# LIfe Cycle ASSESSMENT

### Credit 19A

### Design Review Submission ☐ As Built Submission ☐

|  |  |  |  |
| --- | --- | --- | --- |
| Total Points available: | 7 | Points claimed: | [#] |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Criteria** | **Description** | Points Available | Points Claimed |
| **19A.1** | **Comparative Life Cycle Assessment** | The project has completed a life cycle assessment which demonstrates a reduction against six environmental impact categories when compared to the reference building, and has demonstrated a reduction in environmental impact against the nominated environmental impact categories. | 6 | [#] |
| **19A.2** | **Additional Reporting** | Additional Life Cycle Impact Reporting | 1 |  |
| Material Selection Improvement | 1 |  |
| Construction Process Improvement | 1 |  |
| LCA Design Review | 1 |  |

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

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

19A.1 comparative life cycle assessment

|  |  |
| --- | --- |
| The project has undertaken a whole-of-building, whole-of-life comparative LCA using the [standard practice / actual] reference case option. |  |
| The LCA results for the project and reference building have been input into the *Green Star – Design & As Built LCA Calculator*, which is included within this submission |  |

The Reference Building used for LCA comparison of buildings was:

|  |  |
| --- | --- |
| A Standard Practice Reference Building |  |
| An Actual Reference Building |  |

Provide a short description of the project building.

Provide a short description of the reference building.

Provide a summary of the impact reducing initiatives that have been included in project design.

Describe the LCA methodology used to assess the project, with reference to the requirements outlined in section 19A.1.1 LCA Methodology in the Submission Guidelines.

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

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

### LCA CALCULATOR results

|  |  |
| --- | --- |
| Improvement in all impact categories for all modules is no worse than -10% | [Yes/No] |
| Cumulative impact reduction from all modules | [Insert value from calculator] |
| Cumulative impact reduction from all modules minus B6 | [Insert value from calculator] |
| Calculated points awarded | [Insert value from calculator] |

Identify where this information can be found within the supporting documentation provided, including input data for the *Green Star – Design & As Built LCA Calculator*.

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

### LCA practitioner and peer review Details

|  |  |
| --- | --- |
| Name and details of the LCA practitioner: |  |
| Summary of experience of the LCA practitioner: |  |
| Name and details of the Peer Reviewer: |  |
| Summary of experience of the Peer Reviewer: |  |

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

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

### Outcome of the Peer Review

|  |  |
| --- | --- |
| The peer review investigated whether:   * The LCA conforms to the requirements and intent of this credit, including (but not limited to) appropriateness of scope. * The Interpretation section of the LCA report explains the validity of any claims of LCA consideration in the design and construction of the building. * The methods used to carry out the LCA were consistent with ISO 14040 and 14044. * The methods used to carry out the LCA were scientifically and technically valid. * The data used were appropriate and reasonable in relation to the goal of the LCA. * The interpretations reflected the limitations identified and the goal of the LCA. * The LCA report is transparent and consistent. |  |
| The peer reviewer has confirmed that the LCA report reviewed is the same LCA report (including any revisions) that has been provided for assessment. |  |

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

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

19A.2 additional life cycle impact reporting

### additional LIFE CYCLE impact REPORTING

|  |  |
| --- | --- |
| Life cycle impacts for 5 additional categories have been reported in the *Green Star – Design & As Built LCA Calculator.* |  |

Identify where this information can be found within the supporting documentation provided, including input data for the *Green Star – Design & As Built LCA Calculator*.

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

### MATERIAL SELECTION IMPROVEMENT

|  |  |
| --- | --- |
| The project team achieved a material selection improvement following the first iteration of the project LCA. |  |

Describe how the first iteration of the project LCA contributed to improvement of material selection on an LCA basis. Please describe the original option, the alternative option and the decision-making criteria, quoting the nominated impact categories. Include consideration of hotspots in environmental impacts due to materials and evidence of peer review verification of this statement.

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

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

### CONSTRUCTION PROCESS IMPROVEMENT

|  |  |
| --- | --- |
| The project team achieved a construction process improvement following the first iteration of the project LCA. |  |

Describe how the first iteration of the project LCA contributed to improvement of the transport and construction process on an LCA basis. Please describe the original option, the alternative option and the decision making criteria, quoting the nominated impact categories. Include consideration of hotspots in environmental impacts due to transport and construction and evidence of peer review verification of this statement.

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

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

### LCA DESIGN REVIEW

|  |  |
| --- | --- |
| The project team implemented a continuous design review process informed by LCA. |  |

Describe how the project team implemented continuous design review informed by LCA. Include consideration of the following:

* First consideration of LCA-based impacts included in conceptual design discussions, evidenced by minutes of meetings with LCA expert/s present;
* First iteration of the LCA results presented to the building’s design team sufficiently early to influence design decisions;
* Subsequent iteration/s of LCA results and impacts of changes made having been reported to the design team; and
* Minutes of design review meetings reflecting the incorporation of LCA considerations in the design process.

Please describe the options considered and rationale for decisions which incorporate LCA considerations amongst other factors. Include reference to relevant content in the LCA report and evidence of peer review verification of this statement.

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

|  |  |
| --- | --- |
| **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** –––