# life cycle impacts: Steel

### Credit 19B.2

### Design Review Submission As Built Submission

|  |  |  |  |
| --- | --- | --- | --- |
| Total Points available: | 1 | Points claimed: | [#] |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Criteria** | **Description** | Points Available | Points Claimed |
| **19B.2A** | **Reduced Mass of Steel Framing**  **(Steel Framed Building)** | The mass of steel framing has been reduced when compared to standard practice | 1 |  |
| **19B.2B** | **Reduced Use of Steel Reinforcement**  **(Concrete framed building)** | The mass of steel reinforcement has been reduced when compared to standard practice | 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. |  |

19b.2 general

### Cost of steel Summary

|  |  |
| --- | --- |
| Total Cost of New Steel |  |
| Project Contract Value |  |
| Percent Value of Steel |  |

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

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

## 

## 19B.2A reduced mass of steel framing

|  |  |
| --- | --- |
| The project has specified high-strength steel to 95% of category A products and 25% of category B products. |  |
| The project has reduced the mass of steel framing by 5% when compared to a suitable reference building. |  |

### High Strength Steel

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| High Strength Steel Use - Summary | | | | |
| Type of steel | Steel Strength | Quantity (mass) | Steel Strength met?  Y/N | |
| Category A Products | | | | |
| **Roof sheeting** | **550MPa** |  |  | |
| **Wall sheeting** | **550MPa** |  |  | |
| **Profiled steel decking** | **550MPa** |  |  | |
| **Purlins** | **450MPa** |  |  | |
| **Girts** | **450MPa** |  |  | |
| **Light-steel framing systems\*** | **450MPa** |  |  | |
| ***Sub-total Category A steel*** |  | | [x] tonnes | |
| ***% of compliant steel*** |  | | [x]% | |
| Category B Products | | | |
| **Hot rolled structural steel sections (including plate)** | **350MPa** |  |  |
| **Cold formed sections (including hollow sections)** | **450MPa** |  |  |
| **Welded sections** | **400MPa** |  |  |
| ***Sub-total of Category B steel*** |  | | [x] tonnes |
| ***% of compliant steel*** |  | | [x]% |
| **Total quantity of structural steel specified for the project** | | | [x] tonnes |
| **Total % of compliant steel** | | | [x]% |

### Reduction in Mass of Steel Framing

Provide a description of the design initiatives that have been used to reduce the mass of structural steel framing in the project.

Provide description and justification of the reference case building.

Discuss how the reduction in steel framing has been achieved without changing the load path to other structural elements that are not steel.

|  |  |
| --- | --- |
| Reference Case Building Steel Mass | [x] tonnes |
| Project Steel Mass | [x] tonnes |
| % Reduction in Steel | [x]% |
| Qualified professional Name |  |
| Qualifications |  |

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

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

## 19B.2B reduced use of steel reinforcement

|  |  |
| --- | --- |
| The project has reduced the mass of steel reinforcement by 5% when compared to a suitable reference building. |  |

Provide a description of the design initiatives that have been used to reduce the mass of reinforcing steel in the project.

Provide a description and justification of the reference case reinforcing rates

Discuss how the reduction in steel reinforcing has been achieved without changing the load path to other structural elements that are not steel.

|  |  |
| --- | --- |
| Reference Case Building Steel Reinforcing Mass | [x] tonnes |
| Project Steel Reinforcing Mass | [x] tonnes |
| % Reduction in Steel Reinforcing | [x]% |
| Qualified professional Name |  |
| Qualifications |  |

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** –––