

Taskforce On Climate-Related Financial Disclosure Reporting

Both the risks and opportunities presented by climate change have the potential to impact the asset classes we invest in.

As such, institutional investors consider climate risks as part of their fiduciary duty to build climate resilient portfolios now and into the future.

Climate risk is embedded as one of six key pillars in QIC's ESG framework. There are many dimensions to climate risk and while it is systemic and long term in nature, climate research and policy is constantly evolving, and we recognise our approach needs to be iterative and evolve over time as well.

This is our third-year reporting under the Taskforce on Climate-related Financial Disclosure (TCFD) framework and this section reports the progress we've made over the past year on understanding and managing climate risk within our business.



Governance

Board

The QIC Board has ultimate responsibility for managing the risks associated with climate change and is supported by a number of committees and functions within the organisation.

Board Risk Committee

As climate change is built into the company's formal risk management process the Board Risk Committee plays a key supporting role by assessing and updating the Board on enterprise wide risks, including those associated with climate change.

Board Remuneration Committee

The Board Remuneration Committee also supports the Board through the oversight of QIC's remuneration policies and programs, which includes reviewing and reporting on corporate KPIs including the company's corporate ESG KPI. This KPI is focussed on driving integration of ESG considerations across the business, including climate risk.

ESG Advisory Committee

The ESG Advisory Committee, has representation from senior levels of management and is chaired by a member of the QIC Board. The Committee meets on a quarterly basis to develop and implement QIC's ESG strategy. Our work on both physical and transition risk is regularly presented to this committee for feedback and approval.

Management oversight

Global, systemic ESG issues, like climate risk, that affect our organisation are considered by our Responsible Investment team. This team's role is to develop the corporate ESG strategy, focussing on six key ESG focus areas, of which climate risk is one. In addition to working with the aforementioned committees this team works with nominated 'ESG Champions' across QIC's investment teams to both develop and provide oversight of climate change strategy.

In 2019-20 QIC's Global Real Estate and Global Infrastructure teams both established sustainability committees to effectively manage a range of ESG-related risks and opportunities at asset class level. While having broad ESG responsibilities, these committees drive a targeted focus on climate-related risks and opportunities and integration into investment and business decision-making.

Strategy

Climate risk impacts assets classes, regions, sectors and companies in different ways. Our strategy is focussed on building a detailed understanding of climate risks and opportunities. This approach allows us to consider and continually refine our knowledge of managing the risks and opportunities presented by climate change.

The longer-term goal of our analysis is to estimate the materiality of climate risk in the same way we assess other forms of investment risk, as far as is possible. This is consistent with expectations set by financial regulators and advice released by the Australian Accounting Standards Board (AASB) on the materiality of climate risk in financial statements.

Framing climate-related impacts

Climate risk can take several forms and we view the Financial Stability Board’s¹⁶ Recommendations of the Taskforce on Climate-related Financial Disclosures as a clear definition of this risk. This description provides us the ability to work within a comprehensive and commonly accepted framework.

Climate risk	
Transition risk	Physical risk
Policy and Legal risk	Acute risk
Technology risk	Chronic risk
Market risk	
Reputational risk	

Source: The Financial Stability board's Recommendation of the Task Force on Climate-related Financial Disclosures

Analysis

Across QIC’s investment portfolios we undertake analysis both at the company level and broader sector level to understand potential climate risks and opportunities. To conduct this analysis, we use a range of data sources, including:

- Third party ESG data providers, e.g. MSCI Climate Value-at-Risk
- Data from credible not-for-profit organisations, e.g. CDP
- Government departments and agencies, e.g. CSIRO
- Primary, company-level data where available.

The analysis conducted using these data has allowed us to build:

- Baseline carbon emissions assessments at portfolio and asset level (i.e. carbon footprint)
- Sector, industry and sub-industry analysis to understand absolute carbon emissions, carbon intensity profiles, and exposure to low carbon transition risk
- Exposure to physical climate hazards and extreme weather events.

Climate scenario analysis

Noting the inherent uncertainties in the emergence of the physical impacts of climate change, and in a transition to a low-carbon economy, we undertake scenario analyses to explore the nature of climate-related risks and opportunities. To date these analyses include:

- Physical climate risk assessments looking at material climate variables, asset location, historical performance and potential vulnerability under future climate scenarios
- Global warming scenarios to analyse real asset portfolios’ exposure to low carbon transition risk
- Carbon pricing analysis to understand the impact of climate regulations on revenue at asset and portfolio level.

This analysis provides useful insights and has enabled us to identify areas for further focus. Further, it established the basis for meaningful engagement with portfolio companies.

16. The Financial Stability Board is an international body that monitors and makes recommendations about the global financial system. It was established after the G20 London summit in April 2009 as a successor to the Financial Stability Forum. The Board includes all G20 major economies, FSF members, and the European Commission. Hosted and funded by the Bank for International Settlements, the board is based in Basel, Switzerland.

Engagement

Using our climate analysis as a platform, we engage with boards, management teams and our externally appointed managers to better understand how they are managing climate risk. Depending on the asset class and nature of the investment, our engagement focusses on either physical or transition risk, or both.

When engaging, we are ultimately trying to assess the following:

- Whether there is a good understanding of the nature of the risk
- The systems and process in place to manage the risk
- Whether strategy takes into account the physical and transition risks associated with operations/investments.

To guide our engagement, we apply the TCFD framework and questions generally focus on:

- **Physical climate risk**
 - Does the company have a clear understanding of exposure to relevant climate variables based on relevant projections?
 - Can the company articulate the level of vulnerability to operations associated with the material exposures?
- **Transition risk:**
 - Have the company tested the sensitivity of the business against relevant climate change scenarios?
 - Has the company applied an internal carbon price to understand potential impacts on the business?
- **Metrics and targets:**
 - What climate metrics are currently being monitored and reported?
 - What, if any, targets are in place over the short, medium and long term?

Collaboration

Collaboration is an important part of our approach to understand climate risk. Given the complex nature of the issue, the science continues to evolve and provide more granular information. Acknowledging this we see working with others as important to both test our own thinking and to contribute to the conversation. Some examples of our collaborative approach include:



Climate Action 100+:

In FY20 we became a member of Climate Action 100+, which is an investor initiative to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change and engages with these companies to curb emissions, improve governance and strengthen climate-related financial disclosures.



Investor Group on Climate Change (IGCC):

We continue to be an active member of the IGCC and participate on two working groups – Transparency & Thought Leadership and Physical Risk and Resilience Group, with the latter being chaired by our General Manager, Responsible Investment



Climate Measurement Standards Initiative (CMSI):

We participated in this industry-led collaboration between insurers, banks, asset owners, scientists, regulators, reporting standard professionals and service providers to develop open-source technical business and scientific standards for climate related physical risk projections of future repair and replacement costs of residential and commercial buildings, and infrastructure in Australia. In September 2020, reports were published on both financial disclosure guidelines and climate science guidance.

Physical Risks and Opportunities

Assessing security-level impacts

While we have focussed initially on QIC’s real asset portfolios, over the reporting period we also began to consider physical climate risk in relation to listed equities and corporate credit portfolios using MSCI’s Climate Value-at-Risk tool.

The tool provides an assessment of:

- How much a company may experience an increase (risk) or decrease (opportunity) in business interruptions or asset damages from the physical manifestations of climate change.
- Both chronic hazards (gradual changes in temperatures, precipitation) and acute hazards (coastal flooding, cyclones) and takes into account the specific locations of companies’ facilities.
- Company specific estimates of future cost, revenue and valuation impacts under various scenarios.

This data set has allowed us to progress our physical risk analysis from our real assets into our listed equity and fixed income portfolios. We will be working over FY20/21 to analyse the key physical risks at the industry and security level.

Real assets

We continue to progress our analysis of the impacts of projected physical climate change across QIC’s real estate and infrastructure portfolios. As physical climate risk is highly location specific, in FY19 we developed a bottom-up approach that considers asset level exposure to range of climate hazards under two scenarios or Representative Concentration Pathways (RCP), these were RCP4.5 and RCP 8.5.

We have assessed the impact of physical climate risk for five climate variables, these are:

- Temperature
 - Rainfall/flood
 - Cyclone
- Bushfire
 - Sea level rise

In FY20, we extended this work to assess the impact of physical climate risk of around 25 real estate assets. We have considered asset-level exposure and impact as a result of projected climate trends and extreme weather events at 2030 and 2090. We found the differences in physical climate projections under an RCP4.5 and an RCP8.5 scenarios at 2030 are not always materially significant. It is over a longer time horizon that a divergence in the climate projection data is observed. To explore physical climate risk and stress test assets we have considered the physical climate impacts at 2090 under an RCP8.5 scenario.

We have assessed the impact of physical climate change by considering the historical sensitivity of an asset to past weather events and extremes and overlaid this with forward-looking climate data. In practice, this included the following steps:

- Development of a detailed survey to systematically assess historical impacts of climate variables
- Onsite visit and interview with management and operational staff at each asset

- Climate projection data downscaled to regional level
- Literature review of relevant climate research.

We identified three key areas of potential direct impact from physical climate risk at asset level:

Financial	Operational	Social
<ul style="list-style-type: none">• Operational expenditure• Capital expenditure• Revenue	<ul style="list-style-type: none">• Operational disruption• Management effort required	<ul style="list-style-type: none">• Wellbeing and comfort

By assessing exposure and impact, we have begun to explore the relative level of resilience and/or vulnerability at an asset level across portfolios. This in turn enables us to identify some key adaptation measures to potentially increase an asset’s resilience. We are reviewing the findings of this analysis internally and will progress this work over FY21.

Next steps

We will continue to this work over FY21, with next steps including:

- Further development of real asset physical climate risk assessments
- Extension of physical climate risk assessment to listed markets.

Transition Risk and Opportunities

In FY20 we aimed to enhance our understanding of climate transition risks and opportunities by conducting scenario analysis over our real asset portfolios. This included QIC's real estate and infrastructure assets. We worked with KPMG to customise three climate change scenarios on which to base the analysis.

Rapid Transition

This scenario is aligned with achieving a 1.5°C warming outcome and involves a rapid curtailing of emissions, seeing a global peak in 2022. It is government led with penalties and/or forced closure of high emitting assets and sees fossil fuels being less than 20% of the global energy mix by 2040. It also assumes a high range carbon price is in place by 2030 and a reduction in consumption across all sectors, especially luxury, due to changing consumer preferences.

Market Based

This scenario is aligned with achieving a 2°C outcome and involves a business led reduction in greenhouse gas emissions. There is an increase in consumption globally with a focus on circular economy principles, natural gas is a bridging fuel and the energy transition is largely technology led where low carbon growth dominates and incumbent industries atrophy. It assumes a low range carbon price is in place at 2020 and medium range price is effective by 2030.

Head in the sand

The third scenario we examined is aligned with a 4°C outcome and involves a business-as-usual approach with little regulation beyond current levels. Fossil fuels remain ~50% of energy mix and there are high rates of global resource depletion and biodiversity loss. Inequality continues to increase across the globe.

To explore the risks and opportunities under each of these scenarios we held two half-day workshops with senior members of our real estate and infrastructure teams. These workshops focussed on identifying the key risks and opportunities associated with the transition, existing mitigation measures in place and assigning a residual risk rating and associated timeframe (i.e. short, medium, long-term).

A summary of the transition scenario work is outlined below, which highlights the potential transition risks assessed and the key themes and sub-themes that came out of the work across both asset classes.

Transition risks	Legal, Market, Regulatory, Reputation Technology		
Key themes	Renewables alternatives & resource efficiency	Increase in costs	Changes in consumer behaviour
Sub themes	<ul style="list-style-type: none">Switching to alternative fuels and development of new alternativesGrowth in electric and autonomous vehiclesIncreasing focus on resource efficiency	<ul style="list-style-type: none">Increase cost of energy and raw materials associated with carbon regulationIncreasing cost of insurance premiums and asset maintenance	<ul style="list-style-type: none">Potential impacts on traffic volumesImpacts on tourism flowsPreference for carbon neutral productsGrid defection

We are working on a range of initiatives to build on the findings of the scenario analysis to ensure these risks are further explored and integrated into existing management processes. Additionally, we are also developing a key set of metrics that we will track and review on a periodic basis to provide us with signposts as to which of the three scenarios is most likely to play out and understand how this may impact our real asset portfolios.

Risk Management

QIC manages risk in accordance with the Board's Risk Appetite Statement and Risk Management Framework, including the Enterprise Risk Management Policy. The risk management process is consistent with International Standard ISO 31000: Risk Management. Our Risk Management Framework includes an enterprise-wide methodology for rating risks and provides for assessment of business risks using the consequence and likelihood tables included in the Risk Rating Procedure included in the Board's Risk Appetite Statement.

All risk across the business is identified and rated in accordance with this approach to bring consistency at an enterprise level. Existing controls that mitigate identified risks are taken into consideration to determine the residual risk rating. Identified risks, which include climate change risks, are rated according to QIC's risk rating standards and then compared to the Board-approved Risk Appetite Statement to determine if any further mitigation is required to bring residual risks within the Board's Risk Appetite.

By incorporating climate-related risks in QIC's Risk Management Framework and assessing them in the same way as other business risks, the Board and management can ensure that there is a common understanding of the level of risk throughout the business and ensure that appropriate priority and controls are employed to manage the residual risk in an acceptable way. Given the impact of climate-related risks, we recognise the need for these risks to be measured against different time horizons, i.e. assessed on short, medium or long-

term basis, depending on the scope of the risk assessment, the type of investment decision, the investor's investment strategy and the type of asset and its lifecycle, the standard risk assessment methodology ensures a systematic yet flexible approach.

Our Risk Appetite Statement considers climate risk under three categories – physical risk, transition risk, and risks associated with energy security. Not only does this align with the TCFD recommendations it also allows the business to get a more granular understanding of how risks may manifest under the broad banner of 'climate change'. This facilitates more informed discussions and the formation of targeted mitigation measures across the business.



Metrics and Targets

Real estate assets and the impacts of COVID-19

Please note, values have been provided as at 29 February 2020 and 30 June 2020 for our real estate assets in the following section and within section 14: Sustainability Data.

We have reflected the data in two distinct points in time to remain transparent in disaggregating and demonstrating the effects of COVID-19 on our targets.

Shopping Centre assets

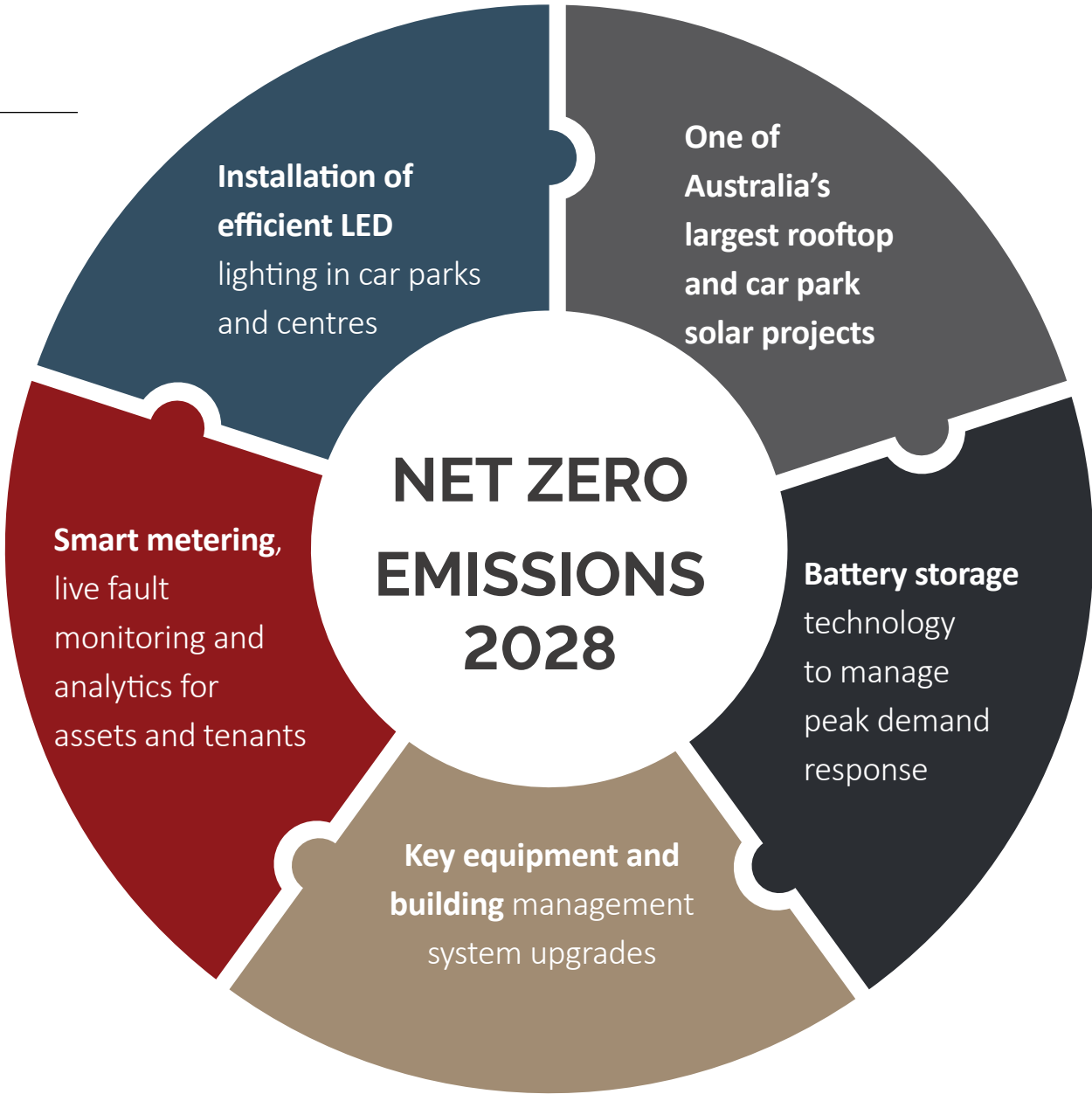
QIC’s largest direct source of emissions (Scope 1 and 2 emissions) come from the retail and office assets developed, owned and operated by QIC Global Real Estate.

Acknowledging this contribution, in FY20 QIC Global Real Estate committed to an ambitious target to become Net Zero Emissions (NZE) by 2028 across its core retail assets in Australia.¹⁷

This commitment has allowed our real estate business to become the first Australian signatory to the World Green Building Council’s Net Zero Carbon Buildings Commitment for a retail portfolio. The NZE target will be achieved through the implementation of a number of focussed initiatives, leveraging some of Australia’s leading sustainability expertise and significantly changing the way we manage and power our assets. The NZE target will be achieved via:

Progress will be measured by tracking and reporting on our emissions profile to ensure we’re meeting key projected goals and milestones. This is not a new process for GRE and some of the key achievements to date include:

- ✓ A 10% reduction in electricity consumption since 2018 through the rollout of an automated building analytics platform
- ✓ Installation underway of more than 25,000 LED lights in Phase 1 of the Lighting Efficiency Project, expected to reduce electricity consumption by a further 9%
- ✓ Investment in one of Australia’s largest shopping centre solar projects



2020 reduction targets

Recognising that purchased electricity is the most material source of emissions for QICGRE’s retail assets, in 2015 we committed to a 20% electricity intensity reduction target by 30 June 2020.

Over this time a range of initiatives aimed at improving energy efficiency have been implemented. While COVID-19 significantly impacted opening hours and visitation at our centres nationally, resulting in less electricity consumption over the last four months of the reporting period, our reduction in electricity intensity over the previous five years was trending toward 20% at 29 February 2020, prior to COVID-19, and was exceeded at 30 June 2020.

GRE Australian core retail assets

Intensity (MJ/m2)	2020 Reduction Target+	2020 Reduction Achieved	
		As at 29 Feb 2020	As at 30 June 2020
Electricity	-20.0%	17.43%	24.24%

QIC has commenced a number of significant projects focused on further reducing electricity consumption as part of our plans to achieve net zero emissions for our core Australian retail assets by 2028. These projects have already delivered reductions in our electricity consumption and are projected to deliver significant further reductions in the coming years.

For further information on QICGRE’s 2020 targets please see the [Global Real Estate ESG Report 2020](#).

17. “Core assets” includes those Australian shopping centres held by QIC Property Fund and QIC Shopping Centre Fund which are 100% owned and operated by QICGRE

Office assets

Over the reporting period QIC Global Real Estate's Office Fund and Portfolio exceeded its 2020 electricity intensity reduction target of 20% on a 2015 baseline, achieving a 32% reduction over the five year period. This excellent result was achieved through a number of initiatives:

- Significant lighting upgrades at 33 Charlotte Street and 111 George Street and implementation of LED sensor-controlled lighting across all assets
- Refurbishment and replacement of cooling towers
- Replacement of older inefficient chillers and implementation of chiller staging strategies
- Installation of power factor correction technology at 63 George Street
- Lift modernisation with destination control technology, A/C regenerative drive motors, LED car lights and motion sensors.

QIC Office Fund / QIC Government Office Portfolio

Intensity	2020 Reduction Target	2020 Reduction Achieved ¹⁸	
		As at 29 Feb 2020	As at 30 June 2020
Electricity	-20.0%	28.49%	31.77%

Infrastructure assets

Over FY20 QIC Global Infrastructure developed high level NZE pathways for each of its assets.

This work provides a detailed understanding of the potential steps required to achieve net zero emission across a range of major infrastructure assets. Specifically, this analysis took into account:

- Current emissions profile and the dominance of scope 1 or 2 emissions
- The trajectory of future emissions
- Key initiatives to reduce emissions, e.g. fuel switching, energy efficiency, use of renewable energy
- Regulatory risk exposure, e.g. carbon price sensitivity
- Material scope 3 emissions

Across Global Infrastructure’s portfolio, a number of assets currently do have emissions reduction targets in place, these are:

- Port of Brisbane: NZE by 2030
- Thames Water: NZE by 2030
- Brisbane Airport: 50% reduction in absolute carbon emissions by 2030, from a 2017 baseline

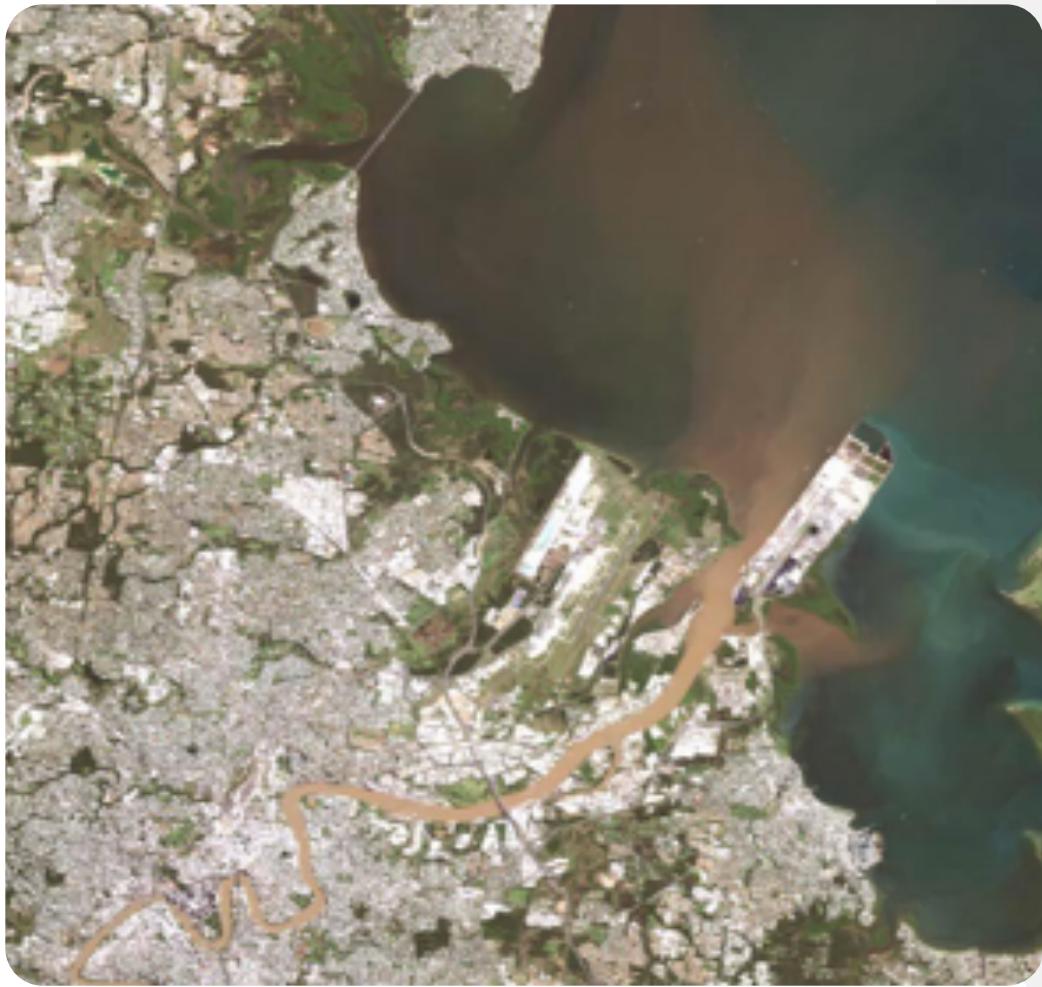
Further to these targets one of the newer assets in the infrastructure portfolio, Brussels Airport, achieved carbon neutrality in 2018.

18. Due to the significant impact of COVID-19 on the operation of our assets, for transparency we are presenting consumption data in this year's reporting for the period both pre-COVID (up until end-February 2020) as well as to end of financial year.

Driving sustainable outcomes: climate

Case Study: Designing for flood resilience at Port of Brisbane

The ‘Offsite Stormwater’ initiative at QIC Global Infrastructure portfolio asset Port of Brisbane is helping to improve Southeast Queensland’s waterway health, tackling sediment pollution at its source while also reducing impacts of potential future flood events.



The impact of sediments on Moreton Bay and Port of Brisbane.

A key environmental issue, sediment run-off impacts water quality, ecosystem health and maintenance requirements for Port of Brisbane’s more than 90km of navigational channels.

This natural process has been accelerated by an increase in extreme weather events such as the 2011 Queensland floods, which saw more than two million tonnes of sediment deposited in the Port’s navigational channels. This event decreased water depth by up to 1.5 metres, reducing the Port’s ability to service South East Queensland’s trade needs, with the dredging required to repair the shipping channel a carbon-intensive activity.

Through a collaboration with key stakeholders including the Queensland Government, catchment management authorities and community groups, Port of Brisbane has invested \$1 million to an innovative rehabilitation and stabilisation project for targeted upstream waterways, which have been identified through research as contributing to 80% of the river’s sediment pollution. By repurposing funding previously used for stormwater treatment, the project has delivered works including bank re-profiling, planting and maintenance of 9,000 native plants and the installation of four cross-bed grade control structures. The works also include a major research component with scientists using new techniques to identify and monitor the sources of sediment pollution.



Restored bank with grass crop cover




Reshaping of creek bed


Case study:
QSCF's world-first Green Bond

In 2019, the QIC Shopping Centre Fund (QSCF) issued an AUD\$300 million Climate Bond Initiative certified green bond, in a world first for the retail property sector. The bond, which was enabled by QIC Global Real Estate’s commitment to enhancing environmental performance across its Australian retail portfolio, was five times oversubscribed and attracted new investors from across Asia and Australian with green and ESG mandates, resetting green debt market expectations in Australia.


In its first year, focus has been on planning and implementation commencement for a range of significant new initiatives which are expected to provide long-term reductions in GHG emissions and GHG emission intensity across the QSCF portfolio, including:



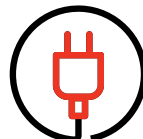
A commitment to achieving net zero carbon emissions for QSCF’s core Australian asset portfolio by 2028¹



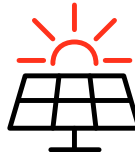
Installation of over 25,000 LED lights in car parks and centres




Investment in key equipment and building management system upgrades




Expansion of power agreements to leverage solar generation capacity



Construction of one of Australia’s largest rooftop and car park solar projects






Rollout of smart metering, live fault monitoring and analytics for assets and tenants



Exploration of battery storage technology to manage peak demand response

Each of the three shopping centres financed by the QSCF Green Bond proceeds (Eastland, Robina Town Centre, and Grand Central) continue to demonstrate aggregate actual and modelled carbon emissions intensity reductions in excess of the minimum requirement for Climate Bond certification of 90.8% for a 6-year tenor green bond. The full QSCF Green Bond Report is available at qic.com

GREEN BUILDING PROJECT		EASTLAND (RINGWOOD, VICTORIA)	ROBINA TOWN CENTRE (GOLD COAST, QUEENSLAND)	GRAND CENTRAL (TOOWOOMBA, QUEENSLAND)
QSCF Total Asset Balance (A\$million)		\$434.5	\$201.6	\$277.9
Allocated Amount (A\$million)		\$142.5	\$66.3	\$91.2
Gross Lettable Area (GLA m ²)		140,820	153,550	91,456
Carbon Emissions Intensity Reductions	Baseline Monthly GHG Intensity (kgCO ₂ /M ²) ¹	14.0	9.1	12.6
	2019 Actual Monthly GHG Intensity (kgCO ₂ /M ²)	12.5	8.5	10.3
	Actual monthly GHG Intensity Reduction vs Baseline Year Intensity (kgCO ₂ /M ²)	1.5	0.6	2.3
	Estimated Annual GHG Avoided ² (Tonnes CO ₂ e)	2,534.8	1,105.6	2,524.2
	% Monthly GHG Intensity Reduction Modelled (Baseline to Completion)	37%	42%	37%
Green Buildings Rating Standard	NABERS Energy 2016	3	3	3.5
	NABERS Energy 2019	4	4.5	3.5
GBP ELIGIBLE CATEGORIES	SDG CONTRIBUTION			
	SDG GOAL	SDG TARGET		
Energy Efficiency		7.3: By 2030, double the global rate of improvement in energy efficiency		
Green Buildings		9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes		
		11.6: By 2030, reduce the adverse per capita environmental impact of cities		

19. For Climate Bond certification and carbon intensity reduction comparison purposes, baseline year (pre-redevelopment) for Eastland was 2013, for Robina Town Centre was 2013 and for Grand Central was 2014.

20. For estimation calculation based on: Final GLA (m2) x (Monthly GHG Intensity- Baseline GHG Intensity) x 12 (months/yr) /1000 (kg/tonne).