

**Nau mai, haere mai ki Aotearoa.
Te kainga o Te Kaunihera
Hanganga Tautaiiao o Aotearoa.**

Welcome to the home of the
New Zealand Green Building Council.



Brad Crowley

Senior Manager,
Buildings and Communities

All homes and buildings in Aotearoa green and sustainable, making healthier, happier New Zealanders.



Advocate

A stronger, fit-for-purpose **Building Code**

Government leadership on sustainable design, construction and operation

Action on embodied carbon

Central and local Government **regulatory submissions and advice**

Member input on advocacy efforts and campaigns

Educate

Industry **training**

Professional **qualifications** for Green Star, Homestar, NABERSNZ, HomeFit

Regular **webinars and industry events**

Trusted **research and reports**



Collaborate

700+ members

Future Thinkers student and young professionals network

Industry advisory boards

Consultation on certification updates and advocacy

Sharing and **celebrating industry success**

Input into **NZGBC Board and governance**

Rate

Independent, third-party certification

Green Star, NABERSNZ, Homestar, HomeFit, Carbonzero

Created **alongside the sector**

Regularly reviewed and updated with industry

Benchmarking efforts to inspire change & improvement

Architects, Designers, Engineers, and other advisors

Product Manufacturers and Distributors

Resene
the paint the professionals use

Holcim

JASMAX

eCubed

MOTT MACDONALD

Holmes

RCP

aurecon

Samson NGĀI TAHU Property

altus Window Systems

PlaceMakers

STONEWOOD HOMES

Giltrap Group

mico

GIB

MITRE 10

Fletcher Reinforcing

architectus

Jacobs

Challenging today. Reinventing tomorrow.

peddlethorp

P F

Cosgroves

Centuria

wattyl

Allied Concrete make hard easy

DAIKIN

INZIDE sustainable flooring solutions

TSA

BCD GROUP Engineers | Planners | Surveyors

RLB Rider Levett Bucknall

RDT pacific

och

OCKHAM

Summerset

pink batts Always.

New Zealand Steel

Piletech

Golden Bay Cement

WINSTONE AGGREGATES

Laminex NEW ZEALAND

S & T

Beca

OCEANIA HEALTHCARE

WILLIS BOND & Co

Jail

mansons TCLM LIMITED

SUNNINGS warehouse

Pacific COLCOATERS

Dulux Worth doing, worth Dulux

Fletcher Building

university THE LIVING DIFFERENCE

SMALES FARM

JAMES KIRKPATRICK GROUP LTD

Metlifecare RETIREMENT VILLAGES

APL WINDOW SOLUTIONS

CAROMA plumbingworld

Diamond Roofing

FORMAN BUILDING SYSTEMS

HUMBLE

easysteel

CSP PACIFIC

COOPER AND COMPANY

AMP CAPITAL

mikegreerhomes

PFI Goodman

STRIDE

LOGOS

JALCON

morton

solutionstreet

Property Developers, Owners, Occupiers and Investors

Local Authorities, Higher Education, Research Institutions

BRANZ

AUCKLAND

Kāinga Ora Homes and Communities

Auckland Council Te Kaurihera o Tāmaki Makaurau

700+ members

Panuku Development Auckland An Auckland Council Organisation

Fletcher Living Love your new home.

ANZ

ASB

Colliers

CBRE

MINISTRY OF JUSTICE

MINISTRY OF HEALTH

MANATŪ HAUORA

AIREDALE PROPERTY

Watercare An Auckland Council Organisation

UNIVERSITY OF OTAGO

UNITEC

UNIVERSITY OF AUCKLAND

AM

UNIVERSITY OF CANTERBURY

VICTORIA UNIVERSITY OF WELLINGTON

GREEN GORILLA

Waste Management

LEIGHS CONSTRUCTION

DOMINION CONSTRUCTORS LTD

SAVORY CONSTRUCTION INTERIORS JOINERY

tailor

bnz

iag

BAYLEYS

JLL

DLA PIPER

PAK'n SAVE

METALS NEW ZEALAND

Ara

MASSEY UNIVERSITY

UNIVERSITY OF NEW ZEALAND

MRM

Ōtakaro Limited Building places for people.

Apollo PROJECTS

EnviroNZ

Signature HOMES YOUR HOME. YOUR WAY.

Cook Brothers CONSTRUCTION

Absolutely Positively Wellington City Council

PALMY

TARANAKI District Health Board

HAWKINS

Haydn+Rollett

FOSTER CONSTRUCTION WE BEGIN WITH THE END IN MIND

Naylor Love

home.

Woolworths

NEW WORLD

Property Professionals, Tenants and Related Property Interests

Contractors, Builders and other Construction Professionals

Agenda

- 1. Why Green Buildings?**
2. Green Star Buildings
3. Additional Information
4. Q+A

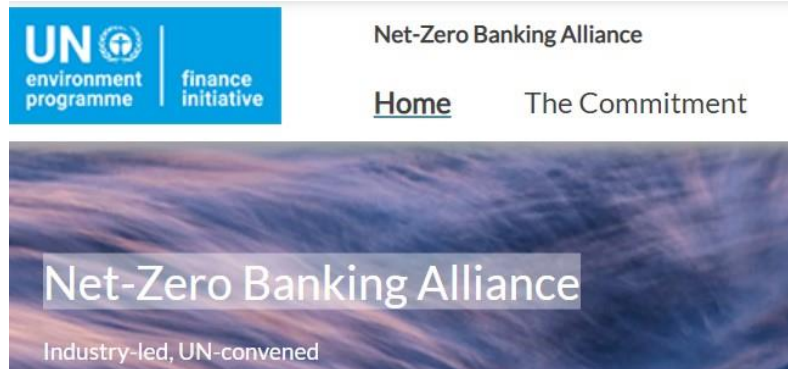


Drivers for change to a zero carbon Aotearoa

- Improving health and wellbeing
- Urgent need to reduce waste to landfill
- Buildings account for 15% of our carbon emissions & hugely reduce other emissions - transport
- Communities seeing more floods/droughts. Need to adapt to climate change
- Local Government Climate Change Declarations
- Building for Climate Change Building Code changes
- TCFD - 200 large asset holders
- Green finance to grow from US\$1tn to \$92tn

WHY CERTIFY?

Green standards evidences performance to other international standards



Green Star and the United Nations Sustainable Development Goals (SDGs)

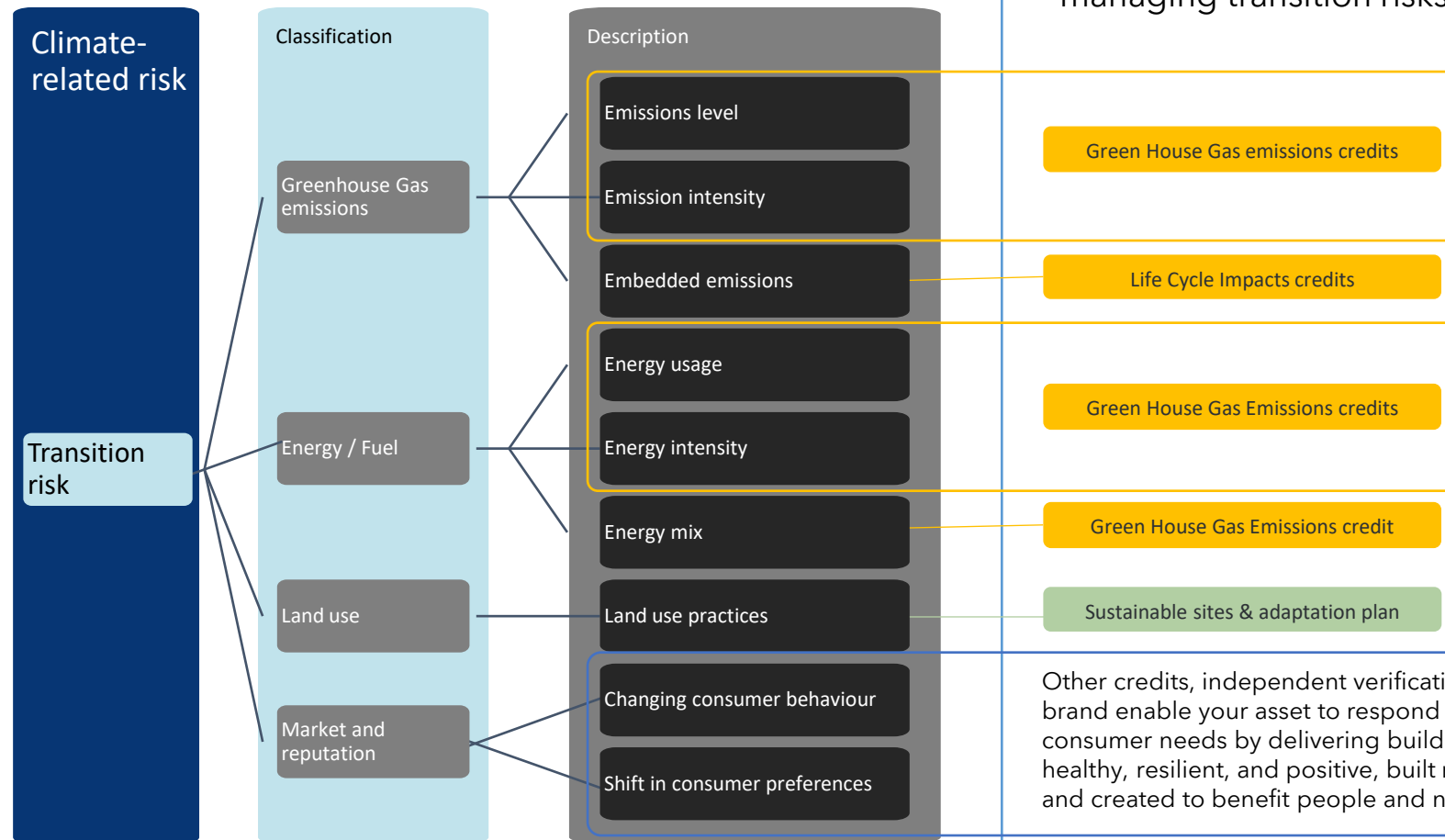


Green Star & transition risks

Green Star rating tools have been designed to address both physical and transition risks with a focus on driving net zero carbon targets.

While risks are determined at a group strategy level, individual assets have to address and ensure they meet these strategic goals.

The rating tool ensure you are managing transition risks appropriately.



Other credits, independent verification, and trusted brand enable your asset to respond to changing consumer needs by delivering buildings that are healthy, resilient, and positive, built responsibly, and created to benefit people and nature.

Operational or Embodied Carbon?

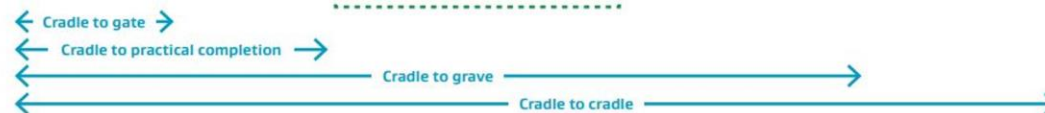


Whole-of-Life Embodied Carbon

Product stage			Construction stage		Use stage					End-of-life stage				Beyond initial life cycle: benefits and loads
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	D
Raw material supply	Transport	Manufacturing	Transport	Construction & Installation Process	Use	Maintenance	Repair	Replacement	Refurbishment	Deconstruction and demolition	Transport	Waste processing	Disposal	Reuse Recovery Recycling

Operational Carbon

B6	Operational Energy
B7	Operational Water





Clients are mandating certificates on new and existing buildings

- Carbon neutral programme aims to make government agencies carbon neutral by 2025



| 40 government agencies now required to

- procure a 4 star NABERSNZ certificate on new leases for larger offices (2,000 m² and above)
- achieve 5 Green star on new buildings they build
 - +\$25 m from April 2022
 - +\$9 m from April 2023



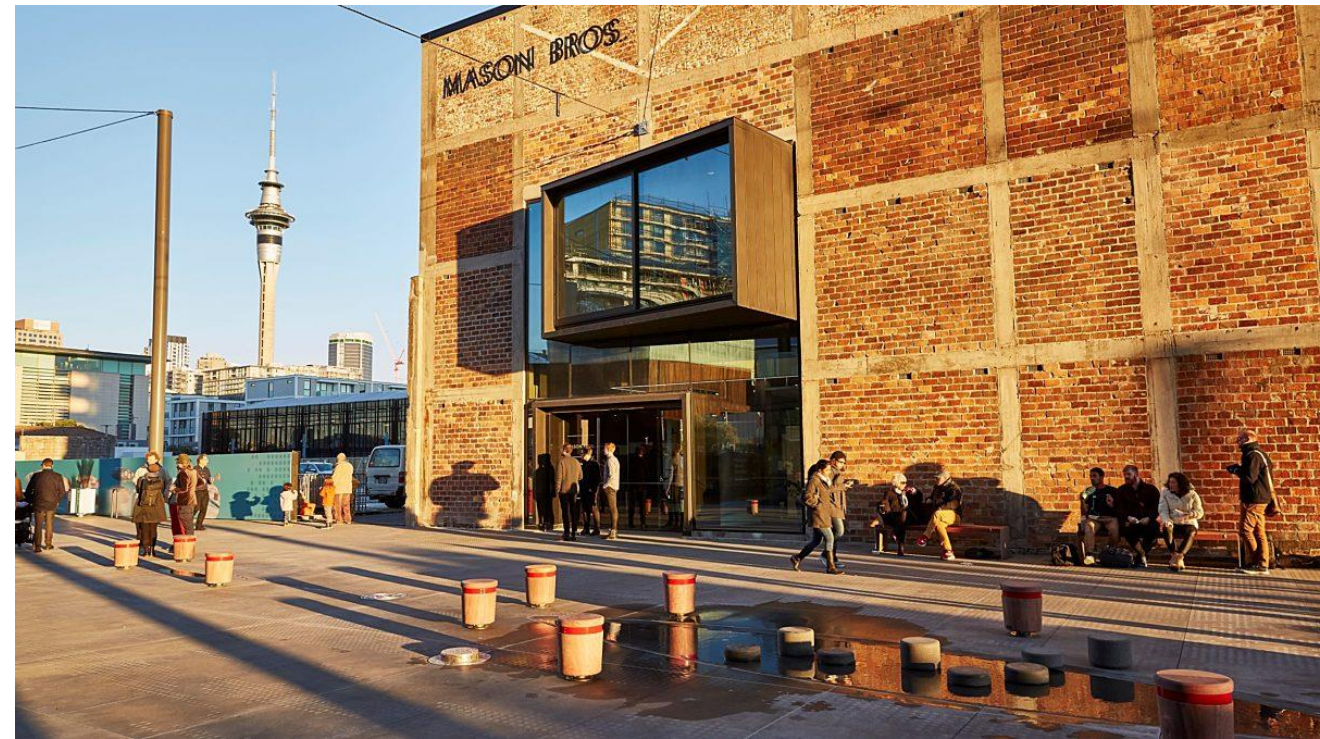
The private sector are reducing emissions from buildings



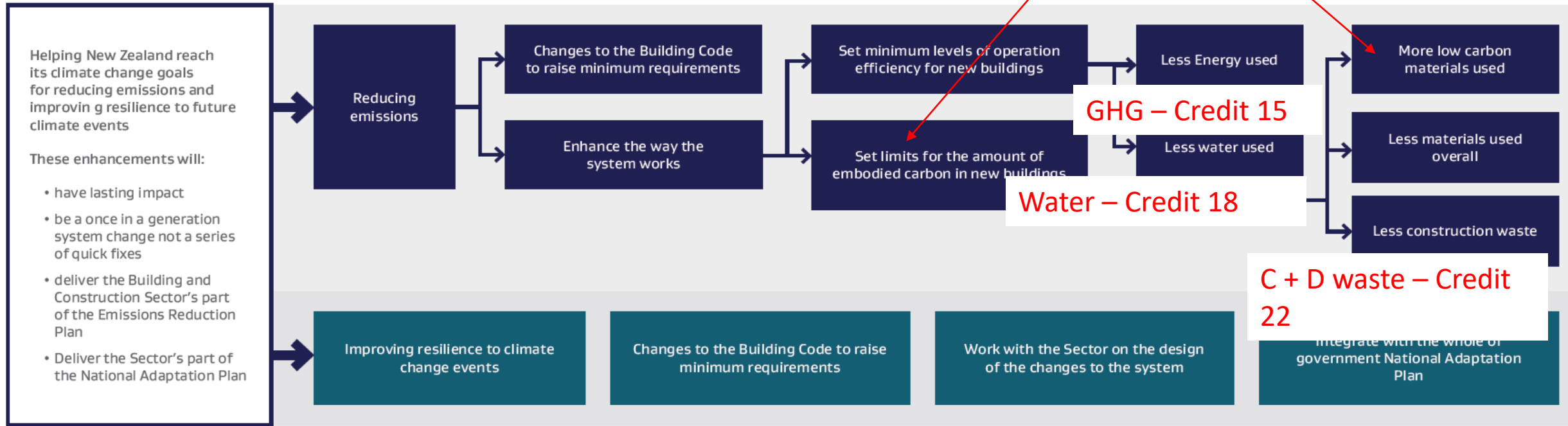
6 star Green Star Mason Brothers building in Auckland found

- 25% reduction in absenteeism & increase in productivity of 9%
- a 130% increase in commuter cycling

Tenants have said this is an increase in fire power of 10%, without the cost of employing more people.



Building for climate change goals - Programme overview



BUILDINGS

HOMES

COMMUNITIES

**NEW /
FIT OUTS**



EXISTING



Fit for living

Any building type



Hotels

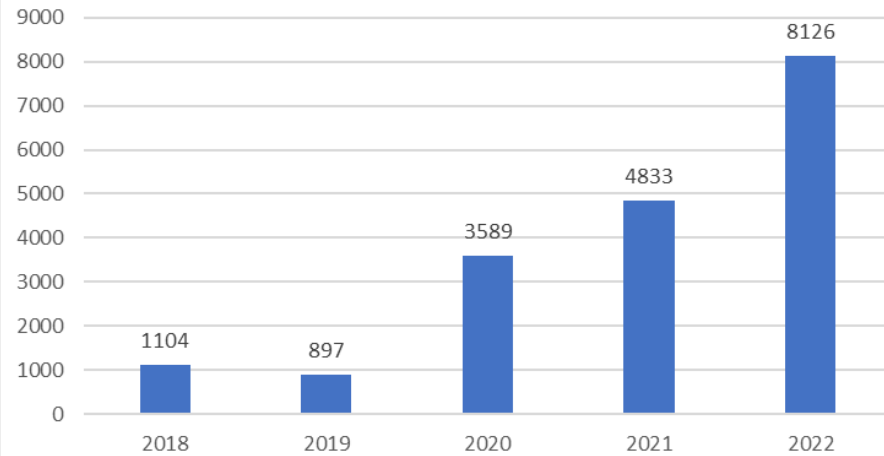


Health



Fit outs

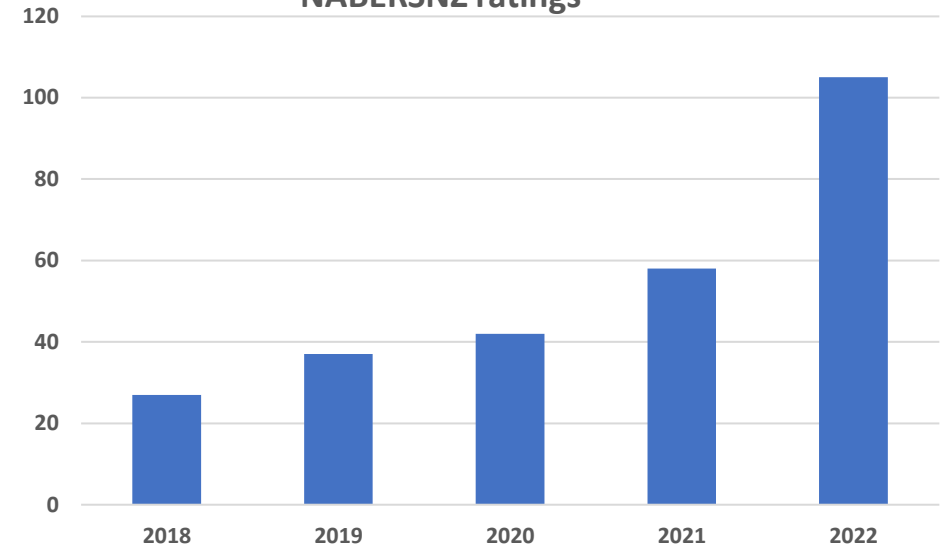
Homestar Registered Projects FY



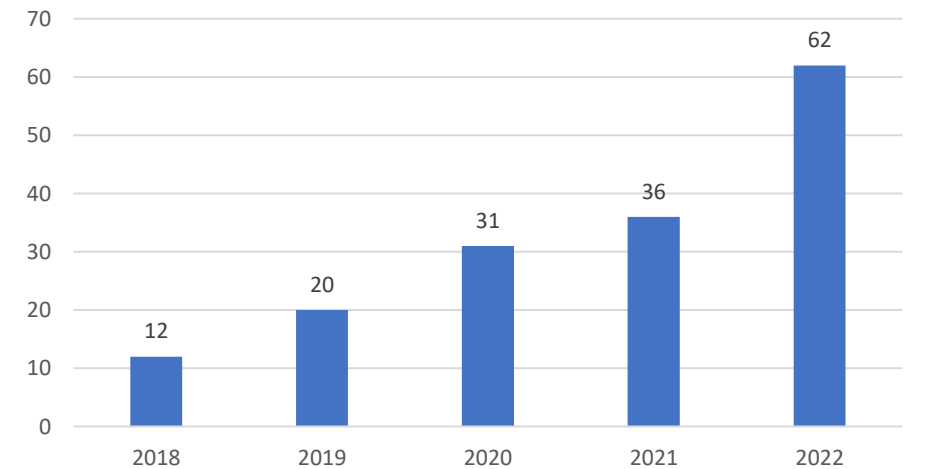
Total of 20,500 homes registered for Homestar.

Total of 239 buildings certified to Green Star with many more in the pipeline

NABERSNZ ratings



Green Star Registered Projects FY





- Transformative, flexible, relevant
- Establishes a common language for sustainable developments
- Promotes integrated thinking on aspects beyond environment
- Raises awareness about sustainable places
- Recognises sustainability leadership

Governance



- Corporate responsibility
- Sustainability awareness
- Community participation and governance
- Environmental management

Environment



- Integrated water cycle
- Greenhouse gas strategy
- Materials
- Sustainable transport
- Ecological value
- Waste management
- Heat island effect

Liveability



- Healthy and active living
- Culture, heritage & identity
- Walkable access to amenities
- Safe places

Economic Prosperity



- Community investment
- Affordability
- Employment
- Education & skills development
- Incentive programs
- Digital infrastructure



Peacocke

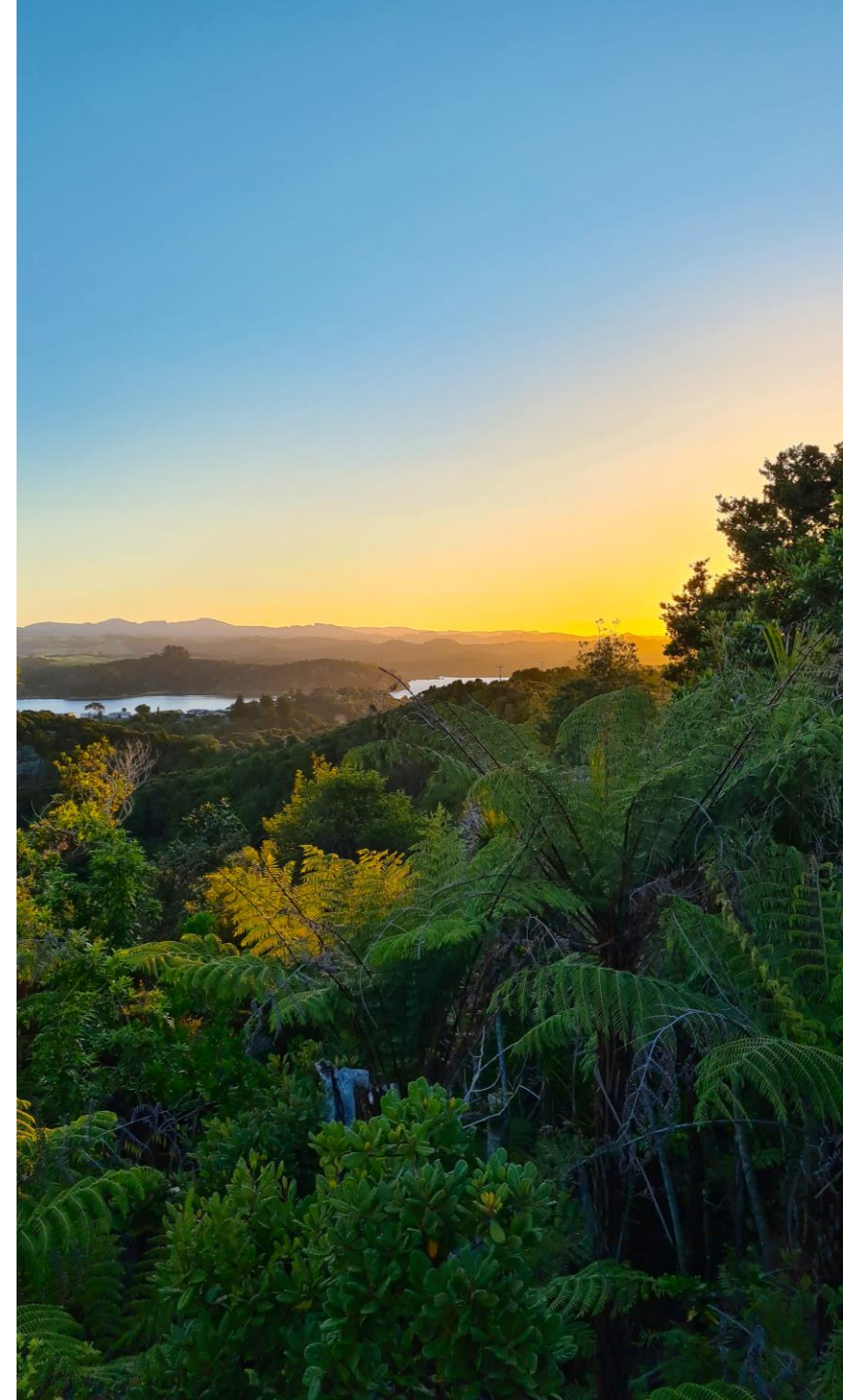
INFRASTRUCTURE AND COMMUNITY PLANS - 2018-28



* Housing Infrastructure Funded
 **3.2M funded from the Housing Infrastructure Fund

Agenda

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- 2. Green Star Buildings**
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Ngā mihi nui

Technical sponsor



**Norman
Disney &
Young**

A TETRA TECH COMPANY

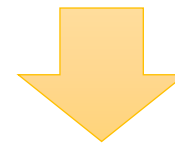
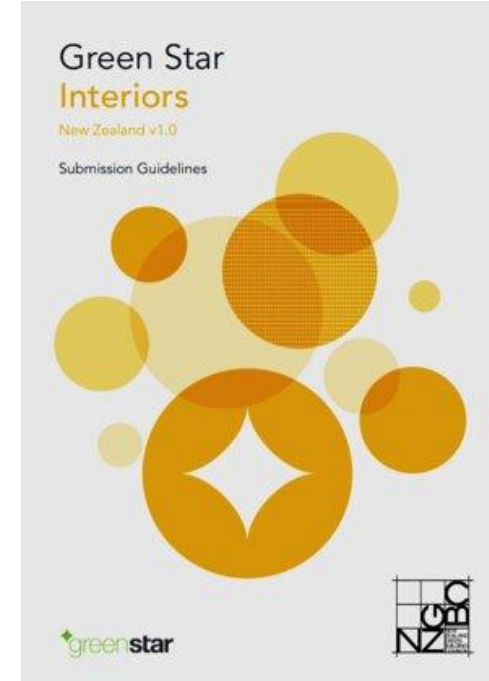
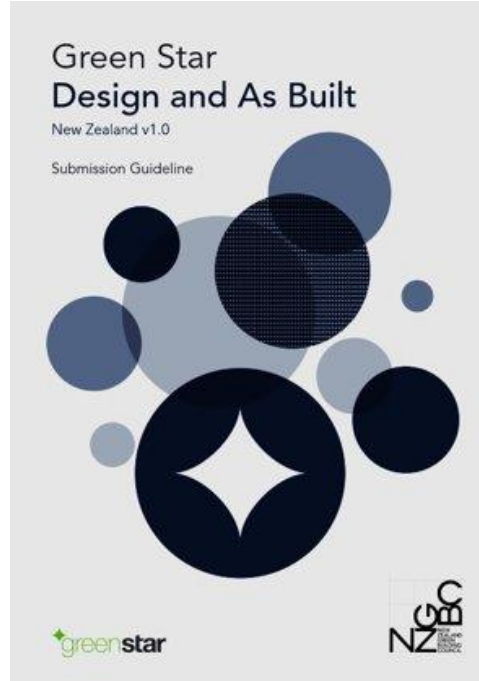
Ngā mihi nui

Project management sponsor

The RDT Pacific logo, with "RDT" in a large, bold, black sans-serif font and "pacific" in a smaller, lowercase, black sans-serif font below it.

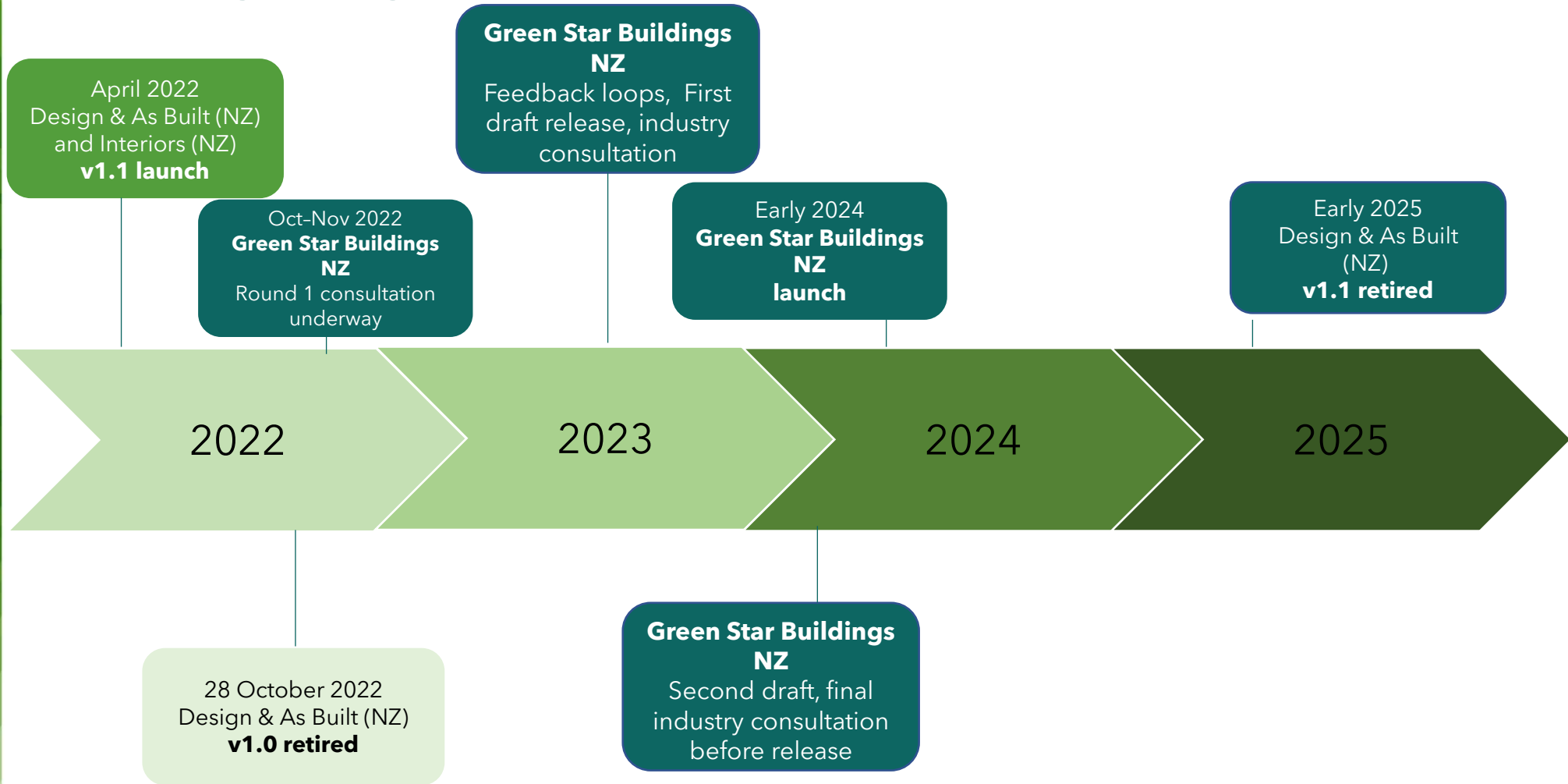
Background

February 2019



Green Star Design & As Built NZv1.1
Green Star Interiors NZv1.1

Timeline



Changes over time



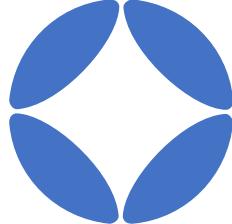
Legacy

Two independent ratings.
Either one is valid and optional



Design &
As Built

A mandatory **As Built** certified rating,
with an optional **Design Review** certified rating



Buildings

A mandatory **As Built** certified rating (Certified),
with an optional **design** assessment (Designed)



Five things to know about Green Star Buildings

1. Delivers a new definition of a sustainable building
2. Meets the Paris Agreement - Climate Positive
3. Responds to sustainability megatrends
4. Creates clear expectations for new buildings
5. Delivers opportunities for supply chain transformation

1. A new definition of sustainable buildings

Green Star Buildings features eight new categories representing the issues that will define the next decade of the built environment.



Responsible

- Industry development (1)
- Responsible construction (1)
- Verification & Handover (1)
- Responsible procurement (1)
- Responsible structure (5)
- Responsible envelope (4)
- Responsible systems (2)
- Responsible finishes (2)



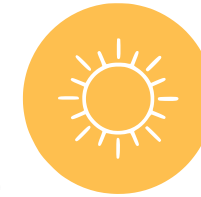
Healthy

- Clean air (2)
- Light quality (4)
- Acoustic Comfort (2)
- Exposure to toxins (2)
- Amenity and comfort (2)
- Connection to nature (2)



Resilient

- Climate change resilience (1)
- Operations resilience (2)
- Community resilience (1)
- Heat resilience (2)
- Grid resilience (2)



Positive

- Upfront carbon emissions (6)
- Energy use (6)
- Energy source (6)
- Other carbon emissions (4)
- Water use (6)
- Life cycle impacts (2)



Places

- Movement and place (2)
- Enjoyable places (2)
- Contribution to place (2)
- Culture and heritage (1)



People

- Inclusive construction practices (1)
- Indigenous inclusion (1)
- Procurement and workforce inclusion (5)
- Design for inclusion (3)



Nature

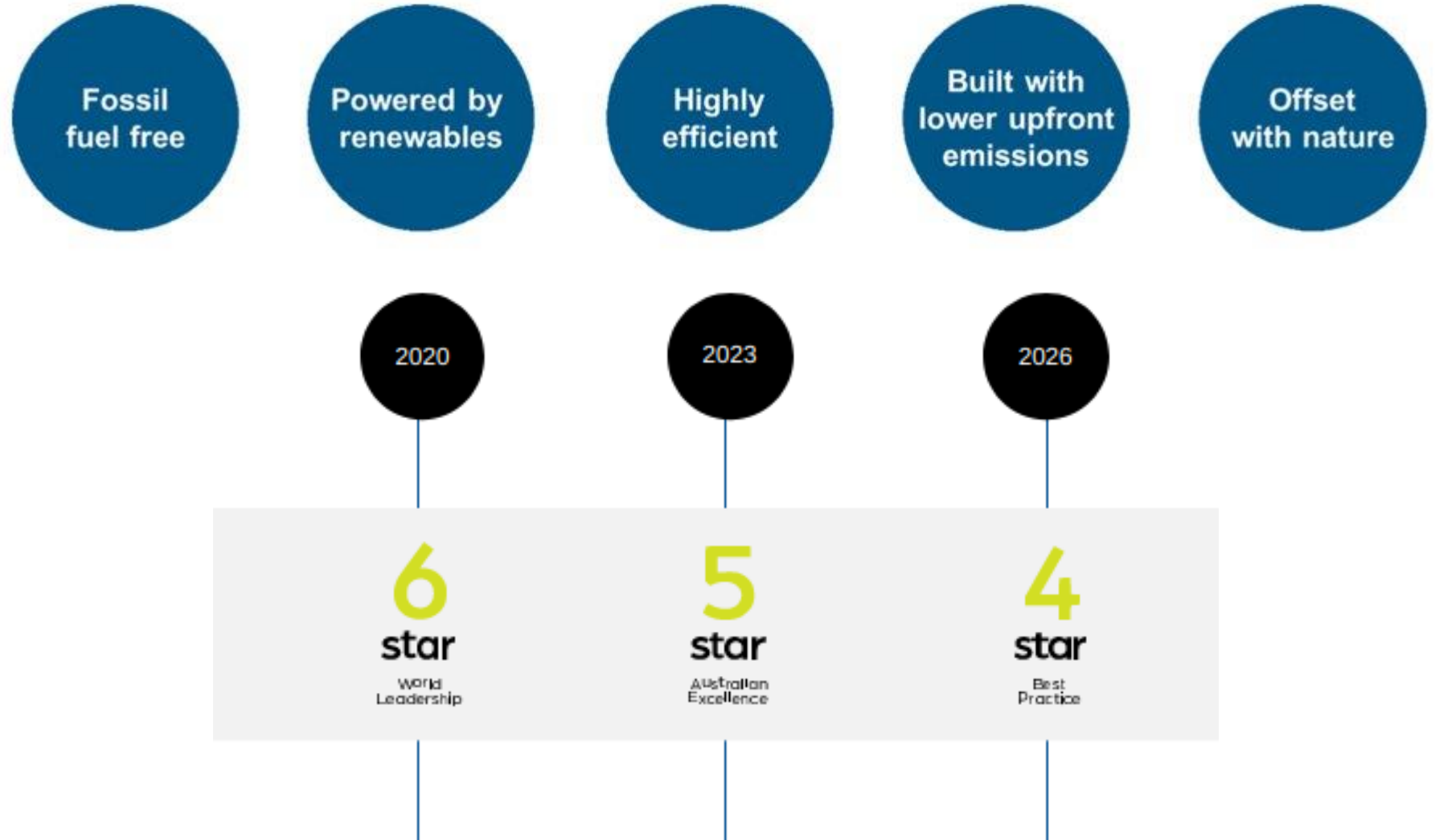
- Impacts to nature (2)
- Biodiversity enhancement (4)
- Nature connectivity (2)
- Nature stewardship (2)
- Waterway protection (4)



Leadership

- Market Transformation
- Leadership Challenges

2. Meets the Paris Agreement Green Star Road to Net Zero Carbon



Lower operational emissions

Fossil
fuel free

Highly
efficient

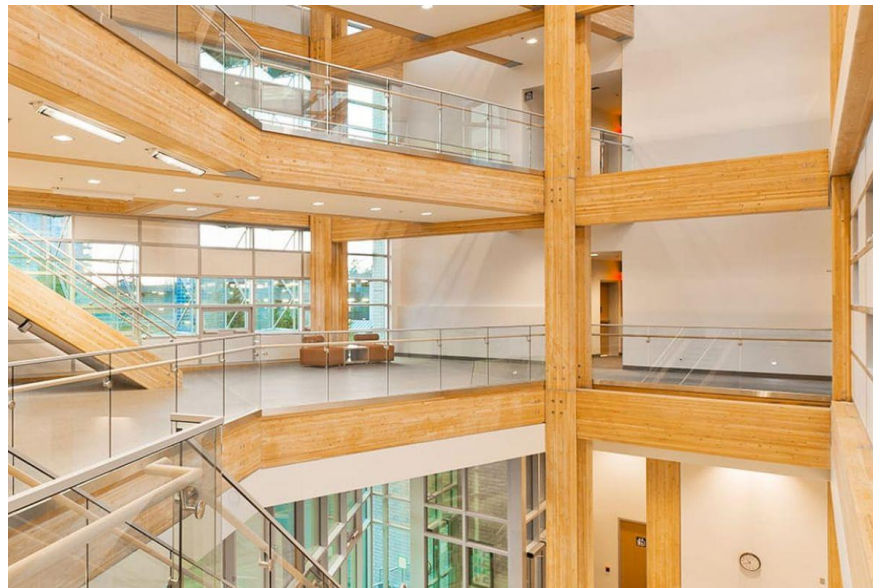


Lower embodied emissions

19.1 **Conditional Requirement – 4 Star** A minimum reduction in upfront carbon emissions of 10% is required to achieve 4 Star Green Star rating.

Conditional Requirement – 5 Star A minimum reduction in upfront carbon emissions of 10% is required to achieve 5 Star Green Star rating.

Conditional Requirement – 6 Star A minimum reduction in upfront carbon emissions of 15% is required to achieve 6 Star Green Star rating.



Built with
lower upfront
emissions

Lower embodied emissions - calculator

Built with lower upfront emissions

	A	B	C	D	E	F	G	H	I	J
1	Climate Change - Fossil (kg CO2e)									
2	Green Star	A1-A3	A4	A5	B1	B3-B5	C	D	Upfront carbon	Embodied whole
3	Construction energy			19,306					19,306	1
4	Site preparation	0	0		0	0	0	0	0	
5	Substructure	0	0		0	0	0	0	0	
6	Superstructure	0	0		0	0	0	0	0	
7	Envelope	0	0		0	0	0	0	0	
8	Fitout	0	0		0	0	0	0	0	
9	Services	0	0		0	0	0	0	0	
10	Formwork	0	0	0					0	
11	Construction waste			0					0	
12	Total	0	0	19,306	0	0	0	0	19,306	1
13										
14	Net-Zero Carbon	A1-A3	A4	A5	B1	B3-B5	C	D	Upfront carbon	Embodied whole
15										
16										
17										
18										
19										
20	Total	0	0	19,306		0	0	0	19,306	1
21										

Question marks for New Zealand

A solid blue circle containing the text "Powered by renewables" in white, bold, sans-serif font.

Powered by
renewables

A solid blue circle containing the text "Offset with nature" in white, bold, sans-serif font.

Offset
with nature

3. Responds to the sustainability megatrends

Green Star Buildings has been built to address the critical megatrends of the next decade



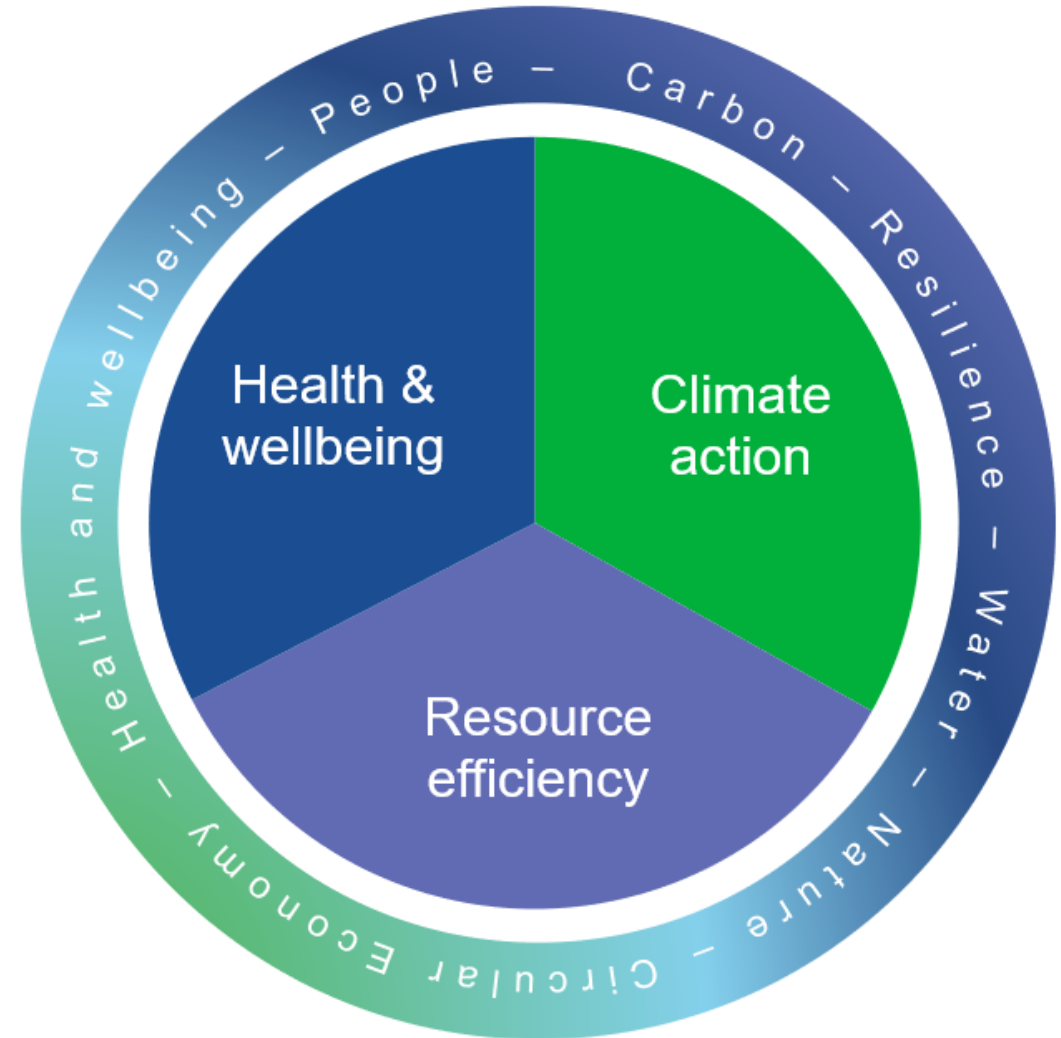
- 1 Net zero emissions
- 2 Climate resilience
- 3 Nature
- 4 Circular economy
- 5 Embodied materials
- 6 Water cycle
- 7 Health and wellbeing
- 8 People and equity
- 9 Community resilience

Meets the sustainability megatrends

Green Star Buildings

addresses issues related to carbon emissions, resilience, water, nature, resources and circular economy, health and wellbeing as well as social issues and people's human rights.

Every credit was developed to ensure the benefits are aligned with these trends, resulting in a balanced rating tool that is ready to tackle the challenges of the next decade.



The minimum expectations in detail

All expectations must be met to achieve a Green Star rating. These requirements would be broadly equivalent to about 30 points in the current rating tool.

	Credit	Benchmark
Responsible	Responsible construction	The site must have an environmental management plan. The builder must have an environmental management system (large builders will need to be ISO14001 accredited). 80% of Construction and demolition waste must be recycled. Head contractor provides sustainability training for 95% of on site workers.
	Verification & Handover	The building must be commissioned and tuned. Appropriate metering must be present. Air tightness testing has been conducted. Building information is provided to facilities manager.
	Operational waste	The building must have appropriate spaces for waste management and an appropriately sized loading dock.
Healthy	Clean air	The ventilation system must have appropriate filtration. Point source pollutants must be exhausted directly outside (printers, kitchens). The building must be provided with at least 50% outside air.
	Light quality	Glare must be managed. Light fittings must be of good quality. Lighting levels must be appropriate. Daylight must be provided.
	Exposure to toxins	All the paints, adhesives, sealants, and carpets must be low Voc. Engineered wood must be low formaldehyde. There must be no lead, asbestos and PCBs in the building.
	Noise levels	Internal noise levels from services and the outside is limited
Resilient	Climate change resilience	The project has done a pre-screening assessment and delineated design choices to mitigate these.
	Upfront carbon emissions	The building has 10% less upfront carbon emissions compared to a standard building from materials.
Positive	Energy use	The building has at least a 10% lower energy consumption than one built to the building code.
	Water use	The building has at least a 15% reduction in potable water usage when compared to a reference building,
Places	Access to amenity	There are showers, lockers and change rooms in the building
People	Social construction practices	There are provisions for providing gender appropriate facilities and personal protective equipment
Nature	Impacts to nature	Ecologically sensitive sites are protected

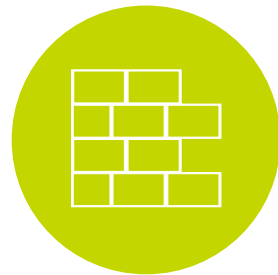
5. Drives opportunities for supply chain transformation

Green Star Buildings aims to create market demand for innovative, responsible, and low carbon products.



Creating a drive for low carbon products

Green Star Buildings introduces a new minimum expectation to ensure all buildings are built with good design choices and lower carbon products.



A new definition for responsible products

Our new Responsible Products Framework aims to reward products that have lower environmental impact, are transparent, respect human rights, and are taking action to reduce in carbon content.

More partnerships for a better supply chain

The built environment needs healthy, zero carbon, low impact materials ready for a circular economy.

Green Star Buildings builds on the legacy of its predecessor by recognising more product certification schemes than ever before.

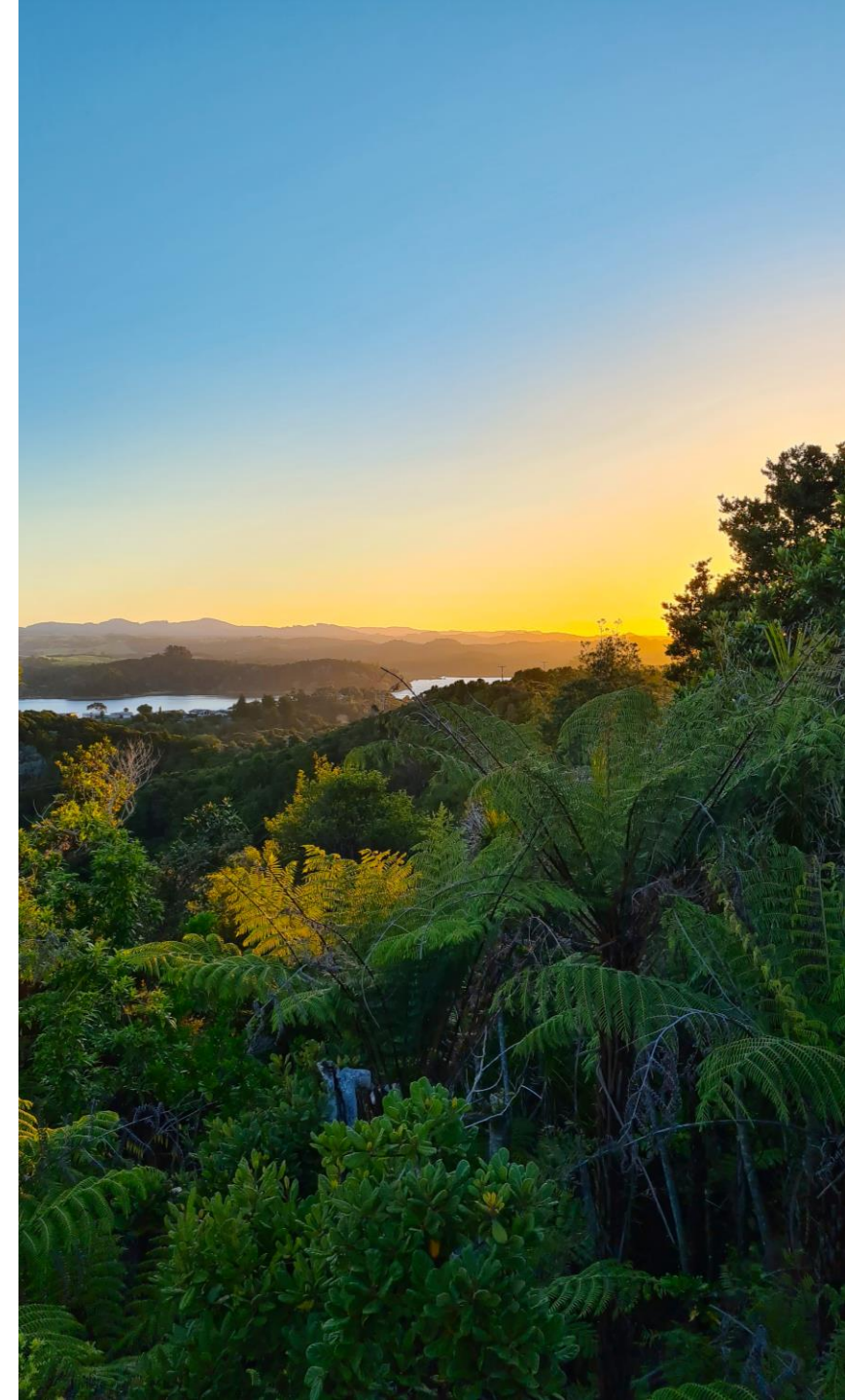


The framework recognises valuable sustainability efforts aligned with five key principles:

- **Responsible** - The product's impacts and contents are transparently disclosed and meet high standards.
- **Healthy** - The product is low or non-toxic and drives valuable social outcomes
- **Positive** - The manufacturing process avoids significant environmental impact and delivers climate positive outcomes
- **Circular** - The product is ready for low-carbon production and the circular economy
- **Leadership** - The product manufacturer has shown achievement in an issue that will lead to market transformation

Agenda

1. Why Green Buildings?
2. Green Star Buildings
- 3. Additional Information**
4. Q+A





Additional Information



www.nzgbc.org.nz

On demand videos

Filters: Any Host Any Topic Keyword Clear all x

Featured Events

GREEN PAINT Listen back to our Products & Materials webinar as we heard from a panel of experts about green paint: the challenges and how they...	GREEN STAR FOR CONTRACTORS This video is for those who work on a	SUSTAINABLY SOURCED ENGINEERED WOOD FOR A

Earlybird

Green Property Summit 2023

10 May 2023
Auckland



Green Property Summit

10 May 2023 | Tāmaki Makaurau Auckland

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