



**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

## A. Separating floors

Two methods of complying with Part E are available. Pre-completion testing which involves testing dwellings on site after completion or the use of Robust Details, which have been tested and proved to comply.

Dwelling type	Applicable method of compliance	
	Pre-Completion	Robust Details
Purpose built dwelling-houses and flats	✓	✓
Dwelling-houses and flats formed by material change of use	✓	-
Purpose built rooms for residential purposes (self contained flats)	✓	✓
Purpose built rooms for residential purposes (not self contained flats)	✓	-
Rooms for residential purposes formed by material change of use	✓	-
Schools	See page 3	
Offices and industrial buildings	See page 3	

### 1 Pre-completion testing

The procedure for pre-completion testing is as follows.

- Tests to be conducted on completed units, except for decoration
- One set of tests is required for every ten dwellings of the same construction type
- A set of tests comprises 2 airborne tests and 2 impact tests
- If any test fails by up to 2 dB, remedial work is required at the discretion of the Building Control
- If any test fails by 3 dB or more, remedial work and a re-test are required
- Pre-completion testing is for all floors, even those described in the Approved Document E

### 2 Robust details

These are details of floors and walls that have been extensively tested and proved to exceed the requirements of Part E. Robust details are exempt from the pre-completion testing. The procedure for using robust details is as follows:

- The robust detail is selected from the published Robust Details Handbook
- A registration form needs to be completed and sent, with the payment, to Robust Details Ltd
- A unique registration number is allocated to each plot
- The customer receives a purchase statement, which includes the plot registration number(s), a copy of the checklist for each robust detail and a compliance certificate for each plot.
- The purchase statement should be submitted to the building control body before work starts on the plot(s)
- A compliance certificate should be signed after the robust detail work is completed and passed to the building control body



**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

Robust Details: Dated April 2010 – see Robust Details website for current details

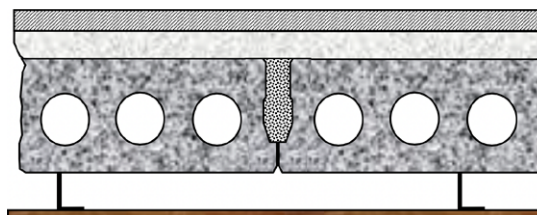
## E-FC-1

Floor finishes: FFT1, 2, 3, 4 or 5 (Refer to "Robust details Part E" handbook)

Directly bonded screed: 40 mm (min) sand cement or proprietary screed nominal 80 kg/m<sup>2</sup>.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>

Ceiling: CT1 to CT4 (Refer to "Robust details Part E" handbook)



## E-FC-2

Refers to cast in situ concrete slab.

## E-FC-3

Withdrawn.

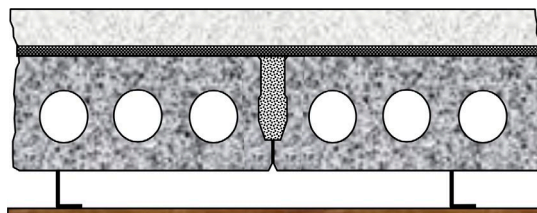
## E-FC-4

Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Resilient layer: 6 mm IsoRubber layer with IsoEdge flanking strip.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>.

Ceiling: CT0 to CT2 (Refer to "Robust details Part E" handbook)



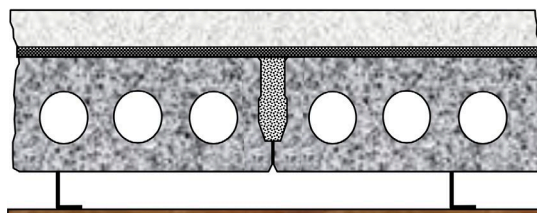
## E-FC-5

Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Resilient layer: YELOfon HD10+ layer with E-strip perimeter edging and J-strip tape.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>. Note: if using aircrete block separating walls a 200mm minimum slab thickness is required (Refer to "Robust details Part E" handbook).

Ceiling: CT0, CT1 & CT5 (Refer to "Robust details Part E" handbook)





**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

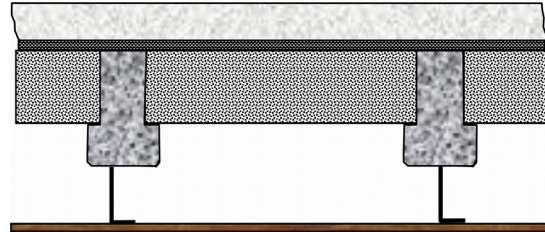
## E-FC-6 (Beam and block)

Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Resilient layer: 8 mm Regupol E48, dimple side down, over a 0.2 mm water proof membrane.

Precast beams: Min 100 mm dense concrete blocks and 50 mm concrete topping min C20, to give a minimum mass of 300 kg/m<sup>2</sup>. Min 300 mm wide precast concrete edge beams.

Ceiling: Min 300 mm drop from top of beam to ceiling board using metal frame system. 50 mm mineral fibre quilt (min 10 kg/m<sup>2</sup>) and one layer of plaster board (nominal 10 kg/m<sup>2</sup>).

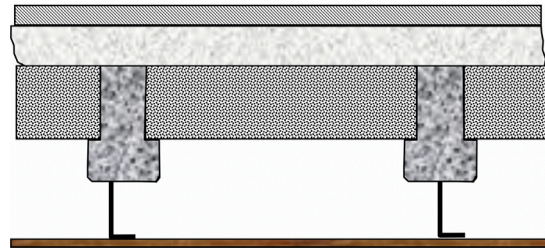


## E-FC-7 (Beam and block)

Floating floor: Suitable floating floors FFT1 or FFT3

Precast floor: Min 100 mm dense concrete blocks and 50 mm concrete topping min C20, to give a minimum mass of 300 kg/m<sup>2</sup>. Min 300 mm wide precast concrete edge beams.

Ceiling: Min 300 mm drop from top of beam to ceiling board using metal frame system. 25 mm mineral fibre quilt (min 10 kg/m<sup>2</sup>) and one layer of plaster board (nominal 10 kg/m<sup>2</sup>).



## E-FC-8

Floor covering: 4.5mm (min) bonded resilient floor covering.

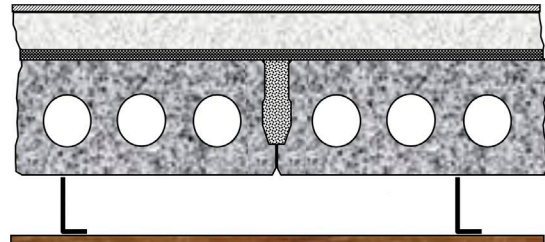
Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Isolating layer (1): 5mm foamed polyethylene layer with a mass of between 30-36 kg/m<sup>2</sup>.

Isolating layer (2): 25mm mineral wool batt with a minimum mass of 140 kg/m<sup>2</sup>, 25mm EPS (flooring grade SD) or extruded polystyrene insulation.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>.

Ceiling: CT0 & CT1 (Refer to "Robust details Part E" handbook)





**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

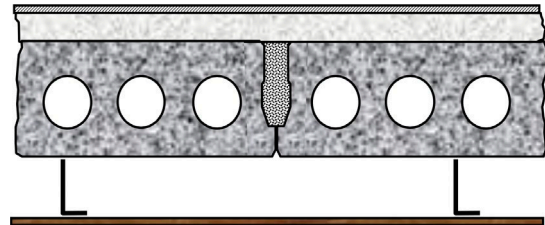
## E-FC-9

Floor covering: 3mm Thermal Economics IsoRubber Top bonded resilient floor covering.

Directly Bonded Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>.

Ceiling: CT0 & CT1 (Refer to "Robust details Part E" handbook)



## E-FC-10

Refers to cast in situ concrete slab.

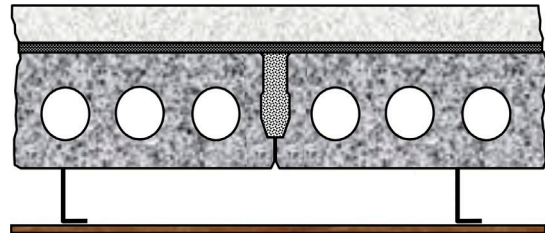
## E-FC-11

Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Resilient layer: 10 mm TRANQUIL.

Precast floor: A minimum 150 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>.

Ceiling: CT0 & CT1 (Refer to "Robust details Part E" handbook)



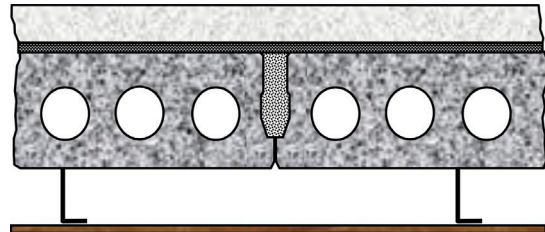
## E-FC-12

Screed: 65 mm (min) sand cement screed or 40 mm proprietary screed, nominal 80 kg/m<sup>2</sup>.

Resilient layer: 6 mm IsoRubber layer with IsoEdge flanking strip.

Precast floor: A minimum 200 mm deep hollow core units with a minimum mass of 300 kg/m<sup>2</sup>.

Ceiling: CT0 & CT1 (Refer to "Robust details Part E" handbook)



Further details are available at: [www.robustdetails.com](http://www.robustdetails.com)

Tel: 0870 240 8209



**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

## B. Internal floors

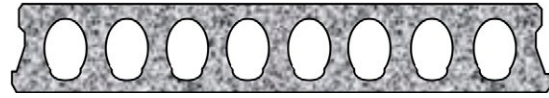
The normal way of satisfying the requirement for internal floors is to use constructions for new floors within a dwelling-house, flat or a room for residential purposes, which provide the laboratory minimum sound insulation of 40 dB. Test bodies conducting testing should preferably have a UKAS or European equivalent accreditation.

Tests on beam and block and hollow core floors have been carried out at the Building Test Centre in Loughborough. The results obtained are summarised below. Certification for these tests is available on request.

Test code	Floor type	Floor depth (mm)	Floor weight (kg/m <sup>2</sup> )	Sand/ cement screed (mm)	Ceiling	RW (dB)
13180A	Beam and block	150	186	-	Single layer plasterboard (8.02 kg/m <sup>2</sup> ) fixed to 50 x 50 timber battens at 1.2 m c/c	40
13182A	Beam and block	150	186	40	Single layer plasterboard (10 kg/m <sup>2</sup> ) fixed to 50 x 50 timber battens at 1.2 m c/c	49
13183A	Hollow core slab	150	236	-	-	53



Beam and block floor



Hollow core floor



**BISON PRECAST**

a Forterra brand

# TECHNICAL GUIDANCE NOTE

Building Regulations Part E - 20 November 2017

## C. Schools

Schools are dealt with in requirement E4 of Part E. The normal way of satisfying requirement E4, for schools, will be to meet the values of sound insulation, reverberation time and internal ambient noise which are given in Building Bulletin 93 'The Acoustic design of schools'. The preferred means of demonstrating compliance to the Building Control Body is to submit a set of plans, construction details, material specifications, and calculations, as appropriate for each area of the school, which is covered by Requirement E4 of the Building Regulations.

The requirements for floors are as shown below.

Basic floor	Floor finish	Ceiling
Solid concrete floor, hollow core floor with screed or beam and block floor with screed, with a minimum mass of 365 kg/m <sup>2</sup>	Soft floor covering > 5 mm thick	-
	Floating floor using resilient pads or strips	-
	Floating floor using continuous layers	-
	-	Proprietary metal ceiling system, 240 mm void, 100 mineral wool, 2 layers of dense plasterboard

Further information is available at: [www.teachernet.gov.uk/acoustics](http://www.teachernet.gov.uk/acoustics)

## D. Offices and industrial buildings

These are outside the scope of the Building Regulations Part E and therefore not affected by either the Robust Details or the Pre-Completion Testing.