE-RELATED RISKS AND OPPORTUNITIES

This stage involves identifying current and anticipated climate-related risks and opportunities (e.g. that Quayside is exposed to now and may be exposed to over set time horizons) via a combination of traditional risk identification and climate scenario methods. Here the focus is on identifying climate-related risks and opportunities that Quayside may be exposed to, whereas at STAGE 3 the focus shifts to assessing each, and, in turn, the resilience of Quayside's business model and strategy.

A traditional risk and opportunity identification process was carried out first. This entailed:

- **Exposure screening:** PoT and Direct non-Port asset elements at risk identified at STAGE 1 were screened for exposure to relevant climate hazards and transition drivers.⁴
- **Risk and opportunity identification:** a combination of desktop analysis and workshops was used to identify, past, current and some potential anticipated climate-related risks and opportunities, the latter of which include:
 - i. Physical risks Quayside anticipates exposure to under the NIWA RCP 8.5 climate projections used for the exposure screening noted above.
 - ii. Transition risks and opportunities arising from anticipated exposure of portfolio assets to a range of emergent and inevitable transition drivers identified at STAGE 1.

Climate scenarios were then used to identify further risks and opportunities. This work entailed:

- **Constructing three Quayside climate scenarios:** in accordance with the process and methods set out in the Strategy section at page 24.
- **Exposure screening:** The same elements at risk identified at STAGE 1 were then screened against the relevant driver outcomes developed under each of Quayside three climate scenarios.
- **Risk and opportunity identification:** a similar combination of desktop analysis and work-shopping was then used to:
 - i. Discern how risks and opportunities identified via the preceding traditional identification process are reasonably expected to play out under each scenario.
 - ii. Identify any further risks and opportunities reasonably expected under each scenario.

Alignment with XRB Guidance:

Traditional risk and opportunity identification work: aligns with steps 1.9 of the XRB Guidance. Specific process and steps undertaken were informed by ISO 14090, 14091, and relevant aspects of Ministry for the Environment's "A guide to local climate change risk assessments".

Scenario construction: The specific process and steps undertaken and alignment of the same with relevant XRB Guidance is detailed at page 24.

Scenario analysis (applying the scenarios): Specific process and steps undertaken to and their alignment with XRB Guidance is also detailed at page 24.

See STAGE 3 below which details how Quayside's scenarios were then used to test the resilience of its business model and strategy.



Te Kāwai Ārahi Pūrongo Mōwaho
EXTERNAL REPORTING BOARD

4. PoT "elements at risk" included individual assets located across each of its sites (e.g. building assets; wharfs and sea protection structures; pavements, hard standing areas, and other ground improvements; utilities and services (e.g. three waters, roads, substations); and plant and equipment (e.g. cranes, straddle carriers, marine fleet). It also included key operations across each of its sites, and key elements of each value chains that the Port forms part of, which are summarised in Appendix A. Direct non-Port elements at risk varied in granularity to insert.



STAGE 3

ASSESS CLIMATE-RELATED RISKS AND OPPORTUNITIES

This involves carrying out a detailed exposure, vulnerability, and impact assessment of each climate-related risk and opportunity identified at the individual asset level during STAGE 2, followed by an assessment of the potential impacts each asset-level risk and opportunity will or may have at the portfolio level on an income (i.e. dividend), capital value, and stakeholder basis.

Detailed assessment of climate-related risks and opportunities at the asset level entails:

- **Exposure assessment:**
 - i. For the PoT and Direct non-Port assets, this entailed qualitatively assessing each asset's expected level of exposure under each Quayside scenario.⁵
 - ii. For indirect non-Port assets, this involved developing climate-related risk and opportunity profiles for each GICS sub-industry applicable assets belong to and assessing how each profile is expected to change under Quayside's three climate scenarios.
- **Vulnerability assessment:** was carried out on a qualitative basis for the PoT and Direct non-Port assets (see pages 18 to 19 which details the methods employed).⁶
- **Impact assessment:** was finally carried out for PoT and Direct non-Port assets generally in line with the approach also detailed on page 19.

Detailed assessment of aggregated climate impacts at the portfolio level

Impacts that Port and Direct non-Port asset climate risks and opportunities may generate at the portfolio level were then assessed by considering their subsequent anticipated impact on the following priority impact vectors under each Quayside climate scenario (see figure 2 on the following page):

- **Dividend/Income** - i.e. how asset level climate risks and opportunities are expected to impact dividend income.
- **Capital value** - i.e. how asset level climate risks and opportunities are expected to impact the capital value of the Portfolio.
- **Stakeholder** - i.e. how asset level climate risks and opportunities are expected to impact stakeholder relationships and objectives.

Alignment with XRB Guidance:

Key elements of STAGE 3 were based primarily on ISO 31000, 14091 and 14090, as well as other relevant sources including the Ministry for the Environment's "A guide to local climate change risk assessments".

Specific steps carried out during this stage also generally aligned with the key steps set out at 6.1 and 6.2 of the XRB Guidance.



Te Kāwai Ārahi Pūrongo Mōwaho
EXTERNAL REPORTING BOARD

5. The exact method used varied between physical risks and opportunities and transition risk and opportunities. E.g. the extent of the PoT's exposure to flood related risks and opportunities was determined by using GIS flood modelling to identify PoT buildings and infrastructure that are prima facie exposed to flood-related climate hazards. A value at risk exposure level was then derived by ascertaining the total capital value of all buildings and infrastructure identified as being exposed to the relevant flood related climate hazards (in this case pluvial flooding and coastal inundation).

6. For example, vulnerability to each applicable climate-related risk was determined by qualitatively assessing each relevant asset's expected level of sensitivity (i.e. to the risk in question) and its expected level of adaptive capacity (i.e. ability to adapt in response to each risk). An analogous approach was also used to assess the potential benefit climate-related opportunities may confer at the asset level. Due to practical limitations this assessment was not carried out for Indirect non-Port assets. As listed equities also change on a relatively frequent basis it was also deemed unnecessary.



STAGE 3

Climate related impacts at the Portfolio level

By way of example, Quayside used each of its entity level climate scenarios to ascertain how each of the PoT's material climate-related risks and opportunities are reasonably expected to impact PoT dividends, the capital value of its shareholding in the PoT, and its stakeholders including the BOPRC and lenders (see pages 29-33). An analogous assessment was likewise carried out in relation to Direct non-Port assets. Due to the scale and complexity, this year Quayside elected to:

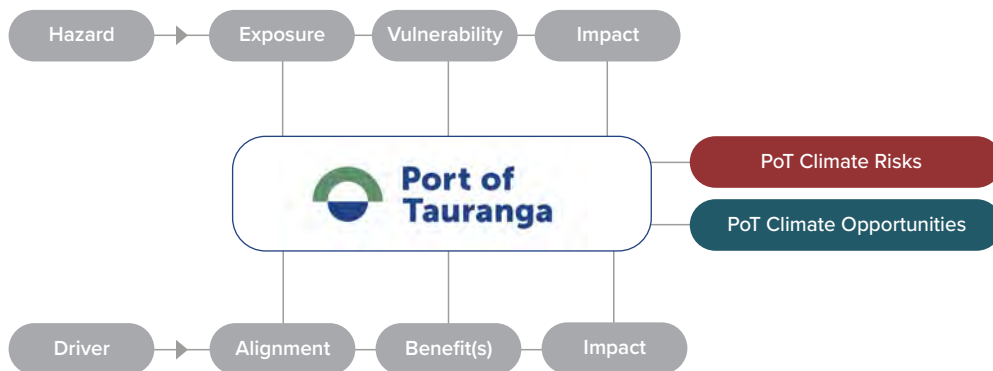
- Confine STAGE 3 to carrying out a qualitative assessment of current and anticipated impacts at the portfolio level in FY24, hence making use of NZ CS 2 adoption provisions 1 and 2 - Current and anticipated financial impacts.

- Address portfolio level impacts on an asset by asset basis by identifying how PoT level climate-related risks and opportunities will or may impact PoT dividend's, the capital value of Quayside's shares in PoT, and any potential impacts on Quayside's stakeholders - e.g. how anticipate transition relate risks that PoT is exposed to may impact the dividend Quayside can in turn pay to BOPRC or its ability to raise capital via publicly listed debt securities)

From FY25 onwards, Quayside will build on this year's qualitative assessment by quantitatively assessing the cumulative impact of all asset level climate-related risks and opportunities at the portfolio level under each of its climate scenarios. However, for the avoidance of doubt, this has not been carried out this year.

FIGURE 2: Assessing impacts at the portfolio level

Identification of current and anticipated impacts at the individual asset Level:



Assessment of current and anticipated portfolio-level impacts from asset-level climate-related risks and opportunities:

	ORDERLY 1.4°C at 2100	DISORDERLY 2.6°C at 2100	HOTHOUSE 3.9°C at 2100
Dividends			
Capital value			
Stakeholder			

Portfolio level-impacts: Quayside has focused on how asset level climate related risks and opportunities will or may impact dividend's, capital value, and stakeholder relationships because, for the reasons outlined at pages 21 to 22 these were considered the most critical elements of its business model and strategy, and, therefore, the most appropriate means of assessing portfolio's climate resilience over the identified time horizons.

Note: Direct non-Port assets (e.g. directly held private equity and real estate assets) were also assessed via this approach



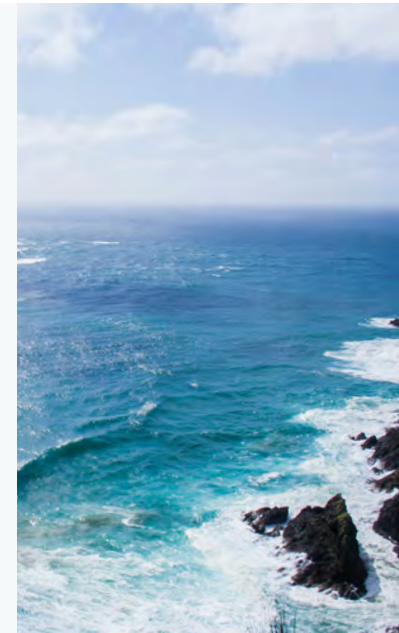
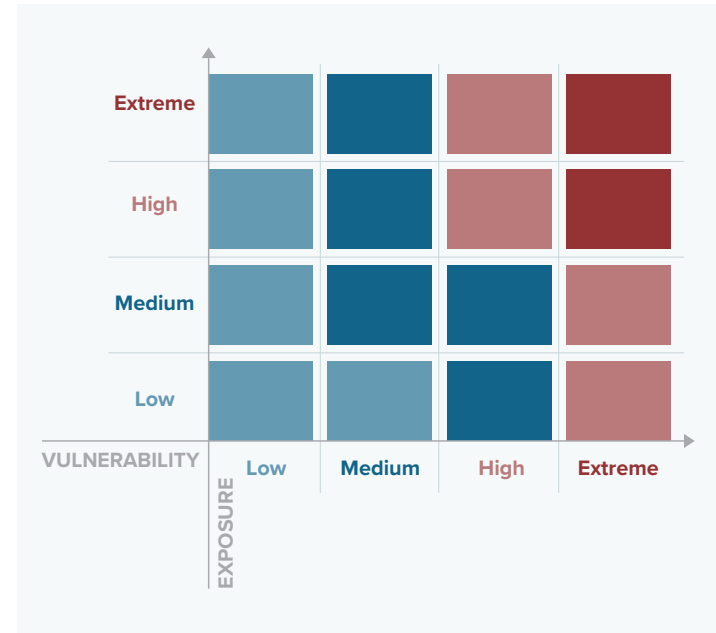
Exposure, sensitivity, and adaptive capacity

During STAGE 3, levels of “exposure” (“E”), “sensitivity” (“S”), “adaptive capacity” (“AC”), and “vulnerability” (“V”) — where vulnerability is calculated as the product of sensitivity and adaptive capacity ($V = S \times AC$) — were qualitatively assessed at the individual asset and portfolio levels.

To ensure each of these assessments was carried out in the systematic and consistent manner, a range of recommended factors, indicators, and data sources were used in each instance (e.g. refer to ISO 14091). However, such factors, indicators and data did vary across physical or transition risk. Such factors were more consistent at the portfolio level where:

- Exposure was determined on a value at risk (“VaR”) basis, and, in some instances by reference to Quayside’s ability to divest assets before an adverse impact occurs.
- Vulnerability was determined by reference to the capacity of a given climate related risk (at the asset level) to affect the three priority impact vectors - dividends, capital value and stakeholder relationships (see page 17).

The above approach was applied to all physical and transition risks, as the rationale for using this analytical framework in place of the traditional likelihood and consequence approach (outlined on page 12) applies equally to both physical and transition risk and opportunity categories.



Managing climate-related risk and opportunities

As stated in the statement of compliance on page 2 and noted in the Governance section at page 7, Quayside is making use of the transition planning adoption provisions. Accordingly, a comprehensive and detailed outline of its approach to managing climate related risks and opportunities will be provided as part of its FY25 climate disclosure.

In the interim however, Quayside has also specified existing and planned management responses to each climate related risk and opportunity outlined in the strategy section.

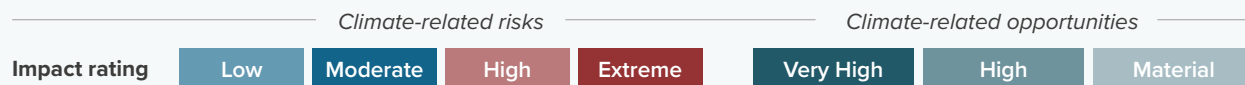
Impact rating

Impact ratings were qualitative and initially determined at the individual asset level by combining vulnerability and exposure ratings to produce an impact/risk rating of low, medium, high, or extreme.

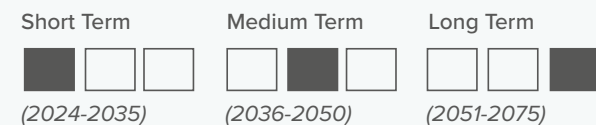
Importantly, all impact ratings reflect the expected gross impacts before considering any potential loss minimisation from specified management responses.

An analogous but less granular system (due to the inherent uncertainty of forecasting such outcomes) was also used to indicatively ascertain the potential benefit/positive impact that climate related opportunities may generate.

Key



Time horizons:





STRATEGY DISCLOSURE



QUAYSIDE'S BUSINESS MODEL AND STRATEGY

Quayside operates as a Council Controlled Trading Organisation (“CCTO”) under ownership by the Bay of Plenty Regional Council. It serves as the Council’s investment arm, annually returning dividends that support the Council’s long-term and annual plans.

Quayside is a strategic investment fund dedicated to enhancing the prosperity of the Bay of Plenty region across generations by managing investment assets independently from council operations. Initially mandated to be the custodian of Council’s majority shareholding in the PoT, Quayside has also built a significant non-port portfolio to include diverse assets across various industries, bolstered by strong partnerships founded on shared values.

In the 30 years since Quayside was formed to hold the Port of Tauranga shares owned by the BOPRC, it has evolved to become a diversified investment manager with total group assets of \$3.5 billion.

The annual dividend Quayside distributes to BOPRC has also grown from \$1.29 million in 1998 to a forecast \$45.0 million in 2024, providing cash to Council for projects and improvements in the local community.

Quayside’s Purpose

As a CCTO, Quayside’s mandated purpose is to grow a responsible and diversified fund that generates long-term returns to support growth and prosperity for the Bay of Plenty region.

Significantly, Quayside’s purpose also entails having an impact past the generation of today, to provide a resilient dividend for our shareholder for the betterment of our rohe and its people.

Quayside delivers regional impact to the Bay of Plenty community through an annual distribution to its shareholder, BOPRC, which then distributes that dividend to the entire Bay of Plenty community, including ratepayers by discounting the general rates bill as well as providing other community services.

BAY OF PLENTY
REGIONAL COUNCIL
TOI MOANA



100%
shareholder



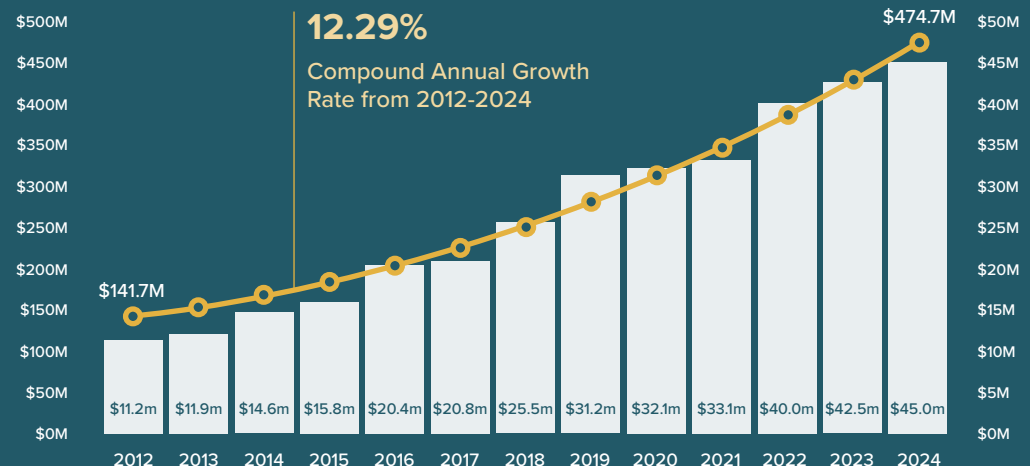
\$474.7 million+

Total distributions paid since 1998

BUSINESS MODEL & STRATEGY

Is set by BOPRC and Quayside each year via an annual 'Letter of Expectation' and 'Statement of Intent'

Dividened to BOPRC



Annual Dividend to BOPRC

Cumulative Dividend to BOPRC



Investment Strategy

Quayside's objectives, as outlined in its 2024 Statement of Intent, along with the Statement of Investment Policy and Objectives for Quayside Holdings Limited, its subsidiaries, and joint ventures, are to:

- Manage investment risk through diversification.
- Provide a resilient dividend stream to Council, allowing it to deliver benefits to the Bay of Plenty Region.
- Promote the sustainability of our fund

- for both current and future generations (intergenerational fund).
- Support a successful and community supported Port of Tauranga
- Ensure our investment is undertaken in accordance with our fiduciary duty to the constituents of the Bay of Plenty and in accordance with our responsible investment policy.

Quayside's core strategy of diversification to deliver on the above objectives is well

established, and is reflected in its strategic targets for the next 3-year period , which include (among others):

- Maximize total shareholder returns (preservation and growth)
- Deliver stable and resilient distributions that ensures intergenerational wealth
- A diversified portfolio consistent with investment objectives
- Increase value through risk-adjusted excess returns.

As noted at page 2, Quayside is still in the process of developing its Transition Plan. However, as an intergenerational fund, we recognize the importance of diversification as a key driver of our Strategy and one of our core Investment Beliefs (as stated in the SIPO). Quayside recognises that climate risk can exacerbate existing risks and as such achieving a well-diversified portfolio is the primary mitigant for reducing risk that can jeopardize our ability to deliver stable dividend to the Council and capital losses over the long term.



Strategic Assets \$1.73 Billion

75.3%

Port of Tauranga ("PoT")

\$1.73 billion

Quayside owns 54.14% of the total shares in the NZX listed PoT

The PoT is significant economic enabler and asset for the Bay of Plenty region. Accordingly, Quayside maintains a majority shareholding. Accordingly, Quayside maintains a majority shareholding on behalf of the BOPRC and the region.

PoT's contribution to Quayside's business model

The PoT is the primary contributor to the dividend Quayside distributes to BOPRC each year. As a nationally significant infrastructure asset, it also plays a crucial role in supporting the intergenerational focus of Quayside's strategy.

Non-Port Portfolio (gross assets) \$569.7 million

24.7%

Listed assets: \$204.5 million - 35.9%

(New Zealand, Australia, Global, and fixed income)

Private equity: \$121.5 million - 21.3%

(Managed and direct)

Other strategic assets: \$120.1 million - 21.1%

(Includes Rangioru Business Park, and Tauriko)

Real estate: \$93.9 million - 16.7%

(Commercial buildings and land)

Natural Resources: \$20.5 million - 3.7%

(Huakiwi Services Limited (primary asset))



Climate scenario analysis

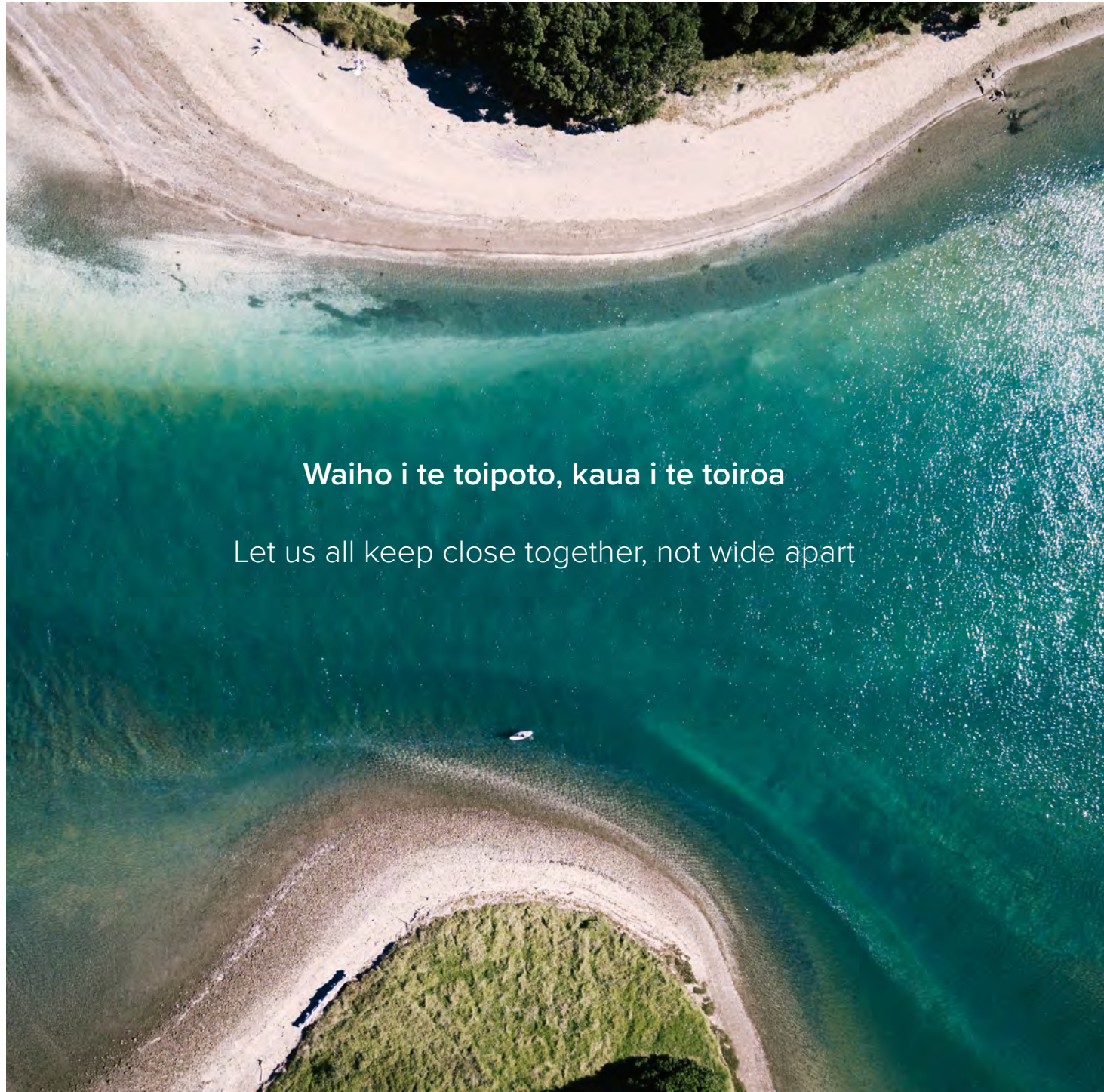
As outlined in the Risk Management section, Quayside developed three climate scenarios, which it has used to systematically explore climate-related risks and opportunities that it may face over time, thereby testing the resilience of its business model and investment strategy.

Quayside's three entity level climate scenarios together with the insights derived from assessing how its business model/portfolio and investment strategy may perform under each, are not predictive or probabilistic forecasts of the future. Rather, they are a strategic tool used to overcome the compounding uncertainty and complexity that makes probabilistic forecasting of climate-related impacts impractical or unworkable.

Alignment with the Port of Tauranga

Quayside's climate scenarios were developed with the assistance of external experts, who also supported the PoT in its scenario development and analysis. As noted in the Risk Management section at page 15, this meant Quayside was able to ensure its scenarios were aligned with the NZ CS 1 and XRB Guidance requirements, while also maintaining alignment with the PoT's scenarios.

This alignment was crucial, as it allowed Quayside to seamlessly incorporate the PoT's risk and opportunity assessment findings into its own evaluation of aggregated climate impacts at the portfolio level, under each corresponding Quayside scenario. This approach ensured consistency across both entities and avoided any internal inconsistencies that could have compromised the accuracy or integrity of Quayside's overall climate-related risk and opportunity assessment.



Waiho i te toipoto, kaua i te toiroa

Let us all keep close together, not wide apart



Developing Quayside's climate scenarios

As noted at page 16 to 17, the construction and application of Quayside's climate scenarios was an integrated component of its 5-STAGE process for identifying, assessing, managing, and reporting on climate-related risks and opportunities. To this end scenario construction, which formed part of STAGE 2, entailed the following:

1. Traditional risk and opportunity identification

Past, current and potential anticipated climate-related risks and opportunities were first identified during STAGE 2 (see page 16). This work, which aligned with Step 1.9 of the XRB process, provided an insight-rich climate risk baseline, which helped to sharpen the focus and improve the development of Quayside's entity level climate scenarios.

2. Establishing the focal question and scope

The focal question was defined as per Step 2.1 of the XRB's process. As noted in the Risk Management section above, scenario boundaries were identified earlier during STAGE 1 (see pages 14 to 15).

3. Identify relevant sector scenarios

Relevant sector scenarios were identified,⁷ and a comparative analysis was conducted to pinpoint inconsistencies across key elements (e.g. reference scenarios, emission trajectories, and drivers), so that these elements could be downscaled to the Quayside scenario level in a coherent and internally consistent manner.

4. Agree Quayside's scenario archetypes⁸

Quayside adopted global reference scenarios, emissions trajectories, and macro assumptions that met key scenario criteria (plausible, challenging, distinctive, internally consistent, and relevant) and aligned with relevant sector scenarios.⁹ This alignment enabled Quayside to directly use the sector scenarios to guide the development of its key drivers and driver outcomes, ensuring a coherent and consistent approach at step 5 below.

5. Identify and rank driving forces

Using the STEEP analytical framework, and sector scenario drivers as a starting point, Quayside identified an initial long list of potential drivers.¹⁰ These drivers were then assessed and ranked based on their influence and uncertainty, resulting in a short-list of critical drivers (see footnote 10 which details how this hybrid bottom-up/top-down approach was executed).

6. Mapping driver outcomes to each scenario archetype

Various methods were used to unpack and rationalise how each critical driver is likely to play out under each of the three Quayside scenario archetypes.¹¹ Extensive analysis and research was carried out to establish robust and well reasoned driver outcomes on an individual driver basis and as a product of interactions between two or more drivers.

7. Drafting scenario narratives

The above archetypes and detailed driver outcomes (e.g. projections, conclusions, and assertions) were used to develop the three Quayside scenarios summarised on pages 25 to 27 in general accordance with steps 3.3, 5.1 and 5.2 of the XRB's recommendations.

Notes:

7. As an asset manager, Quayside first used the Financial Services Sector Climate Scenarios as a starting point. As the Port of Tauranga comprises over 80% of Quayside's portfolio the Transport, Agricultural, and Energy Sector Climate Scenario's were also deemed relevant (refer to rationale set out at Page 14 of the Port's FY24 Climate Related Disclosures).
8. Scenario archetypes are the key parameters and assumptions that define each scenario. They serve as foundational models representing different plausible futures, helping to frame the analysis by providing a structured basis for exploring various outcomes.
9. This process generally aligned with Step 4 "Select temperature outcomes and emissions pathways" (specifically steps 4.1, 4.2), and step 5.1 of the XRB guidance. Although XRB suggests selecting drivers first to inform archetype identification, Quayside opted for a hybrid "top-down" and "bottom-up" approach. Broad climate archetypes were downscaled from sector scenarios to manage multi-sector complexity and ensure consistency. Detailed drivers and outcomes were then developed from the bottom-up within each archetype, allowing for relevance, impact, and challenge while maintaining internal coherence across scenarios. This approach balanced practicality with the need for robust scenario development.
10. In the first instance, drivers were derived from the applicable sector scenarios noted above, by either: (A) adopting a driver in full where it was identified as a potential critical uncertainty (i.e. based on Quayside's focal question and its own climate circumstances) and is wholesale applicable without needing to be translated into a Quayside specific version; or (B) adopting a Quayside specific translation of the given sector driver (i.e. a "downscaled" version of the same). This was done to achieve an appropriate level of consistency and comparability with other climate reporting entities, while still capturing critical uncertainties that were most pertinent to Quayside's business model and strategy. Additional driving forces that were also assessed as being potential critical uncertainties were also identified and included in this long list.
11. In many cases, driver relevant assertions and outcomes set out in the global reference and sector scenarios that Quayside's archetypes were downscaled from were used as a starting point. Critically, these were carefully interrogated for relevance, plausibility, and accuracy, before deriving any Quayside specific out-workings (i.e. driver outcome conclusions and/or driver specific projections relevant to Quayside's business model and know areas of risk and opportunity identified at STAGE noted above). Many driver outcomes were also the product of detailed research and analysis, as well as insights and inputs provided from external stakeholders that were well placed to provide comment (e.g. due to their area of expertise and/or access to data and insights that were not otherwise readily available). In some cases, self contained qualitative models were also developed to enable driver outcomes and conclusions to be tested and validated. This often entailed mapping and understanding interactions and dependencies between one or several drivers.



Overview of Quayside's climate scenarios

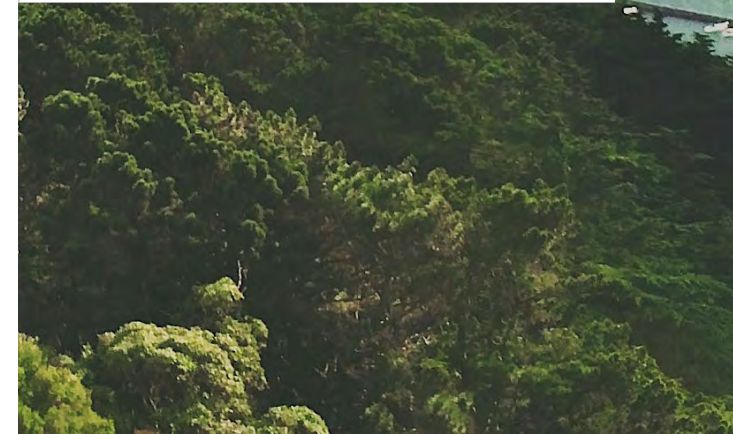
The following summary outlines each of Quayside's three climate scenarios, focusing on the defining features and key assumptions underpinning each, as well as a number of salient high-level outcomes. While more specific driver outcomes are not depicted in the summaries below, the most relevant outcomes are reflected in the risk and opportunity assessment findings detailed at pages 29 to 36.

SCENARIO	ORDERLY - 1.4°C at 2100		DISORDERLY - 2.6°C at 2100		HOTHOUSE - 3.9°C at 2100	
MACRO CONTEXT Globally New Zealand	<p>Ambitious and coordinated international action leads to the world promptly and decisively shifting to a more sustainable, low emission, and inclusive path, which prioritises ensuring global and domestic economies respect planetary boundaries.</p> <p>NZ's transition is coordinated and immediate. Emission reduction occurs across all sectors, driven by clearly signalled policy changes and proactive sector-led initiatives aligned with achieving net zero emissions by 2050. Initial transition momentum is catalysed by ambitious policies that are implemented immediately and become gradually more stringent in the lead up to 2050.</p>		<p>Action is delayed until circa 2032, when a spate of severe weather events and missed Paris Agreement targets push many countries to rapidly implement stringent policies aligned with reducing emissions to net zero as soon as possible. Not all countries take equal action.</p> <p>NZ follows suit to keep up with and retain access to export markets. Stringent and blunt mitigation policies are introduced over a shorter time-frame, often in poorly coordinated fashion. Prioritisation of emissions reduction is required to achieve revised targets. The resulting transition comes at a higher level of cost, disruption, and inequity across society, and between sectors and regions.</p>		<p>Conflict and economic disruption in the 2020s and 2030s lead to geopolitical division that stalls effective climate action and drives prioritisation of energy and food security. Global mitigation action falters and fossil fuel use continues as a result. Some abatement occurs as a by-product of energy security and resilience concerns.</p> <p>NZ joins the rest of the world in prioritising food and energy security. As a result, no additional mitigation policies are implemented from the late 2020s onwards. Faced with high costs and disrupted global markets, the focus shifts to adaptation and ensuring food production remains high despite increasingly severe physical climate impacts.</p>	
REFERENCE SCENARIOS AND PATHWAYS	NGFS: Net Zero 2050 SSP1-1.9	RCP 1.9 (NIWA RCP 2.6) ¹² CCC Tailwinds	NGFS: Delayed Transition SSP2-4.5	RCP 4.5 (NIWA RCP 4.5) ¹³ CCC Headwinds	NGFS: Current Policies SSP3-7.03	RCP 8.5 (NIWA RCP 8.5) ¹⁴ CCC Current Policy Reference
	<p>The archetype for the Financial Services Sector's "Orderly" scenario, Agriculture Sector's Tū-ā-pae (Orderly) Scenario, and the Transport Sector's "Fully Charged" scenario are all based on the same reference scenarios and pathways, which are listed above. The Port of Tauranga's ("PoT") first scenario is also aligned with the above for the reasons set out at Footnote 13.</p>		<p>The above is fully aligned with the Agriculture Sector's Tū-ā-hopo (Disorderly) Scenario but deviates from the Transport Sector's "Short Detour" Scenario (which is based on SSP2-2.6 / NIWA RCP 2.6 projections), and the Financial Services "Too Little, Too Late" equivalent scenario is based on NGFS "Nationally Determined Contributions" narrative. See Footnote 13 which details the rationale for this approach.</p>		<p>Above fully aligns with the "Bypass to Breakdown" Transport Sector Scenario, but deviates from the Agriculture and Financial Services sector "Hothouse" equivalent scenarios, as they are both based on SSP5-8.5. Notwithstanding the decision to align with the Agricultural Sector Scenarios, deviating in this respect was considered prudent for the reasons set out in Footnote 14.</p>	

12. As NIWA has not produced downscaled climate projections based on AR6 SSP couplings, RCP 1.9, NIWA RCP 2.6 and RCP 8.5 projections were relied on in place of SSP1-1.9 and SSP3-7.0 respectively.

13. The Agriculture Sector Tū-ā-hopo, Misstep (Disorderly) scenario is based on RCP 4.5, which yields substantially different physical impact outcomes compared to RCP 2.6, which the Transport Sector's "Short Detour" equivalent is based on. Quayside has chosen to fully align its Disorderly scenario with the Agricultural Sector equivalent (and thereby deviate from the RCP set out in the Transport Sector equivalent) because: (a) it provides a more distinct set of challenging physical impact circumstances to test against (i.e. compared to RCP 2.6, which yields physical impact outcomes that are similar to those in Quayside's Orderly scenario); (b) the PoT which comprises nearly 80% of Quayside's portfolio on a Value at Risk ("VaR") basis is also aligned with the Agriculture Sector's Disorderly archetype in full, as primary sector goods make up over 65% of total freight moved via PoT sites, thereby making the PoT (and subsequently Quayside) an inherently agricultural aligned business; and (c) many of Quayside's other Strategic and Commercial assets are also agricultural based (e.g. Scion, PF Olsen, Huakivi, Birchwood, Tapawera Hop Garden, Spring Sheep, Techion, as well as many of the Managed Fund underlying assets). For similar reasons, Quayside has also elected to base its second scenario on the NGFS disorderly reference scenario to maintain full alignment with the Agricultural Sector's equivalent.

14. SSP5 assumes continued fossil fuel consumption and rapid technological advancement will enable functional global trade that delivers high economic growth. In contrast, SSP3 depicts a fragmented world characterised by regional blocs, protectionism, and low economic cooperation. Quayside and PoT elected to align with SSP3 because: (a) it entails circumstances that are arguably more challenging and thereby present more opportunity to stress test the resilience of Quayside's business model; and (b) it will likely entail physical impacts that are similar to those under SSP5-8.5.























SCENARIO	ORDERLY - 1.4°C at 2100		DISORDERLY - 2.6°C at 2100		HOTHOUSE - 3.9°C at 2100	
POLICY AMBITION AND RESPONSE	<p>Ambition: 1.5°C aligned (highly ambitious)</p> <p>Mitigation response: Immediate and becomes gradually more stringent; generally smooth, coordinated and well signalled.</p> <p>Adaptation response: Also immediate, but proportionate to expected outcomes under policy aligned climate projections.</p>		<p>Ambition: 2°C aligned (low ambition to 2032, then highly ambitious)</p> <p>Mitigation response: Delayed until 2032; then swift and stringent but disorderly; variable / differentiated between nations.</p> <p>Adaptation response: Also delayed and proportionate to policy aligned climate outcomes - e.g. greater restrictions on land use based on RCP 4.5 flood and related hazards, and more onerous building regulation changes.</p>		<p>Ambition: ≥ 3.0°C (low ambition)</p> <p>Mitigation response: No further mitigation policy; some are also abandoned or substantially scaled back over time (e.g. ETS)</p> <p>Adaptation response: Relatively immediate (due to long expected useful life of built environment) and proportionate to policy aligned climate outcomes. Significant/abrupt restrictions placed on land with flood, erosion, coastal inundation and ground water rise hazards.</p>	
TEMPERATURE OUTCOMES	<p>Global mean annual change: 1.6°C at 2050 1.4°C at 2100*</p>	<p>NZ mean annual change: 2031–2050: 0.7°C 2081–2100: 0.7°C–1°C</p>	<p>Global mean annual change: 2°C at 2050 2.6°C at 2100*</p>	<p>NZ mean annual change: 2031–2050: 0.7–0.9°C 2081–2100: 1.3–1.4°C</p>	<p>Global mean annual change: 2.5°C at 2050 3.9°C at 2100*</p>	<p>NZ mean annual change: 2031–2050: 0.9–1.1°C 2081–2100: 2.8–3.1°C</p>
MARKET RESPONSE AND BEHAVIOUR CHANGES	<p>B2B Customers: most place immediate pressure on suppliers to drive emissions reduction. This steadily increases over time. Those that service developing nations only are less stringent in this respect.</p> <p>Consumers and End Users (developed economies): most make an immediate and increasingly stringent shift towards sustainable and low-emission goods and services (e.g. buying local and/or sustainable alternatives where possible, and/or foregoing or reducing consumption of goods and services in hard to abate industries).</p> <p>Consumers and End Users (developing economies), most consumers and end-users prioritise existing fundamentals like poverty alleviation, healthcare, education. However a similar shift to sustainable and low emission consumption starts to flow through to affluent consumers and then the burgeoning middle class, however this is delayed.¹⁵</p> <p>Capital and Insurance: Affordable capital and insurance is easily accessible for organisations that show strong sustainability and resilience.</p>		<p>B2B Customers: Most are delayed and then adopt a more stringent and abrupt version of the Orderly scenario shift from 2032 onwards. Others are more variable in their response (before and after 2032).¹⁶</p> <p>Consumers and End Users (developed economies): Like the B2B customers above, most are delayed and then adopt a more stringent and abrupt version of the shift described in the Orderly scenario from 2032 onwards. Consumers in some countries will have been more proactive prior 2032. Some will be less proactive after 2032 as well.</p> <p>Consumers and End Users (developing economies), as per the Orderly scenario however, the shift to sustainable and low emission consumption is more delayed as increased costs associated with rapid decarbonisation erode poverty alleviation, healthcare, education gains achieved prior to 2032.</p> <p>Capital and Insurance: Capital and is harder and more expensive to access, especially for large longer expected useful life capital assets, unless strong mitigation action and resilience can be demonstrated to a high standard. Insurance is significantly more expensive and in some cases, subject to full or partial retreat (i.e. cover exclusions).</p>		<p>B2B Customers: Minimal change to present day. Some regained carbon reduction targets which were imposed on suppliers initially, however this was eventually abandoned.</p> <p>Consumers and End Users (developed economies): Little change overall. Some sought to shift in line with the Orderly scenario. However, this fails to gain traction and most retain the status quo. Cost and access to essentials like food and energy becomes the paramount concern as the physical effects of climate change deepen.</p> <p>Consumers and End Users (developing economies), over the Short Term there is little impact on the status quo. Longer term, the physical effects of climate change will have an increasing impact on demand for primary products, especially foods and animal derived products, but may also compromise purchasing power.</p> <p>Capital and Insurance: becomes increasingly difficult to access, especially from 2040 onwards. Lenders and investors are unlikely to provide capital unless it can be shown that a given investment is sufficiently resilient to both the direct and indirect physical impacts that climate change may generate.</p>	

15. "Common but differentiated responsibilities" (CBDR) is a key principle in international environmental law, particularly in the context of climate change. It recognises that while all nations share a common responsibility to address global environmental challenges, such as climate change, the nature and extent of their responsibilities differ based on their historical contributions to the problem and their current capacities to address it. For any climate scenario to be plausible, this fundamental principle must be accounted for. Hence distinguishing between developed and developing economies.

16. This scenario is anchored to the Agricultural Sector equivalent in particular, which contemplates varying levels of action being taken by different countries. Accordingly, this is reflected in the B2B customer response. For example, it is likely that some B2B customers will retain mitigation targets and commitments from the early to mid-2020s despite the delay in broader action. For example, New Zealand companies which have traded on sustainability prior to the climate emergency are less likely to fully abandon initial mitigation commitments. Conversely, other B2B customers may still be reluctant to change after 2032 as well.





SCENARIO	ORDERLY - 1.4°C at 2100			DISORDERLY - 2.6°C at 2100			HOTHOUSE - 3.9°C at 2100		
TECHNOLOGY CHANGE OUTCOME	<p>Fast and sustained change, NZ keeps pace: There is significant investment in emission reduction technology.</p> <ul style="list-style-type: none"> Quick wins are achieved over the immediate to short term via the use of data and AI to drive efficiency; Significant step changes are achieved across high emission sectors like energy, transport and agriculture over the latter Short to Medium Term via early investment in R&D. 			<p>Delayed then rapid/abrupt change, NZ falls behind: The country implements quick win changes and benefits from investment in the agricultural R&D in the early to mid 2020s. However, delayed investment in energy, transport, and manufacturing (i.e. process heat) technology has led to the country falling behind. The sudden surge in global demand for low emission technology (from 2032 onwards) makes catching up significantly more expensive. Long lead times due to demand backlogs and supply constraints also slow roll out.</p>			<p>Reasonable rate of development, NZ keeps pace: Technology often advances reasonably fast, however it is driven by/ incidental to:</p> <ul style="list-style-type: none"> Push for economic growth and increased productivity; Efforts to ensure food and energy security; and Efforts to find cost effective means of adapting to the physical effects of climate change, especially across the primary sector. 		
MACRO ECONOMIC	<p>GDP: Moderate to high pressure slows growth Short Term then eases.</p> <ul style="list-style-type: none"> Lower Short Term consumption offset, at least in part, by significant and sustained transition capital investments. Lower physical impacts and realisation of gains from early investment sets enables strong growth medium to long term. <p>Population:</p> <ul style="list-style-type: none"> Global increase of 7% by 2050 (relative to 2022) NZ increase of 16% by 2050 (relative to 2020) 			<p>GDP: Delayed transition over a shorter timeframe, and variable action between developed and developing nations causes:</p> <ul style="list-style-type: none"> Lower growth and periods of downturn in the Medium Term. Lengthier recovery, due to higher transition costs and disruption. Lower growth Long Term due to greater physical impacts. <p>Population:</p> <ul style="list-style-type: none"> Global increase of 16% by 2050 (relative to 2022) NZ increase of 22% by 2050 (relative to 2020) 			<p>GDP: Over Short Term the impacts is minimal (due to low transition impacts and low initial physical impacts). Over the Medium to Long-Term productivity and growth is impacted significantly by increasing:</p> <ul style="list-style-type: none"> Physical effects of climate change (e.g. which decimate primary production yields in many countries) and high adaptation costs. Levels of regional rivalry which compromise/slow global trade. <p>Population:</p> <ul style="list-style-type: none"> Global increase of 8% by 2050 (relative to 2022) NZ increase of 26% by 2050 (relative to 2020) 		
IMPACT SEVERITY	SHORT TERM:	MEDIUM TERM:	LONG TERM:	SHORT TERM:	MEDIUM TERM:	LONG TERM:	SHORT TERM:	MEDIUM TERM:	LONG TERM:
Physical Impacts	 Low	 Low/Moderate	 Moderate	 Low	 Moderate	 High	 Low	 Moderate/High	 High/Extreme
Transition Impacts	 Moderate/High	 Moderate	 Low	 Low/Moderate	 High/Extreme	 Low/Moderate	 Low	 Moderate <i>(adaptation only)</i>	 High <i>(adaptation only)</i>

Climate-related risks

Key: Impact rating

Low

Moderate

High

Extreme





Snap-shot of key climate-related risks and opportunities

Climate-related risks

Key: Impact rating

Low

Moderate

High

Extreme

Risk/opportunity summary	Time Horizon	Orderly	Disorderly	Hothouse
Port of Tauranga (Risks)				
Direct physical risks to Port Assets and Operations (Refer DR1 to DR5 at page 29)	Medium - Long Term			
Indirect physical risks to export freight volumes (Refer IDR1.A to IDR1.C at page 31)	Medium - Long Term			
Indirect transition risks to export and import freight volumes (Refer IDR4 at page 32)	Short - Medium Term			
Indirect transition risks to export and import freight volumes (Refer IDR2, IDR3, and IDR5 at page 32)	Medium - Long Term			
Direct Non-Port and Strategic Assets (Risks)				
DQR1: Risk of acute damage to all commercial real estate and strategic assets, cause by exposure to increased rainfall, wind and storm events.	Medium - Long Term			
DQR2: Risk of flood related damage and disruption, due to increased extreme rain, wind and storm events (Applies to 3 assets only - see page 36)	Short - Medium Term			
DQR3: Risk of damage to Huakiwi orchards due to increased extreme rain, wind, storm, and flood events.	Short - Medium Term			
DQR4: Risk that exposure (of all commercial, strategic and Huakiwi assets) to acute events will compromise access to insurance and lending	Short - Long Term			

Climate-related opportunities

Key: Impact rating

Very High

High

Material

Risk/opportunity summary	Time Horizon	Orderly	Disorderly	Hothouse
Port of Tauranga (Opportunities)				
DO1: Structural changes to New Zealand's national freight system (road to multi-modal) due to various heavy transport decarbonisation transition drivers (see page 30).	Medium - Long Term			
DO2: Introduction of larger low carbon shipping vessels due to policy, market, and sentiment decarbonisation pressures, and technology advances (see page 30)	Short - Medium Term			
IDO2: Effect of climate migration and transition to a low carbon and climate-resilient future on demand for imported goods (see page 33).	Short - Medium Term			
IDO1: Increased demand for logs and other forestry export commodities due to changing preferences and the emergence of new low-emission alternatives. (see page 33)	Medium - Long Term			



Impact of Port climate related risks and opportunities at the Portfolio level

The following tables summarise current and anticipated climate-related impacts that are reasonably expected at the portfolio level under each of Quayside's three climate scenarios outlined above.

Direct physical risks To PoT assets and operations	Port context General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response																				
<p>The PoT identified five direct physical risks deemed material:</p> <p>Medium-Long Term direct risks</p> <p>DR1: Increased wear and tear and risk of acute damage to Port sites and assets, cause by exposure to increased rainfall, wind and storm events).</p> <p>DR2: Increasing instances of disruption to Port operations, cause by exposure to increased rainfall, wind and storm events.</p> <p>Long-Term direct risks</p> <p>DR3: Heightened risk of flood related damage and disruption, due to sea level rise and increased extreme weather (rain, wind and storm) events</p> <p>DR4: Increasing risk of disruption to road and rail access due to sea level rise and increased extreme weather (rain, wind and storm) events.</p> <p>DR5: Risk to Port of Tauranga wharves, harbour access, and loading/unloading capability, due to sea level rise and increased coastal inundation.</p>	<p>< 1% of total capital VaR and revenue VaR relates to sites outside of Port of Tauranga. However, non-Tauranga sites are strategically important, as they are critical to ensuring certain freight enters and exits New Zealand via Tauranga.</p> <p>19 assets across all PoT sites are critical, of which: 11 are wharves, underground utilities, and rail, which are particularly resilient; 3 are substations; and 5 are buildings which house functions that can be stood up off site at short notice.</p> <p>Past weather events indicate that the most PoT assets are inherently climate resilient (see footnote 2).</p> <p>Acute weather events tend to have a short-lived impacts on: ship entry, exit, berthing, and loading/unloading (e.g. if wind sensitive cranes or dry bulk goods are involved); and container handling. Interruptions are usually short lived and backlogs tend to be resolved promptly minimising knock-on impacts. Analogous outcomes are also expected under DR4.</p> <p>Tauranga freeboard levels are sufficient to prevent inundation, even under a hothouse scenario. Freeboard levels at all coastal sites is sufficient to preserve ship access and loading/unloading functions under all climate scenarios. Harbour access at all coastal sites also appears unaffected under all scenarios.</p>	<p>Only DR2 is currently causing detectable impacts at the PoT level.¹⁷ The PoT also experienced minor DR1 and DR4 related impacts during past events like Cyclone Gabrielle which were manageable.¹⁸</p> <p>Dividend: No material impacts attributable to DR2 disruptions have been observed at the Portfolio or PoT level. Disruptions tend to be resolved promptly preventing material knock-on impacts arising (e.g. ships bypassing the PoT, or customers switching to an alternative freight route, especially at scale that is capable of impacting PoT dividends).</p> <p>Capital value: No negative impacts attributable to DR1-5 have been observed. The PoT's apparent climate resilience (e.g. as demonstrated during Cyclone Gabrielle) may have enhanced market confidence in some quarters (e.g. amongst PoT lenders, insurers, and sophisticated investors). However, it has not directly translated into a measurable increase in capital value at present.</p> <p>Stakeholder: Lenders now consider the climate resilience of secured assets. As such, the PoT's demonstrated resilience is likely to have conferred some benefit that can be leveraged going forward (e.g. to secure lower interest rates on borrowing).</p> <p><small>17. DR1 wear and tear is possibly occurring but not at detectable levels. DR1 acute damage and DR3-DR4 are contingent risks.</small></p> <p><small>18. Refer the PoT's FY24 climate disclosure, at pages 18-20.</small></p>	<p>Short to medium term, the projected scale and pace of increases in the climate hazards driving DR1-5 are gradual and show limited material variation between each climate scenario.</p> <p>Dividend: Given the above, and considering PoT's inherent climate resilience—particularly in relation to DR1-2, and DR5—and its generally high levels of adaptive capacity (except for DR4, where it is lower),¹⁹ a reduction in dividend payments is only considered likely under the hothouse scenario in the medium to long term.²⁰ However, there is some potential for this to occur under the disorderly scenario long term. In both cases, the greatest risk stems from the high costs of implementing coastal inundation adaptation measures in response to DR3 and DR4 should sea-level rise reach a point where they become necessary.</p> <p>Capital value: is closely tied to PoT's freight volumes, operational efficiency, capacity to handle large-scale container and bulk cargo, and strategic position as the main gateway for international trade. If effectively managed, DR1-5 are unlikely to disrupt these factors in a manner that negatively impacts the PoT's capital value under any of Quayside's climate scenarios.²¹</p> <p>Stakeholder: Quayside anticipates a continuation of stakeholder outcomes outlined in the current impacts column under the Orderly and Disorderly scenarios. Due to the PoT's apparent inherent resilience, Quayside also anticipates that lenders will still be able to secure lending at reasonable rates under a Hothouse scenario.</p> <div data-bbox="1218 1011 1794 1134"> <table border="1"> <caption>Climate-related risks by scenario</caption> <thead> <tr> <th>Scenario</th> <th>Orderly</th> <th>Disorderly</th> <th>Hothouse</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>Low</td> <td>Moderate</td> <td>Moderate</td> </tr> <tr> <td>Moderate</td> <td>Moderate</td> <td>High</td> <td>High</td> </tr> <tr> <td>High</td> <td>High</td> <td>Extreme</td> <td>Extreme</td> </tr> <tr> <td>Extreme</td> <td>Extreme</td> <td>Extreme</td> <td>Extreme</td> </tr> </tbody> </table> </div> <p><small>19. PoT's plan to have fewer buildings on site over the relevant time frame (especially in areas exposed to a risk of coastal flooding long-term), is likely to further lower the chance of asset-related damage and increased insurance costs.</small></p> <p><small>20. DR1 and DR2 costs are likely to be passed on to PoT customers in full. Other ports are expected to face analogous challenges, thereby minimising the risk of shipping companies bypassing the Port and/or customers switching to another port.</small></p> <p><small>21. Particularly if the PoT's relatively high level of climate resilience and adaptive capacity along with the anticipated benefits of DO1 and DO2 (see page 30), are priced into its capital outlook accordingly.</small></p>	Scenario	Orderly	Disorderly	Hothouse	Low	Low	Moderate	Moderate	Moderate	Moderate	High	High	High	High	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	<p>Building on the insights gathered preparing this FY24 climate disclosure, Quayside will develop a Transition Plan to be included in its FY25 disclosure. In anticipation of this, Quayside management and the board emphasize that diversification, a core principle of Quayside's investment strategy (as outlined in its SIPO), will also be central to its Transition Planning. Diversification is viewed as essential to achieving an optimised level of risk-adjusted returns, regardless of the risk type, whether climate-related or otherwise.</p> <p>Putting this into practice, to strengthen financial resilience in response to climate change, Quayside has collaborated with the BOPRC to enable it to reduce its shareholding in PoT to a minimum of 28%, subject to BOPRC approval of the sale process and final conditions (see Te Mahere Tūroa – Long Term Plan 2024-2034 – Volume Two).</p> <p>Additionally, Quayside's management and governance teams hold regular meetings with PoT executives and board representatives to monitor PoT's efforts in understanding and managing its climate-related risks and opportunities.</p> <p>Finally, in FY25, Quayside will undertake work to quantify the current and anticipated impacts of PoT's climate-related risks and opportunities at the Quayside portfolio level.</p>
Scenario	Orderly	Disorderly	Hothouse																					
Low	Low	Moderate	Moderate																					
Moderate	Moderate	High	High																					
High	High	Extreme	Extreme																					
Extreme	Extreme	Extreme	Extreme																					

Climate-related risks

Key: Impact rating

Low

Moderate

High

Extreme



Direct transition opportunities Aligned with PoT's strategy	Port context General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response																
<p>The PoT identified two direct transition opportunities deemed material:</p> <p>Medium-Long Term direct opportunity</p> <p>DO1: Structural changes to New Zealand's national freight system (road to multi-modal) due to various heavy transport decarbonisation transition drivers.²²</p> <p>Short-Medium Term direct opportunity</p> <p>DO2: Introduction of larger low carbon shipping vessels due to policy, market, and sentiment decarbonisation pressures, and technology advances.²³</p> <p><small>22. This is due to a range of policy, market, and technology transition drivers (existing and anticipated) that are/will promote a shift from road freight to rail and coastal shipping. Under a hothouse scenario, a similar mode shift is also expected to be driven by adaptation imperatives (e.g. high cost of repairing roads as well as increased road link outages due to increased weather events).</small></p> <p><small>23. Most new vessels are larger low-emission ships (e.g. with alternative fuel or hybrid power plants) due to financial and GHG economies of scale; stricter port state and international environmental regulations; and increasing market based pressure to de-carbonise.</small></p> <p><small>24. Road transport dependency increases freight route options that bypass Port sites, whereas rail and coastal shipping based routes favour moving freight via the Port network due to its operational, economic and emission related efficiencies.</small></p>	<p>PoT's value proposition: is partly driven by its ability to efficiently move large freight volumes interregionally via its national strategic network, which, in addition to Port of Tauranga, consists of:</p> <ul style="list-style-type: none"> 3 inland ports/freight hubs (Auckland, Hamilton, and Rolleston) providing key road and rail links. 2 regional feeder ports (Northland and Timaru) offering coastal shipping connections. A freight logistics group, specialist cargo handling company, and on-line cargo management system. <p>Efforts to decarbonise heavy freight: are expected to drive an increasing proportion of inter-regional freight from road transport to rail and coastal shipping, fostering an integrated multi-modal freight system, and pushing New Zealand closer a hub-and-spoke model, where large vessels primarily call at major port hubs, while regional feeder ports are serviced by transshipping.²⁴</p> <p>Future capability: Introducing larger (e.g. 12,500 Panamax plus) vessels is central to the shipping sector's mitigation strategy. PoT is currently the only port in New Zealand receiving larger low emission "big ships", having invested heavily in augmenting shipping channels at Tauranga Harbour and enabling infrastructure upgrades. Critically, PoT also has resource consent to further deepen the Tauranga shipping channels to accommodate even larger vessels, which will likely filter through to servicing New Zealand routes in the Short to Medium Term. In addition to this PoT has the requisite land holdings, berth capacity, capital, and transport network connectivity (e.g. to road, rail, and feeder ports) needed to cater to larger, low emission vessels as and when they commence service on New Zealand routes.</p>	<p>Current impacts are minimal as DO1 and DO2 face high transition friction in the early stages,²⁵ especially DO1, which is also subject to associated market volatility, particularly in relation to coastal shipping.²⁶</p> <p>Dividend: Measuring specific contributions DO1 and DO2 may make to Port profits and, in turn, to dividends is not easy. That being said:</p> <ul style="list-style-type: none"> Due to inertia and volatility factors noted above, DO1 is too early stage to have a material impact on dividends. Same applies to DO2 as new generation vessels are not currently servicing New Zealand routes. Market awareness of PoT's unique status as the only port currently receiving new larger vessels, along with its ability to swiftly upgrade to accommodate even larger low-emission ships, may have encouraged some forward-looking customers to future-proof their logistical arrangements around the PoT's network. This is particularly relevant for customers with large-scale or complex logistics, where changes can be costly and disruptive.. <p>Capital value: Sophisticated investors likely factor in benefits DO2 is projected to confer PoT (e.g. increased future freight volumes, growth potential, and reductions in scope 3 financed emissions due to the introduction of low-emission vessels). While DO1 may impact capital value, its outcomes are less certain and set to materialise over longer time frames, diminishing its current influence on valuation.</p> <p>Stakeholders: As per direct physical risks regarding lenders (see page 29).</p> <p><small>25. This is due to factors such as high investment requirements, infrastructure constraints, and sector reorganisation challenges.</small></p> <p><small>26. Specifically, participants must commit capital in advance of sustainable demand (as a result of the anticipated mode shift) being assured, thereby increasing their vulnerability to economic headwinds in the intervening period.</small></p>	<p>Impact vectors: DO1 and DO2 are expected to create operational, financial, and carbon emission efficiencies that increase PoT's share of national import/export cargo movements, as well as its global connectivity, capacity to handle large-scale container and bulk cargo, and strategic position as the main gateway for international trade. As the number of 'big ships' on New Zealand routes increases this has the potential to see more import/export cargo redirected via PoT's network.</p> <p>Dividend: The frequency and amount of PoT dividends are influenced by multiple factors, with revenue and revenue growth as key drivers (which are themselves largely determined by the volume and composition of cargo PoT handles). Considering these factors, along with the impact vectors discussed and projected rates of freight mode shift and 'big ship' uptake,²⁷ DO1 and DO2 are expected to exert varying degrees of upward pressure on dividend payments under each Quayside scenario.</p> <p>The greatest impact is expected under the Orderly scenario, which has the potential to increase dividend payments in the late short term,²⁸ followed by gradual uplifts in interim and final dividends over the medium term, which stabilise in the long term (especially if other ports eventually acquire 'big-ship' capability). A similar but delayed outcome, with more abrupt increases in the medium to long term and lower overall dividend growth, is expected under the Disorderly scenario.</p> <p>Capital value: is also expected to experience upward pressure, particularly over the medium-term under the Orderly and Disorderly scenarios, as the changes to freight flow patterns driven by DO1 and DO2 become increasingly established, and are subsequently reflected in the PoT's revenue growth outlook.</p> <p>Stakeholders: DO1 and DO2 are likely to reduce PoT emissions significantly, thereby reducing Quayside financed emissions, especially under the Orderly and Disorderly scenarios. Combined with the dividend and capital value outcomes, this would deliver significant wide-ranging stakeholder benefits.</p> <div style="text-align: center;"> <table border="1" style="margin: 0 auto;"> <thead> <tr> <th>Scenario</th> <th>Very High</th> <th>High</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>Orderly</td> <td>Yes</td> <td>No</td> <td>No</td> </tr> <tr> <td>Disorderly</td> <td>No</td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Hothouse</td> <td>No</td> <td>No</td> <td>Yes</td> </tr> </tbody> </table> </div> <p><small>27. Projected freight mode-shift rates from the Transport Sector Scenarios guided Quayside's DO1 related mode shift rate estimates under each Quayside scenario. Parameter variances between corresponding Quayside and sector scenarios were accounted for when doing so. A high-level qualitative estimate of the rate at which new low-carbon vessels may reasonably be expected to start servicing New Zealand routes under each scenario, was guided by insights from several shipping decarbonisation pathways developed by the IMO, IEA, and others, and relevant global reference scenario assumptions (e.g. regarding the rate and time frames of mitigation action generally).</small></p> <p style="text-align: center;"><i>Climate-related opportunities</i></p> <p>Key: Impact rating Very High High Material</p>	Scenario	Very High	High	Material	Orderly	Yes	No	No	Disorderly	No	Yes	No	Hothouse	No	No	Yes	<p>Quayside will continue to engage periodically with senior leadership and governance representatives from PoT to support and inform PoT's efforts in fully leverage the opportunities identified in DO1 and DO2. This collaborative engagement will help ensure that these opportunities are effectively integrated into PoT's strategic planning and operational initiatives.</p> <p>In addition, ahead of the FY25 climate disclosures, Quayside will develop a quantitative model to analyse potential dividend and capital value outcomes resulting from the implementation of DO1 and DO2 across each of its three climate scenarios. This model will provide deeper insight into how these opportunities may influence Quayside's financial performance and long-term value creation.</p>
Scenario	Very High	High	Material																	
Orderly	Yes	No	No																	
Disorderly	No	Yes	No																	
Hothouse	No	No	Yes																	



Indirect physical risks To export freight volumes	Port context General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response																
<p>The PoT identified three indirect physical risks that were deemed material.²⁸</p> <p>Medium-Long Term indirect risks</p> <p>IDR1.A: Compromised Dairy seasonal production and gradual loss of productive capacity over time, due to multiple acute, chronic climate hazards</p> <p>IDR1.B: Compromised Forestry seasonal production and gradual loss of productive capacity over time, due to multiple acute, chronic climate hazards.</p> <p>IDR1.C: Compromised Kiwifruit seasonal production and gradual loss of productive capacity over time, due to multiple acute, chronic climate hazards.</p> <p><small>28. Projections indicate dairy, forestry, and kiwifruit agricultural systems will experience increasing exposure to:</small></p> <p><i>Chronic climate hazards: including increasing temperatures, wetter winters, dryer summers, reduced frost days, and reduced cold nights;</i></p> <p><i>Acute climate hazards: including increased extreme weather (i.e. rainfall, wind and storm, and flooding events, which are projected to increase in severity, frequency, and duration); drought; wild fire weather</i></p> <p><i>Related natural hazards including: increased landslide and soil erosion events caused by extreme rainfall, wind and storm events; and, increased pests and pathogens (new and increased prevalence) caused by increased temperatures.</i></p> <p><small>Exposure of these agricultural systems to the above noted hazards has the potential to generate seasonal production impacts and gradually erode production over time.</small></p>	<p>Business model: PoT services a number of key commodities responsible for most import and export cargo volumes and revenue. By volume, export cargo, which comprised 67% of total annual freight moved via PoT, consisted of.</p> <ul style="list-style-type: none"> Logs and other forest products - 54% of annual exports Dairy commodities - 13% of annual exports Kiwifruit - 10% of annual exports Other, mostly containerised - 23% of annual exports <p>Operating model: PoT's integrated national freight network (which consists of the strategic assets outlined on page 30 and in the Appendices at page 45) is a product of working with key import and export partners (including participants in key commodity related sectors) to develop and deliver highly efficient logistical solutions.</p> <p>Adaptive capacity: While PoT's strategic network of sites and freight links across New Zealand were designed in collaboration with key partners for the conveyance of specific commodities, they are highly adaptable, and can be readily re-purposed for conveying other goods, such as alternative primary sector commodities - e.g. if the physical effects of climate change generate significant land-use changes that impact one or more key commodities.</p> <p>Variable impacts: Cyclone Gabrielle highlighted how the impacts of acute climate hazards on key export-related agricultural systems can vary significantly.²⁹</p> <p><small>29. For example, in FY 2024 Log exports rose 7.5% to 6.7 million tonnes, the second-highest year on record, driven by the early harvest and export of trees in the Central North Island that were damaged by Cyclone Gabrielle. Poor pollination, wind, flooding, hail and cyclones reduced the 2023 crop size. As a result PoT reported 20-30% plus decreases in Kiwifruit exports in 2023.</small></p>	<p>Recent climate events (e.g. warm winter, major frost event, hail and Cyclone Gabrielle) temporarily reduced kiwifruit production and created a significant short-run spike in logs harvested for export, outcomes which directly impacted PoT export volumes (see footnote 29). The cyclone also underscored the resilience of national and regional dairy and forestry production (from a yield perspective) to heavy and extreme acute events. Historically, drought events have had the greatest impact on dairy production and export volumes, though heavy rain, flooding, and cyclones/severe storms have also played a lesser role.³⁰</p> <p>Dividend: While market conditions and capital expenditure can influence the frequency and amount of PoT dividends, freight volumes are the primary driver (as they directly impact revenue), thereby linking physical climate impacts on export commodity production to PoT dividend outcomes.³¹</p> <p>Capital value: Import and export cargo volumes directly influence revenue, which is a key driver of the PoT's profitability and, consequently, its share price. Thus, based on the dividend discussion above, the demonstrated climate resilience of key export commodities, as well as increased log volumes are likely to have positively influenced PoT's capital value as well.</p> <p>Stakeholders: the net resilience of key export commodity production, and, subsequently, export volumes, to Cyclone Gabrielle may have a positive impact on lender and debt security investor perceptions of Quayside's forward looking credit risk.</p> <p><small>30. Although Cyclone Gabrielle caused widespread property damage, dairy production losses reported by Fonterra represent an immaterially small portion of annual production from a PoT export volume perspective. Likewise, notwithstanding damage caused by forestry waste mobilised by the cyclone, damage to forestry stands was limited to a negligible portion of the total plantation forestry estate, and is therefore unlikely to have a significant effect on future export volumes.</small></p> <p><small>31. PoT press releases demonstrate the link between Cyclone Gabrielle and PoT export volumes in the months that followed. While, it does not expressly reference the corresponding impact on the dividend amounts, this can be reasonably inferred.</small></p>	<p>Impact vectors: As the vast majority of New Zealand's forestry, dairy, and kiwifruit production is exported, a significant short-run productivity shock,³² or longer-term productivity decline³³ in any of these sectors will likely impact PoT export cargo volumes directly. However, for reasons outlined in footnotes 31 and 32, short-run productivity shocks capable of materially impacting dairy and forestry export volumes are considered unlikely. Nevertheless, they could contribute to a gradual decline in the economic viability of these agricultural systems over the long term, particularly on marginal land, especially under the Hothouse and Disorderly scenarios.³⁴</p> <p>Dividend: Projected increases in the frequency and severity of acute climate hazards are expected to cause more frequent and possibly more severe short-run disruptions to forestry, dairy, and kiwifruit production, which are then reflected in more frequent and pronounced PoT export revenue fluctuations,³⁴ particularly under the Hothouse and Disorderly scenarios over the medium to long term.³⁵ If impacts on production and export cargo revenue are sufficiently significant and/or frequent, this may affect the size and frequency of PoT dividends. Longer-term productivity decline is not expected to impact export revenue to a degree that materially compromises dividend payments, except long term under the Disorderly and Hothouse scenarios, as Quayside anticipates that:</p> <ul style="list-style-type: none"> The adaptive capacity of key export agricultural systems will counter many long-run adverse impacts, and where adaptation is insufficient, land will be re-purposed comparatively more climate resilient forms of export-based primary production. New Zealand will remain a net exporter of primary sector commodities across all three Quayside scenarios, especially if climate change compromises overseas agricultural productivity as projected. <p>Capital value: may experience increased revenue-based fluctuations for the reasons noted directly above. However, it is still expected to trend upwards over time due to: (i) PoT's climate resilience (see pages 29 and 30); (ii) the expected adaptive capacity of export-based agricultural systems and the ability to re-purpose land for alternative export-based production; and (iii) increased global demand for primary sector goods, due in part to the physical impacts of climate change on offshore primary production</p> <p>Stakeholders: Provided that the dividend and capital value outcomes are largely in line with the assumptions and projections noted above, a continuation of the stakeholder outcomes noted in the current impacts column are expected.</p> <div data-bbox="1249 1050 1832 1177"> <table border="1"> <thead> <tr> <th>Scenario</th> <th>Orderly</th> <th>Disorderly</th> <th>Hothouse</th> </tr> </thead> <tbody> <tr> <td>Orderly</td> <td>Low</td> <td>Moderate</td> <td>High</td> </tr> <tr> <td>Disorderly</td> <td>Moderate</td> <td>High</td> <td>Extreme</td> </tr> <tr> <td>Hothouse</td> <td>High</td> <td>Extreme</td> <td>Extreme</td> </tr> </tbody> </table> </div> <p><small>32. This includes short-run shocks, where an acute climate event compromises production for single season, or, in some cases, over multiple seasons. Thus, if such damage were wide-spread, export volumes, and, in turn, PoT revenue may be negatively affected for multiple years.</small></p> <p><small>33. This refers to a gradual, sustained decline in the production capacity of an export commodity-related agricultural system over time, due to the cumulative effects of acute and chronic climate hazards, progressively weakening the affected agricultural system's economic viability (e.g. independent of or in combination with transition-related factors and non-climate pressures)</small></p> <p><small>34. As per page 29 to 30, historically, dividend payments have primarily been driven by revenue and revenue growth, which are determined by the volume and composition of cargo handled during each reporting period.</small></p> <p><small>35. For example, while extreme acute events are currently rare, under the Hothouse scenario they are expected to increase three-fold by the end of the century (based on NIWA climate projections).</small></p>	Scenario	Orderly	Disorderly	Hothouse	Orderly	Low	Moderate	High	Disorderly	Moderate	High	Extreme	Hothouse	High	Extreme	Extreme	<p>Extent of Quayside's exposure to the stated risks will be reduced via PoT's highly adaptive business model (which can pivot in response to any climate driven changes in the composition of export commodities), and, more generally, portfolio diversification.</p> <p>Detailed measures for managing the stated risks will be:</p> <ul style="list-style-type: none"> included in Quayside's transition plan and FY25 disclosures. informed and supported by the periodic engagement process between Quayside and PoT outlined at page 29. <p>In preparation for FY25 climate disclosures work will be undertaken to quantify potential dividend and capital value outcomes that may arise as a result of IDR1.A-C under each Quayside scenario. Insights gained will be used to inform the development of the transition plan measures noted above.</p>
Scenario	Orderly	Disorderly	Hothouse																	
Orderly	Low	Moderate	High																	
Disorderly	Moderate	High	Extreme																	
Hothouse	High	Extreme	Extreme																	

Climate-related risks

Key: Impact rating

Low

Moderate

High

Extreme



Indirect transition risks To export and import freight volumes	Port context General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response																				
<p>The PoT identified three indirect transition risks that were deemed material.³⁶</p> <p>Short-Medium Term indirect risks</p> <p>IDR4: Impact of changing market access rules and other climate related regulations on key export commodity volumes (Dairy and Kiwifruit in particular).</p> <p>Medium-Long Term indirect risks</p> <p>IDR2: Reduced availability and/or increased cost of stock feed due to multiple acute, chronic climate hazards, and rising biofuel sector demand.³⁷</p> <p>IDR3: Reduce demand for dairy export commodities due to changing preferences and the emergence of new low-emission alternatives.</p> <p>IDR5: Decarbonisation of New Zealand's transport system, due to various transition drivers, is expected to fundamentally alter demand for liquid fuel imports.</p> <p><small>36. Refer to PoT's FY24 climate-related disclosure on pages 26, and 28 to 29 for a list of the transition drivers that are expected to give rise to each of the transition climate-related risks above.</small></p> <p><small>37. IDR2 arises from both physical and transition risks. However, the transition drivers behind this risk, in particular increased demand for biofuel, are expected to have a greater impact in the short to medium term, hence warranting its inclusion alongside other indirect transition risks.</small></p>	<p>Business model: As noted at page 31, PoT services a number of key commodities responsible for most cargo volumes and revenue. In addition to export cargo listed at page 31, PoT imports, which comprised 33% of annual freight, consisted of:</p> <ul style="list-style-type: none"> Liquid fuels - 19% of annual imports Stock feed imports (various) - 11% of annual imports Other, mostly containerised - 70% of annual imports <p>Dairy-related factors central to assessing IDR4 and IDR3 include: NZ dairy's position as the most GHG-efficient producer, and expectation this advantage is retained; the sector's focus on emerging markets; forecast global production constraints; and expectation precision fermentation will only achieve cost parity in respect of a small range of high-value proteins, limiting its broader impact on the dairy sector.³⁸</p> <p>Stock feed factors relevant to IDR2: NZ demand is nearly double local supply, driving high import volumes, with about 75% consumed by the dairy sector. Imports have risen alongside dairy production, with demand spikes triggered by adverse climate impacts on pasture growth. Projected climate hazard increases are expected to reduce the yield of stock feed cultivated crops, potentially causing price volatility. Also, biofuel demand, which has already raised stock feed prices, is projected to increase by 30% between 2023 and 2028.³⁹</p> <p>Liquid fuel factors relevant to IDR5: NZ's entire supply of refined fuel (petrol, diesel and jet fuel) is imported by around 174 tanker calls per year. To date, the volume and frequency of imports has been relatively stable.</p> <p><small>38. Refer to references in PoT's FY24 climate disclosure at page 28</small></p> <p><small>39. Refer to references in PoT's FY24 climate disclosure at page 26.</small></p>	<p>Many of the transition drivers identified by PoT as causing or contributing to IDR2 to IDR5 are becoming increasingly prevalent. However, as outlined in PoT's FY24 climate disclosure (at pages 26, and 28 to 30), these drivers have not yet had an observable impact on key import and export volumes.⁴⁰</p> <p>Dividend: As discussed on pages 29 to 31, freight volumes, and to a lesser extent, the composition of freight, are key determinants of dividend payments. Since IDR2 to IDR5 haven't affected cargo volumes, they've likely not influenced dividends.</p> <p>Capital value: As also discussed on pages 29 to 31, freight volume and composition drive revenue and growth, key factors for profitability and PoT's share price. Given the lack of impact on dividends, IDR1-5 are unlikely to have negatively affected PoT's capital value either.</p> <p>Stakeholders: The prima facie resilience of dairy exports to IDR3, and the potential resilience of stock feed imports to IDR2 may reassure lenders and institutional investors' as to the stability and long-term viability of the PoT's key revenue drivers, thereby enhancing confidence in Quayside's ability to navigate climate-related risks and continue meeting its strategic financial objectives.</p> <p><small>40. PoT's assessment in this respect is as follows:</small></p> <ul style="list-style-type: none"> <small>IDR4: While many countries have signaled plans to implement Carbon Border Adjustment Mechanisms (CBAMs), no such measures affecting key export commodities have been enacted yet.</small> <small>IDR2: Import stock feed volumes have remained stable, indicating that recent weather-related impacts on global production and increasing biofuel sector demand have not yet significantly affected domestic demand or total annual import volumes</small> <small>IDR3: Growing concerns about the climate impact of traditional dairy and the rising popularity of plant-based alternatives are shifting consumer preferences, particularly in established markets like Australia, Europe, and North America. However, key emerging markets, which account for the majority of PoT dairy exports, remain primarily focused on cost and food security, and have yet to be significantly affected by this trend.</small> <small>IDR5: Similarly, the recent phasing out of ICE vehicles from manufacturer offerings and increased update of EV, PHEV, hybrid and other forms of vehicle is yet to have a knock on impact on the volume and frequency of liquid fuel imports.</small> 	<p>Impact vectors: Each risk is driven by factors that will or may cause changes in demand, which are then reflected in freight volumes.⁴¹</p> <p>Dividends: For the reasons in PoT's FY24 climate disclosure (at page 29), IDR4 is not expected to reduce export volumes, particularly for key commodities, to levels that would materially impact dividends, even under an Orderly scenario in the short to medium term, and the more abrupt Disorderly scenario in the medium term.⁴²</p> <p>For reasons also outlined in PoT's FY24 climate disclosure (at page 28) and Port context column, IDR3 is unlikely to impact dairy export volumes to levels that would materially impact dividends, unless an unforeseen technology breakthrough enables precision fermentation to achieve price parity with traditional dairy production across one or more high-volume dairy export commodity categories (e.g. WMP) and/or New Zealand loses its position as one of the most GHG efficient producers of dairy.⁴³</p> <p>The anticipated decline in liquid fuel demand is expected to reduce import volumes under all three scenarios, especially the Order and Disorderly short to medium term. However, due to the slow pace of change (even in the Disorderly scenario), the contribution of annual liquid fuel imports to total annual revenue, and PoT's adaptive capacity (see page 31), dividends are unlikely to be impacted for an extended period.</p> <p>As outlined in PoT's FY24 climate disclosure (at page 26) and the Port context column, IDR2 may impact stock feed import demand over time. However, strong anticipated dairy sector demand, and PoT business model's adaptive capacity are expected to prevent declines that may otherwise materially affect dividends on an ongoing basis.</p> <p>Capital value: may experience increased revenue-based fluctuations for the reasons noted directly above. However, it is still expected to trend upwards over time due to: (i) dairy, kiwifruit, and stock feed commodities apparent transition resilience; (ii) PoT strategic network's adaptive capacity; and (iii) increased global demand for primary sector goods; and (iv) anticipated impacts of DO1-2 and IDO1-2.</p> <p>Stakeholders: Provided that the dividend and capital value outcomes are largely in line with the assumptions and projections noted above, a continuation of the stakeholder outcomes noted in the current impacts column are expected.</p> <div data-bbox="1249 1002 1825 1125"> <table border="1"> <thead> <tr> <th>Scenario</th> <th>Low</th> <th>Moderate</th> <th>High</th> <th>Extreme</th> </tr> </thead> <tbody> <tr> <td>Orderly</td> <td>Low</td> <td>Moderate</td> <td>High</td> <td>Extreme</td> </tr> <tr> <td>Disorderly</td> <td>Low</td> <td>Moderate</td> <td>High</td> <td>Extreme</td> </tr> <tr> <td>Hothouse</td> <td>Low</td> <td>Moderate</td> <td>High</td> <td>Extreme</td> </tr> </tbody> </table> </div>	Scenario	Low	Moderate	High	Extreme	Orderly	Low	Moderate	High	Extreme	Disorderly	Low	Moderate	High	Extreme	Hothouse	Low	Moderate	High	Extreme	<p>Extent of Quayside's exposure to the stated risks will be reduced via general portfolio diversification.</p> <p>Detailed measures for managing the stated risks will be:</p> <ul style="list-style-type: none"> included in Quayside's transition plan and FY25 disclosures. informed and supported by the periodic engagement process between Quayside and PoT outlined at page 29. <p>In preparation for FY25 climate disclosures work will be undertaken to quantify potential dividend and capital value outcomes that may arise as a result of IDR2 to IDR5 under each Quayside scenario. Insights gained will be used to inform the development of the transition plan measures noted above.</p>
Scenario	Low	Moderate	High	Extreme																				
Orderly	Low	Moderate	High	Extreme																				
Disorderly	Low	Moderate	High	Extreme																				
Hothouse	Low	Moderate	High	Extreme																				

Climate-related risks

Key: Impact rating

Low	Moderate	High	Extreme
-----	----------	------	---------



Indirect transition opportunities Aligned with imports & exports	Port context General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response																																		
<p>The PoT identified two indirect transition opportunities that were deemed material:</p> <p>Short-Medium Term indirect transition opportunity IDO2: Effect of climate migration and transition to a low carbon and climate-resilient future on demand for imported goods.⁴⁴</p> <p>Medium to Long-Term indirect transition opportunity IDO1: Increased demand for logs and other forestry export commodities due to changing preferences and the emergence of new low-emission alternatives.⁴⁵</p> <p><small>44. Specifically, the physical effects of climate change and transition to a low carbon, climate resilient future are expected to produce: (i) increased migration to New Zealand over time; (ii) unprecedented levels of capital investment, driven by increasing pressure to decarbonise and the need to improve climate resilience. These expected changes in particular have the potential to generate an increase in the volume of imports and freight movements via PoT sites. Imports of note include: containerised goods (commercial in particular); break-bulk commodities, materials and equipment (e.g. associated with mitigation and adaptation based capital works projects).</small></p> <p><small>45. Transition drivers of note include (but are not limited to):</small></p> <ul style="list-style-type: none"> Increasing consumer emphasis on embodied emissions (including carbon miles) and broader environmental impacts Increasing consumer preference for low carbon sustainable alternatives Increasing pressure to reduce supply chain emissions (e.g. from business-to-business customers, consumers, lenders, investors and insurers) Increasing availability, afford-ability, and appeal or performance (as applicable) of low emission alternatives due technological advances and innovation. 	<p>Business model: PoT is NZ's main international shipping hub and for the reasons outlined in relation to DO1 and DO2, it is likely to retain this status (see page 30). Containerised goods and bulk imports (other than liquid fuel and stock feed) account for approximately 70% of imported freight by volume (see page 32). PoT's strategic network (as outlined in the Appendices), also provides unrivalled inter-regional containerised and bulk cargo capability.</p> <p>IDO2 assumptions: Decarbonisation and adaptation projects are already taking place across a range of sectors. Many more are planned or expected to take place.⁴⁶ A significant proportion of materials, components, plant, and equipment required to complete past mitigation and adaptation projects was imported.⁴⁷ By 2050 NZ's population is projected to increase significantly under each Quayside Scenario.⁴⁸</p> <p>IDO1 assumptions: Sustainable timber and wood fibre derivative products are increasingly becoming a core pillar of decarbonisation strategies adopted by many emission intensive sectors around the world. New and emergent technological wood based products like biofuel and other high value add biotechnology applications in particular are expected to drive a significant increase in demand for sustainable timber.⁴⁹</p> <p><small>46. Including the energy, transport, process heat, agricultural, construction amongst others. Participants across these sectors have also indicated: (i) further planned investments in mitigation and adaptation projects; and (ii) Carbon reduction and resilience building pathways, which are expected to entail significant levels of capital investment.</small></p> <p><small>47. For example, many of the parts and materials needed to expand and improve electricity generation and transmission infrastructure must be imported). This will likely be the case for future adaptation and mitigation projects.</small></p> <p><small>48. By 16%, 22% and 26% respectively under the Orderly, Disorderly and Hothouse scenarios.</small></p> <p><small>49. For example, engineered wood products to replace structural steel; cellulose and other materials to replace plastic; woody biomass to replace coal; various bio-energy replacements for liquid fuels amongst many other new uses).</small></p>	<p>Many of the transition drivers identified by PoT as causing or contributing to IDO1 to IDO2 are becoming increasingly prevalent.</p> <p>Regarding IDO2, a significant proportion of imported materials and equipment required for a number of mitigation and adaptation projects are most likely to have come through PoT. However, at present, PoT is yet to see a material uplift in imports that is directly attributable to mitigation and adaptation related investment (see PoT's FY24 Climate Disclosure (at page 30)).</p> <p>The emergent use of sustainable timber derived alternatives like those listed above is yet to have an observable impact on forestry exports. However, this may be attributed (at least in part) to many of these alternatives having not yet achieved price parity, and, subsequently, sufficient adoption at scale to impact import volumes materially.</p> <p>Dividend: As discussed on pages 29 to 31 freight volumes, and to a lesser extent, the composition of freight, are key determinants of dividend payments. Since IDO1 and IDO2 haven't affected cargo volumes, they've likely not influenced dividends.</p> <p>Capital value: As also discussed on pages 29 to 31, freight volume and composition drive revenue and growth, key factors for profitability and PoT's share price. Given the lack of impact on dividends, IDO1 and IDO2 are yet to have any appreciable impact on PoT's capital value.</p> <p>Stakeholders: Forward looking speculation regarding the potential positive impact of IDO2 may have operated to reassure lenders and institutional investors' as to the stability and long-term viability of the PoT's key revenue drivers, thereby enhancing confidence in Quayside's ability to navigate climate-related risks and continue meeting its strategic financial objectives. IDO1 may also have had this effect, however it is less likely to, due to the longer expected lead in time and comparative uncertainty as to whether or not certain technological uses of sustainable timber will achieve commercial success at scale.</p>	<p>Impact vectors: Refer to Port Context column under IDO1 and IDO2 assumptions.</p> <p>Dividends: IDO2 is expected to drive a material increase in imported containerised and bulk goods, despite some softening of demand due to transition and adaptation-related economic headwinds under each scenario.⁵⁰ However, as noted in the PoT's FY24 climate disclosure at page 30, it is anticipated that any reduction in imports attributable to the above will be offset, if not exceeded, by a countervailing increase in imported freight volumes, driven by population growth and substantial public and private investment in mitigation and adaptation projects. This opportunity is likely to further benefit PoT when combined with the effects of DO1 and DO2. IDO1 is also expected to drive a significant increase in log and forest product exports over the medium to long term under Quayside's Orderly and Disorderly scenarios. This is due to some bio-alternatives (e.g. liquid fuel and petrochemical substitutes) reaching price parity in the short term through decarbonisation and technological advances, as well as increased afforestation driven by rising demand for logs (due to the new value add applications), higher NZU prices, and the introduction of agricultural emissions pricing. An increase may also occur under the hothouse scenario, driven primarily by bio-energy demand, as energy security becomes a global priority.</p> <p>Capital value: Building on the Stakeholders' current impacts reasoning IDO2 has a clearer and more immediate potential to increase import freight volumes and growth, in line with anticipated population increases and capital investments in mitigation and adaptation projects under each Quayside scenario. IDO1 is expected to have similar impacts, but PoT's ability to benefit depends on increased afforestation in response to rising demand for sustainable timber.⁵¹ If, when, and to what extent biofuel and biotechnology drivers of increased demand for sustainable timber will reach commercial scale is less certain. Thus, any material impact on capital value from IDO1 is likely to emerge late medium to early long term, under a comparatively less certain pathway.</p> <p>Stakeholders: Provided that the dividend and capital value outcomes are largely in line with the assumptions and projections noted above, a continuation of the stakeholder outcomes noted in the current impacts column are expected.</p> <table border="1" data-bbox="1232 989 1859 1276"> <thead> <tr> <th></th> <th></th> <th>Orderly</th> <th>Disorderly</th> <th>Hothouse</th> </tr> </thead> <tbody> <tr> <td rowspan="3">IDO2</td> <td>Orderly</td> <td>Material</td> <td>Very High</td> <td>Very High</td> </tr> <tr> <td>Disorderly</td> <td>NO IMPACT</td> <td>Very High</td> <td>Very High</td> </tr> <tr> <td>Hothouse</td> <td>NO IMPACT</td> <td>Very High</td> <td>Very High</td> </tr> <tr> <td rowspan="3">IDO1</td> <td>Orderly</td> <td>NO IMPACT</td> <td>Very High</td> <td>Very High</td> </tr> <tr> <td>Disorderly</td> <td>NO IMPACT</td> <td>Very High</td> <td>Very High</td> </tr> <tr> <td>Hothouse</td> <td>NO IMPACT</td> <td>Very High</td> <td>Very High</td> </tr> </tbody> </table> <p><small>50. E.g. under the Orderly scenario, a moderate but generally manageable level of negative economic impact is anticipated in the short to early medium-term. Under the Disorderly scenario, greater levels of economic disruption, inflationary pressures, financial instability are expected in the medium-term.</small></p> <p><small>51. More afforestation is expected in a disorderly scenario (relative to an orderly pathway). However, it may take 6-10 years longer to impact export volumes, as action is delayed and planting typically takes 25-30 years to reach optimal rotation age.</small></p> <p style="text-align: center;"><i>Climate-related opportunities</i></p> <p>Key: Impact rating</p> <table border="1" data-bbox="1411 1452 1814 1500"> <tr> <td>Very High</td> <td>High</td> <td>Material</td> </tr> </table>			Orderly	Disorderly	Hothouse	IDO2	Orderly	Material	Very High	Very High	Disorderly	NO IMPACT	Very High	Very High	Hothouse	NO IMPACT	Very High	Very High	IDO1	Orderly	NO IMPACT	Very High	Very High	Disorderly	NO IMPACT	Very High	Very High	Hothouse	NO IMPACT	Very High	Very High	Very High	High	Material	<p>Quayside will continue to engage periodically with senior leadership and governance representatives from PoT to support and inform PoT's efforts in fully leverage the opportunities identified in IDO1 and IDO2. This collaborative engagement will help ensure that these opportunities are effectively integrated into PoT's strategic planning and operational initiatives.</p> <p>In preparation for FY25 climate disclosures Quayside will develop a quantitative model of potential dividend and capital value outcomes as a result of DO1-DO2 under each of its three climate scenarios.</p>
		Orderly	Disorderly	Hothouse																																		
IDO2	Orderly	Material	Very High	Very High																																		
	Disorderly	NO IMPACT	Very High	Very High																																		
	Hothouse	NO IMPACT	Very High	Very High																																		
IDO1	Orderly	NO IMPACT	Very High	Very High																																		
	Disorderly	NO IMPACT	Very High	Very High																																		
	Hothouse	NO IMPACT	Very High	Very High																																		
Very High	High	Material																																				



Impact of non-Port climate related risks and opportunities at the Portfolio level

Quayside's non-port portfolio, currently valued at \$569.7 million, consists of a diverse mix of assets across various asset classes, as outlined in Figure 5.

Commercial assets have been divided into the following categories, which, as outlined on page 15, are based on the different approaches available for identifying, assessing, and managing the climate-related risks and opportunities associated with each:

- **Direct Investments:** These assets (listed in Figure 5) are directly invested in by Quayside, providing greater control and access to detailed information. This allows for a bottom-up approach to identifying, assessing, and managing climate-related risks and opportunities in line with the materiality considerations presented below.
- **Indirect Investments:** This category includes listed equities and managed private equity. Due to the large number of assets (especially in the case of managed private equity), limited access to information, a bottom-up approach, as used for Direct Investments and PoT, is not feasible. For these reasons:
 - A broader, more practical top-down approach, as described on the following page, has been employed to identify and assess climate-related risks and opportunities for listed equities.
 - Quayside is actively engaging with fund managers responsible for approximately 70% of its managed private equity (on a value basis). These managers are providing enhanced transparency on climate-related risks and opportunities within their portfolios, allowing Quayside to start integrating these considerations into its overall investment strategy.

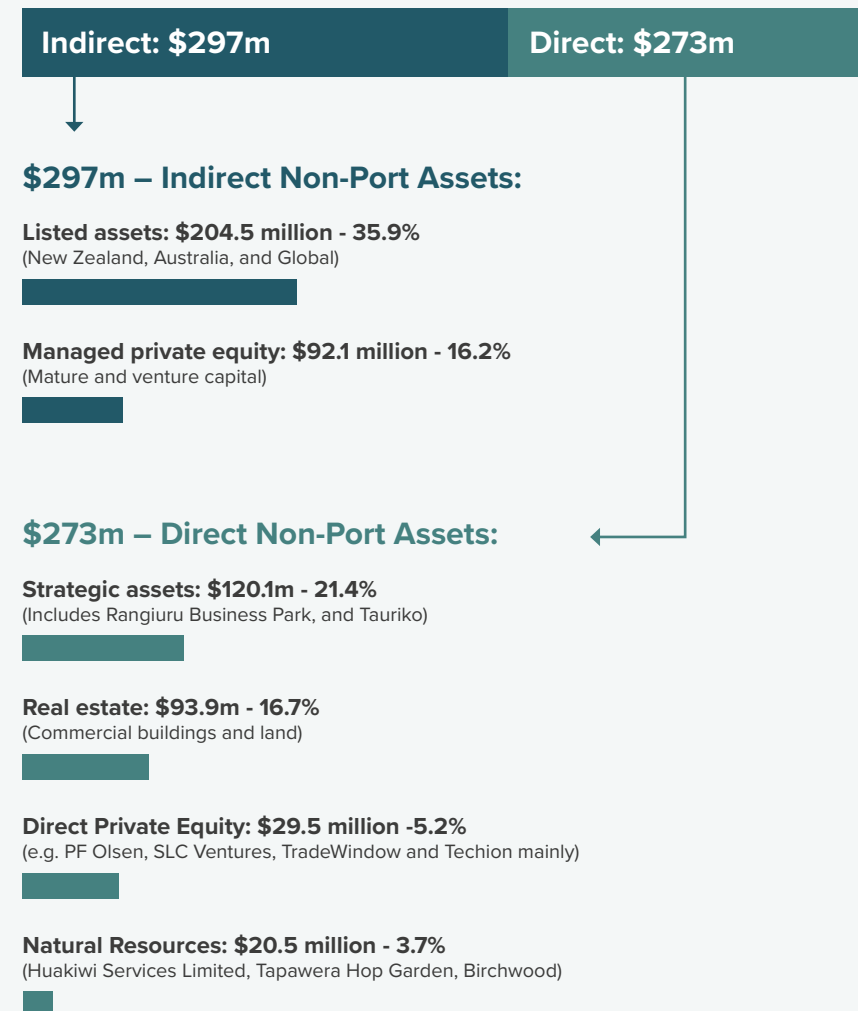
Materiality of Non-Port Assets

The approach to identifying and assessing current and anticipated climate-related risks and opportunities for Quayside's non-port portfolio was also shaped by materiality considerations. This ensured a focus on the most significant exposures and impacts, and, critically, that the approach was commensurate with each asset group's ability to materially influence the key impacts vectors—"dividend," "capital value," and "stakeholders"—which were identified as essential for determining the resilience of Quayside's business model and strategy (see pages 21 to 22).

In particular, materiality shaped key considerations such as time horizons, scope, and the level of detail used to identify climate-related risks (as noted in the Risk Management section at page 14). Additionally, as explained in the following pages, materiality influenced the extent to which climate-related risks and opportunities were assessed in preparing this FY24 disclosure. It also guided the steps Quayside plans to take in future reporting cycles to further enhance its approach over time.

Figure 5: Quayside's Non-Port Asset Portfolio

Non-Port Gross Assets: \$569.7 million - 24.7% of total Portfolio





Listed equities

Climate-related risks and opportunities for listed equities were identified at the GICS industry and sub-industry levels.

A combination of existing climate disclosures from each listed entity, along with various supplementary data sources, was used to:⁵²

- Develop a representative overview of climate-related risks and opportunities for each relevant GICS industry and sub-industry that Quayside's listed equities belong to, considering both current and potential future exposures.
- Provide an indicative impact rating for each GICS industry and sub-industry, which is based on their respective levels of anticipated exposure and vulnerability to climate-related risks and opportunities under each Quayside climate scenario.

The assessment employed a “low” to “extreme” impact rating scale to give a general indication of the potential net impact of these identified risks and opportunities on each relevant industry or sub-industry.

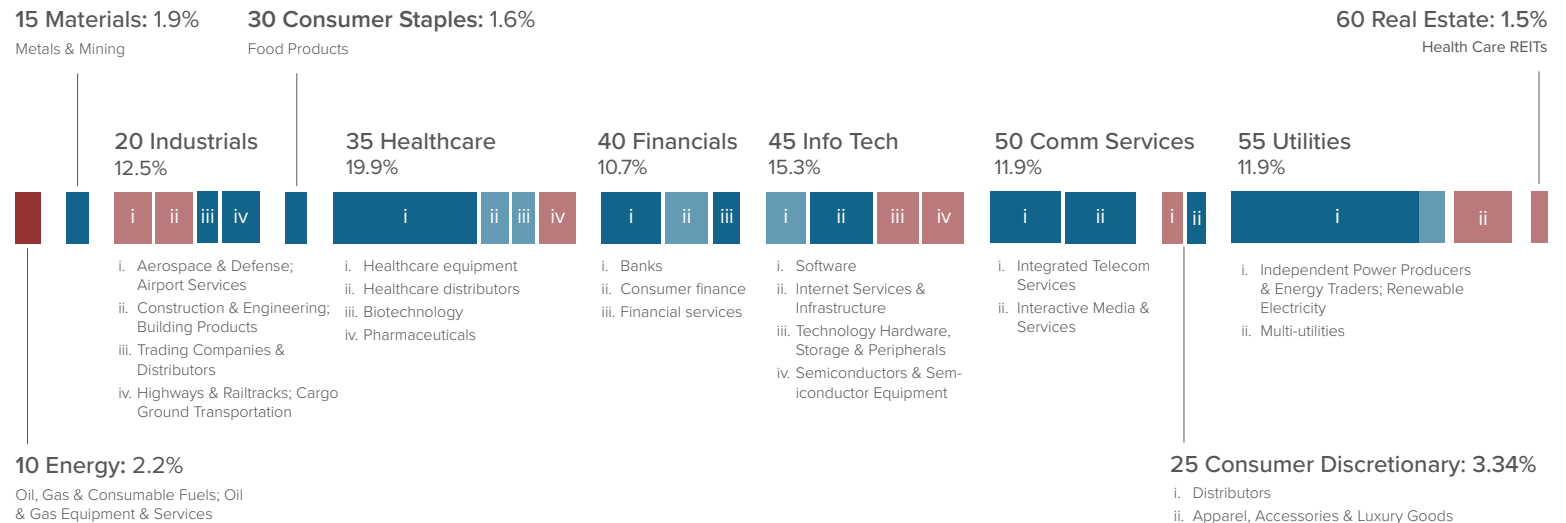
Key: Impact rating



⁵² Quayside's listed equity assets can change frequently due to market movements, acquisitions, and shifts in investment strategy. As a result, identifying and assessing climate-related risks and opportunities at the industry and sub-industry levels was considered the most practical approach. This method allows for a clearer understanding of which sectors, industries, or sub-industries are more vulnerable to transition risks, such as regulatory changes or shifts in market demand, as well as physical risks, like climate events affecting supply chains. It also helps to anticipate which sectors may be positioned to benefit from emerging opportunities.

Materiality considerations

Listed equities currently comprise just under 9% of the total portfolio (including PoT). Given the limited size of their contribution to the total portfolio and the level of diversification across this asset class (i.e. no single asset is over 1% of the total portfolio), their ability to influence the “dividend” and “capital value” impact vectors is immaterial. Due to the sector and industry distribution of this asset class, potential “stakeholder” impacts are also deemed unlikely. As Quayside pursues further diversification to reduce concentration and climate risks, listed equities could play a larger role in this strategy under the SIPO. The initial climate-related risk and opportunity analysis conducted for FY24 will be expanded in future reporting cycles.



Initial observations

Examples of listed asset alignment with climate-related opportunities:

- **\$45 million** is invested in Infratil, Meridian, Mercury Energy, and Contact Energy, which are well-positioned to perform under both Quayside's Orderly and Disorderly scenarios due to their strong transition focus.
- **\$50 million** is invested in IT and Communication Services listed entities, which, despite data centre and hardware manufacturing emissions, are expected to be central to decarbonisation efforts under the Orderly and Disorderly scenarios. In the Hothouse and Disorderly scenarios, they are also crucial for adaptation, especially in the medium to long term.
- **\$13 million** is invested in banks and financial services listed assets, which are positioned to benefit from growing demand for green finance and transition-related capital that drives increased returns, particularly short to medium term under the Orderly and Disorderly scenarios.

Snapshot of initial findings (orderly scenario example)

The snapshot below provides a high-level summary of findings from Quayside's initial top-down assessment of climate-related risks and opportunities for portfolio listed assets under its Orderly Scenario. This assessment covers \$204.5 million in New Zealand, Australian, and international equities across the sectors, industries, sub-industries noted below, as well as fixed income assets. While current and anticipated climate-related impacts on listed assets are currently immaterial, they are expected to gain relevance in future reporting cycles. Hence providing the following overview, to illustrate Quayside's evolving approach to assessing and managing listed equity climate-related risks and opportunities.

Examples of listed asset vulnerability to climate-related risks

- **\$82 million** is invested in capital-intensive sectors like Communication Services, Utilities, Industrials, and Real Estate which are particularly exposed to physical risks due to their large physical footprint. Significant investment in climate resilience upgrades, especially under Disorderly and Hothouse scenarios, may impact dividends in the short to medium term but has the potential to enhance capital value over time (e.g. provided the desired climate resilience is achieved).
- **\$18.2 million** is invested in high-emission, hard-to-abate industries like oil and gas, aviation, infrastructure, and pharmaceuticals. These sectors require significant investment in mitigation infrastructure and equipment, particularly under Orderly and Disorderly scenarios in the short to medium term. However, carbon reduction and efficiency gains are expected to boost profitability and capital value over time, except in the case of Oil and Gas, which, as a legacy sector, is expected to contract as the transition to a low carbon future progresses.



Direct Non-Port and Strategic assets

As outlined on page 34, Quayside's direct Non-Port and Strategic asset portfolio is comprised of several strategic assets, commercial real estate, direct private equity investments, as well as investments in kiwifruit and hops.

Direct Non-Port and Strategic Asset climate related risks and opportunities were identified on a bottom up basis in accordance with the process set out on pages 16 to 19 of this Report. This entailed identifying risks and opportunities at the individual asset level arising across the relevant value chains (e.g. kiwifruit value chain for Quayside's Huakiwi investment and forestry value chain for its PF Olsen investment) and then assessing anticipated impacts that may arise at the portfolio level (i.e. in terms of impact on dividends, capital value and stakeholder relationships) under each Quayside Scenario.

Materiality considerations

Direct Non-Port and Strategic Assets currently comprise just under 12% of the total portfolio (including PoT). Given the limited size of their contribution to the total portfolio their ability to influence the "dividend" impact vector is considered immaterial. However, due to the geographical and sector concentration of many Direct Non-Port and Strategic Assets (namely they are located in the Bay of Plenty and entail commercial property or primary sector activities), it was determined that a single acute climate event affecting multiple assets could result in an aggregate loss of capital value that is potentially material at the portfolio level. While a number of other physical and transition risks were also identified at the individual asset level, their assessed impact at the portfolio level across all key impact vectors was also immaterial.

Risk Summary Type and description	Assets at risk General summary	Current Portfolio Impacts Historical, enduring, and emergent	Anticipated Portfolio Impacts by Scenario Prior to management response	Management Response
<p>Medium to Long-Term direct physical risks</p> <p>DQR1: Increased risk of acute damage to commercial real estate assets and strategic asset sites, cause by exposure to increased rainfall, wind and storm events.</p> <p>DQR2: Heightened risk of flood related damage and disruption, due to increased extreme rain, wind and storm events</p> <p>DQR3: Increased risk of damage to Huakiwi orchards (including land, vines and root systems, assets and infrastructure) due to increased extreme rain, wind, storm, and flood events.</p> <hr/> <p>Short to Long-Term direct transition risk</p> <p>DQR4: Heightened risk that exposure to acute events will compromise access to insurance and lending</p>	<p>DQR1 assets at risk:</p> <ul style="list-style-type: none"> Eight commercial properties, valued at approximately \$86.4 million.⁵³ Rangiuru Business Park and Tauriko valued at approximately \$120.1 million. <p>DQR2 assets at risk:</p> <ul style="list-style-type: none"> Rangiuru Business Park and Tauriko. Three of the eight commercial properties above (total value of \$46.1 million). <p>DQR3: Quayside's 50% share of the Huakiwi Joint Venture, which is currently valued at \$16.6 million.</p> <p>DQR4: all of the above identified assets.</p> <p>The vulnerability of each identified asset to the above risks is expected to vary, due to differences in design, materials, maintenance, and age.</p> <p><small>53. 53 Spring Street, Tauranga; 72 Portside Drive, Mount Maunganui; 63-69 Spring Street, Tauranga (empty site); 1118 Fenton Street, Rotorua; 105 Old Taupo Road, Rotorua; Te Papa Tipu; Panorama; Tauranga Crossing;</small></p>	<p>No impacts of note associated with DQR1 and DQR2 have occurred to date in relation to the listed assets at risk. For example, during Cyclone Gabrielle no material impacts (e.g. significant damage to any of the listed commercial building assets) were observed.</p> <p>Cyclone Gabrielle highlighted the impact of an extreme acute event on kiwifruit orchards, particularly in the Te Tairāwhiti region, where sediment and flooding caused root oxygen deprivation and vine stress, leading to partial or total loss of kiwifruit vines.</p> <p>DQR4 is only expected to generate a material impact if the occurrence of a large scale DQR1 or DQR2 related event triggers full or partial insurance retreat.⁵⁴ As access to lending is typically predicated on access to acceptable insurance cover, the above noted insurance retreat can also generate access to lending issues.⁵⁵</p> <p><small>54. Recent events, such as severe flooding in Canterbury, Nelson, and the West Coast, have highlighted the vulnerability of certain areas to extreme rainfall and flooding. In response, some insurers have either increased premiums significantly or stopped offering flood insurance in high-risk areas. Areas like South Dunedin, parts of Wellington, and the Kapiti Coast have faced increasing challenges in obtaining affordable insurance due to the risk of coastal flooding and erosion. Insurers have become more selective about coverage, with some retreating from particularly exposed properties or offering limited policies.</small></p> <p><small>55. Most banks, including Quayside's preferred banking partners now take in to account potential physical climate impacts of climate change when assessing credit risk, particularly when considering high value loans for long-term physical assets.</small></p>	<p>If an extreme acute climate event in the Bay of Plenty region causes significant physical damage to multiple commercial properties, revealing a potential vulnerability—such as susceptibility to pluvial flooding—that could adversely impact the capital value of one or more assets.</p> <p>As demonstrated by the impact of Cyclone Gabrielle on kiwifruit growers in the Te Tairāwhiti region, an acute event also has the potential to wipe out vines and infrastructure on Huakiwi sites. Such an outcome has the potential to cause full or partial loss of Quayside's investment, in part because it does not confer any ownership rights in the underlying land.</p> <p>If such an event generates knock on impacts under DQR4 (e.g. leads to a significant increase in insurance costs or leads to full or partial insurance retreat, and subsequently, reduced access to capital), this also has the potential to cause a significant and sudden loss of capital value.</p> <p>An outcome of the kind described above is most likely to occur as a result of a flood event. Based on the GIS flood maps used to identify Quayside assets that are exposed to flood hazards, such an outcome is only expected under a Hothouse or Disorderly scenario over the medium to long term.⁵⁶</p> <div data-bbox="1220 1125 1803 1252"> <p>Orderly: Moderate</p> <p>Disorderly: High</p> <p>Hothouse: Extreme</p> </div> <p><small>56. Climate change projections indicate that physical impacts will increase gradually before 2040, with a more significant intensification expected from 2040 to 2050 onwards due to the non-linear nature of climate change. Hence the impact ratings above.</small></p> <div data-bbox="1220 1348 1825 1428"> <p>Climate-related risks</p> <p>Key: Impact rating</p> <p>Low Moderate High Extreme</p> </div>	<p>Geographical diversification is key to mitigate any physical risk affecting property and natural resources investments held by Quayside.</p>



METRICS & TARGETS

DISCLOSURE



GHG INVENTORY

Introduction

This statement describes the approach taken by Quayside to disclose its Scope 1 and 2 greenhouse gas (GHG) emissions for reporting under the CRD regime. Quayside has adopted the NZCS 2 Adoption Provision 4 regarding Scope 3 emissions.

Reporting Period

This statement covers the 12 months from 1 July 2023 to 30 June 2024. Quayside's climate reporting periods have been set to align with its financial reporting periods for consistency and administrative ease.

Intended Use

Quayside is reporting on its emissions; as part of an effort to identify and manage climate opportunities and risks; to meet stakeholder expectations; and to satisfy NZ climate-related reporting disclosure requirements.

The intended users of this report include Quayside's owner, BOPRC, Quayside's PPS holders, its Board and senior leadership team, and all interested stakeholders including lenders, community, employees, and contractors. Relevant content from the report will be shared by these users, in appropriate formats, with internal and external stakeholders as needs arise.

Standards

This report has been produced in accordance with:

- **Greenhouse Gas Protocol:** A Corporate Accounting and Reporting Standard.
- **Greenhouse Gas Protocol:** GHG Protocol Scope 2 Guidance. An amendment to the GHG Protocol Corporate Standard.

Organisational Boundaries

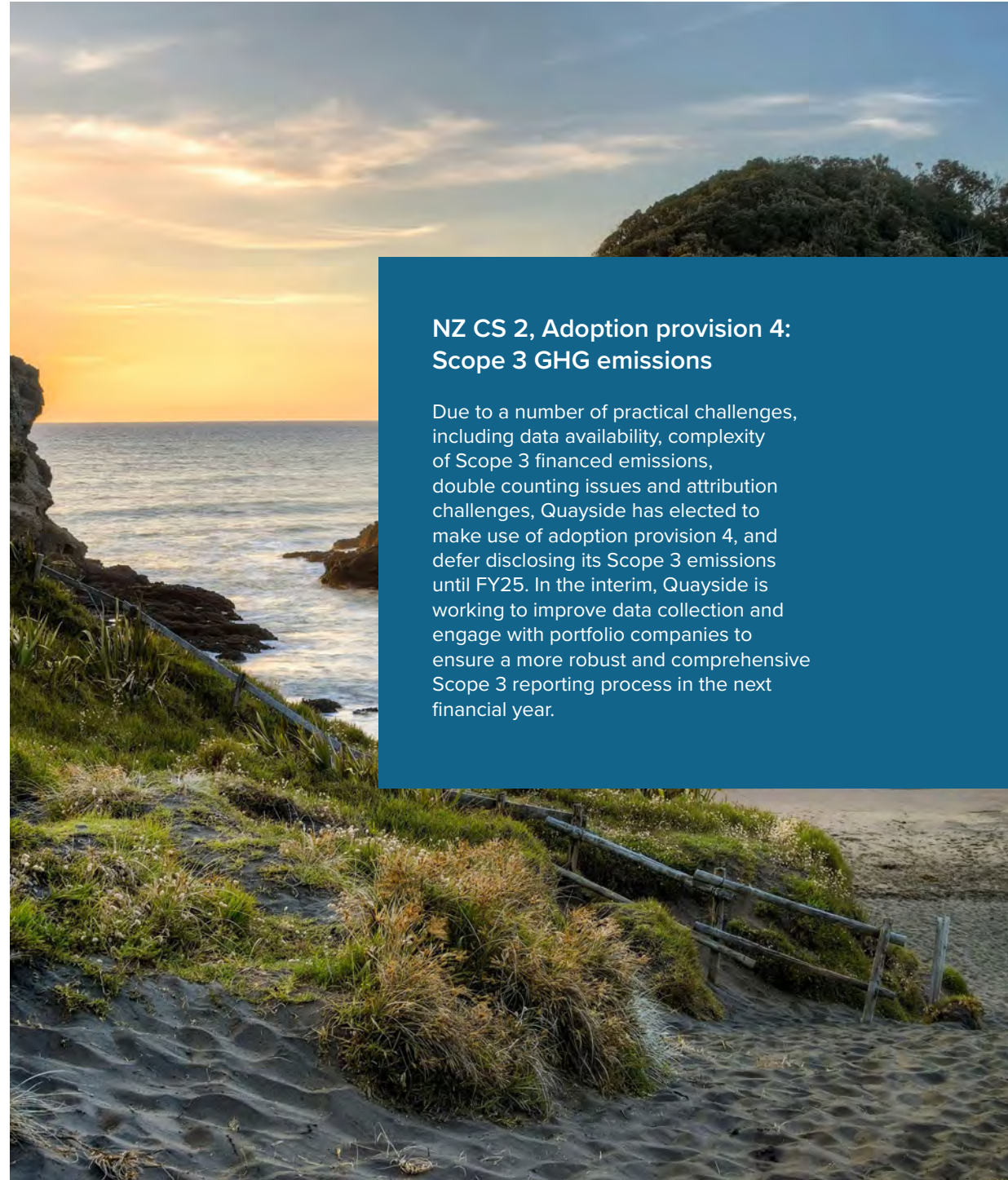
Quayside operates from leased office space at 41 The Strand, Tauranga, and has 19 employed staff members. It also has a small site office at the Rangiuru Business Park, used by various staff at different times as part of running the development, and leases an office space at 53 Spring Street.

Quayside has applied the operational control consolidation approach, as defined by the GHG Protocol, to determine the relevant boundaries for this report. This was considered appropriate because it is consistent with the company's ability to impact operational actions that influence emissions levels and provides the reader with a better view of Quayside's business model.

Under this approach, the entities listed in the table on the following page are considered to fall within the organisational boundaries.

NZ CS 2, Adoption provision 4: Scope 3 GHG emissions

Due to a number of practical challenges, including data availability, complexity of Scope 3 financed emissions, double counting issues and attribution challenges, Quayside has elected to make use of adoption provision 4, and defer disclosing its Scope 3 emissions until FY25. In the interim, Quayside is working to improve data collection and engage with portfolio companies to ensure a more robust and comprehensive Scope 3 reporting process in the next financial year.





Organisational boundaries table

Entity	% interest	Description	Included	Justification
Quayside	100% (Parent company)	Quayside Holdings Limited (referred to as Quayside). The holding company provides financing activity. Also holds all the direct and indirect private equity investments and natural resources investments except for real estate investments.	Yes	Quayside is the reporting company and therefore full Scope 1 and 2 emissions are included in the inventory.
QPL	100% (Subsidiary)	Quayside Properties Limited (" QPL "), holds and develops Rangioru land and also owns 50% of TCD and LCD.	Yes	Manages the development of the business park. Scope 2 is included in the inventory.
QIT	100% (Subsidiary)	Quayside Investment Trust (" QIT "), holds the listed asset and fixed income portfolio.	Yes	No offices or personnel. No Scope 1 or 2 identified for the year.
QUT	100% (Subsidiary)	Quayside Unit Trust (" QUT "), holds the Port of Tauranga Limited investment (referred to as PoT).	Yes	No offices or personnel. No Scope 1 or 2 identified for the year.
QSL	100% (Subsidiary)	Quayside Securities Limited (" QSL ") Acts as trustee for QIT, QUT, and Toi Moana Trust (" TMT ").	Yes	No offices or personnel. Has a Board of Directors but QHL bears the travel costs. No Scope 1 or 2 identified for the year.
QBP	100% (Subsidiary)	Quayside Barnett Place Limited (" QBP "), holds a leased commercial investment property.	No	Tenants have operational control on the asset.
QPD	100% (Subsidiary)	Quayside Portside Drive Limited (" QPD "), holds a leased commercial investment property.	No	Tenants have operational control on the asset.
QTL	100% (Subsidiary)	Quayside Tauriko Limited (" QTL "), holds a leased residential property.	No	Tenants have operational control on the asset.
QTPT	100% (Subsidiary)	Quayside Te Papa Tipu Limited (" QTPT "), holds a leased commercial investment property.	No	Tenants have operational control on the asset.
QTV	100% (Subsidiary)	Quayside The Vault Limited (" QTV "), holds a leased commercial investment property.	No	Tenants have operational control on the asset.
LCD	100% (Subsidiary)	Lakes Commercial Developments Limited (" LCD "), holds 2 leased commercial investment property.	No	Tenants have operational control on the asset.
TCD	50% (Joint Venture)	Tauranga Commercial Developments (" TCD "), holds land. A third party operates parking services on the land.	No	Parking business is operated by a third party.
ACL	100% (Subsidiary)	Aqua Curo Limited (" ACL "). To be wound up.	No	To be wound up.
QMV	100% (Subsidiary)	Quayside Mystery Valley Limited (" QMV "). To be wound up.	No	To be wound up.
Huakiwi	50% (Joint Venture)	Kiwifruit business on leasehold land.	No	QHL does not have full operational control.

Operational Boundaries

The GHG Protocol differentiates the emissions into Scopes:

- Scope 1 – Direct GHG emissions
- Scope 2 – Indirect GHG emissions (from the generation of acquired and consumed energy)
- Scope 3 – Indirect GHG emissions (other sources)

In accordance with the GHG Protocol's emissions by Scope, Quayside has included the following emissions:

- Scope 1 Direct GHG emissions
- Transport fuels consumed by Quayside-owned and leased vehicles
- Fugitive emissions from air conditioning systems in Quayside offices
- Scope 2 Indirect GHG emissions associated with energy purchased

Electricity consumed in Quayside offices (including 41 The Strand, 53, Spring Street and 148 Young Road)

Materiality

Quayside is reporting Scope 1 and Scope 2 emissions only. Quayside will exclude any emissions from sources estimated as being below 5% of total emissions across all categories, provided the total excluded emissions do not exceed 5% of all emissions.

Inclusions and exclusions are presented below.

Base Year

The 12 months from 1 July 2023 to 30 June 2024 has been used as the base year for this report. Reliable data was available for this period, and it is considered representative for comparison purposes.

Methodology

All emissions are expressed in terms of metric tonnes of carbon dioxide equivalent greenhouse gases (tCO₂e).

Calculations are performed by multiplying activity data by relevant and activity-specific emissions factors (EF).

The majority of EFs used to calculate emissions presented in this report were sourced from the Ministry for the Environment (MfE) document, "Measuring emissions: A guide for organizations: 2024 detailed guide," published May 2024, based on data and methods from the 2023 calendar year. Where EFs from other sources have been used, this has been noted.

GWP (Global Warming Potential) used for the disclosed emissions is sourced, via MfE guidance documents, from the IPCCs Fifth Assessment Report

Uncertainty

The accuracy of emissions calculations depends on the quality of the activity data and EFs. Quayside is comfortable with the activity data and EFs used. However, risks remain that may impact the emissions calculations in terms of:

- The reliance of activity data on the accuracy of information supplied by external service providers; and
- inherent uncertainties and approximations linked to the calculation of EFs.

Emissions Reduction Targets

Work on developing a carbon management and reduction strategy will be undertaken in the coming months. This will include an assessment of climate-related risks and opportunities, the quantification of actual and expected financial impacts and the setting of emissions targets.

Base year recalculation policy

Given the impact that we expect on Quayside's GHG inventory derived by the inclusion of Scope 3 emissions, especially Category 15, Quayside will set the recalculation significant threshold upon the determination of Scope 3 emissions for the base year FY24.

Additional Scope 3 considerations

In addition to the Scope 3 practical challenges noted on page 38, collecting, verifying, and analysing emissions data across a portfolio can be a time-consuming task that requires significant resources. Accordingly, to achieve an optimal outcome, Quayside intends to develop its Scope 3 maturity over several reporting cycles.



Inclusions

Scope & type	Unit	Description	Rationale for selected methodology	Justification
Scope 1 (Diesel)	Litres	MfE - Activity-based	Low uncertainty. Activity data is sourced directly from suppliers and expressed as litres sold in the reporting period. It is assumed that supplier reports are accurate, and that fuel reported for the reporting period was used in the reporting period.	The calculation methodology and EFs used for quantifying diesel-related emissions were chosen as they are considered the most accurate methods currently available for measuring emissions from diesel consumption in Group-owned or controlled assets.
Scope 1 (Petrol)	Litres	MfE - Activity-based	Low uncertainty. Activity data is sourced directly from suppliers and expressed as litres sold in the reporting period. It is assumed that supplier reports are accurate, and that fuel reported for the reporting period was used in the reporting period.	This calculation methodology and EFs were selected for quantifying petrol related emissions as the Group understands it to be the most accurate method available for the quantification of emissions associated to petrol utilised in Group-owned or controlled assets.
Scope 2 (Electricity used)	kWh	Activity based Location-based method grid – average annual 2023 Market-Based method residual supply mix 2023/2024 – BraveTrace	Low uncertainty. Activity data is sourced directly from suppliers either through reports or extracted from data portals or from invoices. Electricity consumption is expressed in kWh per installation control point (ICP) that is charged to the Group. It does not include kWh associated to transmission and distribution losses. kWh consumption for ICPs fully on-charged by the Group to tenants are not included. It is assumed that supplier reports are accurate, and that kWh reported for the reporting period was used in the reporting period.	This calculation methodology and EFs were selected for quantifying electricity related emissions as it can be applied to the full reporting period kWh consumption. The Group understands it to be the most accurate method available (other than quarterly EFs for the location-based method) for the quantification of emissions associated to electricity utilised in Group owned or controlled assets.

Exclusions

Scope	GHG emission source	Description	Reason for exclusion
1	Refrigerant releases Stationary fuels.	HVAC – Air conditioning from Quayside offices (41 The Strand, 53 Spring St. and 148 Young Road.	Immaterial and no instances of refill in the year.



Metric & Targets

GHG Inventory

	Apportioned Total tCO ₂ e FY24
Total Scope 1 and 2 (Location-Based)	6.9
Total Scope 1 and 2 (Market-Based)	6.8
Scope 1	2.2
Scope 2 (Location-based)	4.7
Scope 2 (Market-based)	4.6

The location-based method is the average emissions intensity of the electricity grid. The market-based method reflects emissions from no or low-emission electricity purchased. If none is purchased, then a residual supply mix "emission factor" can be used that reflects the intensity of whatever electricity remains on the grid, minus renewable energy already purchased. The reporting of both methods is required under the GHG Protocol as the Group operates in a market where product or supplier-specific electricity data is available

Carbon Intensity

	Intensity Measure tCO ₂ e/FTE FY24
Scope 1 & 2	0.36

Remuneration

Management remuneration linked to CRR/CROs	Target	As % of gross salary
CEO, CIO, GM Finance	Incorporate climate transition considerations into SIPO / SAA	2.50%
	Formulate a Transition Plan to manage current climate-related risks in the investment portfolio (all SLT)	
GM Operations, GM Property	Formulate a Transition Plan to manage current climate-related risks in the investment portfolio (all SLT)	2.50%





Climate-related risk and opportunity metrics

Complying with the obligation to disclose the amount or percentage of assets or business activities vulnerable to transition and physical risks, as well as those aligned with climate-related opportunities, involves specifying (in the context of an asset manager) the VaR for each material risk and opportunity, along with its percentage of the total portfolio.

To provide end-users with greater clarity and a more comprehensive view of the portfolio's vulnerability and deepen their insight into each of the specific risks and opportunities, Quayside has also included more specific risk and opportunity breakdowns at the individual asset level throughout this Report and in the Appendices as specified below.

Port of Tauranga - 75.3%

Direct physical risks

The PoT faces five direct physical risks (DR1-5) that could impact Quayside at the portfolio level. As a result, 100% of Quayside's shares in the PoT—representing 75.3% of its total portfolio—are considered vulnerable to these risks. The detailed breakdown of PoT's asset-level vulnerability to DR1-5 (see Appendices at page 45) is crucial for understanding how Quayside's overall vulnerability to these risks may vary (e.g. in terms of their potential impact on dividends, capital value and stakeholder relationships).

Direct opportunities

The PoT is aligned with two direct transition opportunities (DO1-2) that could significantly impact both the PoT and Quayside portfolio levels, particularly across the priority dividends, capital value, and stakeholder relationship impact vectors. As with physical risks, Quayside's entire PoT shareholding—representing 100% alignment—is exposed to these opportunities. See Appendices at page 45 for further alignment details.

Indirect physical and transition risks

Quayside's shares are also vulnerable to knock-on impacts from PoT's indirect physical risks (IDR1.A-C) and indirect transition risks (IDR2-5). However, as outlined in the Appendices (page 46), PoT's vulnerability—and the potential impact on Quayside at the portfolio level—will vary significantly, depending on the proportion of import and export freight affected by each identified risk.

Indirect transition opportunities

Similarly, all Quayside PoT shares are aligned with the two key indirect transition opportunities (IDO1 and IDO2) identified by PoT. Since both opportunities relate to import and export volumes, their potential impact will vary based on the projected increases in freight volumes each could generate. For further details, refer to the Appendices (page 46), which outlines the potential impact of these opportunities

Non-Port Portfolio Assets - 24.7%

Direct Non-Port and Strategic asset physical risks

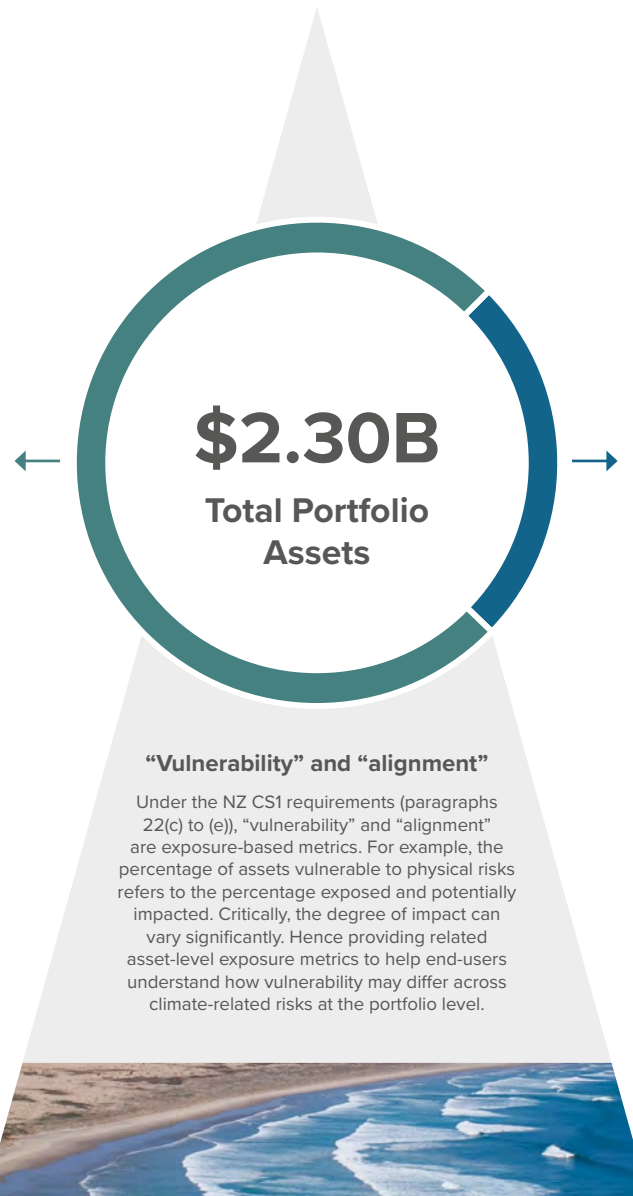
As outlined at page 36, a number of Direct Non-Port and Strategic Assets were identified as having a level of exposure and vulnerability to four direct physical risks DQR1-4.

Based on the total VaR for those assets identified as being exposed to each of the above mentioned physical risks, the metrics as follows:

- DQR1 VaR: \$206.5 million / 36.2% of the total Non-Port Portfolio
- DQR2 VaR: \$166.2 million / 29.2% of the total Non-Port Portfolio
- DQR3 VaR: \$16.6 million / 2.9% of the total Non-Port Portfolio
- DQR4 VaR: \$223.8 million / 39.3% of the total Non-Port Portfolio

Indirect Non-Port Assets - Listed assets

As noted on page 35, listed asset climate-related risks and opportunities were considered immaterial due to their small contribution to the total portfolio, high level of diversification, and limited influence on Quayside at the portfolio level. However, a detailed qualitative assessment of vulnerability for each sector, industry, and sub-industry within this asset class is provided on page 35, with a more detailed breakdown planned for FY25.





APPENDICES

Note: Pages 45 and 46 of the Appendices have been taken directly from PoT's FY24 climate disclosure (see pages 38 and 39). In addition, the value chains set out on pages 47 and 48 are based on PoT's value chain summary also set out in its FY24 disclosure (see page 11).



Direct climate related risk and opportunity metrics

Taken direct from PoT's FY24 climate Disclosure

The percentage of Port of Tauranga assets and business activities identified as vulnerable to direct climate-related risks and aligned with climate-related opportunities has been provided on a value at risk ("VaR") basis (capital VaR for assets and annual revenue VaR for activities).

Non-Tauranga assets and business activities

Assets and business activities across sites outside of Tauranga are also addressed (despite constituting a small proportion on a VaR basis) due to the importance of the interconnected and often inter-dependent national network from strategic, value proposition and operational perspectives. Less than 6% of total capital VaR and total revenue VaR is located at sites outside of Tauranga.

Joint ventures

In line with our staged approach to joint ventures, more detailed metrics for these investments (including their underlying assets and revenue streams exposed to climate-related risks and opportunities) will be provided in FY2025. This will incorporate any assessments undertaken by our joint venture partners (e.g. Marsden Maritime Holdings for Northport, which currently constitutes less than 3.5% of the Group's total asset base).

Direct climate-related risk and opportunity key metrics

In accordance with NZ CS1 22(c) to (e), metrics for direct climate-related risks ("DR") 1-5 and direct climate-related opportunities ("DO") 1-2 are as follows:

Capital VaR

100% Of assets across all sites are vulnerable to DR1: "Increased wear and tear and risk of acute damage to assets caused by exposure to increased rainfall, wind and storm events".

However, the level of vulnerability varies across sites (due to variances in regional climate hazards projections) and assets (due to their respective levels of resilience).

<9% Of Port assets across all sites are vulnerable to DR3: "Risk of flood related damage and disruption, due to sea level rise and increased extreme rain, wind and storm events".
This is based on available fluvial, pluvial and coastal flood projections for a 1% AEP pluvial flooding or coastal inundation event under RCP 8.5 (taking into account sea level rise).

Revenue VaR

100% Of all Port assets and opportunities located across all Port sites are aligned with (i.e. stand to benefit from):

DO1: Structural changes to New Zealand's national freight system (road to multi-modal).

Freight mode shift from road to rail and coastal shipping entails a further shift to a hub and spoke model (where international freight enters/exits hubs such as Port of Tauranga and is then moved between regions via 90% coastal shipping). This outcome is likely to increase freight movements via Port sites.

DO2: Introduction of larger low-carbon shipping vessels.

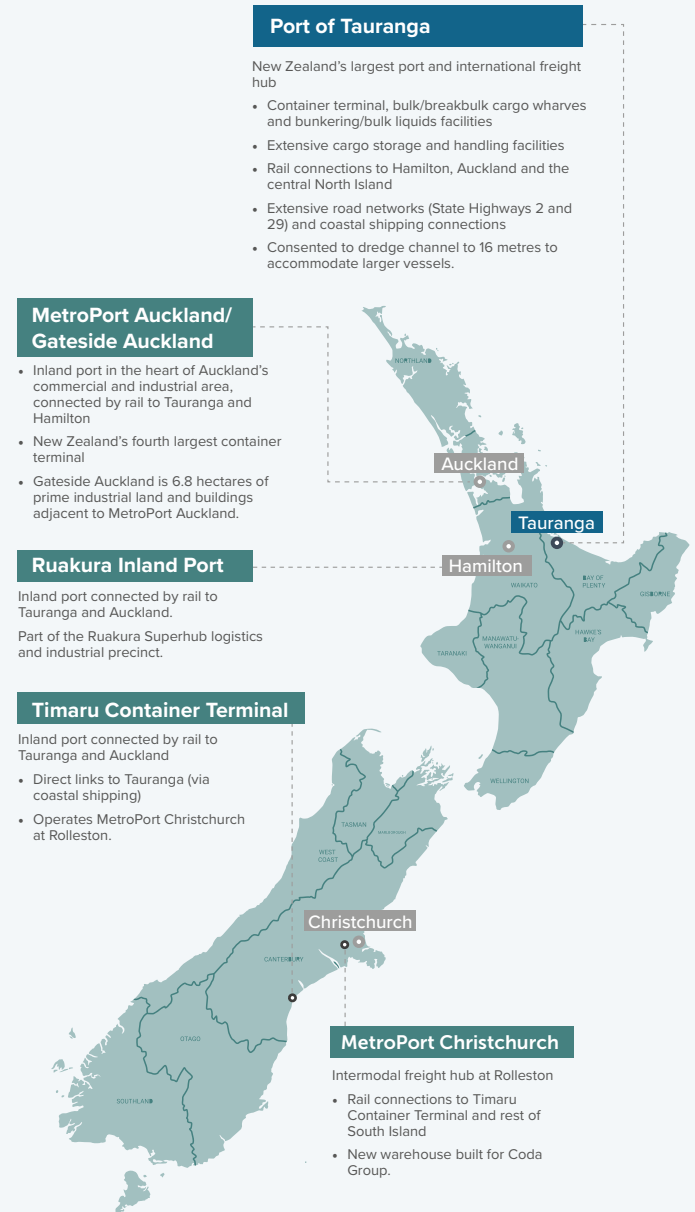
Operating routes to/from the Port of Tauranga is expected to increase the Port's role as an international hub, further facilitating a shift towards the hub and spoke model described above. This is expected to also increase business activity via all sites (due to the inter-connected strategic nature of the Port's national network).

90% Of all business activities are prima facie vulnerable to being impacted by DR3.
All business activities at the Port of Tauranga, Gateside Auckland, and Ruakura could be disrupted, except for commercial leasing, which is unlikely to be materially impacted by rare instances of flooding and/or coastal inundation.

90% Of Port activities are vulnerable to DR4: "Risk of disruption to road and rail access due to sea level rise and increased extreme weather (rain, wind and storm) events".
DR4 is relevant to business activities across the Tauranga, Gateside Auckland, and Timaru sites, excluding commercial rentals. This is based on a 1% AEP pluvial flooding or coastal inundation event under RCP 8.5.

100% Of all business activities are prima facie vulnerable to DR5: "Risk to Port of Tauranga wharves, harbour access, and loading/unloading capability, due to sea level rise and increased coastal inundation."
Most buildings, infrastructure, and other improvements to land assets at the Port of Tauranga are exposed to full or partial stranding if wharf or harbour access is compromised. This may also have an indirect adverse impact on land capital values. Given the inter-dependant network nature of Port of Tauranga's operations across all sites, all business activities are also deemed potentially vulnerable.

100% Of business activities across all sites are vulnerable to DR2: "Increasing instances of disruption, caused by exposure to increased rainfall, wind and storm events".
Marine services and certain cargo-handling activities were identified as being the most vulnerable, whereas commercial leasing has a comparatively low level of vulnerability.





Risk and opportunity exposure via import/export categories

Taken direct from PoT's FY24 climate Disclosure

Percentage of exports exposed to physical and transition risks and opportunities on a revenue value at risk ("VaR") basis:

77% Of total annual exports are comprised of logs and other forest products, dairy and kiwifruit "**Key Export Commodities**"

54% Of total annual exports are **Logs** and **Other Forest Products**, which are aligned with **IDO1**: Increase demand for logs and other forestry export commodities due to changing preferences and the emergence of new low-carbon sustainable alternatives

100% Of Port business activities are exposed to **IDO1**, **IDR1**, and **IDR4**

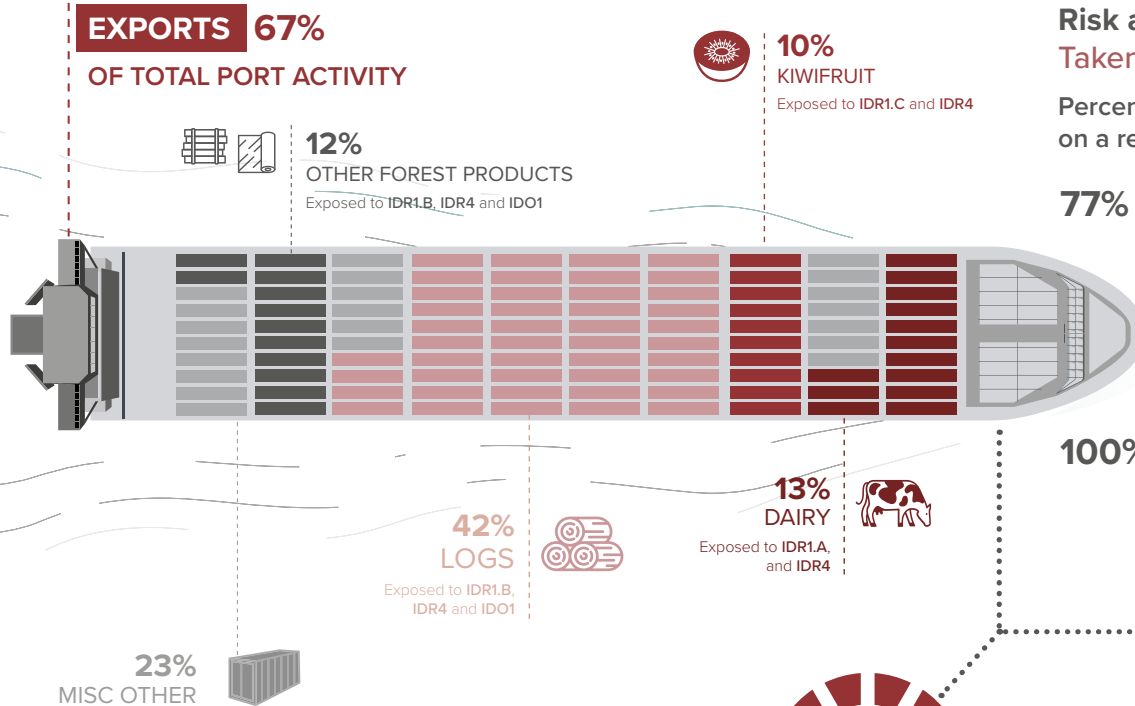
All PoT business activities (e.g. terminal, cargo, marine, storage and related operations) play a role in facilitating the receipt and shipment of all exports.

100% Of **Key Export Commodities**, which comprise 51% of total freight (i.e. all imports and exports) are exposed to:

- **IDR1**: Risk of compromised seasonal production and gradual loss of productive capacity over time (see IDR1.A to IDR1.C)
- **IDR4**: Impact of changing market access rules and other climate related regulations on key export commodity volumes

All **Imports** and **Exports** are exposed to **Direct Risks and Opportunities**

As each relies on PoT assets and business activities which are exposed to direct risks (DR) 1-5 and Direct Opportunities (DO) 1-2



Percentage of imports exposed to physical and transition risks and opportunities on a revenue VaR basis:

IDR2: Reduced availability and/or increased cost of stock feed

Has the potential to impact supply of and demand for stock feed imports, which comprise:

11% of annual imports (as depicted); or

3.66% of total freight (i.e. all imports + exports).

IDR5: Decarbonisation of New Zealand's transport system

Is expected to fundamentally alter demand for liquid fuel imports, which comprise:

19% of annual imports (as depicted); or

6.33% of total freight (i.e. all imports + exports).

IDO2: Impact of climate migration and transition to a low carbon climate resilient future, on demand for misc imported goods

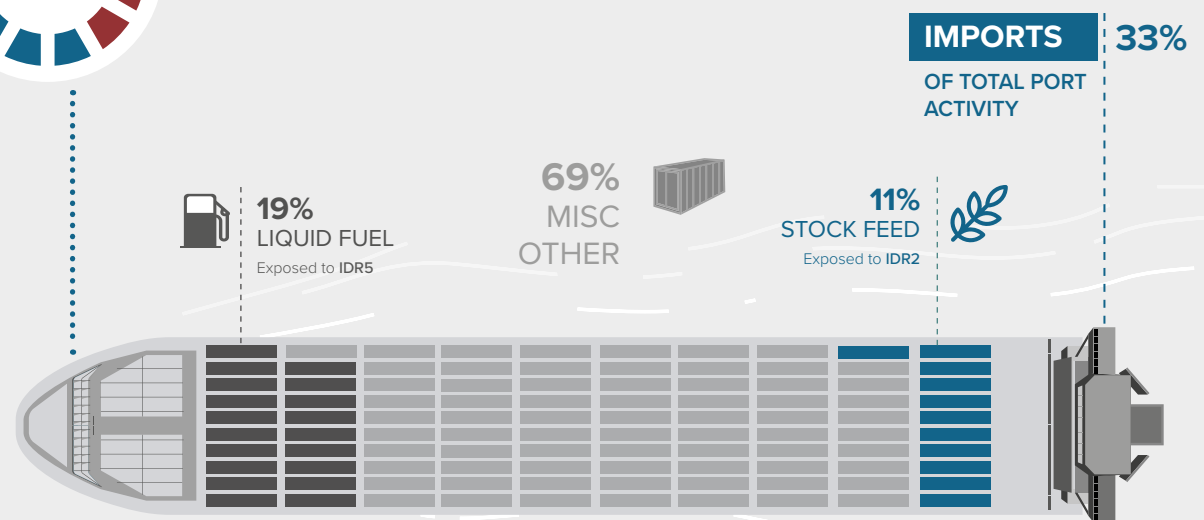
Specifically, containerised goods and bulkbreak which comprise:

69% of total imports (as depicted); or

22.8% of total freight (i.e. all imports + exports).

100% of Port business activities are exposed to IDR2, IDR5, and IDO2.

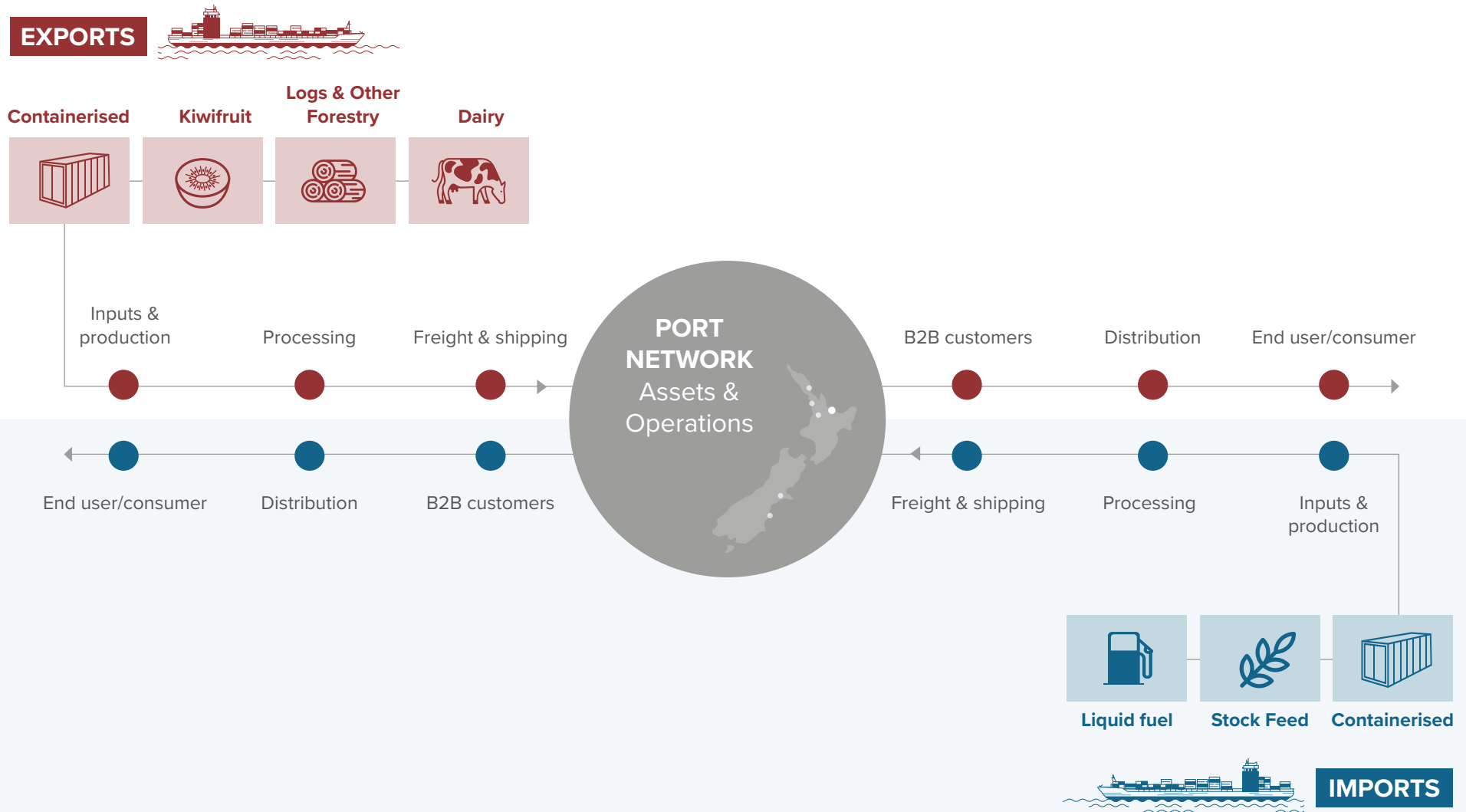
As they each play a role in the landing, holding, and dispatching all imported goods (albeit to varying extents depending on the method of unloading and handling each category, amongst other factors).





PoT key import and export commodities value chain summary

Taken direct from PoT's FY24 climate Disclosure⁵⁷



57. As New Zealand's largest sea port, Port of Tauranga (together with its inland ports and wider Group sea port operations), imports and exports commodities and goods that belong to an indeterminate number of value chains. For this reason, it is not feasible to carry out a full value chain analysis of every one, especially in the case of containerised freight, as accurately identifying the specific value chain of every container's contents is not practically possible. Accordingly, guided by the fair presentation, value chain and materiality requirements of NZ CS3, the Port focused on identifying and mapping the value chain for its: (i) four largest export commodities, i.e. dairy, logs, other forest products and kiwifruit, which comprise approximately 75% of total exports by volume; and (ii) two largest import commodities, i.e. liquid fuels and stock feed, which account for 30% of total imports by volume.



GLOSSARY

Aotearoa New Zealand Climate Standards

Standards issued by the External Reporting Board that comprise the Climate-related Disclosures framework.

Climate-related opportunities

The potentially positive climate-related outcomes for an entity. Efforts to mitigate and adapt to climate change can produce opportunities for entities, such as resource efficiency and cost savings, the adoption and use of low-emissions energy sources and building resilience in the value chain.

Climate-related risks

The potential negative impacts of climate change on an entity. See also the definitions of physical risks and transition risks.

Climate resilience

The capacity to cope with a changing climate. This includes the ability to project, assess, prepare for, respond to, recover from, and adapt to the impacts of climate change.

Climate scenario

A plausible, challenging description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces and relationships covering both physical and transition risks in an integrated manner. Climate scenarios are not intended to be probabilistic or predictive, or to identify the "most likely" outcome(s) of climate change.

Global Industry Classification Standard (GICS)

The GICS is a four-tiered, hierarchical industry classification system that helps investors understand the key business activities for companies around the world. MSCI and S&P Dow Jones Indices developed this classification standard to provide investors with consistent and exhaustive industry definitions.

Greenhouse gas (GHG)

Atmospheric gases including carbon dioxide, methane and nitrous oxide that contribute to trapping heat in Earth's atmosphere. Human

activities such as the burning of fossil fuels increase greenhouse gas levels in the atmosphere leading to more trapped heat and therefore consequential increases in the global average temperature and associated effects on climate systems.

Huakiwi Services Limited ("Huakiwi")

Huakiwi, which is 50% owned by Quayside, provides management and operational services for kiwifruit orchards, focusing on helping Māori landowners develop and manage orchards on their land, promoting economic development and sustainable practices.

Materiality

The degree to which climate-related risks and opportunities could affect an entity's ability to create value for itself, its stakeholders and society at large.

Physical risks

Risks related to the physical impacts of climate change. Physical risks arising from climate change can be event-driven (acute) such as increased severity of extreme weather events. They can also relate to longer term shifts (chronic) in precipitation and temperature and increased variability in weather patterns, such as sea level rise.

Port of Tauranga ("PoT")

PoT is New Zealand's largest port, and the primary asset in Quayside's investment Portfolio.

Quayside Holdings Limited ("Quayside")

Quayside is the investment arm of the BOPRC. Established in 1991, Quayside manages a diverse portfolio of investments, with its primary asset being a majority shareholding (around 54%) in the PoT.

Scope 1

Direct GHG emissions from sources owned or controlled by the entity.

Scope 2

Indirect GHG emissions from consumption of purchased electricity, heat, or steam.

Scope 3

Other indirect GHG emissions not covered in Scope 2 that occur in the value chain of the reporting entity, including upstream and downstream GHG emissions. Scope 3 categories are purchased goods and services, capital goods, fuel-related and energy-related activities, upstream transportation and distribution, waste generated in operations, business travel, employee commuting, upstream leased assets, downstream transportation and distribution, processing of sold products, use of sold products, end-of-life treatment of sold products, downstream leased assets, franchises, and investments.

Transition plan

An aspect of an entity's overall strategy that describes an entity's targets, including any interim targets, and actions for its transition towards a low-emissions, climate-resilient future.

Transition risks

Risks related to the transition to a low-emissions, climate-resilient global and domestic economy, such as policy, legal, technology, market and reputation changes associated with the mitigation and adaptation requirements relating to climate change.

Value chain

The full range of activities, resources and relationships related to an entity's business model and the external environment in which it operates. A value chain encompasses the activities, resources and relationships an entity uses and relies on to create its products or services from conception to delivery, consumption and end-of-life. Relevant activities, resources and relationships include those in an entity's operations, such as human resource; those along its supply, marketing and distribution channels, such as materials and service sourcing and product and service sale and delivery; and the financing, geographical, geopolitical and regulatory environments in which an entity operates.





Quayside Holdings ©

Quayside Holdings Limited
Level 2, 41 The Strand,
Tauranga 3110, New Zealand