

Registered Acoustic Solutions
to Meet the Requirements of
Approved Document E

New Build - Light Weight Acoustic Solution

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Why Use a Cradle & Batten System Instead of Screed?

- Improves acoustic Performance
- Reliable method of harvesting Code Credits for improved sound insulation
- Removes the need for another Wet Trade that can cause delays in the building process
- Avoids remedial work due to laitances before floor finishes can be laid
- When installation is complete the floor is immediately ready for floor finishes
- Provides a level floor to 3mm accuracy (BS 8204: SR1)
- Provides a service void for future access
- Compatible with under floor heating, giving greater controllability
- Cradle under-carriage *guaranteed for 60 years*
- Sustainable and fully recyclable
- Versatility - flexible floor zones from 53mm to 300mm (larger zones are possible)



To consider in more detail the comparison between screed floors and the Cradle & Batten floor system please see the following pages.

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Floor screeds

Very often floor screeds are seen to be the most cost effective solution in masonry new build construction when looking to lay an acoustic floor. There are two types of screed that can be used, traditional sand cement screeds and liquid calcium sulphate screeds.

Disadvantages of using a screed solution

When using a sand cement screed, even if the floor is laid by a good screeder, the floor is likely to be uneven. This causes problems when you come to the final floor finishes. Very often a latex levelling screed is required which is very costly and causes unnecessary delays in the build program. Sand cement screeds also require long periods to dry out - generally they dry at 1mm per day. This means that most screeds take two months to dry out before floor finishes can be applied. Even after this period during the winter the moisture levels may not have dropped sufficiently. To lay floor finishes the relative humidity levels have to drop below 75% RH and during the winter this can be a challenge resulting in delays.

Liquid screeds generally leave a more level floor however you then have the problem after the drying process of the occurrence of laitance creating a hard white chalky residue on top of the screed. This creates a barrier between the concrete floor and the new floor finishes and therefore must be ground off before floor finishes can be applied. This process is arduous and can be very time consuming. The laitance should be removed in the early stages when it is weaker although this is not always practical. It can also result in a rough surface which then becomes an issue when laying some types of floor finishes.

Power floated concrete floors also have major problems with drying out. Because a surface hardener is used this acts as a seal for the moisture in the floor. These floors can sometimes take over 12 months to dry out properly.

Whatever screed you choose before the screed can be laid an acoustic resilient layer must be installed to all areas of the floor. This can be awkward and time consuming especially when shuttering is required around soil vent pipes before the resilient layer is carefully fitted around these areas. It is also necessary to install a flanking strip around the perimeter of the floor to be screeded. These flanking strips must be supported otherwise they will fold over and the screed flows over these perimeter strips causing points of contact with the structure. It is vital that the no part of the floor screed comes into contact with the structural floor or perimeter walls as this will cause points of contact resulting in a transmission of flanking sound which can cause sound tests failures. If this occurs the remedial costs can be very high and the delays on site significant.

Sustainability

It is also worth noting that screed also has limitations concerning sustainability and is not recyclable. In today's climate Architects and Housing Associations are looking for sustainable methods of construction.

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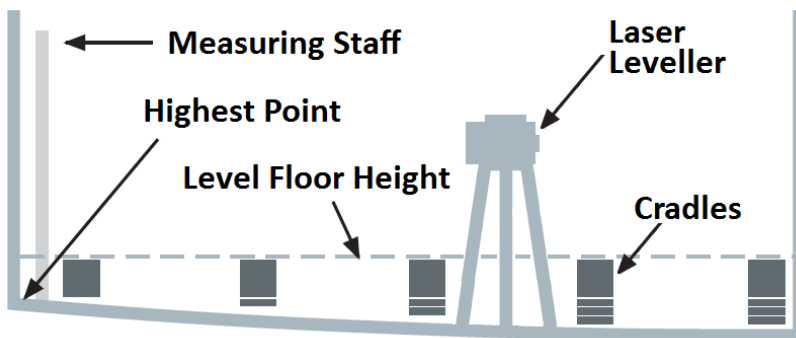
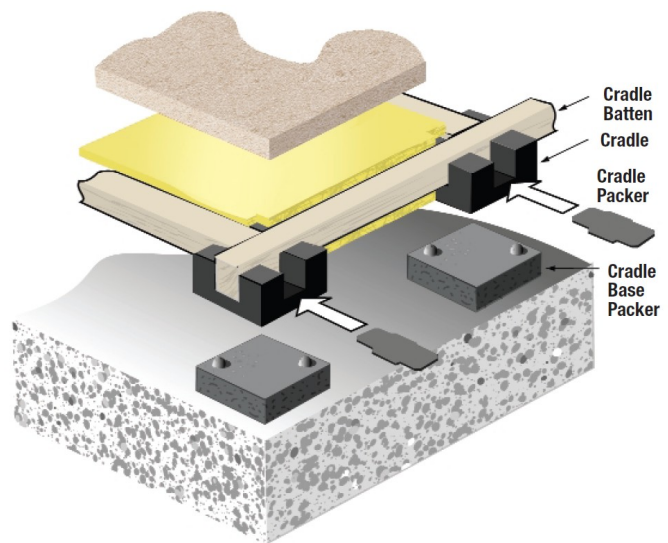
The benefits of using a light weight cradle & batten acoustic floor in preference to a screed solution

The InstaCoustic light weight cradle and batten acoustic floor provides a solution that has many advantages over a screed.

Firstly this solution is a dry system that voids another wet trade meaning that once the acoustic floor has been completed the floor is immediately ready for the floor finishes. This has the potential to speed up the build programme and protect against delays due to winter weather.

This system can also be used directly on top of a concrete plank structural floor without the need of a levelling screed. The InstaCoustic cradle and batten floor incorporates a levelling system that can be used to level even the most uneven structural floors. It can cope with a sloping gradient and also ridges that create steps in the floor. The levelling system consists of cradle base packers and cradle shims as seen in the diagram.

Because the floor system creates a void this can be used to house the services for each dwelling and access panels can be created to gain access in the future.



Please see InstaCoustics LABC Registered Acoustic Solutions for more information on the application of the Cradle & Batten floor system

Sustainability

The InstaCoustic cradle system uses cradles made from recycled lorry tyres with the added benefit of being completely recyclable after their useful life. The timber battens are sourced from sustainable sources therefore providing a system that has the highest environmental credentials being fully sustainable. This will aid the harvesting of credits under the Code for Sustainable Homes. This system also delivers a very high acoustic performance that has the potential to achieve 4 credits under the Code for acoustic performance in excess of the regulations.