Box beam Corner Detail

1200mm maximum centres

22
18
60
330
450
60

Corner Detail

1200

Typical Box Beam construction:

SJ60x400 engineered timber I joists to each face

22mm Woodfibre board to outer face,

24mm smartply blocking
(or 20mm+5mm, or 18mm+6mm)

Continuous along outer face exterior 18mm ply or 22mm timber for strength

Voids fully filled with densely packed straw or sheep wool, hemp or similar insulation

SJ60x400 timber noggins at 1200c/c
See floorplate layout for locations.

Provide 18mm Smartply timber boarding to top & bottom.

Box beam Details

Door fixing posts:

2 No 50x100 C16 posts

2no. 50 x 330 solid timber noggins either side of post at top and bottom

50x115x100mm Solid timber blocking either side of post, between top flanges of I joists

50 dp x 100 x 330 solid timber noggin to base of box beam, to support bottom of posts

Posts to be fixed permanently to noggins

Notes:

Adjust dimensions depending on loadings & spans. I-Joist flanges may be 45 or 60mm wide. Blocking should fully fill depth to outside of flange.

All joints of timber or smartply to be staggered and at least 600mm apart.

Smartply to be glued and nailed with ringshanks top and bottom of floor plate.

External edge <u>must</u> have continuous blocking on outside. Blocking can be either full thickness or madeup of layers eg. 10mm+15mm. To be glued into web with cascamite. Blocking on both sides is only needed at joints between I-joists.

All board materials to be exterior grade
All voids o be fully fitted with insulation eg. sheepswool, hemp batts etc.

For guidance only: all timber sizes and strength classes to be verified with Structural Engineer

Section at joint between i-joists

External — Internal

5mm gap between blocking & flange
Location of base plate above

18
486
63   330   63
22
450
400
18

150 x 50 timber fixed to flange and smartply blocking to support flooring, along side walls only

24mm smartply blocking only required over joints.

24mm smartply blocking along sidewalls, and 600mm over joints (see notes)

<u>Note:</u> No need for blocking except at joins and external face of outer i-joist

Section with Fixing posts

Door fixing posts:

2 No 50x100 C16 posts

350dp x 50 x 330 solid timber noggins either side of post (not shown)

50 dp x 100 x 115 solid timber blocking either side of post, between top flanges of I joists

50 dp x 100 x 330 solid timber noggin to base of box beam, to support bottom of posts
Posts to be fixed permanently to noggins

Structural Box Beam Floorplate Plan

Internal

joints of smart ply to be staggered and to be at least 600mm apart from all other joints
600mm minimum
600

timber joints to be blocked out for 600mm minimum, formed over car tyre foundations

1200mm maximum centres

External

SmartPly joint

Smartply blocking, over joints and continuous along outside edge

SJ60x400 engineered timber I joists each face
SJ60x400 timber noggins at max.1200mm ctrs.

I-joist joints to be blocked out for 600mm minimum, formed over car tyre pillars

60
330
450
472
60
22
600 minimum

Smartply blocking, over joints and along outside walls

Smartply blocking, must be continuous along outer face

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