

The Highland Cinema

Complete

Area

Client

Architect

2020

UK Scotland

The Highland Cinema Limited

Dualchas Architects

Opened in 2020, the Highland Cinema is located in the town centre of Fort William and has two cinema screens, along with a cafe bar and covered terrace area to the front facing Cameron Square. Cinema 1 has a capacity of 109 and Cinema 2 has a capacity of 62.

Given its town centre location, residential dwellings are relatively nearby, closer than would often be the case for out-of-town cinema developments. We undertook a noise impact assessment as part of the planning process and advised the architects on the roof and external wall build-ups required to control cinema sound track noise to the environment.

Internally, the cinemas are directly adjacent to one another, separated by a twin-frame plasterboard partition which incorporates acoustically resilient ties between the metal frames to maintain a high sound insulation.



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Adjoining cinemas are often constructed using ‘box-in-box’ type constructions comprising floating floors or resiliently supported seating terraces, and suspended plasterboard ceilings. In this case, a separation joint was incorporated into the ground floor slab between the two plasterboard leafs of the separating wall to control horizontal sound transfer via the floor slab. Co-ordinating this separation joint early in the design with the structural engineers meant the cinema seating terraces could be fixed directly into the concrete slab, avoiding the complexity of resilient supports within the raked seating build-ups.



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Rather than suspending plasterboard ceilings below the roof structure, the ‘lids’ of the cinema boxes were constructed using plywood and plasterboard installed on top of the horizontal members of the steel roof structure, forming accessible attic spaces within the pitched roof areas above, and allowing for easier installation of the building services systems. Doing it this way required careful detailing at the interfaces of the cinema wallheads and the attic floors to control sound flanking transmission via the supporting structure. We advised the architects on the important design details required and visited the site at key times during the construction to ensure the details were understood and incorporated correctly.

A high level of sound insulation ($D_{nT,w}$ 69 dB and $D_{nT,63Hz}$ 49 dB) is achieved between the two cinemas, comfortably meeting modern-day cinema standards.

Supply and extract ducts serve the cinemas from high level via the attic spaces. Careful co-ordination of duct routes and locations of crosstalk attenuators ensure the background noise in the cinemas is low and sound insulation between cinemas is not compromised. We supported the building services engineers throughout the design and construction by advising on optimum duct routings, setting silencer performance requirements, and reviewing the proposals for AHUs, silencers, and grille selections.

The cafe bar has a pitched slatted timber ceiling, and the slats are spaced apart and overlaid with sound absorbent treatment. This minimises reverberation and makes it a comfortable space to host talks, presentations and other similar community events.

Angus MacDonald, the client and owner of The Highland Cinema said ‘*Sandy Brown did an excellent job with the acoustics, we are extremely happy with the sound proofing*’.