

69 Banana Street, Redland Bay

Sustainability Statement

New Fortune Investment

Job No: 1035844
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PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

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Executive summary

This Sustainability Statement has been prepared to define and guide the sustainability outcomes for the development of an Apartment and Childcare Development at 18 Outridge Street, 69 & 71 Banana Street, Redland Bay. The aim is to identify the key sustainability opportunities relevant to the project and to provide the responsible planning authority with a clear indication of how sustainability has been addressed within this development.

This Statement is prepared as a response to the following Guidelines from Economic Development Queensland (EDQ):

- PDA Guideline no. 04 Integrating sustainable principles into residential subdivisions
- PDA Guideline no. 14 Environmental values and sustainable resource use

The report outlines how the project is committed to a formal certified rating under the Green Star Buildings rating tool. The project is targeting a minimum of a 5-star Green Star rating which demonstrates Australian Excellence. The project will continue to investigate meeting the requirements into the next stages of design. The target credits and associated points within them under the Green Star Buildings v1 tool are detailed in Appendix A of this report as an indicative strategy.

In summary, the development meets the requirements for sustainable design under the listed guidelines above as required by EDQ.

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1.0 Introduction

This Sustainability Statement has been prepared on behalf of New Fortune Investment for the development of 69 Banana St, Redland Bay.

The relevant details of the project are as below:

- Project Address: 69 Banana St, Redland Bay
- Applicant: New Fortune Investment

The project site is under the jurisdiction of Economic Development Queensland.



Figure 1 Locality Plan

1.1 Design Overview

This application addresses the proposed 69 & 71 Banana St development will provide the following:

Level	Type	Area
Ground	Childcare (120 children)	829.9m ²
2	Residential (9 units)	1,066.4m ²
3	Residential (9 units)	1,066.4m ²
4	Residential (9 units)	1,066.4m ²

5	Residential (9 units)	1,066.4m ²
6	Residential (9 units)	1,066.4m ²
7	Residential (7 units)	1,078.6m ²
Basement 1	67 car parking spaces	2,024.5m ²
Basement 2	69 car parking spaces	2,024.5m ²
Total	-	11,289.5m ²

1.2 EDQ Sustainability Guidelines

This SMP is prepared as a response to EDQ's PDA Guideline no. 14 relating to climate change issues and associated strategies, with particular attention to the following sections.

Resource	Strategies
Climate change resilience	- Locate and design infrastructure with regard to predicted sea level rise. - Incorporate design and construction elements that are responsive to changing climate that is likely to cause more intense storms, stronger winds, higher temperatures and sea level rise. - Retain and improve the extent of native vegetation and address other heat island management strategies in precinct and building design and construction.
Greenhouse gas emission reduction	- Adopt subdivision and lot layouts that optimise solar orientation and natural ventilation. » Maximise opportunities for public and active transport use. - Use building design that encourages energy, water and materials conservation elements. - Use local and renewable energy sources where economically feasible and/or design buildings so that new technologies can be easily retrofitted. - Promote public transport systems that reduce dependence on private motor vehicles.
Potable water	- Work with partners to implement Total Water Cycle Management principles to ensure the most effective and efficient use of water. - Develop and implement a water demand management plan that educates end users in reducing their water consumption. - Incorporate water efficient appliances and fittings into the design (minimum 4 star Water Efficiency Labelling and Standards (WELS) rating).
Recycled and re-used water	- Implement current best practice Water Sensitive Urban Design (WSUD) principles for Queensland. - Develop a site water management plan that considers a range of onsite water reuse strategies e.g. rainwater and stormwater harvesting, water recycling measures like home grey water or treated water from off-site sources such as treatment plants or sewer mining.

Resource	Strategies
Energy	▪ Meet or exceed the regulated energy efficiency requirements for Queensland at the time of the development proposal. ▪ Implement demand management strategies to shift energy loads to off-peak. ▪ Maximise the passive thermal design of buildings to minimise use of artificial heating and cooling systems ▪ Incorporate energy efficient plant and/or equipment. ▪ Centrally locate internal services such as water where possible. ▪ Maximise the use of natural light and energy efficient lighting. ▪ Promote renewable energy and local or on-site energy generation. ▪ Ensure development is able to be retrofitted with future demand management opportunities. ▪ Promote energy efficient appliances and consider embedding peak saver appliances.
Energy and water - heat island effects	▪ Development should incorporate heat island reduction strategies to minimise urban ambient temperature increases. Heat island reduction strategies include: ▪ retaining existing vegetation and/ or increasing vegetation area throughout the development ▪ providing street trees and pocket parks and promoting garden vegetation to provide shading to buildings and pavements ▪ using building materials (particularly for roofs and pavements) with high reflectance and emissivity to reduce solar radiation absorption.
Sustainable building materials	Development should incorporate: ▪ standardised materials ▪ materials from certified sustainable and renewable resources e.g. Ecospecifier, GECA » locally available materials where possible ▪ materials manufactured in an environmentally responsible manner ▪ non toxic and low volatile organic compound (VOC) and low emission products. ▪ consider construction materials with low embodied energy

2.0 Sustainability Response

The building's design has included considerations of sustainability from the beginning of the design process. The Green Star Buildings environmental rating tool has been used to provide a benchmark for sustainable design. Green Star is noted with the planning scheme as a suitable guideline to demonstrate compliance with the scheme. This report will highlight the sustainability features of this project, with a focus on the design and construction initiatives.

The Green Star rating tool has been used to demonstrate the preliminary design potential to achieve a 5 star rating. The proposed design has the potential to achieve at least 35 points. The project will continue to investigate higher rating into the next stages of design.

A draft points strategy has been developed for the project (see Appendix A). The specific points are subject to change during the design development phase of the project; however, the project team are committed to achieving the 5 star rating.

The sustainability initiatives that will be incorporated into the design and construction of the building are outlined in the following section. They are arranged to correspond to the Green Star category headings, for ease of reference:

- Responsible
- Healthy
- Resilient
- Positive
- Places
- People
- Nature
- Leadership

The points under investigation for each category are shown following.



2.1 Responsible

Recognised activities that ensure the building is designed, procured, built, and handed over in a responsible manner.

The key project specific design strategies within this category include:

- Engagement of a Green Star Accredited Professional to provide advice and guidance.
- Requirements for the head contractor to develop an Environmental Management Plan and be ISO14001 certified.
- Provide sustainability education to site-based construction team members.
- Divert at least 90% of construction and demolition waste from landfill.
- Develop and implement a metering and monitoring plan to manage operational energy and water consumption.
- Commissioning the building to a high standard, including commissioning of the building envelope through air-tightness testing.
- Provide sufficient space and access to promote recycling during operation.
- Select finishes and structural products for the building that are responsible including certifications like EPDs, ISO14001, Carbon Neutral, FSC, GECA or Green Tag.



2.2 Healthy

Promotes actions and solutions that improve the physical and mental health of occupants.

The key project specific design strategies within this category include:

- Provide high air quality by separating supply and exhaust points, providing clean ductwork, and increasing fresh air supplies.
- Electrical and natural lighting is provided at a suitable level and quality. Daylight will be maximised across the enclosed spaces with a high portion of rooflights.
- Acoustic comfort will be provided across the development reviewing maximum noise levels and noise transfer.
- Minimise indoor pollutant by selecting low VOC and low formaldehyde products. Confirm the intent has been achieved through on-site testing.



2.3 Resilient

Encourages solutions that address the capacity of the building to bounce back from short-term shocks and long term stresses.

The key project specific design strategies within this category include:

- Conduct a climate change physical risk assessment considering high continued levels of carbon emissions. Implement design and construction changes to reduce the risks.



2.4 Positive

Encourages a positive contribution to key environmental issues of carbon, water and the impact of materials.

The key project specific design strategies within this category include:

- Minimise the carbon and water impact of materials and construction processes.
- Minimise the carbon impact of operational stage of the project through energy efficiency and on-site energy generation.
- Provide all energy from electricity only and all of this electricity to be from renewable sources or is offsetted.
- Minimise potable water consumption through the use of efficient fittings, landscaping selections and rainwater capture.
- Provide a Zero Carbon Action Plan specific to the building.
- The apartments will achieve an average star rating of 7-star aligning with NCC 2022 requirements.



2.5 Places

Supports the creation of safe, enjoyable, integrated and comfortable places.

The key project specific design strategies within this category include:

- Provide showers and lockers to promote building occupants to exercise.
- Development to be ready for electric vehicles.



2.6 People

Encourages solutions that address the social health of the community.

The key project specific design strategies within this category include:

- Require a construction site that provides gender inclusive facilities and protective equipment. Policies are implemented on-site to increase awareness and reduces instances of discrimination, racism and bullying.
- Require a construction site that provides and monitors high quality staff support on-site to reduce at least five key physical and mental health impacts relevant to construction workers.
- Require the head contractor to employ peoples from disadvantaged or under-represented groups through social procurement programs.



2.7 Nature

Encourages active connections between people and nature and rewards creating biodiverse green spaces in cities.

The key project specific design strategies within this category include:

- Select a project site that is not considered to be of high importance.
- Minimise light pollution of the site to neighbours and the sky.

Refer to Appendix A of this document for Green Star strategy prepared for the project, demonstrating the pathway to achieve 5-star rating under Green Star Buildings v1 rating tool.

3.0 NatHERS Assessment

The proposed development is targeting NCC 2022 requirements for NatHERS which are an average rating of 7-star along with the associated heating and cooling load limits. Sample assessment has been undertaken on 15 units at this stage to understand the building fabric performance requirements.

Sample results are as below:

Unit	Heating Load (MJ/m2)	Cooling Load (MJ/m2)	Star rating
204	11.0	26.8	7.7
205	8.7	31.5	7.4
209	2.4	37.8	7.4
401	1.0	32.6	8.2
402	0.9	31.8	8.3
403	1.0	36.8	7.7
404	5.5	23.7	8.7
405	7.6	29.4	7.8
406	1.9	41.9	7.0
407	1.1	41.7	7.2
408	0.4	37.1	7.7
409	2.0	30.8	8.3
701	10.2	30.6	7.4
703	11.0	29.6	7.4
707	8.0	21.4	8.7
Average	150.2	32.2	7.7

4.0 Conclusion

The proposed development incorporates sufficient sustainability initiatives to meet the planning requirements.

The project is committed to achieving a 5-star Green Star Buildings rating, demonstrating Australian Best Practice. This report has highlighted the sustainability initiatives included in the development, with a focus on the design and construction initiatives and outcomes. It demonstrates a wide range of sustainability outcomes across all categories.

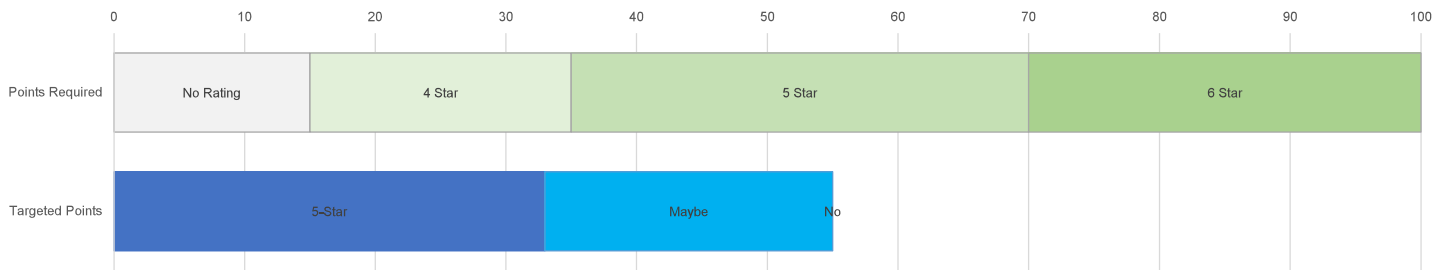
Overall, the project contributes to the stated aim of the Economic Development Queensland (EDQ) to fostering sustainable developments that are energy-efficient, water-sensitive, and resilient to the impacts of climate change.

Project:	69 Banana St	Comments / changes from previous revision
Project No.	1035844	0
Date:	22/06/23	
Revision:	-	
Prepared By:	Nandini Phadnis	

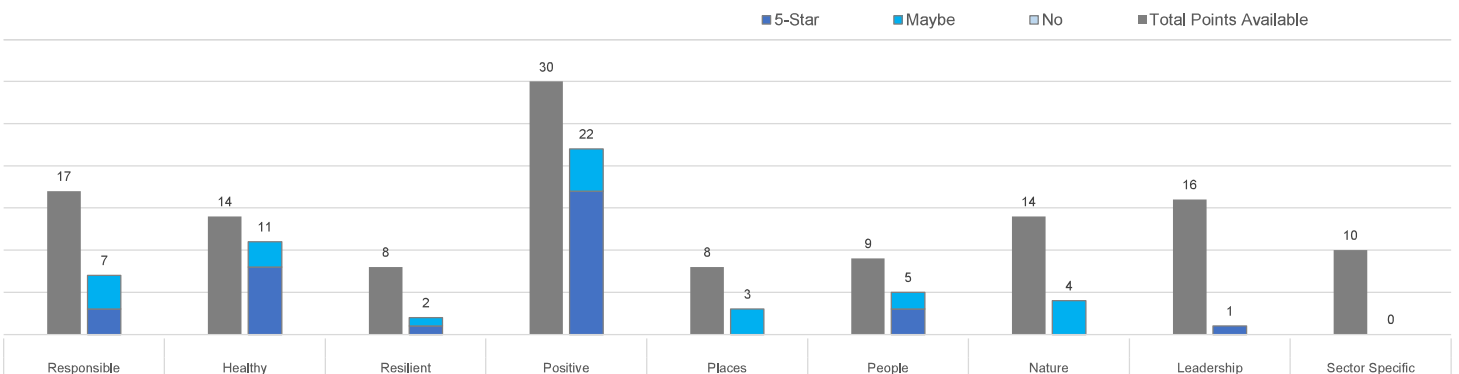
Note: This document provides detail on the rating strategy, credit criteria and project specific comments. It is the responsibility of each party (design and construction teams) to understand the credit compliance requirements and submission evidence required for certification. Refer to the Green Star Buildings Submission Guidelines Version 1 published by the GBCA for further details.

PATHWAY	TARGET RATING	5-Star	Maybe	No
Minimum Expectations Met (15no. - no points awarded)	Yes	Yes	Yes	Yes
Climate Positive Path points targeted (14 points required)	Not Required	14	14	14
Points targeted to be achieved	35	33	55	55
Rating to be achieved	5 star	4 star	5 star	5 star
Estimated Costs	N/A	\$0	\$0	\$0

These costs are indicative and must be confirmed by the Cost Consultant and/or the Contractor



Category	Minimum Expectations met (Yes/No)	Total Points Available	5-Star	Maybe	No
Responsible	Yes	17	3	4	0
Healthy	Yes	14	8	3	0
Resilient	Yes	8	1	1	0
Positive	Yes	30	17	5	0
Places	Yes	8	0	3	0
People	Yes	9	3	2	0
Nature	Yes	14	0	4	0
TOTAL CORE	Yes	100	32	22	0
Leadership		16	1	0	0
Sector Specific		10	0	0	0
TOTAL FOR RATING		100	33	22	0
CUMULATIVE POINTS		100	33	55	55



Project: 69 Banana St (1035844)										Key:		Minimum Expectation	Credit	Exceptional	CP Pathway	Revision: - (22/6/2023)				
Credit		Minimum Expectation	Credit Achievement	Exceptional Performance	Total points available	Minimum Expectation	5-Star	Maybe	No	Additional Cost	Comments									
Responsible		(3)	11	6	17	(3)	3	4	0	\$0										
Industry Development - credit			1		1		1	-	-	Yes	GSAP Engagement fees									
Responsible Construction - minimum		•			•	✓	-	-	-		Requires contractor to have an EMP/EMS which is certified to ISO14001. This may limit the pool of contractors, depending on who is being considered.									
Responsible Construction - credit			1		1		1	-	-		Standard practice in the industry.									
Verification and Handover - minimum		•			•	✓	-	-	-		Appropriate metering and monitoring to be provided, commissioning to be completed, Air tightness testing to be undertaken.									
Verification and Handover - credit			1		1		-	1	-	Yes	ICA can be engaged to achieve this credit. Likely in the \$50-75k range.									
Operational Waste - minimum		•			•	✓	-	-	-		Benefits for having all system working well and commissioning to be managed.									
Responsible Procurement - credit			1		1		-	-	-											
Responsible Structure - credit			3		3		-	3	-		Achievable but cost item to be considered. Full detail of pricing to be established and factored against other TBC. Additional cost for carbon neutral concrete to be factored									
Responsible Structure - exceptional				2	2		-	-	-											
Responsible Envelope - credit			2		2		-	-	-											
Responsible Envelope - exceptional				2	2		-	-	-											
Responsible Systems - credit			1		1		-	-	-											
Responsible Systems - exceptional				1	1		-	-	-											
Responsible Finishes - credit			1		1		1	-	-		Compliant products to be selected by the Architect and Head Contractor									
Responsible Finishes - exceptional				1	1		-	-	-											
Healthy		(4)	11	3	14	(4)	8	3	0	\$0										
Clean Air - minimum		•			•	✓	-	-	-		Requirements are applicable to the Kindergarten and residential dwellings.									
Clean Air - credit			2		2		2	-	-		For non-residential, 100% more outdoor air over AS1668 or CO2 monitoring to be provided.									
Light Quality - minimum		•			•	✓	-	-	-		For residential, 50% more outdoor air over AS1668 if mechanically ventilated, or engineered natural ventilation system to be provided if naturally ventilated.									
Light Quality - credit			2		2		2	-	-		Lighting to be provided as prescribed. Glare to be removed from light sources. Regularly occupied areas are 1 reasonable proximity of windows, glazed facades for good quality daylight, glare control to be provided.									
Light Quality - exceptional				2	2		-	-	-		Subject to daylight modelling									
Acoustic Comfort - minimum		•			•	✓	-	2	-	Yes	Subject to daylight modelling and lighting to be provided as in all areas as per the requirements.									
Acoustic Comfort - credit			2		2		2	-	-	Yes	Acoustic consultant to be engaged for compliant advice									
Acoustic Comfort - minimum		•			•	✓	2	-	-	Yes	Acoustic consultant to be engaged for compliant advice. At least 2 of the requirements to be met for residential areas, and at least 3 of the requirements to be met for the Kindergarten a									
Exposure to Toxins - minimum		•			•		-	-	-		Compliant products to be selected by the Architect and the Head Contractor.									
Exposure to Toxins - credit			2		2		2	-	-	Yes	On-site testing to be undertaken post completion to check TVOC and Formaldehyde concentration are within stipulated limits.									
Amenity and Comfort - credit			2		2		-	-	-		Subject to views assessment									
Connection to Nature - credit			1		1		-	1	-		At least 5 nature-inspired design interventions required to be included OR plants as per stipulated requirements to be provided in common areas with an ongoing maintenance plan to me									
Connection to Nature - exceptional				1	1		-	-	-		At least 10 plants									

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Credit	Minimum Expectation	Credit Achievement	Exceptional Performance	Total points available	Minimum Expectation	5-Star	Maybe	No	Additional Cost	Comments			
Resilient	(1)	8	0	8	(1)	1	1	0	\$0				
Climate Change Resilience - minimum	•			•	✓	-	-	-		Will have impacts on Mech, Hyd, Civil design as a minimum with potential impact on Arch.			
Climate Change Resilience - credit		1		1		1	-	-	Yes	Climate Change and Adaptation assessment to be undertaken.			
Operations Resilience - credit		2		2		-	-	-					
Community Resilience - credit		1		1		-	-	-					
Heat Resilience - credit		1		1		-	1	-		Hardscape covering in the balconies and the roof will have to be light coloured.			
Grid Resilience - credit		3		3		-	-	-					
Positive	(4)	16	14	30	(4)	17	5	0	\$0				
Upright Carbon Emissions - minimum	•			•	✓	-	-	-		Complying with current requirements is mandatory for projects from 2023.			
Upright Carbon Emissions - credit		3		3		3	-	-	Yes	This will require low carbon concrete, structural design to be improved to reduce no, recycled content in concrete to be maximised as much as possible. Other initiatives focusing on design.			
Upright Carbon Emissions - exceptional			3	3		-	-	-					
Energy Use - minimum	•			•	✓	-	-	-		Complying with current requirements is mandatory for projects from 2023.			
Energy Use - credit		3		3		3	-	-	Yes	Subject to modelling.			
Energy Use - exceptional			3	3		-	3	-	Yes	For residential, 6-star average and at least 6 out of 9 initiatives to be implemented.			
Energy Source - minimum	•			•	✓	-	-	-		Complying with current requirements is mandatory for projects from 2023.			
Energy Source - credit		3		3		3	-	-	Yes	Complying with the exceptional requirements is mandatory for projects from 2023.			
Energy Source - exceptional			3	3		3	-	-	Yes	Complying with the exceptional requirements is mandatory for projects from 2023. Use of fossil fuels is not permissible.			
Other Carbon Emissions - credit		2		2		2	-	-	Yes	Complying with the exceptional requirements is mandatory for projects from 2023.			
Other Carbon Emissions - exceptional			2	2		-	-	-		Complying with credit requirements is mandatory for projects from 2023.			
Water Use - minimum	•			•	✓	-	-	-		Emissions from refrigerants are eliminated or offsetted			
Water Use - credit		3		3		3	-	-		Subject to water calculations, 45% reduction over a reference building. Needs efficient water fixtures, recapturing fire test water, harvesting rainwater for toilet flushing and landscape irrigation.			
Water Use - exceptional			3	3		-	-	-					
Life Cycle Impacts - credit	-	2		2		-	2	-	Yes	Subject to Life Cycle Assessment. Additional assessment required.			
Places	(1)	8	0	8	(1)	0	3	0	\$0				
Movement and Place - minimum	•			•	✓	-	-	-		Showers and changing facilities to be provided for kindergarten areas.			
Movement and Place - credit		3		3		-	-	-					
Enjoyable Places - credit		2		2		-	-	-					
Contribution to Place - credit		2		2		-	2	-	Yes	Independent reviews required to be held during the design development OR an urban context report covering urban context analysis and appropriate design responses is required.			
Culture, Heritage and Identity - credit		1		1		-	1	-		Requires meaningful engagement with community groups in early design OR local analysis to be undertaken through community engagement to understand culture, heritage and identity			

Project: 69 Banana St (1035844)					Key:		Minimum Expectation	Credit	Exceptional	CP Pathway	Revision: - (22/6/2023)				
Credit	Minimum Expectation	Credit Achievement	Exceptional Performance	Total points available	Minimum Expectation	5-Star	Maybe	No	Additional Cost	Comments					
People	(1)	7	2	9	(1)	3	2	0	\$0						
Inclusive Construction Practices - minimum	•			•	✓	-	-	-		Standard practice for Tier A Head Contractors					
Inclusive Construction Practices - credit		1		1		1	-	-		Easy to achieve, to be implemented by the Head Contractor					
Indigenous Inclusion - credit		2		2		-	-	-							
Procurement and Workforce Inclusion - credit		2		2		2	-	-		Social Procurement strategy to be prepared to generate employment opportunities for the disadvantaged or under-represented groups.					
Procurement and Workforce Inclusion - exceptional			1	1		-	-	-							
Design for Inclusion - credit		2		2		-	2	-		The building's design and construction to be navigated and enjoyed by users of various age groups, genders, mental and physical abilities, including equal access to the building, diverse wayfinding and inclusive spaces.					
Design for Inclusion - exceptional			1	1		-	-	-							
Nature	(1)	10	4	14	(1)	0	4	0	\$0						
Impacts to Nature - minimum	•			•	✓	-	-	-							
Impacts to Nature - credit		2		2		-	-	-							
Biodiversity Enhancement - credit		2		2		-	2	-	Yes	Landscaped area to be provided as prescribed (15% of the site or 1 500 of GFA whichever is larger), 60% of plants to be indigenous. Biodiversity Management Plan to be prepared.					
Biodiversity Enhancement - exceptional			2	2		-	-	-							
Nature Connectivity - credit		2		2		-	-	-							
Nature Stewardship - credit		2		2		-	-	-							
Waterway Protection - credit		2		2		-	2	-		40% reduction in average annual stormwater discharge across the whole site along with stipulated pollution reduction targets.					
Waterway Protection - exceptional			2	2		-	-	-							

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Credit	Minimum Expectation	Credit Achievement	Exceptional Performance	Total points available	Minimum Expectation	5-Star	Maybe	No	Additional Cost	Comments														
Leadership												12	1	10	1	0	0	\$0						
Market Transformation - 1												1		1	-	-	-							
Market Transformation - 2												1		1	-	-	-							
Market Transformation - 3												1		1	-	-	-							
Market Transformation - 4												1		1	-	-	-							
Market Transformation - 5												1		1	-	-	-							
Leadership - Climate Positive Pathway												1		1	1	-	-	-						
Leadership - Circular Economy (credit)													0	0	-	-	-							
Leadership - Circular Economy (exceptional)												0		0	-	-	-							
Leadership - Responsible Structure												1		1	-	-	-							
Leadership - Responsible Envelope												1		1	-	-	-							
Leadership - Responsible Systems												1		1	-	-	-							
Leadership - Responsible Finishes												1		1	-	-	-							
Leadership - Fossil Fuel Fee Construction Site (credit)												1			-	-	-							
Leadership - Fossil Fuel Fee Construction Site (high)												1			-	-	-							
Leadership - Fossil Fuel Fee Construction Site (exceptional)													1		-	-	-							
Leadership - TBC												0			-	-	-							
Leadership - TBC												0			-	-	-							
Leadership - TBC												0			-	-	-							
Leadership - TBC												0			-	-	-							

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