# Adaptation and Resilience

### Credit 3

### Design Review Submission As Built Submission

|  |  |  |  |
| --- | --- | --- | --- |
| Total Points available: | 3 | Points claimed: | [#] |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Criteria | Description | Points Available | Points Claimed |
| **3.1** | **Implementation of a Climate Adaptation Plan** | A project specific climate adaptation plan has been developed in accordance with a recognised standard; and  Solutions have been included into the building design and construction that specifically address the risk assessment component of the adaptation plan. | 2 | [#] |
| **3.2** | **Earthquake Resilience** | The project implements strategies to mitigate the impact of earthquake and seismic movement over the life of a building. | 1 | [#] |

## Project-specific technical questions (formerly tcs and cirs)

|  |  |
| --- | --- |
| There are no project-specific technical questions for this credit. |  |
| There are project-specific Technical Questions for this credit and all responses received from the NZGBC are attached. |  |

3.1 Implementation of a Climate Adaptation Plan

### 3.1.1 Climate Adaptation Plan

|  |  |
| --- | --- |
| A Climate Adaptation Plan specific to the project has been developed and, as a minimum, meets the Compliance Requirements under 3.1.1. |  |
| The Climate Adaptation Plan was developed by a suitably qualified professional as detailed in the Compliance Requirements and their CV is attached. |  |

Identify where this information can be found within the supporting documentation provided.

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
| [####] | [####] |

### 3.1.2 Developing climate change scenarios

The scenarios used in the climate adaptation plan were sourced from Intergovernmental Panel on Climate Change (IPCC) endorsed Global Circulation Models (GCMs) which includes the National Institute of Water and Atmospheric Research (NIWA) climate projections. The following standard(s) were used:

|  |  |
| --- | --- |
| *ISO 31000-2009 – Risk Management – Principles and Guidance*; |  |
| *The AGO’s Climate Change Risks and Impacts: A Guide for Government and Business.* |  |
| A more detailed climate modelling software |  |

Where more detailed climate modelling software has been used, please detail and provide evidence that this source of information/modelling software is IPCC endorsed.

Identify where this information can be found within the supporting documentation provided.

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
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### 3.1.3 Recognised Standards

The climate adaptation plan has been developed in line with the recognised standards below.

|  |  |
| --- | --- |
| ISO31000-2009– Risk Management – Principles and Guidance; AND  Climate change effects and impacts assessment: A guidance manual for local government in New Zealand, May 2008. |  |

### 3.1.4 Risk Assessment

|  |  |
| --- | --- |
| **Minimum information included in Climate Adaptation Plan** | **Page or chapter reference(s) in the plan** |
| The assessment of climate change impacts has addressed two time scales relevant to anticipated building lifespan for the primary effects of temperature, precipitation and sea-level rise. |  |
| The risk assessment has also considered the secondary effects of relative humidity, drought/flood, wind, cyclones and bushfire. |  |

Identify where this information can be found within the supporting documentation provided.

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
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### 3.1.5 Implementation of the Climate Adaptation Plan

|  |  |
| --- | --- |
| At least two risk items identified in the risk assessment component of the climate adaptation plan have been addressed by specific design responses. |  |
| All risk items identified as ‘high’ or ‘extreme’ have been address by specific design responses. |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk** | **Classification (e.g. high, extreme…)** | **Design Response** | **Page or chapter reference(s) in plan** | **Supporting As-Built Document** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Identify where this information can be found within the supporting documentation provided.

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
| [####] | [####] |

Provide details of two risk items that have been addressed by a specific design response.

Provide an outlined of any ‘high’ or ‘extreme’ risks that have been identified.

Please provide an outline of the specific design responses.

Identify where this information can be found within the supporting documentation provided.

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
| [####] | [####] |

3.2 earthquake resilience

One additional point is available to projects that implement strategies to mitigate the impact of earthquake and seismic movement over the life of a building. The criteria are listed as below:

|  |  |  |
| --- | --- | --- |
| **Low Damage Design (LDD) Analysis**  A Low Damage Design analysis has been undertaken by a suitably qualified professional, using an accepted industry guideline or standard. |  |  |
| **Summary Evaluation**  The project’s seismic performance has been evaluated against “standard practice” and a summary prepared demonstrating how the project achieves best practice. |  |  |
| The Low Damage Design analysis and Summary Evaluation were developed by a suitably qualified professional as detailed in the Compliance Requirements and their CV is attached. |  |  |

**Recognised Standards**

The LDD analysis has been developed in line with the recognised standard(s) below:

|  |
| --- |
| [####] |
| [####] |

|  |  |
| --- | --- |
| **Supporting Documentation** (Name / title / description of document) | **Reference** (Page no. or section) |
| [####] | [####] |
| [####] | [####] |

## DISCUSSION

Outline any issues you would like to highlight and clarify with the Certified Assessor(s).

## DECLARATION

I confirm that the information provided in this document is truthful and accurate at the time of completion.

Provide author details, including name, position and email address:

[Date]

––– **Report end** –––