



TECHNICAL INFORMATION BUILDING REGULATIONS :APPROVED DOCUMENT E “SOUND”

BACKGROUND INFORMATION.

January 2002 the Government published proposals for changes to the B. Reg. Part E. The proposals involved some of the most widespread changes ever seen for the Building Regulations

The main proposals involved :-

- 1). Changes to the performance criteria for walls and floors for sound insulation.
- 2). Introduction of “Pre-Completion Testing (PCT) for 10% of all new build dwellings and dwellings involving a “change of use”.
- 3). Introduction of sound insulation performance criteria and sound insulation testing for “rooms for residential purposes” (such as hotels and hostels).

The House Builders Federation suggested that to implement this change by July 2003 was impossible and an alternative method had to be devised.

The main questions were :-

- 1). There were insufficient Testing Stations to undertake the 10% of all new build testing.
- 2). To what changes in construction were needed to satisfy the new sound reduction criteria.

HBF offered to prepare a “pattern book” of Robust Standard Details (RSDs) which will comply to the new technical standards with a comfortable factor of safety.

RSD QUALIFICATION - AIRBORNE SOUND INSULATION

For constructions to qualify for RSD inclusion the separating walls and floors must have field measured evidence of airborne sound insulation achieving a mean value greater than or equal to $50 \text{ dB d(nTw)} + C(\text{tr})$ with no value below $47 \text{ dB d(nTw)} + C(\text{tr})$.

The $C(\text{tr})$ element is the additional factor from the previous Building Regulations which involved the “deep-base-thump” from music boxes! across a wide sound band width. The lower end of the band width which is difficult to detect using the “human ear” !

IMPACT SOUND TRANSMISSION

For constructions to qualify for RSD inclusion the separating floors must have field measured evidence of impact sound transmission achieving a mean

value greater than or equal to 57 dB L'(nTw) with no value higher than 60 dB L'(nTw).

For each type of construction a number of on-site tests had to be carried out by the construction industry .

Each construction type is required to have a minimum of 30 ample tests for inclusion within the RSD programme. Up to 8 measurements from any one site is possible.

THE RACE WAS ON !To obtain RSDs before January. 2004 Test results were to be issued on construction types which had as yet was unknown !. The PFF / CARTER CONCRETE LTD. carried out laboratory sound tests (under site conditions) for various floor types using the 150mm thick flooring. On the bases that if the 150mm thick flooring worked anything greater would also comply !

An assumption which did not necessarily prove to be correct.

AUGUST 2003, PUBLICATION OF DRAFT AMENDMENT OF THE BUILDING REGULATIONS TO ALLOW RSD@ TO BE USED AS AN ALTERNATIVE TO PRE-COMPLETION TESTING.....

Not issued until late December 2003 !

Shortly afterwards **Robust Details Ltd.** was formed and hence "Pre-Completion Testing" was not required if the contractor constructed elements in accordance with their RSD's.

Like the NHBC system, the developer would purchase the documents and register the site from Robust Details ltd.

WHAT ARE WE DOING NOW?

Carter Concrete Ltd products can be used with confidence as a solution to the separating floor to comply with Robust Details Ltd.:-

See enclosed Technical Sheets:-

Issue to Builders the type of floor constructions that have a good chance of passing the technical sound criteria under the Building Regulations "Pre-Completion Testing" method.

Provide construction details used in contracts to the "the Building Performance Centre" of the Robust Details Ltd, the management committee to obtain sufficient information to allow these construction types (Candidates for RSDs) to be accepted as RSDs.

As Robust Details Ltd are constantly monitoring sites and revising their construction elements contact our Engineer Robin Watts for the present status.