# acoustic comfort

### Credit 9

### Design Review Submission As Built Submission

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Name | Description | Points Available | Points Claimed |
| **9.1** | **Internal Noise Levels** | Internal ambient noise levels are suitable and relevant to the activity type in the room. This includes all sound generated by the building systems and any external noise ingress. | 1 |  |
| NA |  |
| **9.2** | **Reverberation** | The nominated area has been built to reduce the persistence of sound to a level suitable to the activities in the space. | 1 |  |
| NA |  |
| **9.3** | **Acoustic Separation** | The nominated enclosed spaces have been built to minimise crosstalk between rooms and open areas. | 1 |  |
| NA |  |

## 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. |  |

## General Information

Provide a description of the nominated area and all relevant internal and external noise sources.

Please justify if NA is claimed.

Provide a description of the design features that ensure that the credit criteria have been met.

If the building is mechanically ventilated, provide confirmation that the mechanical plant and associated equipment were fully operational when the testing was carried out.

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

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

## 9.1 Internal Noise Levels

Select one of the following compliance pathways:

|  |  |  |
| --- | --- | --- |
| **Mechanically Ventilated Spaces** | In the nominated area, ambient sound levels are no more than 5dB(A) above the lower figure in the range recommended in Table 1 of AS/NZ 2107:2016;  **OR** |  |
| **Naturally Ventilated Spaces** | In the nominated area, ambient sound levels are no more than 10dB(A) above the lower figure in the range recommended in Table 1 of AS/NZ 2107:2016. |  |
| Provide details and justification of any areas that have been excluded or claimed as Not Applicable for functional reasons. | | |

Complete the following table detailing noise levels as recorded by the Acoustic Consultant or Commissioning team:

|  |  |  |  |
| --- | --- | --- | --- |
| Summary Table | | | |
| Description of Area or Room | Space Type Definition | Acceptable sound limit (**AS/NZS 2107:2016)** | Actual Value |
| [e.g. Level 1 meeting room] | [e.g. office space] | [##] | [##] |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Please note: project teams may add more rows as required or use an attachment to display this information.

**Qualification of the acoustic consultant**

|  |  |
| --- | --- |
| A member of the Acoustical Society of New Zealand or equivalent international recognised body |  |
| A qualified staff member within an Association of Australasian Acoustical Consultants (AAAC) member firm |  |

Provide a description of how the measurements were conducted including selection of representative spaces and time periods.

|  |  |
| --- | --- |
| If the building is mechanically ventilated, the mechanical plant and associated equipment were fully operational when the tests were carried out. |  |

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

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

## 9.2 reverberation

|  |  |
| --- | --- |
| The reverberation time in the nominated area is below the maximum stated ‘Recommended Reverberation Time’ provided in Table 1 of AS/NZ 2107:2016. |  |

Provide details and justification of any areas that have been excluded or claimed as Not Applicable for functional reasons.

Please complete the following table detailing reverberation times as recorded by the Acoustic Consultant or Commissioning team:

|  |  |  |  |
| --- | --- | --- | --- |
| Summary table | | | |
| Description of Area or Room | Space Type Definition | Recommended Reverberation Time (**AS/NZS 2107:2016)** | Actual Value and Justification |
| [e.g. Level 1 meeting room] | [e.g. office space] | [##] | [##] |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Please note: project teams may add more rows as required or use an attachment to display this information.

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

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

## 9.3 acoustic separation

Provide details and justification of any areas that have been excluded or claimed as Not Applicable.

Select one of the following compliance pathways:

|  |  |
| --- | --- |
| **9.3A** Noise transmission between enclosed spaces has been addressed by the installation of partitions that achieve a weighted sound reduction index (Rw) of:   * At least 45; for all partitions fixed without a door, and/or are glazed partitions without a door; or * At least 40, for all partitions fronting a room (from an open plan area); or * At least 35; for all partition types that contain a door; and * At least 50 through floors between occupied spaces. |  |
| **9.3B** Noise transmission between enclosed spaces has been addressed by the installation of partitions that comply with Dw + LAeqT > X,  The sounds tests from which Dw have been measured in accordance with ISO 140-4:1998. The measurement was based on finished rooms, accounting for any carpets and acoustically absorbent ceilings specified. |  |
| **9.3C** *For residential spaces:*   * The inter-tenancy apartment construction to habitable areas result in airborne noise isolation standard of Rw+Ctr > 55; and * All inter-tenancy walls should include Discontinuous Construction as defined by the Building Code of Australia * Walls between apartments and public corridors results in airborne noise isolation standard of Rw > 55; and * The floor construction above habitable rooms and wet areas of adjacent dwellings (i.e. floor cover) results in an impact isolation standard of Ln,w + CI < 55.   Apartment entry doors include acoustic seals and achieve laboratory acoustic rating of Rw 30. |  |

Provide a description of how the measurements and calculations were conducted including selection of representative spaces and time periods.

Provide a description of the partitions that have been installed that address noise transmission between enclosed spaces.

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** –––