



# A clear path to Green Star certification

Helping project teams achieve  
4 Star Green Star Buildings



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# Introduction

This guide is written for developers and project teams approaching Green Star for the first time. Its purpose is to remove the guesswork: to set out a typical pathway for the achievement of a 4 Star Green Star rating, when each decision needs to be made and who on the team is responsible for it.

A 4 Star Green Star rating may be the entry point to certification, but this is still a worthwhile achievement. Four stars represents *best practice* — a verified standard that sits meaningfully above what the Building Code requires and above what most of the market delivers, helping you stand out in the crowd. A 4 Star Green Star rating also makes the building eligible for sustainable finance.

Green Star is the most widely recognised and used sustainable building rating tool for non-residential buildings in Aotearoa. Green Star has been used in Aotearoa New Zealand since 2007. Since that time, many professionals have been trained in, and gained experience working with, this tool. Over the years, many resources have been created to facilitate the process of achieving a certification making certification more accessible than ever before. Research has consistently shown that certified buildings have lower vacancy rates, and command higher value and rent. All these benefits can now be recognised by not just the top end buildings with endless budgets, but by all buildings striving for best practice.

In addition to the minimum expectations, which must be achieved by all projects targeting Green Star, a full list of suggested credits is presented within this document. This represents one possible pathway to the 15 Points required for a 4 Star rating. This list of credits is considered readily achievable based on product availability and industry knowledge. Projects are encouraged to review the full list of credits within the Submission Guidelines to assess if any credits not included here may be more appropriate for their specific project. There may be site or project constraints which make these credits more difficult to achieve and alternatively an organization may already have policies in place that align well with other credits. The credits included here are not “better” or “more important” than any other credits in the Submission Guidelines, but considered to be more easily achievable by the majority of building types. There will be situations where building constraints are not well suited to the presented sustainability initiatives and other credits may need to be considered.

This list of credits has been selected based on several sources of information

- Similarity to Green Star Design & As Built credits that the industry is already familiar with
- Feedback from experienced Green Star Accredited Professionals
- Analysis of projects already targeting these credits in New Zealand
- Analysis of Australian project data where this tool has been in the market since 2020

## About Green Star Buildings

Green Star Buildings was released to the New Zealand market in 2024 after extensive consultation with industry. This replaced the previous version Design & As Built v1.1. Green Star Buildings, like previous versions of Green Star, is a points-based holistic sustainability rating tool for non-residential buildings. Evidence is submitted and independently reviewed to certify a building as having met a targeted standard to set it apart from buildings built to lower requirements.

Projects are assessed at two stages. A design assessment is typically submitted near the end of the design stage. It is up to the project team to decide when the ideal time for submittal will be. More complete documentation will allow for a more thorough review and understanding of compliance, however if the submittal occurs too late there may not be sufficient time to implement required changes resulting from the review. Submitting post tender may add financial risk, but could also allow for design feedback from an experienced contractor. The design assessment is optional but highly recommended to verify the project is on track to meet the requirements. The final submittal, which determines if a Green Star accreditation is obtained, occurs post practical completion. It may take time to gather all information, such as final commissioning results, but it is recommended to submit as early as possible as tracking down relevant parties for additional information may become more difficult the more time passes.

Note that it is normal to not be awarded all targeted points during the first assessment round. In most cases this is resolved by submitting additional documentation for a round 2 assessment to demonstrate compliance with the claimed criteria. In some

cases, this is because of design or construction short comings that do not meet the intent. In those cases, the project team must decide if it is feasible to make the required changes. It is always advised to target more than the 15 points required as a buffer to allow for any unexpected changes during construction and to provide a buffer for targeted points that are not achieved.

This guidance document should be read in conjunction with the latest Green Star Buildings Submission Guidelines and the list of Technical Clarifications published on the NZGBC website. Any information presented in those documents takes precedence over this document. This guide is intended to help understand and plan for compliance early in design, but for full credit details and requirements, the Submission Guidelines should be consulted.

## Sustainable Finance

Many banks and financiers are offering sustainable finance deals to help them meet their own targets and commitments. They are often offering lower finance rates which can result in significant savings over the life of a loan. Financial institutions look to independent verification, such as Green Star, to evaluate against their own targets. Investors also look to these tools to determine if an asset can be classified as a sustainable investment.

In version 2 of the NZGBC Sustainable Finance Guide, a 4 Star Green Star Buildings rating is included. The option to be eligible for lower interest rates on a building loan may be an attractive incentive to target Green Star. This has been widely supported and adopted by major financial institutions in New Zealand.



Image 1: Marian College – 4 Star Green Star Design and As-Built NZ v1.0 Built rating

## Acknowledgements

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## Consultants

A common perception of achieving a Green Star rating is that extensive additional consultant scope is required, adding cost to the project budget. This could be either consultants that would not otherwise be part of the project team, or added scope for standard design and construction team members. While this guide hopes to minimise that scope and cost, engaging the following specialists early in the design stage is recommended.

- **Green Star Accredited Professional (GSAP)** – this can be a dedicated Environmentally Sustainable Design (ESD) consultant or a qualified consultant such as an architect or services engineer already engaged on the team
- **Independent Commissioning Agent**
- **Acoustic Consultant**
- **Climate Change Resilience Professional**
- **Energy Modeller** – often done as part of the mechanical engineer's scope and can be used to demonstrate NZ Building Code H1 compliance
- **Embodied Carbon Professional** – trained in the use of the NZGBC Embodied Carbon calculator or third party software. The architect or QS is frequently able to provide this service.
- **Air Tightness Professional**

The remaining scope in the credits presented in this pathway can typically be completed by professionals that are already expected to be part of a project team including architect, building services and structural engineer and contractor.

# Minimum Expectations

The below credits have criteria that must be achieved by all projects to be eligible for a rating. These are features that are considered critical for all best practice buildings and are therefore not part of the optional list of credits which can be targeted. No points are awarded for these criteria. In some cases there may be project specific restrictions that prevent these from being feasible. These should be discussed with the NZGBC prior to registration and in some unique situations may be granted an exemption.

| Category    | Credit                             | Requirements                                                                                                                                                  |
|-------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Responsible | Responsible Construction           | Engage a contractor with an Environmental Management Plan (EMP) and Environmental Management System (EMS) and divert 40% of Construction waste from landfill. |
|             | Verification and Handover          | Provide metering and commissioning, test for air tightness and provide handover information for efficient operation.                                          |
|             | Responsible Resource Management    | Provide space for waste to be separated during building operation.                                                                                            |
| Healthy     | Clean Air                          | Provide increased ventilation rates and ensure pollutant infiltration is mitigated.                                                                           |
|             | Light Quality                      | Provide high quality light fixtures and ensure access to daylight is maximised for occupants.                                                                 |
|             | Acoustic Comfort                   | Engage a consultant to assess the acoustic quality of indoor spaces                                                                                           |
|             | Exposure to Toxins                 | Select low Total Volatile Organic Compounds (TVOC) products.                                                                                                  |
|             | Thermal Comfort and Amenity Spaces | Building to be modelled to achieve a high level of thermal comfort.                                                                                           |
| Resilient   | Climate Change Resilience          | Complete the provided climate change pre-screening checklist.                                                                                                 |
| Positive    | Upfront Carbon Emissions           | Complete an upfront carbon model and ensure a 15% reduction compared to a standard practice reference.                                                        |
|             | Energy Use                         | Complete an energy model and ensure a 10% reduction compared to a standard practice building.                                                                 |
|             | Energy Source                      | Ensure no fossil fuels are used for heating, hot water or cooking.                                                                                            |
|             | Water Use                          | Complete the water use calculator and ensure a 10/15% reduction compared to a reference.                                                                      |
| Places      | Movement and Place                 | Provide accessible showers and changing facilities.                                                                                                           |
| People      | Inclusive Construction Practices   | The head contractor provides inclusive facilities and protective equipment and installs on site policies on discrimination.                                   |
| Nature      | Impact to Nature                   | Ensure the building is not built on high ecological value land and minimises light pollution impacts.                                                         |

## Suggested Credits

The credits listed below present one possible pathway to earning a 4-star rating. Although only 15 points are required, very few projects achieve every credit that they target. It is therefore always recommended to target buffer points to account for unforeseen circumstances where some points are lost due to site conditions or design and construction constraints. The below pathway includes a total of 19 points.

Every credit has a level of risk of not being achieved. The risk may be due to cost or design constraints, or due to owner preference. Even if fully incorporated into the design, the contractor may jeopardize compliance by not meeting certain criteria during construction. The below credits have been selected as they are all considered low to medium risk of not being achieved, as long as they are incorporated from early design. If any of these credits are considered high risk for a project, it is strongly recommended that additional credits are targeted which may be more suitable.

| Category    | Credit                           | Points | Risk   |
|-------------|----------------------------------|--------|--------|
| Responsible | Industry Development             | 1      | Low    |
|             | Verification and Handover        | 1      | Medium |
|             | Responsible Products             | 4      | Medium |
| Healthy     | Clean Air                        | 2      | Medium |
|             | Acoustic Comfort                 | 2      | Medium |
| Resilient   | Climate Change Resilience        | 1      | Medium |
| Positive    | Upfront Carbon Emissions         | 1      | Low    |
|             | Energy Use                       | 3      | Low    |
|             | Other Carbon Emissions           | 2      | Medium |
|             | Water Use                        | 1      | Low    |
| People      | Inclusive Construction Practices | 1      | Low    |
| Total       |                                  | 19     |        |

The below are credits that may be targeted in addition or as alternate to those above. They mainly meet the same criteria but have been identified to be slightly higher risk, cost or design restrictive for some projects.

- Light Quality - Credit Achievement
- Thermal Comfort and Amenity Spaces – Credit Achievement

Both daylighting and thermal comfort may be assessed through energy modelling software to analyse the suitability of these credit criteria and in some cases may be easier to achieve than others on the above list.

# Credit List

The remainder of this guide outlines each of the suggested credits in more detail. This includes both the minimum expectations and the suggested credits. Note that while these are laid out separately above, minimum expectations and voluntary credits are treated the same in the detailed sections below.

Each credit page includes:

- Credit criteria
- An overview of what the credit aims to achieve
- Tips on how to achieve the credit
- List of additional resources that can be consulted

Note that all projects registering after May 2028 are also required to achieve the Grid Resilience credit. This has not been included here but will be added to future revisions. Several other credits have criteria that become more stringent over time. A note has been added to the relevant credits.



Image 2: Big Chill Ruakura Superhub– 4 Star Green Star Design and As-Built NZ v1.0 Built rating

# Industry Development

## Responsible

Credit number 1

**Recommend targeting 1 point out of 1 point in this credit.**

### Criteria

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|                    |         |                                                                                                                                                    |
|--------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Credit Achievement | 1 point | <ul style="list-style-type: none"><li>The building owner or developer appoints a Green Star Accredited Professional.</li></ul>                     |
|                    |         | <ul style="list-style-type: none"><li>The building owner or developer discloses the cost of sustainable building practices to the NZGBC.</li></ul> |
|                    |         | <ul style="list-style-type: none"><li>The building owner or developer markets the building’s sustainability achievements.</li></ul>                |

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### Overview

One of the main goals of the NZGBC and Green Star is to develop better practices within the industry, by upskilling professionals, promoting best practice, and continuous research into efficiencies, leading to more buildings being built to higher standards.

There are 3 aspects to this credit which are aimed at promoting and developing the industry knowledge and uptake of sustainable building practices. These aspects are engaging experienced professional to facilitate the design and certification process, marketing the achievement to educate the public and building stakeholders, and to provide financial feedback to allow the NZGBC to better understand the associated cost for Green Star projects.

Note that unlike all other credits, this one is reviewed internally by NZGBC staff and will not be shared with an external assessor. This protects any sensitive financial information from being shared with external parties.

### Considerations

#### Green Star Accredited Professional

Engage at least one Green Star Accredited Professional (GSAP) from the time or within one month of registration.

- Contract them to be part of the core project team for the duration of the project.
- Engage a GSAP with prior experience working on Green Star projects
- Be clear about the GSAP’s scope of work – this may be design and construction (recommended) or the role can be handed over to an experienced contractor GSAP.

It is strongly recommended that every project involves an experienced Green Star Accredited Professional (GSAP). Without that experience, the project will be at risk of missing some criteria, such as planning for the minimum expectation requirements during early design. This may jeopardize a rating being achieved. The majority of the technical implementation required for compliance will be completed by other consultants or the contractor, however a key part of demonstrating compliance is presenting the evidence to the NZGBC in a clear manner that allows for the criteria adherence to be verified by the independent assessor. Poorly presented documentation is one of the most common reasons for credits not being awarded. Without the involvement of a GSAP, there is a high risk that this role will not be clearly allocated or that insufficient time allowance is made to complete the submission.

When engaging a GSAP, it is important to be clear about the extent of the role you are expecting them to fulfil. For continuity it is beneficial to have a single GSAP throughout design and construction. Sometimes the role gets handed over to an experienced contractor to take over during construction. A scope and fee template is available to help engage a GSAP for the project. If using this guide, it may be possible to reduce some of the early optioneering work in the GSAP scope.

## Financial Transparency

This financial information is only to be used for NZGBC's market analysis and developing industry statistics around the cost of Green Star projects. As mentioned, this credit is assessed by NZGBC so the information will not be shared to external assessors.

- Fill out the *Green Star Financial Transparency disclosure template* – it covers design, construction, and documentation.
- Provide the information in Excel format, not a PDF
- Information should be readily available from the quantity surveyor (QS), eg documents and invoices.

## Marketing Sustainability Achievements

Showcasing your project/building and its achievements should be done for every project – this credit simply puts it into a common, clear format.

- Provide information that answers the questions in the submission form for a Green Star Case Study. The case study seeks information on the sustainability initiatives that the building targeted to enable it being featured on the NZGBC's website or complete the NZGBC case study.
- Make sustainability achievements available to its occupants and visitors.
- Display the Green Star certification in a location that is visible to the public or visitors

# Responsible Construction

## Responsible

Credit number 2

It is not suggested to target any points beyond the Minimum Expectation

### Criteria

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | <ul style="list-style-type: none"><li>• The builder or head contractor has an environmental management system in place to manage its environmental impacts on site.</li><li>• The builder or head contractor has an environmental management plan to cover the scope of construction activities.</li><li>• The builder diverts at least 40% of construction and demolition waste from landfill. The head contractor provides training on the sustainability targets of the building.</li></ul> |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

If not managed carefully, the construction process can have a significant impact on the environment. By putting the right systems in place, the contractor has the ability to limit these impacts.

### Considerations

#### Environmental Management System (EMS)

The head contractor must have one of the below EMS in place throughout the construction period.

< \$25m contract value - New South Wales EMS Guidelines, Enviro-mark Diamond or other recognised framework

> \$25m contract value - ISO 14001 audited and certified, BS 7750 or European Community’s EMAS

To mitigate risk, it is recommended to engage a contractor that has been audited and certified to one of these frameworks prior to construction. It is acceptable for accreditation to be gained during construction but only if no major non compliance was found and no significant changes to the contractors processes were required, that would have deemed operations to be non compliant during parts of the construction period.

#### Environmental Management Plan (EMP)

An EMP must be completed by the head contractor. An *Environmental Management Plan Guidance Template* is available to assist in creating the plan and will help ensure that the plan meets the credit requirements.

#### Waste Diversion

A minimum waste diversion rate of 40% of all construction and demolition waste must be achieved. This can be done by sorting waste into different waste streams on site, or by choosing a waste contractor that has facilities to separate combined waste. On site sorting tends to result in higher diversion and lower contamination rates but multiple bins may require additional space. Project

teams are encouraged to review the documents available at the *NZGBC Construction and Demolition Waste website* which includes a FAQ document to assist project teams.

Project teams are required to submit a Technical Question if their project location does not have the infrastructure to meet the 40% diversion threshold as this is minimum expectation, but exemptions may be granted under special circumstances if the project team can demonstrate they have diverted as much waste as is reasonably possible.

Projects in Auckland may choose to target the 70% construction and demolition waste diversion rates to achieve 1 point. Outside the Auckland region the infrastructure, such as recycling centres, may not be available to meet this threshold. To achieve the point, compliance with the *Green Star C&D Waste Reporting Criteria* must be demonstrated.

# Verification and Handover

## Responsible

Credit number 3

**Recommend targeting 1 point out of 1 point in this credit in addition to the Minimum Expectations**

### Criteria

|                     |         |                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil     | <ul style="list-style-type: none"><li>The building has metering and monitoring systems.</li><li>The building has set environmental performance targets, designed and tested for airtightness, been commissioned, and will be tuned.</li><li>The project team create and deliver operations and maintenance information to the facilities management and building users.</li></ul> |
| Credit Achievement  | 1 point | <p>In addition to the <i>Minimum Expectation</i>:</p> <ul style="list-style-type: none"><li>An independent level of verification is provided to the design, planning, commissioning and tuning activities by an independent commissioning agent.</li></ul>                                                                                                                        |

## Overview

It is important to design a building to operate efficiently, but ensuring that the building is operating as it should is equally important. The ‘performance gap’ in buildings from design to operations is well researched but there are ways to combat this.

Without the verification mechanisms in place, significant efficiencies may be lost through improperly tuned or commissioned systems. The criteria in this credit are intended to set the building up for success from the start but also to give the building operator the resources they need to continue that efficient operation throughout the life of the building.

## Considerations

### Metering and Monitoring

Metering and monitoring systems are essential to find leaks and abnormal energy consumption in buildings.

- One overall water or energy meter is not sufficient for catching these abnormalities, nor does it identify where they are
- If the building is under 1000sqm, a single meter may be sufficient as long as there is no equipment with an individual power consumption greater than 100kW
- Metering can also be useful for future NABERSNZ ratings, separating landlord and tenancy loads.

Retrofitting meters at a later stage can be expensive and disruptive to the building.

### Environmental Performance Targets

During design, performance targets must be set that can later be referenced by operations staff. This provides a point of reference that can be used to assess if the buildings actual operations is as expected or if inefficient operation or unexpected usage is resulting in higher than expected demand. These targets should be set early in design and may be based on preliminary modelling results or data from comparable building. There is no obligation for these targets to match final modelling results or real performance data.

## Commissioning and Tuning

This is the main commissioning and tuning process to get a building to operate as per the design.

- Commissioning specifications must be created during design to ensure the contractor has an understanding and obligation to carry out this process as part of the scope of work.
- Commissioning processes might not reflect actual operation so an ongoing tuning process is therefore required to assess operations based on seasonal and occupancy variations.
- A contract for a minimum of one year, allowing for quarterly tuning, must be in place. Both the services designer and contractor must be available for input for the duration of the tuning period.

Commissioning results are often the last piece documentation required to complete a Green Star submission. Ensure that this scope is clearly defined to avoid delays post occupancy.

## Airtightness

The key consideration for meeting this requirement is that this does not **just** require post construction testing of a buildings air tightness, but consideration from early design stages. It is therefore critical for a qualified professional to be engaged as early as possible. If seen purely as a testing exercise, air tightness will likely be an additional cost to the project. If it is taken into consideration during design, it may be factored into energy efficiency calculations and mechanical equipment sizing. This can then be weighed against and optimised with other design features to come up with an efficient solution. If a more airtight design allows for reduced equipment sizing, some or all of the cost of the testing may be offset.

An achievable air tightness target should be set during design. It is not a requirement for this target to be achieved during the testing phase, however if it is exceeded, the energy model must be updated to reflect the testing result which may result in a reduction of points.

## Operations and Maintenance Information (O&M)

Producing O&M manuals should be standard practice for all buildings. Additional assurance needs to be given that the information is presented that is accessible to relevant building stakeholders to allow users to understand and operate the building as intended. This must also include a building logbook.

## Independent Commissioning Agent (ICA)

In addition to the Minimum Expectations, it is recommended that the project engages an Independent Commissioning Agent (ICA) to meet the Credit Achievement. In most cases the ICA will help with meeting the minimum expectations and thereby reducing the risk of those requirements not being met. For projects with simple systems such as an unconditioned warehouse, this is likely not required and may offer limited benefit.

Note that projects valued at over \$20 million must also use the soft-landing approach to earn the point. As the industry is considered to be less familiar with this approach, larger projects may not want to target this credit.

# Responsible Resource Management

## Responsible

Credit number 4

**This is a Minimum Expectation. There are no points associated with this credit**

### Criteria

|                     |     |                                                                                                                                                                                                                                                                                                          |
|---------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>• The building is designed for the separation of waste and recovery streams</li><li>• The building provides a dedicated and adequately sized waste storage area(s)</li><li>• The building ensures safe and efficient access to the waste storage area(s)</li></ul> |
|---------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

Throughout the life of a building, waste will be generated from operations and occupants. Providing sufficient space for onsite waste separation can result in higher recycling and composting rates, reducing waste sent to landfill. An allowance must be made in the design to ensure enough space is provided for these bins.

### Considerations

Two pathways are available for this credit. The performance pathway requires the preparation of an Operational Waste Management Plan by a qualified waste professional. It is suggested that the Prescriptive Pathway is used, which does not require consulting with a waste specialist.

*A New Zealand Guide to Operational Waste* and the *Operational Waste Calculator* has been developed to assist with the waste area calculation. This provides step-by-step guidance to ensure appropriate allowances are made based on the building type.

Note that a waste contractor needs to be consulted to review the design. This should be the contractor that is most likely to be engaged for waste collection during the operational phase to ensure the layout is compatible with their waste removal equipment. If the project will use kerb side waste collection, this is not required.

# Responsible Product Framework

## Responsible

Credit numbers 6 to 9

**Recommend targeting 4 points out of the possible 13 points across these credits**

### Overview

Credits 6 to 9 in Green Star Buildings cover the responsible procurement of products and materials used in the construction of the building. Responsible procurement covers a wide variety of environmental and social impacts from water consumption during manufacture to modern day slavery in supply chains.

### Considerations

The use of sustainable products is a key aspect of any sustainable building and this has been acknowledged with the high number of points attributed to this category. As there are thousands of products available that may be procured from around the world, Green Star relies on independent product certifications – NZGBC does not provide products certifications.

A score, called a Responsible Product Value (RPV) is assigned according to which independent certifications a product has obtained. Green Star points are then earned based on what proportion of certified products are used within the building. Before specifying or procuring products, team members are encouraged to enquire about this score from their suppliers. To verify the score based on a combination of certifications, a *Responsible Products Score Checker* is available on the Green Building Council of Australia website.

Up to 13 points are available between the Responsible Structure, Envelope, Systems and Finishes credits, however some of these building components may not have a many products available that comply with the Responsible Products Framework. In particular, we would advise that the Systems category likely does not contain many compliant products at the time of this guide's release.

Across the remaining 3 categories, structure, envelope and finishes, it is recommended that 4 total points are targeted. We cannot lay out a specific path for each credit as the available products may vary by building typology, but procurement risk will be decreased through early engagement and consultation with contractors and suppliers. It would be considered very high risk to simply specify a Responsible Product Value that must be met. Not all building materials will have compliant products available. Specific strategies for each category are outlined below but it will be up to the project team to determine a combination of points most suitable to a specific building.

Please go to the NZGBC Responsible Products Programme webpage and view the short video and associated information for more detail related to this.

To demonstrate compliance, proof of purchase must be provided for the products for which an RPV is claimed. The total contract value, used to calculate the percentage of compliant products, can be confirmed through a QS estimate or bill of quantities.

It is important to ensure that the selected products certification is included in the design specifications. Contractors must be made aware how these certifications relate to points targeted so any alternates proposed meet those same standards.

# Responsible Structure

## Responsible

Credit number 6

Points Available: 5

### Criteria

|                    |             |                                                                                                                       |
|--------------------|-------------|-----------------------------------------------------------------------------------------------------------------------|
| Credit Achievement | 1<br>point  | <ul style="list-style-type: none"><li>20% of all structural components (by cost) meet a RPV of at least 10.</li></ul> |
|                    | 2<br>points | <ul style="list-style-type: none"><li>35% of all structural components (by cost) meet a RPV of at least 10.</li></ul> |

### Overview

This credit includes all load bearing and stability components including steel, timber and concrete.

### Considerations

In the structure category a large proportion of total cost may come from a single supplier. As compliant options are available, such as certified concrete and steel, these points are considered achievable in most situations. Projects with large amounts of FSC certified timber may also be able to reach this threshold.

When a significant portion of the building structure of an existing building is retained, this will not only benefit the project from an embodied carbon perspective, but these components will also be rewarded highly in this credit. The equivalent cost of a new product will need to be calculated and used to represent the reused product.

#### Key Materials

- Concrete - EPD (Product specific) + Declare Red List Free
- Steel - Eco Choice Aotearoa
- Timber - FSC
- Reused Products

# Responsible Envelope

## Responsible

Credit number 7

Points Available: 4

### Criteria

|                    |          |                                                                                                                          |
|--------------------|----------|--------------------------------------------------------------------------------------------------------------------------|
| Credit Achievement | 1 point  | <ul style="list-style-type: none"><li>15% of building envelope components (by cost) meet a RPV of at least 10.</li></ul> |
|                    | 2 points | <ul style="list-style-type: none"><li>30% of building envelope components (by cost) meet a RPV of at least 10.</li></ul> |

### Overview

This credit includes the elements that surround the building such a façade, external shading, insulation, suspended slabs and roofing.

### Considerations

This category contains the highest variability across different building types.

A building procuring a high proportion of curtain wall from overseas may find it difficult to find compliant products. Locally sourced components, depending on the façade type, may have better options available.

Industrial buildings are most likely to use these type of products but this may also apply to other typologies.

#### Key Materials

- Precast panels containing certified steel or concrete.
- Steel cladding used for roofs or walls – Ecochoice Aotearoa
- Batt insulation – EPD + Ecochoice Aotearoa

# Responsible Finishes

## Responsible

Credit number 9  
Points Available: 2 points

### Criteria

|                                                     |         |                                                                                                                                                                                                                        |
|-----------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Credit Achievement                                  | 1 point | <ul style="list-style-type: none"><li>40% of all internal building finishes (by cost) meet a RPV of at least 7.</li></ul>                                                                                              |
| In conjunction with the <i>Credit Achievement</i> : |         |                                                                                                                                                                                                                        |
| Exceptional Performance                             | 1 point | <ul style="list-style-type: none"><li>10% of all internal building finishes (by cost) meet a RPV of at least 12</li><li>or</li><li>60% of all internal building finishes (by cost) meet a RPV of at least 7.</li></ul> |

### Overview

This credit includes internal finishes such as flooring, plasterboard, paints, ceilings, partitions, doors and internal windows. Loose furniture is not included.

### Considerations

Unlike the category, finishes often contain many more smaller value contracts. Internal finishes include flooring, plasterboard, paints, ceilings, partitions, internal windows or similar. Although many compliant products are available, this comes with higher risk as individual contracts and trades may need to be managed to ensure the specified products are used.

#### Key Materials

- Plasterboard - EPD + Eco Choice Aotearoa
- Multiple paint suppliers - Eco Choice Aotearoa
- Multiple carpet suppliers - Cradle to Cradle
- Timber - FSC

# Clean Air

## Healthy

Credit number 10

**Recommend targeting 2 points out of the possible 2 points in addition to the Minimum Expectation**

### Criteria

|                     |          |                                                                                                                                                                                                                                 |
|---------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil      | <ul style="list-style-type: none"><li>• Levels of indoor pollutants are maintained at acceptable levels.</li><li>• A high level of outdoor air is provided.</li><li>• Pollutants entering the building are minimised.</li></ul> |
| Credit Achievement  | 2 points | <p>In addition to the <i>Minimum Expectation</i>:</p> <ul style="list-style-type: none"><li>• The building’s ventilation systems allow for easy maintenance.</li><li>• A high level of outdoor air is provided.</li></ul>       |

### Overview

High quality outdoor air provided to a space can help lower pollutant concentrations resulting in better indoor air quality which has been linked directly to improved health and productivity of occupants.

### Considerations

The minimum expectation requires the provision of outdoor air at 10% above minimum code requirements (NZS 4303).

To earn the Credit Achievement points, this must be increased to 60% above code. Note that increased ventilation rates will increase HVAC energy demand, which will make it more difficult to meet the Energy Use credit criteria.

Increased ventilation rates will likely require larger equipment and duct riser space.  
When retrofitting an existing building this space may not be available.

Supply air intakes must be located with sufficient separation from exhaust points to minimise the risk of pollutants being introduced into the building and degrading the indoor air quality. This includes openable windows. Special consideration must be given to industrial buildings with loading areas to ensure exhaust fumes are not introduced into the building. To provide high quality outdoor air for the life of the building, equipment must be maintained and filters changed regularly. It must therefore be demonstrated that equipment has been provided with sufficient access to perform those tasks.

In addition to reducing outdoor pollutants from entering the building, indoor pollutants must also be eliminated. Dedicated exhaust provisions must be in place for photocopy and cooking equipment.

# Acoustic Comfort

## Healthy

Credit number 12

**Recommend targeting 2 points out of the possible 2 points in addition to the Minimum Expectation**

### Criteria

|                     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil      | <ul style="list-style-type: none"><li>An Acoustic Report is prepared</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Credit Achievement  | 2 points | <p>In addition to the <i>Minimum Expectation</i>, a combination of the following subject to building type:</p> <ul style="list-style-type: none"><li>The building achieves maximum internal noise levels.</li></ul> <p>and/or</p> <ul style="list-style-type: none"><li>The building provides acoustic separation.</li></ul> <p>and/or</p> <ul style="list-style-type: none"><li>The building minimises impact noise transfer.</li></ul> <p>and/or</p> <ul style="list-style-type: none"><li>The building is designed with reverberation control.</li></ul> |

### Overview

Poor acoustic environments can be disruptive to the productivity and wellness of building occupants. This credit aims to reduce noise disruption from the exterior and between neighbouring spaces.

### Considerations

An acoustic consultant must be engaged to complete a qualitative analysis of the building design to ensure a basic level of acoustic quality is achieved within the building.

As the acoustic consultant will be involved to meet the minimum expectation, it is recommended to increase their scope to provide a design compliant with the Credit Achievement, thereby earning 2 points. This involves meeting more prescriptive acoustic targets, chosen from a list based on building typology and specific project priorities.

Some of the metrics are verified through design, while others require on site measurements. The acoustic consultant must be engaged for the complete scope of work. Testing must also be factored into the construction schedule as this should not be undertaken during times of high construction noise, but equipment that will be running during normal building operations must also be operating during testing.

# Exposure to Toxins

## Healthy

Credit number 13

It is not suggested to target any points beyond the Minimum Expectation

### Criteria

|                     |     |                                                                                                                                                                                                                                                                           |
|---------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>The building’s paints, adhesives, sealants, and carpets are low in TVOC; and,</li><li>The building’s engineered wood products are low in TVOC; and,</li><li>Occupants are not exposed to banned or highly toxic materials</li></ul> |
|---------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

Building materials can be a significant source of toxins that can be harmful to occupants. Total Volatile Organic Compounds (TVOCs) are a measure of those toxins. Material selection can reduce this harm resulting in healthier conditions for both construction workers and occupants.

### Considerations

To comply with the minimum expectation it must be demonstrated that all listed products are low in TVOC. This requires careful selection and specification of products that meet the relevant TVOC limits.

Product compliance can be demonstrated through lab test results or by selecting products with a compliant certification such as Eco Choice Aotearoa. A list of certifications is available in the *Exposure to Toxins certification scheme index* on the NZGBC website. Certified products have the added benefit of contributing to the *Responsible Finishes* credit.

Compliance with this criterion can also be met through an alternate path if the TVOC limits in the Credit Achievement are demonstrated through on site testing. It is noted that compliance with the Minimum Expectation through on-site testing may add significant risk to the projects Green Star eligibility. If VOC limits are exceeded during testing, and product compliance has not been demonstrated through documentation, the Minimum Expectation will not be met and the project will not be eligible for a rating. A technical question should be submitted to the NZGBC to explain why the prescriptive requirements of this minimum expectation cannot be demonstrated.

If any portion of an existing building is being reused, a hazardous materials survey must be carried out to identify if any asbestos, lead or PCBs are present.

# Thermal Comfort and Amenity Spaces

## Healthy

Credit number 14

**It is not suggested to target any points beyond the Minimum Expectation**

### Criteria

|                     |     |                                                                                                                                                                                             |
|---------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>A high degree of thermal comfort is provided to occupants in the space, by ensuring operative temperature is maintained within a set range.</li></ul> |
|---------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

Thermal comfort plays a key role in the usability, wellbeing and productivity of occupants. This includes factors beyond just air temperature that contribute to a building users perception of comfort with a space, such as cold surfaces and draughts. Thermal comfort has links to occupant wellbeing and productivity.

### Considerations

Compliance with this credit typically involves computer simulation of these factors, usually done as part of the energy model. Meeting the requirements may require design changes, especially in buildings that are naturally ventilated or have large amounts of glazing. Preliminary modelling will reduce the risk of having to make those changes in later design.

Unless the project intends to target the higher levels of thermal comfort in the Credit Achievement, it is recommended that the Operative Temperature pathway is used to demonstrate compliance with the minimum expectation. This is a simplified approach, compared to the PMV modelling which can be assessed within the energy model.

An additional point is available in this credit for providing dedicated amenity spaces such as parent/relaxation/prayer/exercise rooms. Some buildings may include this as standard in their designs so may be eligible for the point.

# Climate Change Resilience

## Resilient

Credit number 16

**Recommend targeting 1 points out of the possible 1 points in addition to the Minimum Expectation**

### Criteria

|                     |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil     | <ul style="list-style-type: none"><li>The project team completes the climate change pre-screening checklist. The project team must communicate the building’s exposure to climate change hazards, and any identified risks to the client/building owner.</li></ul>                                                                                                                                                                                            |
| Credit Achievement  | 1 Point | <p>In addition to the <i>Minimum Expectation</i>:</p> <ul style="list-style-type: none"><li>A project-specific Climate Change Risk Assessment has been developed and implemented in accordance with a recognised standard.</li><li>A Climate Adaptation Plan has been developed and implemented, including solutions for the building design and construction that specifically address key risks identified in the Climate Change Risk Assessment.</li></ul> |

### Overview

Climate Change may expose a building to increased risk over its lifespan such as from sea level rise and flooding. Where and how a building is built, may impact future maintenance cost, ability to occupy, or the need to replace a building before its expected end of life. Being aware of these risks and designing for these scenarios will make the building more resilient.

### Considerations

The minimum expectation only requires the completion of a pre-screening checklist, but this is not required if the Credit Achievement is targeted. Climate Adaptation Plans are becoming more common in the industry as extreme weather events raise awareness around climate risks. A comprehensive *Guidance for Climate Change Risk Assessment & Adaptation Planning* document is available to assist the project team in creating an adaptation plan. This guide helps to make sure the value of the assessment is maximised and if followed, will increase the likelihood of being done to a Green Star compliant standard

Larger organisations may have obligations to disclose their climate risks on an organisational level. This may contribute to this analysis, but a project specific assessment must be completed for this credit.

# Upfront Carbon Emissions

## Positive

Credit number 21

**Recommend targeting 1 point out of a possible 8 points**

### Criteria

|                     |          |                                                                                                                                                   |
|---------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil      | <ul style="list-style-type: none"><li>The building's upfront carbon emissions are at least 10% less than those of a reference building.</li></ul> |
| Credit Achievement  | 1 point  | <ul style="list-style-type: none"><li>The building's upfront carbon emissions are at least 15% less than those of a reference building</li></ul>  |
|                     | 2 points | <ul style="list-style-type: none"><li>The building's upfront carbon emissions are at least 20% less than those of a reference building</li></ul>  |

### Overview

Up to half of a building’s life time emissions may occur before the building ever gets occupied. This is largely attributed to the mining, processing and manufacturing of products that are used for buildings. This credit therefore covers these ‘upfront’ emissions from the products and materials used in the building’s construction.

### Considerations

A minimum upfront carbon reduction of 15% should be targeted which is achievable in most cases by procuring lower carbon product alternatives. Focus should be placed on high carbon building components, such as specifying low carbon steel or cement replacements. This should be done in collaboration with the structural engineer and product supplier to select a product solution suitable for the project and location. Some low carbon products may have longer lead times, which must be factored into procurement schedules. To safeguard against procurement changes during construction, it is recommended that a 20% reduction is targeted, especially during early design assessments. This safety factor may be reduced once the contractor is involved and provides specific procurement and material availability insight.

Up to 8 points are available for higher reductions. Significantly larger reductions may easily be achievable when a portion of the building is existing and reused.

The NZGBC has created an embodied carbon calculator, methodology and guide to facilitate these calculations. A dedicated embodied carbon masterclass is available and has been completed by over 300 attendees, greatly upskilling the industry

The minimum required reduction becomes more stringent over time and increases from 15% for projects registered after May 2026, to 20% for projects registered after May 2028. As the industry progresses it is expected that more low carbon products will become available making it easier to achieve higher reductions.

Due to the high impact of building upfront carbon, buildings should not be demolished before their end of life. If the project site contains a building less than 50 years old that is demolished to allow for construction of the new building, its embodied carbon must be offset.

# Energy Use

## Positive

Credit number 22

**Recommend targeting 3 points out of a possible 7 points**

### Criteria

|                     |          |                                                                                                                           |
|---------------------|----------|---------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil      | <ul style="list-style-type: none"><li>The building's energy use is at least 10% less than a reference building.</li></ul> |
|                     | 1 point  | <ul style="list-style-type: none"><li>The building's energy use is at least 20% less than a reference building.</li></ul> |
| Credit Achievement  | 2 points | <ul style="list-style-type: none"><li>The building's energy use is at least 25% less than a reference building.</li></ul> |
|                     | 3 points | <ul style="list-style-type: none"><li>The building's energy use is at least 30% less than a reference building.</li></ul> |

### Overview

Buildings are responsible for very large proportions of energy use globally and in New Zealand. Energy use optimisation results in lower operating cost and emissions as well as lower risk to energy cost fluctuations.

### Considerations

It is suggested that at least 3 points are targeted for a 30% energy reduction in annual operational energy use. Up to 7 points are available for higher energy reductions. Note that 30% also becomes the minimum required reduction for all projects registering after May 2028.

This reduction is in relation to a reference building which uses a code minimum building fabric, code compliant lighting, and an electric boiler for heating. Relative reductions are achieved by optimising the building fabric and specifying efficient services such as heat pumps and improved operational controls.

Both passive and active design solutions should be considered. Cooling loads may be reduced by upgrading window glass specifications and providing shading to minimise solar gains. If the building is designed with a high-performance envelope, it is recommended that the energy model is also assessed for peak energy loads. A reduction in peak load that helps reduce strain on the electricity grid, may be rewarded in the *Grid Resilience* credit.

As the reference building assumes an electric boiler for heating (efficiency = 1), by specifying a heat pump system (efficiency = 2+) especially in a heating dominated building, significant savings may be achieved.

For lighting systems, control strategies such as occupancy sensors and timers should be considered.

Buildings with large roof areas, such as warehouses, may be able to reduce their energy use significantly by including photovoltaic (PV) solar panels.

Details on how to carry out energy modelling for Green Star can be found in the NZGBC Energy Use Calculation Guide.

An *Accredited Energy Modeller (AEM)* certification is available for modellers that have demonstrated a knowledge and experience in the Green Star modelling criteria. A model submitted by an AEM is subject to less review thereby lowering the risk of the points not being awarded.

# Energy Source

## Positive

Credit number 23

It is not suggested to target any points beyond the Minimum Expectation

### Criteria

|                     |     |                                                                                                                                                                                                                  |
|---------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>The building provides a Zero Carbon Action Plan.</li><li>100% of the building’s <b>energy</b> is supplied from electricity or other sources of renewable energy.</li></ul> |
|---------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

Eliminating fossil fuel use in buildings is one of the easiest ways to reduce emissions. Rising cost and supply uncertainty of fossil fuels also adds risk to the building’s operation.

### Considerations

It is a minimum requirement for all buildings to use no fossil fuels for heating, hot water or cooking. Although this is easily achieved for most building types and fully electric options are readily available, it must be clearly communicated to building stakeholders to ensure their expectations are met.

This credit also requires creating a Zero Carbon Action Plan, unless the *Other Carbon Emissions* credit is also met. This credit is included below, but if the project team chooses not to target it, a plan will need to be created on how high impact refrigerants can be phased out over time.

Although only the Minimum Expectation is included in this pathway, points may be earned in this credit through on-site renewables. This may be readily achievable for some building types, such as warehouses with large roof surfaces available for solar panels. Up to 2 points are available if 20% of electricity is generated from on-site renewables. The benefit of onsite renewables may be double counted as they will also contribute towards the Energy Use credit.

Fossil fuel use for emergency backup power is permitted.

# Other Carbon Emissions

## Positive

Credit number 24

**Recommend targeting 2 points out of a possible 2 points**

### Criteria

|                    |          |                                                                                                                                                                   |
|--------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Credit Achievement | 2 points | <ul style="list-style-type: none"><li>The building owner minimises the impact of refrigerant leakage and offsets remaining emissions from refrigerants.</li></ul> |
|--------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

When released to the atmosphere, some refrigerants can be thousands of times more harmful than other greenhouse gases. Careful consideration for the type and quantity of refrigerants used will not only reduce that harm but also limit the risk of high cost and availability uncertainty when refrigerants have to be replaced throughout the life of the building.

Note that the Credit Achievement becomes mandatory for all projects registering after May 2028.

### Considerations

This credit is about limiting potential emissions associated with refrigerants being released into the atmosphere. The impact is calculated based on the type and quantity of refrigerants used in the project, and leakage rates commonly attributed to the type of equipment used. A calculator is provided to calculate the impact based on these factors.

Typically the largest factor is the global warming potential (GWP) of the refrigerant, which can vary significantly. Commonly used refrigerants are R410a (GWP=2088), R32 (GWP=675) and R290 (GWP=3). Note that not all of these will be available in all system and equipment types so this must be discussed with mechanical engineer and equipment supplier. Note that some low GWP refrigerants have higher flammability ratings requiring additional design intervention.

Quantity is also very dependent on the type of system. Some systems will have only a small charge isolated to a single piece of equipment, while others will have a much higher charge piped throughout the whole building.

To achieve the maximum benefit, it is recommended that all sustainability attributes are considered and incorporated as early as possible during the design stage. It will always be more difficult, if not impossible, to make changes during construction. If for unforeseen reasons, the project finds itself short of points and cannot make the adjustments needed to achieve the targeted credits, there are two additional Exceptional Performance points available in this credit. This involves offsetting all emissions from *Upfront Carbon (Credit 22)* and *Energy Use (Credit 23)*. As this does not impact the building design, it is one of the few credits that may be added retroactively without design or construction implications. Note that depending on the building, this may have significant financial implications without direct benefit to the building itself. However, if an organization has net zero ambitions that already involve offsetting emissions, this may not be an additional cost.

# Water Use

## Positive

Credit number 25

**Recommend targeting 1 point out of a possible 6 points**

### Criteria

| Minimum Expectation | Nil     | Sleeping area <50% of the GFA                                                                                              | Sleeping area ≥50% of the GFA                                                                                              |
|---------------------|---------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|                     |         | <ul style="list-style-type: none"><li>The building uses 15% less potable water compared to a reference building.</li></ul> | <ul style="list-style-type: none"><li>The building uses 10% less potable water compared to a reference building.</li></ul> |
| Credit Achievement  | 1 Point | <ul style="list-style-type: none"><li>The building uses 25% less potable water compared to a reference building.</li></ul> | <ul style="list-style-type: none"><li>The building uses 20% less potable water compared to a reference building.</li></ul> |

### Overview

Buildings are major users of potable water. Lowering water demand will reduce operational cost and infrastructure and resource requirements associated with supplying water to buildings. Buildings with sleeping areas such as hotels and age care facilities may find it more difficult to reduce demand, so a lower threshold applies to those typologies.

### Considerations

It is suggested that 1 point is targeted under this credit, although up to 6 points are available for higher reductions. This level of reduction is suggested as it should not require incorporating rainwater or grey water harvesting systems and can be met by specifying low flow plumbing fixtures. The reduction achieved is in relation to a standard practice reference building.

A 25% reduction in potable water use, can be achieved by:

- Optimising the hydraulic design to reduce dead legs or reduce pipe diameters, to limit the amount of time required for hot water to reach fixtures.
- AND
- Specifying fixtures with the below WELS star ratings

| Fixture | WELS rating |
|---------|-------------|
| Toilets | 4           |
| Urinals | 6           |
| Taps    | 6           |
| Showers | 3           |

Note that the potable water calculator must be used based on specific building conditions and usage and this is a simplified example of water usage that would be typical of an office building. Other typologies may have more complex water use cases including pools, washdown areas, cooling towers and irrigation. It is always recommended to use planting that does not require active irrigation as this may significantly increase water use unless rainwater harvesting is included.

Details on how to calculate the water use for Green Star can be found in the *NZGBC Potable Water Calculator Guide*.

# Movement and Place

## Places

Credit number 27

It is not suggested to target any points beyond the Minimum Expectation

### Criteria

|                     |     |                                                                                                                                                                                                                            |
|---------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>The building includes showers and changing facilities for building occupants.</li><li>The facilities are accessible, inclusive, and located in a safe and protected space.</li></ul> |
|---------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Overview

The transportation sector is a major source of emissions. Although the building owner may not be in direct control of reducing these, putting in place facilities that encourage and facilitate alternative transport modes, may result in lower car dependence for occupants. Health and wellbeing benefits are also linked to active transport methods.

### Considerations

The minimum expectation requires only that showers and changing facilities are provided for occupants. A more detailed transport analysis and strategy that reduces car use is required to earn points. This will be more achievable for projects in urban locations with access to public transport.

Showers must provided as per below and to be minimum 900x900mm. Showers required to meet statutory accessibility requirements do not count towards the total, unless the building is less than 600sqm or for industrial buildings where the office portion is less than 600sqm. In addition, 1 locker must provided per every 8 occupants.

| Occupants | Showers              |
|-----------|----------------------|
| 0-49      | 1                    |
| 50-99     | 2                    |
| 100-200   | 4                    |
| 200+      | Additional 1 per 200 |

Access for pedestrians (from the site boundary and between buildings) to the Changing Facilities entry must be:

- Separate/distinct from vehicle ingress/entries;
- Free from steep gradients;
- Provided with appropriate surface grip; and
- Clearly signed across the site.

# Inclusive Construction Practices

## People

Credit number 31

**Recommend targeting 1 point out of the possible 1 point in addition to the Minimum Expectation**

### Criteria

|                     |         |                                                                                                                                                                                                                                                                                                                                         |
|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum Expectation | Nil     | <ul style="list-style-type: none"><li>During the building’s construction, the head contractor provides inclusive facilities and protective equipment. The head contractor also installs policies on-site to increase awareness and reduces instances of discrimination, racism, and bullying.</li></ul>                                 |
| Credit Achievement  | 1 point | <ul style="list-style-type: none"><li>Policies and/or programs implemented are relevant to construction workers on site.</li><li>The head contractor provides high quality staff support on-site to reduce at least five key physical and mental health impacts.</li><li>The effectiveness of the interventions is evaluated.</li></ul> |

### Overview

This credit aims to reduce discrimination on sites and ongoing education to construction workers. By providing facilities and policies, a more inclusive atmosphere can be created on sites.

### Considerations

At a minimum the head contractor must provide gender neutral/inclusive bathrooms and PPE for diverse body types AND Implement:

- Policies to address discrimination
- Procedures in case of policy breaches

Training on the above must be provided to 95% of all workers on site

For the additional point, the head contractor provides programmes on site to address mental and physical health issues. A list of issues is provided in the Submission Guidelines. A needs analysis may be conducted to identify additional items not included in the list, but is not required if a topic is selected from the provided list At least five issues must be addressed including at least one physical and one mental health issue. A report must be provided evaluating the program’s effectiveness and areas that can be improved. It is recommended that training is incorporated into site inductions or tool box talks to ensure a high proportion of workers are exposed to the training.

# Impacts to Nature

## Nature

Credit number 35

It is not suggested to target any points beyond the Minimum Expectation

### Criteria

|                     |     |                                                                                                                                                                                                            |
|---------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |     | <ul style="list-style-type: none"><li>The building was not built on, or significantly impacted, a site with a high ecological value.</li></ul>                                                             |
| Minimum Expectation | Nil | <ul style="list-style-type: none"><li>The building’s light pollution has been minimised.</li><li>There is ongoing monitoring, reporting, and management of sensitive ecosystems within the site.</li></ul> |

### Overview

This credit aims to reduce the impact of the building on the natural environment. Buildings should not be directly responsible for destruction of land with high ecological value. Light spilling from a site to neighbouring areas can also be disruptive to wildlife. This can be mitigated by ensuring exterior lighting is pointed downward to limit sideways and upwards spillage.

### Considerations

Only the minimum expectations, which is designed to limit harm on the natural environment surrounding the building, has been included here. Projects with larger sites and extensive landscaping are encouraged to review the other Nature category credits.

#### Site Ecological Value

Buildings may not be built on highly productive land or result in the clearing of native forest or native wetlands, lakes or rivers. If any sensitive ecosystems are present within 100 meters of the site, a protection management plan must be prepared by a qualified ecologist. A *Sensitive Ecosystem Management Plan* must be prepared to monitor the ecosystem for a minimum of five years.

Note that if it can be demonstrated that the site was previously developed and is not in close proximity to sensitive ecosystems, an ecologist report is not required.

#### Light Pollution

Light pollution to both neighbouring bodies and the night sky must be limited. The lighting design must incorporate appropriate features to limit the impact on surrounding areas of light spillage. This is achieved by selecting and installing lighting fixture that focus the majority of the light output downwards. In addition to external lighting, light fixture inside glazed atria are also included in this scope.

Note that different lighting conditions apply based on the type of zone the building occupies as defined by NZS 4282. If the building is adjacent to a different category, the more stringent conditions present at the boundary apply.

Note that curfew and non-curfew conditions might exist for the site and compliance with each must be met. For example, the Auckland Council curfew is 10pm to 7am. Refer to local authority for curfew times.