MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

COVERSHEET

Minister	Hon Stuart Nash	**Portfolio**	Minister for Economic and Regional Development
Minister	Hon James Shaw	**Portfolio**	Minister for Climate Change
Title of Cabinet paper	Carbon Neutral Government Programme – Report Back on the use of Sustainable Building Rating Systems	**Date to be published**	27 January 2022

List of documents that have been proactively released		
Date	**Title**	**Author**
September 2021	Carbon Neutral Government Programme – Report Back on the use of Sustainable Building Rating Systems	Offices of the Minister for Economic and Regional Development and Minister of Climate Change
29 September 2021	Cabinet Minute of Decision DEV-21-MIN-0190	Cabinet Office

Information redacted **YES**

Any information redacted in this document is redacted in accordance with MBIE's policy on Proactive Release and is labelled with the reason for redaction. This may include information that would be redacted if this information was requested under Official Information Act 1982. Where this is the case, the reasons for withholding information are listed below. Where information has been withheld, no public interest has been identified that would outweigh the reasons for withholding it.

Some information has been withheld for the following reasons:

- Confidential advice to Government

In Confidence required

Office of the Minister for Economic and Regional Development and Office of the Minister for Climate Change

Economic Development Committee

Carbon Neutral Government Programme report back on the use of sustainable building rating systems

Proposal

1 This paper reports back to Cabinet [CBC-21-MIN-0030 refers]:

1.1 with options (including cost analysis) for the use of sustainable building rating systems and tools to support agencies to reduce carbon emissions from new government buildings;

1.2 on an approach and timeline for introducing the recommended rating system option.

2 This paper also reports back to Cabinet [DEV-21-MIN-0107 refers] on progress on increasing the visibility of agency carbon decisions.

Relation to government priorities

3 This programme contributes to the Government's overarching policy goal to 'lay the foundations for the future, including issues such as climate change response'.

Executive Summary

4 The Carbon Neutral Government Programme is a long-term work programme that aims to make a number of government organisations carbon neutral from 2025, and help them accelerate their emissions reduction journeys [CAB-20-MIN-0491 refers]. This paper reports back on options for the use of sustainable building rating systems (rating tools) to support agencies to reduce carbon emissions from new government buildings and an approach and timeline for introducing the recommended option [CBC-21-MIN-0030 refers].

5 Recent research[1] suggests that the building and construction sector could be responsible for around 9.4 per cent of New Zealand's domestic greenhouse gas emissions (emissions) and up to 15 per cent if you include imports and exports. Around half of these emissions (when imports and exports are

[1] Modelling undertaken by Thinkstep (2021) on behalf of the Ministry of Business, Innovation and Employment.

included) result from the construction of buildings and around half from the ongoing operation of buildings. Concern about the environmental and social impacts of design and construction has resulted in the development of rating tools which aim to mitigate some of the social and environmental impacts of buildings.

Benefits and costs

6 Using a rating system to certify buildings is reported to support a number of outcomes, such as reduced embodied and operational carbon, reduced energy usage and water consumption, as well as positive impacts on employee health, wellbeing and productivity. The main benefit of rating tools is that they encourage a targeted focus on key areas and consistent application of processes to clearly demonstrate that efforts have been made to achieve sustainable outcomes.

7 Introducing a requirement to use a rating tool or tools to assess and certify buildings is likely to result in additional upfront project costs but may also result in ongoing operational efficiency savings. These upfront costs are expected to include, per project, consultancy costs, additional capital costs to meet the required rating standard, as well as assessment and certification costs. Expected savings could result from reduced energy usage as well as reduced water consumption.

Comparative analysis

8 The Ministry of Business, Innovation and Employment (MBIE) commissioned an analysis and comparison of the major sustainable building rating tools available for use in the New Zealand market and that are suitable for use with new non-residential buildings. The analysis focused on a comparison of six sustainable building rating tools; Green Star Design and As built New Zealand, Green Star Buildings Australia, Core Green Building certification, Passive House, Leadership in Energy and Environmental Design (LEED) and Building Establishment Environmental Assessment Method (BREEAM).

Preferred rating system

9 The rating tools were compared according to how well they would support the objectives of the Carbon Neutral Government Programme, ease of application in the New Zealand market and cost to implement. Overall the Green Star Design and As Built rating system can be differentiated from the other rating tools in that it:

9.1 Has greater maturity in the New Zealand market;

9.2 Has specific adaptations for the New Zealand context; and

9.3 Uses geographically relevant data for assessments.

10 We propose the use of the Green Star Design and As Built rating system for new non-residential government buildings. We also propose creating a framework that permits other rating tools to enter the New Zealand market.

Measuring what matters

11 Green Star operates using a points system, with the total rating achieved across a wide range of credit criteria. The achievement of almost all credits in the current Green Star Design and As Built rating tool are optional. This means that a rating could be achieved without a focus on carbon emission and waste reduction criteria that support the objectives of the Carbon Neutral Government Programme and Broader Outcome priority four (reducing emissions and waste to support New Zealand's transition to a net zero economy).

12 To ensure a focus on reducing embodied and operational carbon as well as construction and operational waste we propose that, when achieving a rating, agencies will be required to achieve a minimum number of points from credits that support the achievement of these objectives.

Setting a rating standard

13 There are three levels of Green Star achievement possible, 4 star, 5 star and 6 star. We have considered options for implementing a 4 star or 5 star option. The average capital cost uplift to the project budget to achieve a 5 star rating is estimated to be 2.7% (on average to achieve a 5 star rating for all building types) compared to an estimated 1.1% (on average for all building types) to achieve a 4 star rating. The comparative analysis suggests that, in combination with a requirement to achieve minimum points, we could achieve our objectives of reducing embodied carbon, operational carbon and construction and operational waste at a 4 star rating level.

14 However, we propose requiring procurement mandated agencies to achieve a 5 star rating for new non-residential government buildings. This will enable the achievement of our key objectives, as well as additional benefits, such as improved comfort for building occupants, reduced stormwater discharge as well as reduced peak electricity demand.

Setting a capital threshold

15 We propose that:

15.1 From 1 April 2022 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $25 million and over;

15.2 From 1 April 2023 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $9 million and over.

16 We are proposing a two-stage approach to implementing a 5 star Green Star rating for all projects due to the market capacity and risks to delaying construction projects in the short term.

17 About 14 buildings in total were certified Green Star in New Zealand over the last year and it is expected that the market can scale up to approximately 40-50 certifications per year. The number of new government buildings with a capital value of $9 million or over is expected to be in the order of 200 over the next two years[2]. This approach will also enable agencies, designers and the construction sector to build capacity and capability to deliver 5 star rated buildings on this scale.

18 Setting the requirement for a 5 star rating in 2023 for new buildings over $9 million should signal the Government's expectation, resulting in the market expanding in anticipation of meeting demand as well as responsibly mitigating the risk to project delays across the government's construction pipeline.

Enabling other rating tools to enter the New Zealand Market

19 While at this point, Green Star is the tool best suited to the New Zealand context this could change in the near future. We propose creating a framework that enables other rating tools to be developed and or enter the New Zealand market. To enable this approach, we propose that:

19.1 MBIE be responsible for maintaining a list of approved rating tools and that the Green Star Design and As Built will be listed as an approved rating tool;

19.2 The Procurement Functional Lead may assess and approve rating tools as meeting objectives, at which point the rating tool will be added to the list of approved rating tools.

Relevance to government strategies to reduce emissions in buildings and construction

Building for Climate Change

20 Work is already underway, commissioned by the Minister for Building and Construction, to drive long term change in the sector to meet the challenges posed by climate change, and to meet our target to be a net zero carbon emissions nation by 2050. The programme, referred to as Building for Climate Change (BfCC) is focused on:

20.1 Improving the operational efficiency of buildings; improved efficiency will lead to lower operational emissions, also known as operational carbon, from buildings;

[2] According to the latest data from New Zealand Infrastructure Commission Te Waihanga infrastructure construction pipeline.

20.2 Reducing the whole of life embodied carbon of buildings which includes emissions generated from production of construction materials, construction processes, construction waste disposal and disposal at the end of a building's life.

21 The programme is still under development, but may introduce specific reporting requirements and carbon caps which new building projects must meet as part of securing a building consent or code of compliance certificate. The BfCC programme is also likely to consider the longer-term role of sustainable building rating systems and tools in the building system.

Reducing carbon emissions from new government buildings

22 On 6 July 2020 Cabinet agreed [CAB-20-MIN-0326 refers] government procurement would take a lead in facilitating the building and construction sector to transition to a low-emissions, climate-resilient future. To enable this, Cabinet agreed that procurement mandated agencies[3] would be required to assess and consider, through the procurement process, the emissions generated by building materials and construction processes for new government buildings [CAB-20-MIN-0326 refers].

23 On 30 November 2020 Cabinet strengthened this requirement; requiring procurement mandated agencies, when procuring the construction of a new government building, to document and report on their reasons for not selecting the option with the lowest emissions, resulting from building materials and construction processes, before the contract is signed [CAB 20-MIN-0491 refers].

24 To support agencies, Cabinet directed MBIE to develop guidance on assessing carbon emissions generated by building materials and construction processes [CAB-20-MIN-0326 refers]. This guidance, named the *Procurement Guide to Reducing Carbon Emissions in Building and Construction* (the Guide) was published in June 2021.

25 The Guide focuses on the key steps that agencies can take with a particular focus on the design phase, to reduce emissions. The Guide was developed in consultation with and considered feedback from a number of government agencies, interested organisations within the sector, and industry representatives from the Construction Sector Accord.

26 The Guide encourages agencies to consider options that do not result in a new building, such as improving how existing space is used, changing ways of working, refurbishing an existing building, or leasing instead of building. This is important, but we recognise that sometimes a new building will be needed.

[3] Procurement mandated agencies means those agencies that are required to follow the Government Procurement Rules. A list of the procurement mandated agencies (around 140) is included in Annex One.

Sustainable building rating tools

27 Concern about the impacts of construction has resulted in the development of rating tools which aim to mitigate the environmental and social impacts of buildings.

28 Rating tools consider a broad range of environmental and social factors, including carbon and waste. They also consider other sustainability features including, but not limited to, water use, building materials, indoor environmental quality, energy efficiency, transport connectivity, land use and ecology, greenhouse gas emissions as well as the health and wellbeing of building occupants. Rating tools provide a benchmark against which a building's sustainability performance can be considered and sometimes incorporate the output of tools that aim to estimate the energy demand of a building once built and/or carbon foot printing tools to provide an overall performance rating for a building.

29 Rating tools suitable for use with non-residential buildings are the main focus of this paper.

30 On 6 April 2021 Cabinet invited us, as Minister of Economic and Regional Development and Minister for Climate Change, to report back [CBC-21-MIN-0030 refers] on:

30.1 options (including cost analysis) for the use of sustainable building rating systems and tools to support agencies to reduce carbon emissions from new government buildings;

30.2 an approach and timeline for introducing the recommended rating system option.

Potential benefits

31 The main benefit of rating tools is that they encourage a targeted focus on key areas (such as reducing embodied and operational carbon) and consistent application of processes to clearly demonstrate that efforts have been made to achieve sustainable outcomes. The use of a rating system does not guarantee the achievement of outcomes. However, using a rating system to certify buildings has been reported to support the achievement of a number of outcomes, as well as positive impacts on employee health, wellbeing and productivity.

32 The use of rating tools is reported to support the achievement of reduced energy usage (for example, from heating, cooling, lighting and ventilation) and water consumption. Reduced energy usage and water consumption could in turn result in operational cost savings. Estimates of energy savings vary. For example, of between 25%-30% have been reported in the United States

context[4]. Estimates of reduced water consumption of around 39% have also been reported[5]. In the New Zealand context, case studies of sustainable buildings predicted energy reduction outcomes of between 35%-50%[6].

33 The use of rating tools has been reported to support the achievement of improved indoor environmental quality and this has been reported have positive impacts on employee health, wellbeing and productivity. Some international studies suggest improved indoor environmental quality can result in an 8-11% improvement in productivity[7]. In the New Zealand context, post occupancy evaluations, of sustainable buildings[8], have found perceived productivity benefits of up to 10%[9].

34 Certification by a rating system can provide independent assurance that what was intended at design stage to achieve good performance in sustainability is what is built. Experience from other countries suggests that if certification does not take place, it is very likely that buildings will not meet sustainability objectives and will not perform to the level they were intended to. However, studies also show that even when certified using a rating system, buildings need to be effectively commissioned to achieve predicted performance and reported benefits[10]. Effective commissioning has been estimated to result in reduced operations and maintenance costs of between 0% and 25%[11] [12].

Potential additional costs

35 Introducing a requirement to use a rating tool or tools to assess and certify buildings will result in some additional project costs. These costs may include, on a per project basis, additional design and consultancy costs, additional capital costs to meet minimum rating standards, as well as assessment and certification costs.

36 Reported estimates of additional project costs vary. For example, in Australia it has been estimated that Green Star can result in additional capital cost of between 1.5% and 3.2% to capital project costs[13]. While the World Green Building Council (WGBC) estimates that the additional capital cost for rated buildings can be up to 12.5%, as a percentage of total project cost, depending on a range of factors. Research by the WGBC also suggests that additional

[4] Kats, G. (2003) "Green Buildings Costs and Financial Benefits." Boston: Massachusetts Technology Collaborative.

[5] Kats, G. (2010) "Greening Our Built World: Costs, Benefits and Strategies." Washington D.C.: Island Press.

[6] Fullbrook, D. & Jackson, Q. (2006) Value case for sustainable building in New Zealand. Ministry for the Environment.

[7] World Green Building Council (2014) Health, wellbeing and productivity in offices: The next chapter for green building.

[8] Note that these buildings were not Green Star rated.

[9] Fullbrook, D. & Jackson, Q. (2006) Value case for sustainable building in New Zealand. Ministry for the Environment.

[10] Commissioning is a process intended to confirm that, once built, all systems of a building, such as heat, air conditioning, plumbing, and security, are operating as intended and designed by the architect and engineer.

[11] Kats, G. (2003) Green Buildings Costs and Financial Benefits.

[12] Mills, E. (2009). "Building Commissioning: A Golden Opportunity for Reducing Energy Costs and Greenhouse Gas Emissions." California Energy Commission Public Interest Energy Research.

[13] https://www.aph.gov.au/Parliamentary_Business/Committees/House/ITC/DevelopmentofCities/Report/section?id=committees%2Freportrep%2F024151%2F25690

capital costs increase as the environmental standard or rating level required increases[14].

37 Design and consultancy costs, as well as assessment and certification costs may also vary for different rating tools. Costs for commissioning have been found to range from 0.3% to 4%[15,16,17] of capital costs per project.

Costs may decrease due to economies of scale and increased competition

38 There is some international evidence that:

38.1 The cost of sustainable building materials decrease as the market matures and competition increases. For example as competition between materials manufacturers increases the costs associated with more sustainable materials may decrease;

38.2 As sustainable design and construction practices become standard practice costs decrease because manufacturers and buildings are able to reduce their overall costs through economies of scale.

39 However, very few studies quantify the change in scale required to drive change, the extent to which costs decrease or the timeframes within which this can be expected to occur. A recent study in Australia found that the cost of achieving a Green Star rating has fallen slightly over time. The Green Building Council of Australia's first financial transparency report, released in 2016, found the average cost of Green Star was 2.9%. This had decreased to 2.5% by 2019.

40 A requirement for government agencies to use sustainable building rating systems, such as Green Star, is likely to encourage the use sustainable design and construction practices which could in turn increase demand, support improved market maturity as well as increased competition. This may, over time, result in decreased design and construction costs; benefiting both government and the private sector building projects.

Introduction of NABERSNZ for government office accommodation

41 Since 1 January 2021 agencies that are subject to the Property Functional Lead Mandate[18] (Property Mandate) with office accommodation[19] over 2,000m2 have been required to begin the NABERSNZ (the National Australian

[14] World Green Building Council (2013) The business case for green building: A Review of the Costs and Benefits for Developers, Investors and Occupants.

[15] Syphers, G., Baum, M., Bouton, D & Sullens, W. (2003) Managing the Cost of Green Buildings.

[16] Dorgan, C., Cox, R., & Dorgan, C. (2002) The Value of the Commissioning Process: Costs and Benefits.

[17] Kats, G. (2003) Green Buildings Costs and Financial Benefits.

[18] Around 67 agencies are subject to the Property Mandate, this includes all public sector departments, New Zealand Defence Force, New Zealand Police, the Parliamentary Counsel Office, all Crown agents (except District Health Boards and the New Zealand Blood Service) and the Offfice of the Clerk of the House of Representatives and the Parliamentary Service.

[19] Operational and specialist facilities are excluded from the Property Mandate and a number of facilities are specifically excluded from the Mandate include, but are not limited to, schools, prisons and correctional facilities, emergency services operational centres, courts of law and regional delivery centres.

Built Environment Rating System New Zealand) assessment process at the next available opportunity (such as a lease renewal). In contrast to rating tools, which focus on a broad range of sustainability criteria, NABERSNZ is specifically designed to rate the operational energy (and energy-related emissions) performance of office buildings once they have been built and are in use. The introduction of rating tools would be complementary to the requirement to use NABERSNZ.

Options for sustainable building rating tools

Comparative assessment of sustainable building rating tools

42 MBIE commissioned an analysis and comparison of the major sustainable building rating tools available for use in the New Zealand market and that are suitable for use with new non-residential buildings.

43 The analysis focused on a comparison of six sustainable building rating tools available in the market that can be used for assessing the environmental performance of non-residential new buildings. These rating tools are shown in Table 1. Further information about each of these rating tools is set out in Annex Two.

Table 1: Sustainable building rating tools assessed

Rating tool	Administered by
Green Star Design and As Built NZ	New Zealand Green Building Council
Green Star Buildings AU	Green Building Council of Australia
Core Green Building certification	International Living Futures Institute
Passive House	Passive House Institute
LEED - Leadership in Energy and Environmental Design	United States Green Building Council
BREEAM - Building Research Establishment Environmental Assessment Method	Building Research Establishment

44 The rating tools were compared based on the following key criteria:

44.1 **Supporting the objectives of the Carbon Neutral Government Programme** and Broader Outcomes priority four *transitioning to a net zero emissions economy and designing waste out of the system*, with a focus on embodied carbon, operational carbon and construction and operational waste;

44.2 **Ease of application**, based on the maturity of the rating system and their applicability within the context of the New Zealand market;

44.3 **Additional costs**, including consideration of certification costs, consultancy costs, as well as the capital cost uplift (as a percentage of capital budget) that may be required to meet a specified rating level.

45 A high-level comparison of the rating tools, summarised in Table 2, shows that:

45.1 **Supporting the objectives of the Carbon Neutral Government Programme** and Broader Outcomes priority four. All rating tools have similar capabilities to support the achievement of the objectives of the Carbon Neutral Government Programme and Broader Outcomes priority four;

45.2 **Ease of application**. BREEAM and LEED are leading rating tools, in terms of global ratings. However, Green Star (New Zealand) is the only rating tool that has good maturity in the New Zealand market;

45.3 **Additional costs.** Certification fees and estimated consultancy fees are similar for all rating tools. The average increase to project budgets is estimated to be around 2.5%. In the case of Green Star Design and As Built New Zealand, this is based on data from Australia. ILFI reports that Core Green Building Certification is likely to lead to a total cost increase of 10% including consulting costs, while Passive House reports a 5% increase to project budgets.

Table 2: High-level comparative summary of green building rating tools

Criteria	**Green Star** Design and As Built	**Green Star** Buildings (AU)	**Living Building** Core Certification	**Passive House**	**LEED**	**BREEAM**
Supporting the objectives of the Carbon Neutral Government Programme						
Embodied carbon	optional	mandatory	mandatory	not rated	optional	optional
Operational carbon	optional	optional	mandatory	mandatory	optional	optional
Construction Waste	partial	partial	partial	not rated	partial	optional
Ease of application						
Number of Ratings (NZ)	174	0 (new)	0 (new)	40	2	0
Number of Ratings (global)	3670	0 (new)	Hundreds	60,000	over 100,00	over 500,000
Additional costs						
Fees (certification)	$15-50,000	$8-50,000	$6-60,000	$2-5,000	$10-60,000	$5-25,000
Fees (consulting)	$50-150,000	$50-150,000	(incl. below)	$15-150,000	$50-150,000	$50-150,000
Average (across all ratings) capital uplift to project budget[20]	2.5%	2.5%	10%	5%	2.5%	2.5%

[20] Note that the values shown are the average capital uplift across all ratings for that rating system. The capital uplift for a project varies by rating level and can also vary by type of building.

1) **green shading** means that the rating tool includes mandatory requirements or is likely to meet objectives to reduce embodied carbon, operational carbon or construction waste;
2) **Yellow shading** means that the rating tool includes optional content that could meet these objectives, if a requirement to achieve certain credits is required;
3) **Blue shading** means the rating tool could contribute in part to meeting an objective.

46 Overall, the Green Star Design and As Built rating system is differentiated from the other rating tools in that it:

46.1 has greater maturity in the New Zealand market

46.2 has specific adaptations for the New Zealand context, such as an earthquake resilience credit to meet the requirements of New Zealand Building regulations; and,

46.3 uses geographically relevant data as a basis for assessments.

Preferred rating system

47 We propose the use of the Green Star Design and As Built rating tool (referred to from here on as Green Star) for new non-residential government buildings. Projects using this rating tool must achieve an As Built Certification[21].

48 This will encourage better focus by procurement mandated agencies on reducing greenhouse gas emissions, construction and demolition waste, as well as operational waste, but is likely to be an interim measure. In the longer-term the Building for Climate Change programme may introduce specific reporting requirements and carbon caps which new building projects must meet through the building consent process. The market will adapt to meet these new requirements, resulting in greater choice in rating tools.

Measuring what matters – setting clear objectives

49 Green Star, along with most other rating tools, operates using a points system, with the total rating achieved across a wide range of different credit criteria. The achievement of almost all credits in the current Green Star Design and As Built rating tool are optional. This means that a rating could be achieved without a focus on carbon emission and waste reduction criteria that support the objectives of the Carbon Neutral Government Programme and Broader Outcome priority four.

A minimum number of points must be achieved from credits that support the achievement of objectives

50 Table 3 sets out the minimum credits, totalling 18 points, that we recommend should be required and the outcomes that this will support. Further detail on

[21] As Built Certification can be completed up to two years after practical completion.

the appropriateness of the targeted minimum credit and public benefits that can be achieved by taking this approach are set out in Annex Three.

Table 3. Recommended minimum credits required to achieve key objectives

Credit	Minimum credit	Outcome
Credit 15: Greenhouse Gas Emissions	8 of 20 points[22]	Operational energy saving of 50%[a]
Credit 19: Life Cycle Impacts / Life Cycle Assessment credit	4 of 7 points	Saving of 70%[b] across seven environmental impacts; ensures consideration of carbon impacts of materials
Credit 22: Construction and Demolition Waste	1 of 1 point	70%[c] construction waste diverted from landfill
Credit 8B: Operational Waste	1 of 1 point	Supports reduction of waste produced during the operation of the building
Credit 2: Commissioning and Tuning	2 of 4 points	Ensures the building performs as intended
Credit 19: Indoor air quality	1 of 4 points	Achieve “provision of outdoor air”
Credit 14: Thermal comfort	1 of 2 points	Occupants are comfortable
Total minimum points	**18** out of 39 available	

a, b, c Note these savings or reductions are in comparison to a business as usual reference building.

51 We propose that in achieving a 5 star rating, agencies will be required to achieve minimum points for credits that support reducing embodied and operational carbon and support reducing construction and demolition waste, as well as operational waste. In taking this approach we can ensure that agencies are focused on reducing carbon emissions and construction and operational waste. Including a focus on indoor air quality and thermal comfort will support a balance between operational energy efficiency and healthy indoor environments for those who use these buildings.

52 Agencies could choose to achieve more than 18 points across these credits, but will have the discretion to make up the remaining points in areas that are aligned with their strategic or operational objectives.

[22] In the comparative analysis Thinkstep recommended that achieving 8 out of 20 points for credit 15 would result in a good outcome and that in their opinion aiming to achieve more than 8 points would be exceeding the capability of the market to deliver.

Setting a rating standard

53 Green Star Design and As Built operates on a system of 100 points, plus 10 innovation points, which act as bonus points in the total of 100. Green Star is set at a standard that is higher than legal compliance in order to score points.

54 There are three levels of achievement possible:

4 star 45-59 points

5 star 60-74 points

6 star 75+ points

55 We have considered options for implementing a 4 star or a 5 star requirement for new non-residential government buildings. An overview of these options is set out in Table 4.

Table 4: Overview of options for setting a rating standard

	Option- 4 Star rating	***Option - 5 Star rating***
Overview	**45-59 total points** **Minimum points requirement -** 18 points ***Remaining points – 28*** *How the remaining 28 points are achieved is at the agency's discretion*	**60-74 total points** **Minimum points requirement -** 18 points ***Remaining points - 43*** *How the remaining 43 points are achieved is at the agency's discretion*
Achievement of objectives based on minimum points requirement (18 points)		
Operational carbon	Minimum 50%[a] reduction	Minimum 50%[b] reduction
Embodied carbon	Reduced	Reduced
Construction waste	At least 70%[c] diverted from landfill	At least 70%[d] diverted from landfill
Operational waste	Reduced	Reduced
What could be achieved with the remaining points		
Examples of additional benefits that agencies could choose to achieve	• Peak electricity demand reduction • Refrigerants with no ozone layer depletion and minimal contribution to climate change • Reduced stormwater discharge • Reduced light pollution at night • Proximity to public transport infrastructure (if site selection is an option) • Charging infrastructure for electric vehicles • Acoustic comfort, lighting and visual comfort for building occupants	

[a, b, c, d] Note these savings or reductions are in comparison to a business as usual reference building.

56 Research undertaken by the World Green Building Council found that capital cost increases as the standard or rating required increases[23].

57 Table 5 shows the estimated uplift in capital cost of Green Star for different rating levels and for different types of building. Estimated uplift in capital cost increases as the rating standard increases and varies by building type. These capital cost uplifts are based on an assumption that the costs attributed to Green Star are additional to those costs the project would have otherwise incurred if it had not been pursuing Green Star certification.

Table 5: Estimated capital cost uplift to achieve a specific Green Star rating for different types of building

	Estimated capital uplift to project budget for:			
	All building types	**Educational buildings**	**Office buildings**	**Public buildings**
4-star Green Star	1.1%	0.8%	0.5%	
5-star Green Star	2.7%	0.6%	1.7%	2.9%
6-star Green Star	2.6%	1.3%	1.9%	6.1%
Average	**2.5%**	**0.8%**	**1.7%**	**4.3%**

Source: data is from the Green Building Council Australia and estimates are based on 98 projects[24]

58 We propose that procurement mandated agencies be required to achieve a minimum of a 5 star rating, with a specific focus on credits that will support the achievement of the objectives of the Carbon Neutral Government Programme, for new non-residential buildings. While a 5 star rating, is likely to cost more on average and will not achieve a greater reduction of embodied carbon, operational carbon or construction waste than a 4 star rating it will enable other additional benefits to be achieved.

59 In conjunction with the minimum point's requirement, introducing a 5 star rating requirement will:

59.1 Result in a reduction in embodied carbon, operational carbon and construction and demolition, as well as operational waste sent to landfill; supporting the achievement of the objectives of the Carbon Neutral Government programme, as well as supporting the achievement of Broader Outcomes;

59.2 Enable the delivery of additional sustainability benefits, such as those outlined in Table 4;

59.3 Represent a significant sustainability achievement.

[23] World Green Building Council (2013) The business case for green building: A Review of the Costs and Benefits for Developers, Investors and Occupants.
[24] Green Star in focus: The business case, (2020) Green Building Council Australia.

60 In the short-term it may to be challenging for agencies to achieve 5 star ratings. This could result in increased project delivery times as agencies will need to upskill and develop the capability to specify, procure and manage the design and delivery of buildings to a 5 star rating. Increased project delivery times could result in reputational risk.

Buildings in scope of the requirement

61 The requirements set out in this Cabinet paper target new buildings that are being built and will be owned by procurement mandated agencies, with a capital cost over $9 million[25]. As defined in the Building Act 2004, the term building means any temporary or permanent movable or immovable structure (including any structure intended for occupation by people, animals, machinery, or chattels); and includes any mechanical, electrical, or other systems, and any utility systems, attached to and forming part of the structure whose proper operation is necessary for compliance with the building code. The exclusions set out in Clause A2 of Schedule 1 of the Building Regulations 1992 apply.

62 Procurement mandated agencies hold diverse portfolios of buildings which are used for a wide range of operational purposes. Some types or uses of building, as defined in Clause A1 of Schedule 1 of the Building Regulations 1992, are not eligible for Green Star certification. Projects must also meet other eligibility criteria. MBIE will provide agencies with further guidance on eligibility.

63 Some operational buildings must meet other specific regulations and it may not be possible to meet these in conjunction with Green Star or other approved rating tools. We propose creating a framework that enables exemptions to be approved where an agency can demonstrate clear and substantiated reasons for a building to be exempt, due to its type or use.

MBIE to maintain a list of exempt building types and uses

64 To enable this approach, we propose that:

64.1 Agencies may apply to MBIE to have certain types or uses of building exempted from the requirements set out in this Cabinet paper. When applying for an exemption agencies must demonstrate clear and substantiated reasons for why a building should be exempted due to its type or use;

64.2 MBIE will maintain a list of exempted building types and uses;

64.3 The Procurement Functional Leader is authorised by Cabinet to assess and approve exemptions.

[25] The Government Procurement Rules apply to the procurement of new construction works, when the maximum total estimated value of the procurement meets or exceeds a capital value of $9 million.

Projects in scope for implementation

65 The requirements of this Cabinet paper will apply to all projects where a Detailed Business Case (DBC), or a Single Stage Business Case (SSBC), or a comparable detailed agency business case (where a Better Business Case was not undertaken) has not yet been approved:

65.1 Before 1 April 2022 for new non-residential buildings with a capital value of $25 million and over;

65.2 Before 1 April 2023 for new non-residential buildings with a capital value of $9 million and over.

Project exemptions

66 If a business case (for the relevant project stage) is well advanced but has not been approved before the requirements of this Cabinet paper take effect, revising the business case could in some cases have significant impacts on project timelines and budgets; risking the delivery of new buildings and services.

67 To mitigate this, but also to ensure implementation occurs as set out in this paper, we are proposing a framework where procurement mandated agencies may apply for an exemption, before 1 April 2022 when the requirements come into force:

67.1 Where a DBC, or a SSBC, or a comparable detailed agency business case (where a Better Business Case was not undertaken) is well advanced but has not been approved; and,

67.2 An agency believes there will be significant delay to the project that will be contrary to public interest;

67.3 The agency may apply for an exemption from the Minister for Economic and Regional Development, Minister for Climate Change and the relevant Portfolio Minister before the requirements come into force on 1 April 2022.

Market capacity to support the delivery of Green Star

68 Around 174 buildings in total, have been certified as Green Star in New Zealand since Green Star was introduced in 2007 and around 14 buildings were certified over the last year. Green Star assessments and certifications are undertaken by third party certified assessors.

69 Requiring procurement mandated agencies to seek Green Star certification is likely to result in a substantial increase in the number of buildings being certified each year. The latest data from the New Zealand Infrastructure Commission Te Waihanga infrastructure construction pipeline (the pipeline)

suggests that around 200 new government buildings[26] with a capital value of over $9 million could be subject to this new requirement over the next two years. An overview of project data from the pipeline is included as Annex Four.

70 This is likely, at least in the short-term, to stretch the capacity of the market to deliver. If the pipeline of projects exceeds the capacity of the market to deliver, this is very likely to result in delays to projects, which would in turn result in second order inflationary cost increases[27] and delayed service provision.

71 It is expected, based on current capacity, that delivery could be scaled up by a two or threefold increase annually, meaning that around 40-50 projects to be assessed and certified each year. Agencies, designers and the construction sector will also need to build capacity and capability to deliver 5 star rated buildings on this scale.

Capital threshold to phase in the introduction of Green Star will support the market to scale up capacity and mitigate risk of project delays

72 We propose that capital threshold is put in place for the first year of the new requirement. This would, in the short-term, constrain the number of projects subject to this new requirement; enabling the market to scale up to deliver and mitigating the risk of project delays.

73 The latest data from the pipeline suggests the capital value at which the volume of projects reduces to around 40-50 projects per year is at the $25 million or above threshold. Based on current market capacity, to certify around 40-50 projects each year, and data from the pipeline we propose that:

73.1 From 1 April 2022 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $25 million and over;

73.2 From 1 April 2023 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $9 million and over.

74 This approach will also enable agencies and the construction sector to build the processes, capability and capacity to procure, design and construct 5 star rated buildings at the necessary scale.

[26] The pipeline data is still being developed by New Zealand Infrastructure Commission Te Waihanga, and there could be many more projects that are not currently captured.
[27] There are already some indications of cost escalation in the market due to shortage of materials (as a result of the COVID-19 pandemic) and if market capacity is stretched by this requirement it could exacerbate these issues.

Promoting innovation and enabling other rating tools to be approved to rate new non-residential government buildings

75 We have considered whether there should be a focus on requiring or mandating the use of a single rating tool or a range of rating tools. Some rating tools are more established in New Zealand than others, which could support selecting a single provider. However, this approach is likely to reduce innovation and market development in New Zealand. We also note that there is no provider currently offering a tool that exactly aligns with our three focus areas of embodied carbon, operational emissions, and waste disposal.

76 While, at this point, Green Star is the tool which is best suited to the New Zealand context and has most maturity in the New Zealand market, other rating tools may choose to enter the New Zealand market. In as little as 12 months a viable competitor could become available, particularly existing tools such as BREEAM and LEED, which are already very well established in other markets.

77 We propose creating a framework that enables other rating tools to have the opportunity to certify non-residential government buildings.

MBIE to maintain a list of approved rating tools and the Procurement Functional Leader is empowered to assess and approve new rating tools

78 To enable this flexible approach, we propose that:

78.1 MBIE will be responsible for maintaining a list of approved rating tools that meet the objective of supporting the achievement of the Carbon Neutral Government Programme;

78.2 Green Star Design and As Built will be listed as an approved rating tool;

78.3 The Procurement Functional Leader be authorised by Cabinet to assess and approve new rating tools as meeting the objective of supporting the achievement of the Carbon Neutral Government Programme.

79 This approach will enable MBIE to monitor the market and assess new rating tools as and when they become established in New Zealand. This will avoid creating a monopoly situation which could prohibit innovation and discourage the development of new rating tools, or act as a barrier for rating tools entering the New Zealand market.

80 The other rating tools considered in the comparative assessment may be reassessed and listed as approved rating tools at a later point in time.

Implementation

Timeline for implementation

81 We propose that from 1 April 2022 procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating when constructing a new non-residential building with a capital value of $25 million and over.

82 This timeline could be challenging for agencies to implement. Implementation will need to be phased, to target new projects that have not received funding approval (baseline and new crown expenditure) and have not yet appointed a design team.

83 Where projects are already well advanced and design decisions have been made, there would be significant time and cost implications if agencies were required to redesign to meet these new requirements. However, any project contemplated from the 2021/22 financial year onwards will need to consider how to incorporate these requirements.

84 From 1 April 2023 procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating when constructing a new non-residential building with a capital value of $9 million and over.

Mechanism for implementation

85 The Procurement Guide to reducing carbon emissions from building and construction (the Guide) will be amended to incorporate these new requirements. The Guide is published by the Procurement Functional Leader as a Construction Procurement guide under Rule 69 of the Government Procurement Rules. Rule 69 requires that procurement mandated agencies must apply the Construction Procurement guides, where appropriate, when procuring new construction works, with a capital value of $9 million or above.

Oversight of agency carbon decisions for new non-residential government buildings

86 On 19 May 2021, I was invited, as Minister for Economic and Regional Development, to report back, by 30 November 2021, on progress on increasing the visibility of agency carbon decisions for new government buildings and on implementing appropriate review or approval measures [DEV-21-MIN-0107 refers].

87 This paper reports back on an approach for increased visibility of agency carbon decisions for new government buildings. I propose that the Minister for Economic and Regional Development has greater oversight of decisions made by those agencies that do not select the lowest carbon option currently available.

88 Accordingly, I am proposing that when a procurement mandated agency builds a new buildings with a capital value over $9 million:

88.1 If the agency does not select the lowest carbon option currently available, the agency will need to:

88.1.1 Set this out in the business case along with the reasons why they have not selected the lowest carbon option, including obtaining their Chief Executive's approval[28];

88.1.2 Within 5 business days of the Chief Executive's decision, inform the relevant portfolio Minister(s) and the Minister for Economic and Regional Development.

89 This will provide greater visibility and accountability, but I would like to consider stronger measures for a group of Ministers to have the authority to review carbon decisions by procurement mandated agencies Confidential advice to Government

90 The intent of mandating the use of building ratings systems is to ensure agencies are choosing the lowest carbon option and taking a consistent approach. For greater certainty, where an agency meets the requirement of a Green Star 5 star rating or above, or meets the requirements of another approved rating system, the agency will be deemed to have selected the lowest carbon option.

Financial Implications

91 As indicated above, achieving a building rating incurs additional costs in certification and consultancy costs as well as capital costs. These vary depending on the build. Introducing a requirement for a Green Star Design and As Built NZ rating of 5 stars is expected to add around:

Cost category	Estimated cost per project
Assessment and certification costs	$15,000 - $50,000
Consultancy costs	$50,000 - $150,000
Capital cost uplift for 5 star rating	2.7% on average across all building types (2.9% for public buildings)

92 Additional costs, per project, vary depending on a range of factors, such as building type, size and specifications as well as project complexity. This means that additional costs are likely to vary for different agencies. Given this, it is difficult to estimate the financial implications.

[28] Where an agency is considering selecting an option which is not the lowest carbon they should signal this to the relevant Ministers as early in the process as is possible before informing Ministers of this decision as per paragraph 88.1.2.

93 However, based on the average capital cost uplift, for every billion spent on new non-residential government buildings, 2.7% (as a percentage of estimated capital budget) to achieve a 5 star rating, would equate to around $27 million additional capital cost per billion. This estimate of additional cost, per billion, do not include additional assessment and certification costs or additional consultancy costs.

94 Introducing a requirement for a Green Star Design and As Built NZ rating of 5 stars will impact more on some agencies than others. Those agencies that hold large portfolios of buildings will be most impacted.

Legislative Implications

95 No legislative implications have been identified in this paper.

Te Tiriti o Waitangi Implications

96 In the widest context, climate change impacts are a significant issue for Māori (for example, the Wai 2607 claim). However, there are expected to be limited direct effects of the Carbon Neutral Government Programme on iwi and Māori. The direct impact of the Carbon Neutral Government Programme will be on the organisations included within it (see Appendix 1), their employees and any other building inhabitants of these organisations, which may include Māori individuals. Carbon Neutral Government Programme participants will be reminded to consider the impacts of reducing their emissions on iwi/Māori and wider community.

Impact Analysis

Regulatory Impact Statement

97 A regulatory impact analysis is not required.

Climate Implications of Policy Assessment

98 The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that the CIPA requirements apply to this proposal as a key objective is to reduce emissions. However, the emissions impact is unable to be accurately determined in quantitative terms due to the lack of available baseline data. It is expected that this proposal will result in a small overall decrease in emissions through increased building efficiency as well as the use of lower emissions building materials and reduced construction and demolition as well as operational waste.

Population Implications

99 No population implications have been identified.

Human Rights

100 No human rights implications have been identified in this paper.

Consultation

101 All agencies that are required to apply the Government Procurement Rules were given the opportunity to comment on this Cabinet paper. A full list of the agencies given the opportunity to comment is included in Annex Five.

102 Feedback on the draft Cabinet paper was provided by the following 21 agencies, Accident Compensation Corporation, Cancer Control Agency, Department of Internal Affairs, Department of the Prime Minister and Cabinet, Energy Efficiency and Conservation Authority, Fire and Emergency New Zealand, Heritage New Zealand Pouhere Taonga, Kāinga Ora–Homes and Communities, Ministry of Business, Innovation and Employment, Ministry for Culture and Heritage, Ministry for Primary Industries, Ministry for the Environment, Ministry of Education, Ministry of Health, Ministry of Housing and Urban Development, Ministry of Justice, New Zealand Customs Service, New Zealand Defence Force, Oranga Tamariki–Ministry for Children, Otakaro Limited, Tertiary Education Commission and Waitemata District Health Board. A summary of key agency feedback is set out in Annex Six.

Communications

103 We expect to announce these new requirements as soon as is practicable.

104 New Zealand Government Procurement will use its usual communications channels to inform procurement mandated agencies of the new requirements agreed in this paper.

Proactive Release

105 Following Cabinet Office Circular CO (18) 4 regarding the proactive release of Cabinet papers, this paper will be proactively released, within 30 business days of final decisions being taken by Cabinet, subject to redactions, as appropriate under the Official Information Act 1982.

Recommendations

The Ministers for Economic and Regional Development and the Minister for Climate Change recommend that the Committee:

1 **note** that on 6 April 2021 Cabinet invited the Minister of Economic and Regional Development to report back to Cabinet [CBC-21-MIN-0030 refers] on:

1.1 options (including cost analysis) for the use of sustainable building rating systems and tools to support agencies to reduce carbon emissions from new government buildings;

1.2 an approach and timeline for introducing the recommended rating system option.

Implementation of sustainable building rating requirements

2 **note** that the Ministry of Business, Innovation and Employment has undertaken a comparative assessment of six well known sustainable building rating tools.

3 **agree** that:

3.1 from 1 April 2022 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $25 million and over;

and

3.2 from 1 April 2023 when constructing a new non-residential building, procurement mandated agencies will be required to achieve a minimum 5 star Green Star rating for projects with a capital value of $9 million and over.

4 **note** that a phased approach will enable early adoption but also recognise some of the practical considerations of adding additional requirements to building projects already underway.

Minimum point's requirement

5 **agree** that the minimum points set out below must be achieved for the following credits:

Credit	Minimum credit	Outcome
Credit 15: Greenhouse Gas Emissions	8 of 20 points	Operational energy saving of 50%[a]
Credit 19: Life Cycle Impacts / Life Cycle Assessment credit	4 of 7 points	Saving of 70%[b] across seven environmental impacts; ensures consideration of carbon impacts of materials
Credit 22: Construction and Demolition Waste	1 of 1 point	70%[c] construction waste diverted from landfill
Credit 8B: Operational Waste	1 of 1 point	Supports reduction of waste produced during the operation of the building
Credit 2: Commissioning and Tuning	2 of 4 points	Ensures the building performs as intended
Credit 19: Indoor air quality	1 of 4 points	Achieve "provision of outdoor air"
Credit 14: Thermal comfort	1 of 2 points	Occupants are comfortable
Total minimum points	**18** out of 39	

[a, b, c] Note these savings or reductions are in comparison to a business as usual reference building.

Framework for approved rating tools

6 **agree** that the Ministry of Business, Innovation and Employment will be responsible for maintaining a list of approved rating tools.

7 **agree** that Green Star Design and As Built be listed as an approved rating tool.

8 **agree** that the Procurement Functional Lead may assess and approve rating tools as meeting the Green Star 5-star or equivalent, at which point the rating tool will be added to the list of approved rating tools.

Building types and uses in scope and exemptions framework

9 **note** that some types or uses of building, as defined in Clause A1 of Schedule 1 of the Building Regulations 1992, are not eligible for Green Star certification.

10 **agree** that agencies may apply to MBIE to have certain types or uses of eligible building exempted from the requirements set out in this Cabinet paper and that when applying for an exemption agencies must demonstrate clear and substantiated reasons for why a building or use should be exempted.

11 **agree** that the Procurement Functional Leader may to assess and approve building types and uses as exempt.

12 **agree** that MBIE will maintain a list of exempted building types and uses.

Projects in scope for implementation and project exemptions framework

13 **note** that where projects are already well advanced and design decisions have been made, there would be significant time and cost implications if agencies were required to redesign to meet these new requirements.

14 **agree** that the requirements set out in Recommendation 3 will not apply where a Detailed Business Case, or a Single Stage Business Case, or a comparable detailed agency business case (where a Better Business Case was not undertaken) has been approved before the requirements come into force on:

14.1 1 April 2022 for projects with a capital value over $25 million;

14.2 1 April 2023 for projects with a capital value of $9 million.

15 **agree** that up until 1 April 2022, the Minister for Economic Development, the Minister for Climate Change and the relevant Portfolio Minister may grant an exemption from the requirements set out in Recommendation 3 for projects where a Detailed Business Case, or a Single Stage Business Case or a comparable detailed agency business case (where a Better Business Case was not undertaken) is well advanced but has not been approved.

Oversight of agency carbon decisions

16 **agree** that where a procurement mandated agency builds a new building and does not choose the lowest carbon option currently available they will be required:

16.1 to set this out in the business case along with the reasons why they have not selected the lowest carbon option and to obtain approval from their Chief Executive;

16.2 within 5 business days of the Chief Executive's decision, to inform the relevant portfolio Minister(s) and the Minister for Economic and Regional Development.

17 **agree** that where a procurement mandated agency meets the requirement of a Green Star 5 star rating or above, or meets the requirements of another approved rating system, the agency will not be deemed to have selected the lowest carbon option.

18 Confidential advice to Government

Confidential advice to Government

Authorised for lodgement

Hon Stuart Nash

Minister for Economic and Regional Development

Hon James Shaw

Minister for Climate Change

Annex One: Procurement mandated agencies

Public Service

Department

1. Crown Law Office
2. Department of Conservation
3. Department of Corrections
4. Department of Internal Affairs
5. Department of the Prime Minister and Cabinet
6. Education Review Office
7. Government Communications Security Bureau
8. Inland Revenue Department3
9. Land Information New Zealand
10. Ministry for Culture and Heritage
11. Ministry for Pacific Peoples
12. Ministry for Primary Industries
13. Ministry for the Environment
14. Ministry for Women
15. Ministry of Business, Innovation and Employment
16. Ministry of Defence
17. Ministry of Education
18. Ministry of Foreign Affairs and Trade
19. Ministry of Health
20. Ministry of Housing and Urban Development
21. Ministry of Justice
22. Ministry of Māori Development-Te Puni Kokiri
23. Ministry of Social Development
24. Ministry of Transport
25. New Zealand Customs Service
26. New Zealand Security Intelligence Service
27. Oranga Tamariki - Ministry for Children
28. Serious Fraud Office
29. Public Service Commisssion
30. Statistics New Zealand
31. Te Kāhui Whakamana Rua Tekau mā Iwa—Pike River Recovery Agency
32. The Treasury

Departmental Agency

33. Cancer Control Agency
34. National Emergency Management Agency
35. Office for Māori Crown Relations – Te Arawhiti
36. Social Wellness Agency

Non-Public Service Departments

1. New Zealand Defence Force
2. New Zealand Police
3. Parliamentary Counsel Office

Crown Entities

Crown Agents

1. Accident Compensation Corporation
2. Callaghan Innovation
3. Civil Aviation Authority of New Zealand
4. *District Health Boards*
   1. Auckland
   2. Bay of Plenty
   3. Canterbury
   4. Capital and Coast
   5. Counties Manukau
   6. Hawke's Bay
   7. Hutt
   8. Lake
   9. MidCentral
   10. Nelson Marlborough
   11. Northland
   12. South Canterbury
   13. Southern
   14. Tairawhiti
   15. Taranaki
   16. Waikato
   17. Wairarapa
   18. Waitemata
   19. West Coast
   20. Whanganui

State Services

Crown Agents (continued)

5. Earthquake Commission
6. Education New Zealand
7. Energy Efficiency and Conservation Authority
8. Environmental Protection Authority
9. Fire and Emergency New Zealand
10. Health Promotion Agency
11. Health Quality and Safety Commission
12. Health Research Council of New Zealand
13. Kāinga Ora – Homes and Communities
14. Maritime New Zealand
15. New Zealand Antarctic Institute
16. New Zealand Blood Service
17. New Zealand Qualifications Authority
18. New Zealand Tourism Board
19. New Zealand Trade and Enterprise
20. New Zealand Transport Agency
21. New Zealand Walking Access Commission
22. Pharmaceutical Management Agency
23. Real Estate Authority
24. Social Workers Registration Board
25. Sport and Recreation New Zealand
26. Taumata Arowai–the Water Services Regulator
27. Tertiary Education Commission
28. WorkSafe New Zealand

Autonomous Crown Entities (ACEs)

1. Accreditation Council
2. Arts Council of New Zealand Toi Aotearoa
3. Broadcasting Commission
4. Government Superannuation Fund Authority
5. Guardians of New Zealand Superannuation
6. Heritage New Zealand (Pouhere Taonga)
7. Museum of New Zealand Te Papa Tongarewa Board
8. New Zealand Artificial Limb Service
9. New Zealand Film Commission
10. New Zealand Infrastructure Commission - Te Waihanga
11. New Zealand Lotteries Commission
12. New Zealand Symphony Orchestra
13. Public Trust
14. Retirement Commissioner
15. Te Reo Whakapuaki Irirangi (Maori Broadcasting Funding Agency)
16. Te Taura Whiri I Te Reo Māori (Māori Language Commission)

Independent Crown Entities (ICEs)

1. Broadcasting Standards Authority
2. Children's Commissioner
3. Climate Change Commission
4. Commerce Commission
5. Criminal Case Review Commission
6. Drug Free Sport New Zealand
7. Electoral Commission
8. Electricity Authority
9. External Reporting Board
10. Financial Markets Authority
11. Health and Disability Commissioner
12. Human Rights Commission
13. Independent Police Conduct Authority
14. Law Commission
15. New Zealand Productivity Commission
16. Office of Film and Literature Classification
17. Privacy Commissioner
18. Takeovers Panel
19. Transport Accident Investigation Commission

Crown Entity Companies

Others

1. Crown Irrigation Investments Limited
2. New Zealand Growth Capital Partners Limited
3. Radio New Zealand Limited
4. Television New Zealand Limited

Crown Research Institutes (CRIs)

1. AgResearch Limited
2. Institute of Environmental Science and Research Limited
3. Institute of Geological and Nuclear Sciences Limited
4. Landcare Research New Zealand Limited
5. National Institute of Water and Atmospheric Research Limited
6. New Zealand Forest Research Institute Limited
7. New Zealand Institute for Plant and Food Research Limited

PFA Schedule 4A Companies

1. City Rail Link Limited
2. Crown Asset Management Limited
3. Crown Infrastructure Partners Limited
4. Education Payroll Limited
5. Network for Learning Limited
6. New Zealand Green Investment Finance Limited
7. Ōtākaro Limited
8. Predator Free 2050 Limited
9. Provincial Growth Fund Limited
10. Research and Education Advanced Network New Zealand Limited
11. Southern Response Earthquake Services Limited
12. Tamaki Redevelopment Company Limited

Crown Entity Subsidiaries

Approx. 150 Crown entity subsidiaries

Crown Entity Subsidiaries of NZIST

1. Ara Institute of Canterbury Limited
2. Eastern Institute of Technology Limited
3. Manukau Institute of Technology Limited
4. Nelson Marlborough Institute of Technology Limited
5. Northland Polytechnic Limited
6. Open Polytechnic of New Zealand Limited
7. Otago Polytechnic Limited
8. Southern Institute of Tech ology Limited
9. Tai Poutini Polytechnic Limited
10. Toi Ohomai Institute of Technology Limited
11. Unitec Institute of Technology Limited
12. Universal College of Learning Limited
13. Waikato Institute of Technology Limited
14. Wellington Institute of Technology Limited
15. Western Institute of Technology Limited
16. Whitireia Community Polytechnic Limited

School Boards of Trustees

Approx. 2,416 (including Te Aho o Te Kura Pounamu – The Correspondence School)

PFA Schedule 4 Organisations

Fish and Game Councils (12)

Reserve Boards (20)

Trusts

1. Agricultural and Marketing Research and Development Trust
2. Asia New Zealand Foundation
3. National Pacific Radio Trust
4. Ngai Tahu Ancillary Claims Trust (Inactive)
5. Pacific Co-operation Foundation
6. Pacific Island Business Development Trust
7. Te Ariki trust

Other (bodies corporate)

1. Game Animal Council
2. New Zealand Game Bird Habitat Trust Board
3. New Zealand Government Property Corporation
4. The Maori Trustee

Other (unincorporated)

1. New Zealand Lottery Grants Board

Reserve Bank of New Zealand

State Sector

Non-Public Service Departments

1. Office of the Clerk of the House of Representatives
2. Parliamentary Service (Parliamentary Corporation)

Offices of Parliament

1. Office of the Ombudsmen
2. The Controller and Auditor-General
3. The Parliamentary Commissioner for the Environment

Crown Entities Tertiary Education Institutes

Universities

1. Auckland University of Technology
2. Lincoln University
3. Massey University
4. University of Auckland
5. University of Canterbury
6. University of Otago
7. University of Waikato
8. Victoria University of Wellington

New Zealand Institute of Skills and Technology (NZIST)

Wananga

9. Te Wananga o Aotearoa
10. Te Wananga o Raukawa
11. Te Whare Wananga o Awanuiarangi

State-Owned Enterprises

1. Airways Corporation of New Zealand Limited
2. Animal Control Products Limited
3. AsureQuality Limited
4. Electricity Corporation of New Zealand Limited
5. KiwiRail Holdings Limited
6. Kordia Group Limited
7. Landcorp Farming Limited
8. Meteorological Service of New Zealand Limited
9. New Zealand Post Limited
10. New Zealand Railways Corporation
11. Quotable Value Limited
12. Transpower New Zealand Limited

Public Sector

Regional Councils

1. Bay of Plenty Regional Council
2. Canterbury Regional Council
3. Hawke's Bay Regional Council
4. Manawatu–Wanganui Regional Council
5. Northland Regional Council
6. Otago Regional Council
7. Southland Regional Council
8. Taranaki Regional Council
9. Waikato Regional Council
10. Wellington Regional Council
11. West Coast Regional Council

Territorial Authorities

1. Ashburton District Council
2. Auckland Council
3. Buller District Council
4. Carterton District Council
5. Central Hawke's Bay District Council
6. Central Otago District Council
7. Chatham Islands Council
8. Christchurch City Council
9. Clutha District Council
10. Dunedin City Council
11. Far North District Council
12. Gisborne District Council
13. Gore District Council
14. Grey District Council
15. Hamilton City Council
16. Hastings District Council
17. Hauraki District Council
18. Horowhenua District Council
19. Hurunui District Council
20. Hutt City Council
21. Invercargill City Council
22. Kaikoura District Council
23. Kaipara District Council
24. Kapiti Coast District Council
25. Kawerau District Council
26. Mackenzie District Council
27. Manawatu District Council
28. Marlborough District Council
29. Masterton District Council
30. Matamata-Piako District Council
31. Napier City Council
32. Nelson City Council
33. New Plymouth District Council
34. Opotiki District Council
35. Otorohanga District Council
36. Palmerston North City Council
37. Porirua City Council
38. Queenstown-Lakes District Council
39. Rangitikei District Council
40. Rotorua District Council
41. Ruapehu District Council
42. Selwyn District Council
43. South Wairarapa District Council
44. South Taranaki District Council
45. South Waikato District Council
46. Southland District Council
47. Stratford District Council
48. Tararua District Council
49. Tasman District Council
50. Taupo District Council
51. Tauranga City Council
52. Thames-Coromandel District Council
53. Timaru District Council
54. Upper Hutt City Council
55. Waikato District Council
56. Waimakariri District Council
57. Waimate District Council
58. Waipa District Council
59. Wairoa District Council
60. Waitaki District Council
61. Waitomo District Council
62. Wellington City Council
63. Western Bay of Plenty District Council
64. Westland District Council
65. Whakatane District Council
66. Whanganui District Council
67. Whangarei District Council

Annex Two: Information on the sustainable building rating tools assessed in the comparative study

The information in the following sections is based on material published by the organisation responsible for the administration of the sustainable building rating tool.

Green Star Design and As Built v1.0

Rating Tool Description

The New Zealand Green Building Council (NZGBC) operates Green Star in New Zealand under licence from the Green Building Council of Australia (GBCA). The Australian Green Star rating tools are adapted for the NZ market and conditions.

Green Star Design and As Built v1.0 is modelled on the Australian version 1.2, which was released in 2017. Apart from translation into the NZ building code and similar requirements, it also has specific adaptations for the NZ context, such as an earthquake resilience credit, and the removal of mandatory building air tightness testing as part of commissioning.

How certification works

Green Star operates on a system of 100 points, plus 10 innovation points, which act as bonus points in the total of 100. There are 3 levels of achievement possible:

- 4 star New Zealand Best Practice 45-59 points
- 5 star New Zealand Excellence 60-74 points
- 6 star World Leadership 75+ points

Table 6 shows the Green Star credits from which these points can be achieved.

Each star rating is a valid and valuable achievement. Green Star is set at a standard that is higher than legal compliance in order to score points, and therefore even 4 star is a recognition of deliberate effort to achieve sustainable outcomes.

Table 6 Credits in Green Star Design and As Built NZ v1.0

Category	Credit
Management	Green Star Accredited Professional
	Commissioning and Tuning
	Adaptation and Resilience
	Building Information
	Commitment to Performance
	Metering and Monitoring
	Responsible Construction Practices
	Operational Waste
Indoor Environment Quality	Indoor Air Quality
	Acoustic Comfort
	Lighting Comfort

Category	Credit
	Visual Comfort
	Indoor Pollutants
	Thermal Comfort
Energy	Greenhouse Gas Emissions
	Peak Electricity Demand Reduction
Transport	Sustainable Transport
Water	Potable Water
Materials	Life Cycle Impacts
	Responsible Building Materials
	Sustainable Products
	Construction & Demolition Waste
Land Use & Ecology	Ecological Value
	Sustainable Sites
Emissions	Stormwater
	Light Pollution
	Microbial Control
	Refrigerant Impacts
Innovation	Innovation

Green Star Buildings v1.0 (GBCA)

Rating Tool Description

The Green Building Council of Australia released Green Star Buildings v1.0 in October 2020.

Its uniqueness is related to a number of factors, including its treatment of carbon and energy, including upfront carbon emissions, its long list of mandatory elements that must be achieved for every rating, and its new methodology for incentivising supply chain transformation through its Responsible Products Framework.

How certification works

Green Star Buildings operates on a system of 100 points, plus additional points from the Leadership category, which replaces the previous Innovation category.

There are many Minimum Expectations that are now included as mandatory minimum requirements, and are not rewarded with any points. These are included to ensure that every Green Star rated building under this rating tool will have the assurance of delivering the expected norms for a green building.

There are 3 levels of achievement possible:

- 4 star Best Practice 15-34 points

- 5 star Excellence 35-69 points
- 6 star World Leadership 70+ points

These achievement levels have been significantly recalibrated compared to the Green Star – Design and As Built versions. This is because Minimum Expectations do not qualify for points. It has also broadened the scale, and while 4 star has remained at a similar level of achievement to Green Star Design and As Built v1.3 (which has tighter energy efficiency requirements than v1.2), 5 star and 6 star have both significantly increased in difficulty.

Table 7. Credits in Green Star Buildings v1.0

Category	Credit
Responsible	Industry Development
	Responsible Construction
	Verification and Handover
	Operational Waste
	Responsible Procurement
	Responsible Structure
	Responsible Envelope
	Responsible Systems
	Responsible Finishes
Healthy	Clean Air
	Light Quality
	Exposure to Toxins
	Acoustic Comfort
	Amenity and Comfort
	Connection to Nature
Resilient	Climate Change Resilience
	Operations Resilience
	Community Resilience
	Heat Resilience
	Grid Resilience
Positive	Upfront Carbon Emissions
	Energy Use
	Energy Source
	Other Carbon Emissions
	Water Use
	Life Cycle Impacts
Places	Movement and Place
	Enjoyable Places
	Contribution to Place
	Culture, Heritage and Identity
People	Inclusive Construction Site
	Indigenous Inclusion
	Procurement & Workforce Inclusion
	Design for Inclusion

Category	Credit
Nature	Impacts to Nature
	Biodiversity Enhancement
	Nature Connectivity
	Nature Stewardship
	Waterway Protection
Leadership	Market Transformation
	Leadership Challenges

Core Green Building Certification (ILFI)

Rating Tool Description

Consultation with the International Living Futures Institute (ILFI) resulted in a re-scoping away from the Living Building Challenge to the Core Green Building Certification, which is a more appropriate rating tool in the context of public procurement. The ILFI is headquartered in the USA.

The Core Green Building Certification is a “best practice green building standard” operated by the ILFI which outlines the 10 best practice achievements that a building requires to be regarded as a green or sustainable building.

How certification works

The 10 mandatory criteria must be proven through 12 months of operational data. Certification is binary – it is achieved or it is not.

Table 8. Imperatives in Core Green Building Certification

Number	Imperative
1	Ecology of Place
2	Human Scaled Living
3	Responsible Water Use
4	Energy & Carbon Reduction
5	Healthy Interior Environment
6	Responsible Materials
7	Universal Access
8	Inclusion
9	Beauty and Biophilia
10	Education & Inspiration

Passive House (PHI)

Rating Tool Description

This rating tool, is owned and operated by the Passive House Institute (PHI) in Germany. Passive House is supported and promoted in NZ by Passive House Institute New Zealand (PHINZ). The Passive House rating tool aims to provide insulated, efficient, comfortable and ventilated buildings. It does not intend to act as a holistic sustainability rating tool.

How certification works

Passive House certification is undertaken by locally accredited Passive House Certifiers. Certification is based on the provision of performance data to assure that the performance of the building matches the requirements of the standard.

Achievement of the certification is binary: all criteria are mandatory.

Table 9. Criteria for Passive House Certification

Criteria	Parameters
Indoor Air Quality	Humidity
Air Tightness	Permeability / leakage
Occupant Comfort	Temperature
Annual Space Cooling / Dehumidification Demand / Load	Energy demand
Annual Space Heating Demand / Heating Load	Energy demand
Annual primary energy demand	Energy demand / renewables

LEED (USGBC)

Rating Tool Description

The United States Green Building Council (USGBC) have been operating the Leadership in Energy and Environmental Design (LEED) rating tool since 1998. The LEED v4.1 rating tool is similar in concept to Green Star, in that it has categories and credits in a genuinely holistic sustainable buildings standard.

How certification works

Certification is performed by the Green Business Certification Incorporated (GBCI) as a third-party assessment organisation. The GBCI is a sister organisation to USGBC, sharing significant staff, including their President, Chief Executive and Chief of Staff. Therefore, their true third-party status is somewhat under question.

There are 4 levels of achievement possible:

- Certified 40-49 points
- Silver 50-59 points
- Gold 60-79 points
- Platinum 80-110 points

Table 10 Credits in LEED v4.1

Category	Credit
	Integrative Process
Location and Transportation	LEED for Neighborhood Development Location
	Sensitive Land Protection
	High Priority Site and Equitable Development
	Surrounding Density and Diverse Uses
	Access to Quality Transit
	Bicycle Facilities
	Reduced Parking Footprint
	Electric Vehicles
Sustainable Sites	Construction Activity Pollution Prevention
	Site Assessment
	Protect or Restore Habitat
	Open Space
	Rainwater Management
	Heat Island Reduction
	Light Pollution Reduction
Water Efficiency	Outdoor Water Use Reduction (prerequisite)
	Indoor Water Use Reduction (prerequisite)
	Building-Level Water Metering
	Outdoor Water Use Reduction
	Indoor Water Use Reduction
	Optimize Process Water Use
	Water Metering
Energy and Atmosphere	Fundamental Commissioning and Verification
	Minimum Energy Performance
	Building-Level Energy Metering
	Fundamental Refrigerant Management
	Enhanced Commissioning
	Optimize Energy Performance
	Advanced Energy Metering
	Grid Harmonization
	Renewable Energy

Category	Credit
	Enhanced Refrigerant Management
Materials and Resources	Storage and Collection of Recyclables
	Building Life-Cycle Impact Reduction
	Environmental Product Declarations
	Sourcing of Raw Materials
	Material Ingredients
	Construction and Demolition Waste Management
Indoor Environmental Quality	Minimum Indoor Air Quality Performance
	Environmental Tobacco Smoke Control
	Enhanced Indoor Air Quality Strategies
	Low-Emitting Materials
	Construction Indoor Air Quality Management Plan
	Indoor Air Quality Assessment
	Thermal Comfort
	Interior Lighting
	Daylight
	Quality Views
	Acoustic Performance
Innovation	Innovation
	LEED Accredited Professional
Regional Priority	Regional Priority: Specific Credits (4)

BREEAM (BRE Global Ltd.)

Rating Tool Description

BREEAM International New Construction 2016 is operated by BRE Global Ltd. (part of the BRE (Building Research Establishment) Group). BREEAM is Building Research Establishment's Environmental Assessment Method.

How certification works

BREEAM provides third-party certification of achievements using qualified and licenced BREEAM Assessors. Assessment is documentation-based, stating a requirement for an “auditable trail of evidence”.

There are 5 levels of achievement possible, categorised by a percentage score:

- Pass ≥30%
- Good ≥45%
- Very Good ≥55%

- Excellent ≥70%
- Outstanding ≥85%

The final score is derived from applying weightings per environmental section. Weightings are dependent on the location of the project.

Table 11. Criteria for BREEAM International New Construction 2016

Environmental Sections	Assessment Issues
Management	Project brief and design
	Life cycle cost and service life planning
	Responsible construction practices
	Commissioning and handover
	Aftercare
Health and wellbeing	Visual comfort
	Indoor air quality
	Safe containment in laboratories
	Thermal comfort
	Acoustic performance
	Accessibility
	Hazards
	Private space
	Water quality
Energy	Reduction of energy use and carbon emissions
	Energy monitoring
	External lighting
	Low carbon design
	Energy efficient cold storage
	Energy efficient transport systems
	Energy efficient laboratory systems
	Energy efficient equipment
	Drying space
Transport	Public transport accessibility
	Proximity to amenities
	Alternative modes of transport
	Maximum car parking capacity
	Travel plan
Water	Water consumption
	Water monitoring
	Water leak detection
	Water efficient equipment

Environmental Sections	Assessment Issues
Materials	Life cycle impacts
	Hard landscaping and boundary protection
	Responsible sourcing of materials
	Insulation
	Designing for durability and resilience
	Material efficiency
Waste	Construction waste management
	Recycled aggregates
	Operational waste
	Speculative floor and ceiling finishes
	Adaptation to climate change
	Functional adaptability
Land use and ecology	Site selection
	Ecological value of site and protection of ecological features
	Minimising impact on existing site ecology
	Enhancing site ecology
	Long term impact on biodiversity
Pollution	Impact of refrigerants
	NO_x emissions
	Surface water run-off
	Reduction of night time light pollution
	Reduction of noise pollution
Innovation	Innovation

Annex Three: Further detail on the appropriateness of the targeted minimum credits and public benefits

Credit	Target	Outcome	Appropriateness of target	Public benefit
Credit 15: GHG Emissions	8 of 20 points	Operational energy saving of 50%[a]	• 50% is demonstrated to be achievable. • More points requires green power and/or an upgraded building envelope ($).	• Represents a significant improvement achieved at a known cost-effective benchmark. • Avoids mandating additional expense.
Credit 19: Life Cycle Impacts	4 of 7 points	Saving of 70%[b] across seven environmental impacts; ensures examination of impacts from materials	• Requires completing building life cycle assessment using LCAQuick, eTool, or similar. • Quantification of materials impacts enables data-informed decision making. • Greater percentage reduction may not result in lower carbon emissions.	• Mandates the use of life cycle assessment to increase industry capability and capacity for measurement of impacts. • Establishes the basis for data gathering to prepare for evidence-based benchmarking.
Credit 22: Construction and Demolition Waste	1 of 1 point	70%[c] waste diverted from landfill	• Industry data accuracy must be improved, provides a platform to require audited providers. • NZGBC determined 70% as an appropriate target for NZ industry achievement.	• Counters industry issue of inaccuracy of waste data. • Establishes waste separation practices on construction sites. Australian experience shows that often higher achievement occurs once waste separation practices are implemented.
Credit 8B: Operational Waste	1 of 1 point	Supports reduction of waste produced during the operation of the building	• Encourages solutions that facilitate the recycling of resources and reduction of operational waste to landfill.	• Supports recycling of resources and reduces operational waste to landfill.
Credit 2: Commissioning and Tuning	2 of 4 points	Ensures the building performs as intended	• The energy savings forecast won't be achieved without ensuring that the building performs to the designed targets.	• Claims of delivered improvements through policy targets are substantiated.
Credit 9: Indoor Air Quality	1 of 4 points	Achieve "Provision of Outdoor Air"	• Ensures appropriate ventilation and pollutant control. • Balances efficiency and health outcomes.	• Provides basis for clean, fresh air in buildings. • Balances operational energy efficiency improvements with healthy indoor environments.
Credit 14: Thermal Comfort	1 of 2 points	Occupants are comfortable	• Thermal comfort is achieved in terms of temperature, humidity and air movement. • Target is roughly 95% satisfaction (not seeking perfection).	• Ensures that healthier buildings are delivered through control of both temperature and moisture. • Balances operational energy efficiency improvements with healthy indoor environments.

[a, b, c,] Note these savings or reductions are in comparison to a business as usual reference building.

Annex Four: Information about the pipeline of projects by estimated capital value and project stage

Estimated Capital Value	Indicative Project Stage				Total Projects
	Early Planning	In Planning	Procurement Underway	Under Construction	
Less than $1 Million	3	8		5	16
$1 - $5 Million	17	33	3	27	80
$5 - $25 Million	33	58	20	57	168
$25 - $50 Million	4	11	1	2	18
$50 - $100 Million	4	10	1	8	23
$100 - $250 Million	1			1	2
$250 - $500 Million		1		4	5
$500 Million - $1 Billion	1			1	2
Over $1 Billion		1			1
Total Projects	**63**	**122**	**25**	**105**	**315**

Annex Five: Agencies given the opportunity to comment on the Cabinet paper

Accident Compensation Corporation, Accreditation Council, AgResearch Limited, Arts Council of New Zealand Toi Aotearoa, Auckland District Health Board, Bay of Plenty District Health Board, Broadcasting Commission (NZ On Air), Broadcasting Standards Authority, Callaghan Innovation, Cancer Control Agency, Canterbury District Health Board, Capital and Coast District Health Board, Children's Commissioner, City Rail Link Limited, Civil Aviation Authority of New Zealand, Climate Change Commission, Commerce Commission, Counties Manukau District Health Board, Criminal Cases Review Commission, Crown Infrastructure Partners Limited, Crown Irrigation Investments Limited, Crown Law Office, Department of Conservation, Department of Corrections, Department of Internal Affairs, Department of the Prime Minister and Cabinet, Drug Free Sport New Zealand, Earthquake Commission, Education New Zealand, Education Payroll Limited, Education Review Office, Electoral Commission, Electricity Authority, Energy Efficiency and Conservation Authority, Environmental Protection Authority, External Reporting Board, Financial Markets Authority, Fire and Emergency New Zealand, Government Communications Security Bureau, Government Superannuation Fund Authority, Guardians of New Zealand Superannuation, Hawke's Bay District Health Board, Health and Disability Commissioner, Health Promotion Agency, Health Quality and Safety Commission, Health Research Council of New Zealand, Heritage New Zealand Pouhere Taonga, Human Rights Commission, Hutt District Health Board, Independent Police Conduct Authority, Inland Revenue Department, Institute of Environmental Science and Research Limited, Institute of Geological and Nuclear Sciences Limited, Kāinga Ora–Homes and Communities, Lakes District Health Board, Land Information New Zealand, Landcare Research New Zealand Limited, Law Commission, Maritime New Zealand, MidCentral District Health Board, Ministry for Culture and Heritage, Ministry for Pacific Peoples, Ministry for Primary Industries, Ministry for the Environment, Ministry for Women, Ministry of Business, Innovation and Employment, Ministry of Defence, Ministry of Education, Ministry of Foreign Affairs and Trade, Ministry of Health, Ministry of Housing and Urban Development, Ministry of Justice, Ministry of Social Development, Ministry of Transport, Museum of New Zealand Te Papa Tongarewa Board, National Emergency Management Agency, National Institute of Water and Atmospheric Research Limited, Nelson Marlborough District Health Board, New Zealand Antarctic Institute, New Zealand Artificial Limb Service, New Zealand Blood Service, New Zealand Customs Service, New Zealand Defence Force, New Zealand Film Commission, New Zealand Forest Research Institute Limited, trading as Scion, New Zealand Green Investment Finance Limited, New Zealand Growth Capital Partners Limited ,New Zealand Infrastructure Commission/Te Waihanga, New Zealand Lotteries Commission, New Zealand Police, New Zealand Productivity Commission, New Zealand Qualifications Authority, New Zealand Symphony Orchestra, New Zealand Tourism Board, New Zealand Trade and Enterprise, New Zealand Transport Agency, New Zealand Walking Access Commission, Northland District Health Board, Office for Māori Crown Relations - Te Arawhiti, Office of Film and Literature Classification, Oranga Tamariki–Ministry for Children, Otakaro Limited, Parliamentary Counsel Office, Pharmaceutical Management

Agency, Predator Free 2050 Limited, Privacy Commissioner, Provincial Growth Fund Limited, Public Service Commission, Public Trust, Radio New Zealand Limited, Real Estate Agents Authority, Research and Education Advanced Network New Zealand Limited, Retirement Commissioner, Serious Fraud Office, Social Wellbeing Agency, Social Workers Registration Board, South Canterbury District Health Board, Southern District Health Board, Southern Response Earthquake Services Limited, Sport and Recreation New Zealand, Statistics New Zealand, Tairawhiti District Health Board, Takeovers Panel, Tamaki Regeneration Limited, Taranaki District Health Board, Taumata Arowai, Te Kāhui Whakamana Rua Tekau mā Iwa — Pike River Recovery Agency, Te Puni Kōkiri (Ministry of Māori Development), Te Reo Whakapuaki Irirangi (Maori Broadcasting Funding Agency), Te Taura Whiri I Te Reo Maori (Māori Language Commission), Television New Zealand Limited, Tertiary Education Commission, The New Zealand Institute for Plant and Food Research Limited, The Treasury, Transport Accident Investigation Commission, Waikato District Health Board, Wairarapa District Health Board, Waitemata District Health Board, West Coast District Health Board, Whanganui District Health Board, WorkSafe New Zealand.

Annex Six: Summary of key themes from agency feedback

The majority of agencies support the objectives of reducing embodied and operational carbon as well as reducing construction and demolition waste. A number of agencies noted that they support the use of building rating systems however, some agencies did not support the use of building rating systems. The most common reasons for not supporting the use of building rating systems were that:

- Rating tools may not be well suited to rating complex and specialised operational buildings;
- With the introduction of the Carbon Neutral Government Programme and the work underway on the Building for Climate Change Programme, agencies have already or are developing tailor made systems, tools and processes for reducing embodied and operational carbon.

Buildings in scope

Agencies recommended that the types and uses of buildings that are within scope should be more clearly defined. Agencies also suggested that some types and uses of buildings should be exempt from the requirement to use rating tools, for example, because they must meet other regulatory standards and rating tools assessment criteria may conflict with these.

Phased Implementation must take into account investment decisions and milestones

A number of agencies recommended that the phased implementation approach must take account of investment decisions and milestones and that projects should be exempt from the requirements once project funding has been agreed.

Enabling other rating tools to be approved

Most agencies supported the proposed approach for enabling other rating tools to be approved. A number of agencies proposed that the Procurement Functional Leader should be able to:

- Assess and approve bespoke rating tools or systems that are designed to meet the specific requirements agencies buildings and operational requirements;
- Rating tools that target one or more of the objectives of the Carbon Neutral Government Programme.

Risks to project timeframes and potential flow on impacts on service delivery

Agencies raised a number of concerns about potential risks to project timeframes and potential flow on impacts on service delivery, including:

- Existing supply chain constraints and cost escalation, resulting from the COVID-19 pandemic, could be exacerbated by these new requirements, resulting in increased capital costs. Some agencies suggested that there should be processes in place to agree substitute materials and enable exemptions if required;
- Capacity and capability of the building and construction sector will be a significant issue and could result in increased project timelines impacting on delivery of services. A number of agencies suggested that there should be further

consultation with the sector. It was also noted that capacity and capability constraints may be more of an issue outside of metropolitan areas;

- The use of rating systems will add complexity and additional administrative burden. for example the time and cost required for preparation and documentation to enable certification is significant and this will impact on both agency staff and the design consultation team;
- Implementation timelines are challenging and implementation needs to be delayed or phased differently to reduce potential risks;
- Estimates of capital cost uplifts are based on overseas experience and may represent a conservative estimate in the New Zealand context where materials and construction costs are often higher than in other jurisdictions;
- That additional funding will be required to ensure avoid impacts on service delivery, otherwise agencies may have to reduce the levels of service that can be provided in new buildings (e.g. number of hospital beds).