

FIBOLITE

MAKING LITE OF PART E REGULATIONS

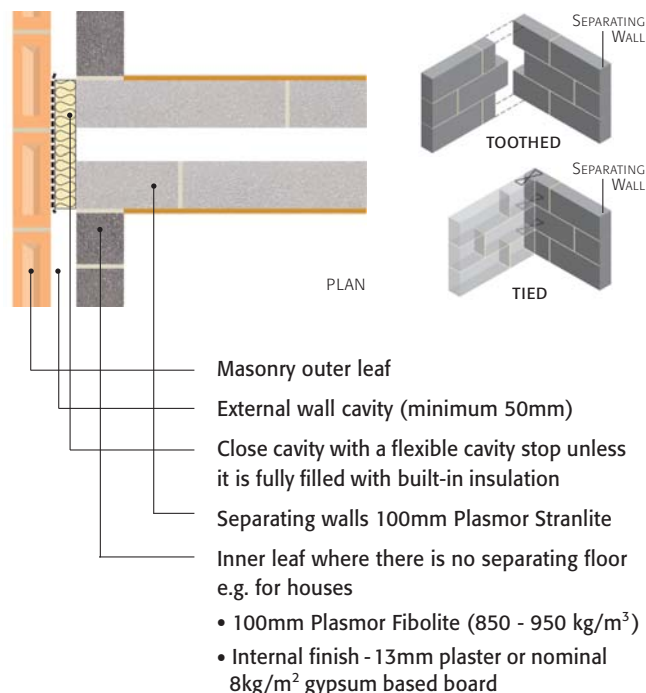
Recent amendments to **Robust Details Part E** (*Resistance to the Passage of Sound*) now permits the use of **Plasmor Fibolite blocks** in flanking walls in conjunction with **Plasmor Stranlite blocks** in the separating (*party*) wall. The amendments apply to **E-WM-2**, **E-WM-4** and **E-WM-11** wall types.

This revised regulation recognises the acoustic properties of **Fibolite blocks** in flanking wall applications and together with Fibolite's thermal performance, low moisture movement properties and its ultra lightweight, emphasises Fibolite as the building block of choice for the discerning specifier and builder.



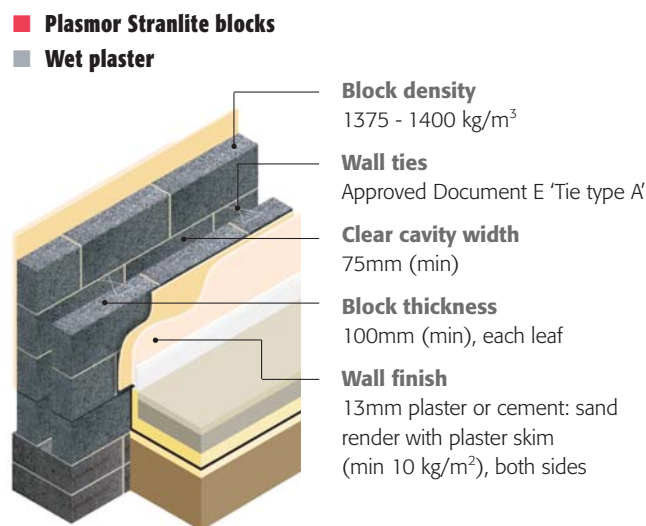
EXTERNAL (FLANKING) WALL USING PLASMOR **FIBOLITE** BLOCKS

E-WM-2



SEPARATING WALL USING PLASMOR **STRANLITE** BLOCKS

E-WM-2



External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

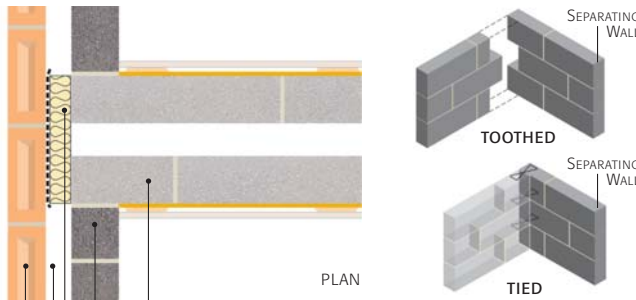
NOTE: Where there is a separating floor e.g. flats/apartments, the party floor is subject to pre-completion acoustic testing.

GOOD SITE PRACTICE

- Keep cavity and wall ties free from mortar dropping and debris
- Fully fill all blockwork joints with mortar
- Make sure there is no connection between the two leaves except for wall ties and foundations
- Keep any chases for services to a minimum and fill well with mortar

EXTERNAL (FLANKING) WALL USING PLASMOR **FIBOLITE** BLOCKS

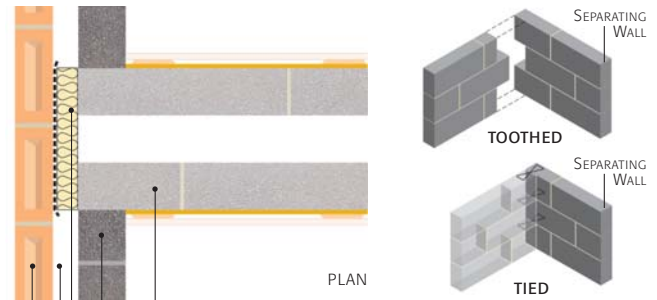
E-WM-4



- Masonry outer leaf
- External wall cavity (minimum 50mm)
- Close cavity with a flexible cavity stop unless it is fully filled with built-in insulation
- Separating walls 100mm Plasmor Stranlite
- Inner leaf where there is no separating floor e.g. for houses
 - 100mm Plasmor Fibolite (850 - 950 kg/m³)
 - Internal finish - 13mm plaster or nominal 8kg/m² gypsum based board

EXTERNAL (FLANKING) WALL USING PLASMOR **FIBOLITE** BLOCKS

E-WM-11

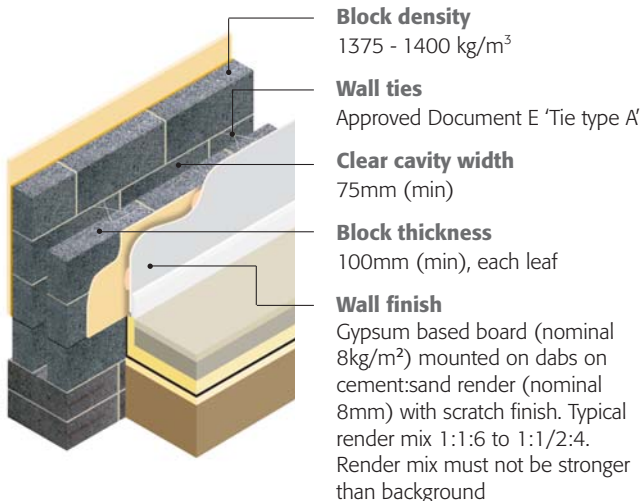


- Masonry outer leaf
- External wall cavity (minimum 50mm)
- Close cavity with a flexible cavity stop unless it is fully filled with built-in insulation
- Separating walls 100mm Plasmor Stranlite
- Inner leaf where there is no separating floor e.g. for houses
 - 100mm Plasmor Fibolite (850 - 950 kg/m³)
 - Internal finish - 13mm plaster or nominal 8kg/m² gypsum based board

SEPARATING WALL USING PLASMOR **STRANLITE** BLOCKS

E-WM-4

- Plasmor Stranlite blocks
- Wet plaster



- Block density**
1375 - 1400 kg/m³
- Wall ties**
Approved Document E 'Tie type A'
- Clear cavity width**
75mm (min)
- Block thickness**
100mm (min), each leaf
- Wall finish**
Gypsum based board (nominal 8kg/m²) mounted on dabs on cement:sand render (nominal 8mm) with scratch finish. Typical render mix 1:1:6 to 1:1/2:4. Render mix must not be stronger than background

External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

NOTE: Where there is a separating floor e.g. flats/apartments, the party floor is subject to pre-completion acoustic testing.

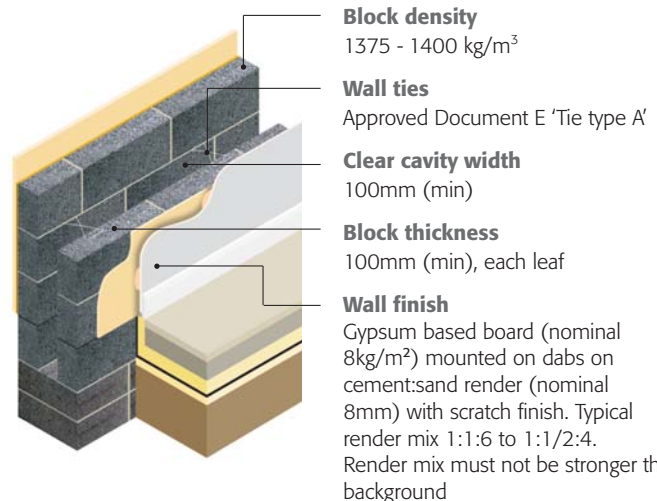
GOOD SITE PRACTICE

- As previous, plus - ensure that render is applied to the complete face of each leaf with a scratch finish (it may be omitted within the floor joist/beam zone)

SEPARATING WALL USING PLASMOR **STRANLITE** BLOCKS

E-WM-11

- Plasmor Stranlite blocks
- Wet plaster



- Block density**
1375 - 1400 kg/m³
- Wall ties**
Approved Document E 'Tie type A'
- Clear cavity width**
100mm (min)
- Block thickness**
100mm (min), each leaf
- Wall finish**
Gypsum based board (nominal 8kg/m²) mounted on dabs on cement:sand render (nominal 8mm) with scratch finish. Typical render mix 1:1:6 to 1:1/2:4. Render mix must not be stronger than background

External (flanking) wall Masonry (both leaves) with 50mm (min) cavity - clear, fully filled or partially filled with insulation

NOTE: Where there is a separating floor e.g. flats/apartments, the party floor is subject to pre-completion acoustic testing.

GOOD SITE PRACTICE

- As previous, plus - ensure cavity is 100mm wide and that correct wall ties are used.



PLASMOR EXPANDED CLAY

HISTORIC PERSPECTIVE

For three decades during the 1960's, 70's and 80's the staple raw material for quality lightweight aggregate block manufacture was Coal Fired Power Station Furnace Bottom Ash. During this period many coal fired power stations were contributing base load electricity supply to the National Electricity Grid and were being supplied by a myriad of UK collieries. Furnace bottom ash is the residue of burning coal and provides a strong, light, totally inert block making aggregate.

THE CHANGING ENERGY MARKET

During the late 1980's and early 90's the UK Energy market witnessed significant and dramatic changes. Due to political, economic and environmental pressures a high proportion of UK collieries and coal fired power stations were irreversibly closed down. This presented an acute dilemma to the lightweight aggregate block industry; how to secure future long-term supplies of quality lightweight aggregate. The choices facing the industry were numerous; consider expensive and unreliable imported aggregate, move to heavier quarried virgin aggregates, source sub-standard secondary aggregates or simply rely on the residual supply of power station furnace bottom ash. Considering the "Dash for Gas", the conversion of some coal fired power stations to oil burning and the increasing pressures of the Environmental Movements, these were not options of merit for Plasmor.

FOCUS ON EXPANDED CLAY

In 1990 the Plasmor Board of Directors committed the company to an extensive and exhaustive research and development project with the expressed intention of developing a totally new, reliable, long term supply of premium quality sustainable block making aggregate. Over a number of years the Company trialed a great many raw materials and processes including reclaimed and recycled materials all to little avail.

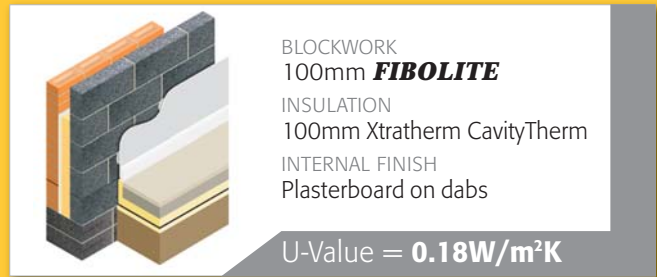
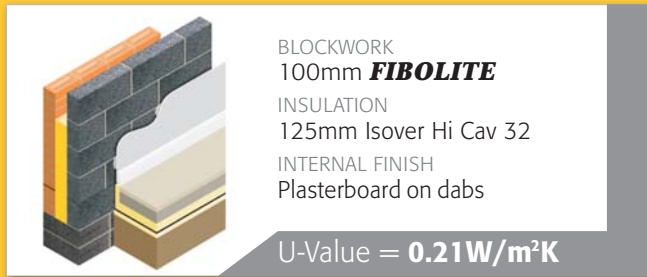
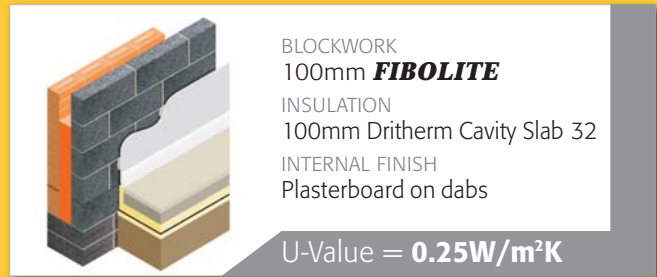
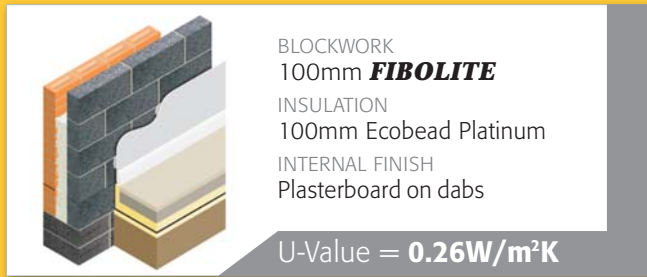
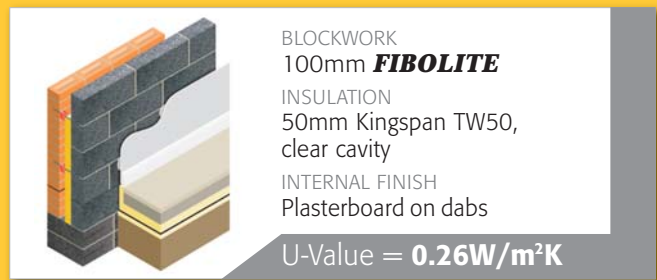
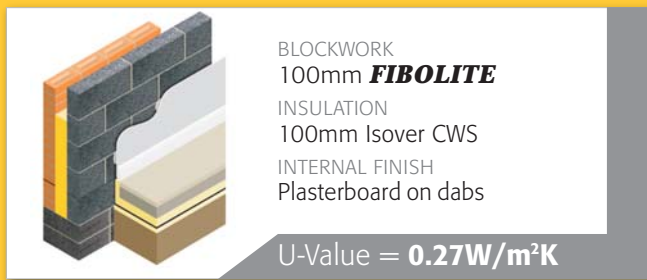
The future was undoubtedly found in Expanded Clay. After years of geological and chemical research, laboratory testing and incremental pilot testing the Company decided to pursue expanded clay, and pioneered the expanded clay process in the UK. Expanded clay nodules are produced by sophisticated pyrogenic technology whereby geochemically specific clay is expanded in a rotary kiln at high temperature. The first Plasmor expanded clay kiln was commissioned in 2000 and represented the biggest single investment in the Company's history.

Plasmor view expanded clay as the key to the sustainable and ecological future of concrete block manufacture as it absolves the need for expensive imports and lowers the use of virgin, hard, quarried aggregates such as limestone, granite, sand and gravel. Use of expanded clay in lightweight aggregate blocks offers customers a number of important benefits:-

- Lighter blocks giving faster laying rates and CDM 20kg compliance
- Thermal and Acoustic Building Regulation approval
- Consistent High Quality means less wastage on site due to breakages
- Lower moisture movement (not greater than 0.60mm/m) giving greater structural performance
- Consistent block structure giving excellent fixability
- Totally inert material giving greater fire resistance
- Class 1 aggregate as defined in BS 5628 -3
- Guaranteed consistent supply of quality block making aggregate

FIBOLITE - MAKING LITE OF PART L REGULATIONS

EXAMPLES OF U-VALUES ACHIEVED USING **FIBOLITE** BLOCKS



FULL FILL CAVITY (3.6N)

BRICK OUTER LEAF		Isover CWS Superwall 36			Knauf Dritherm 37			Isover Hi-Cav 32 Knauf Dritherm 32 Superwall 32		
k value		0.036			0.037			0.032		
Finish		100mm	125mm	150mm	100mm	125mm	150mm	100mm	125mm	150mm
100mm Fibolite	Plasterboard on Dabs*	0.27	0.23	0.20	0.28	0.23	0.20	0.25	0.21	0.18

* Wall tie with a 6.2mm cross sectional area.

PARTIAL FILL CAVITY (3.6N)

BRICK OUTER LEAF		Xtratherm Cavity Wall Kingspan TW50 Celotex CW4000				
k value		0.022				
Finish		50mm	60mm	75mm	90mm	100mm
100mm Fibolite	Plasterboard on Dabs*	0.26	0.23	0.20	0.18	0.16

* Wall tie with a 6.2mm cross sectional area. 50mm cavity maintained with a minimum R value of 0.644

FULL FILL CAVITY (3.6N)

BRICK OUTER LEAF		Xtratherm CavityTherm Full Fill**				
k value		0.021				
Finish		75mm	90mm	100mm	125mm	150mm
100mm Fibolite	Plasterboard on Dabs*	0.23	0.20	0.18	0.15	0.13

* Wall tie with a 6.2mm cross sectional area. ** 5mm projecting HIP accounted for.

The illustrations shown here are just a few examples of wall constructions that achieve 0.27 W/m²K or better.

FOR FURTHER INFORMATION
OR CALCULATIONS CONTACT OUR
TECHNICAL DEPARTMENT:
01977 673221

FIBOLITE

FEATURES & BENEFITS

ONE HAND LIFT

ULTRA LIGHTWEIGHT – IMPROVES LAYING RATES

ULTRA LIGHTWEIGHT

SATISFIES CDM REGULATIONS

THERMALLY EFFICIENT

SIMPLE SOLUTIONS TO 'U' VALUES DOWN TO
 $U = 0.13W/M^2K$

ACOUSTIC COMPLIANCE

PART 'E' ROBUST DETAIL FOR FLANKING WALLS

STRONG AND DURABLE

LOWER WASTAGE THAN ALTERNATIVE
ULTRA LIGHTWEIGHTS

LOADBEARING AND HIGH STRENGTH

$3.6N/mm^2$, $7.3N/mm^2$

LOW MOISTURE MOVEMENT

NOT GREATER THAN 0.60mm/m

FIXABILITY

DIRECT NAILING, EASY AND SPEEDY TO DRILL
AND PLUG

EASILY CUT AND CHASED

SAVES TIME AND EFFORT

AUTHORITY

MANUFACTURED to BS EN 771-3

QUALITY MANAGEMENT STANDARD

BS EN ISO 9001 Certificate No: FM 10847

ENVIRONMENTAL MANAGEMENT SYSTEM

BS EN ISO 14001 Certificate No: EMS 536819

BEWARE OF IMITATIONS!

