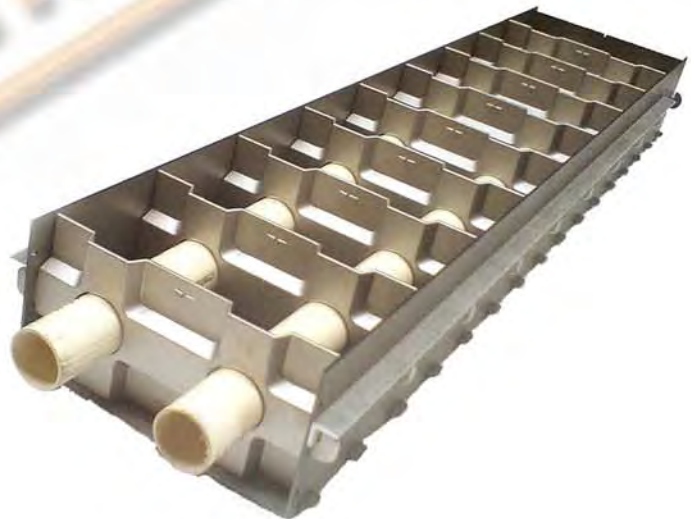




PAN PACIFIC ENGINEERING PTY LTD

LITEBLOK™

INTERGRATED CONSTRUCTION SYSTEM



HANDBOOK

FACTORY 1
7-9 WESTPOOL DRIVE
HALLAM VIC 3803
AUSTRALIA

PO BOX 935
MOUNT WAVERLEY
VIC 3149
AUSTRALIA

TEL: (61 3) 8786 3889
FAX: (61 3) 8786 3882
EMAIL: ppmr@litebuilt.com
WEB: <http://www.litebuilt.com>



ADVANTAGES

Building costs reduced by up to 30% compared to conventional construction methods due to:

- Material cost savings.
- Labour cost reduction.
- Fast construction time.
- Simple Construction Method.
- Minimizes skilled labour requirement.



INNOVATION

Self supporting structures. No need for external structural elements. Columns are formed in some of the holes by inserting reinforcement bars, which are subsequently grouted. The distance between them depending on structural requirements.

Perfect fit of the blocks, no mortar required to join them.

Perfectly smooth walls, only a layer of thin set of mortar or textured paint is needed.

Easy installation of services through the vertical holes. Blocks can be cast with electrical boxes or water taps incorporated.





TESTING STANDARDS

- **LITEBUILT®** Aerated Concrete complies with ASTM, BS, European and Australian Concrete Construction Standards.
- The material has been Fire Tested to Australian and various International Standards.
- Seismically resistant construction standard. (Covenin Mindu Venezuela) 1756-1998.



WATER ABSORPTION OF THE LITEBLOK™

LITEBUILT® Aerated Concrete has a marginally lower moisture absorption rate by weight than regular concrete, being 10-12%.

However, considering that the weight of our product is 50% to 75% less than regular concrete, the total moisture uptake is reduced in the same proportions, meaning it is only 25% to 50% of what regular concrete would retain.



CONSTRUCTION METHOD

The **LITEBLOK™ Integrated Construction System** is a seismically resistant building method. It features high compressive strength, has a high insulation capacity due to its low density, has a high sound absorption value and is vermin and termite resistant.

The perfect fit of the blocks due to the shape will give you perfect alignment and right angle geometry, without mortar.

Since there are no external structural elements required (columns and beams), the construction is incredibly simple, fast and economical. The blocks are precise, dimensionally accurate and are perfectly aligned.

1. LOCATION OF THE INTERNAL COLUMNS

Starter bars are arranged in the foundation where vertical reinforcement of the wall is required.



2. CASTING OF THE FLOORSLAB

A level floorslab (which can also be lightweight) is being cast.





3. LOCATION OF THE SERVICES

Before laying the blocks, PVC tubes are inserted where services such as water, drains, etc, are to be located.

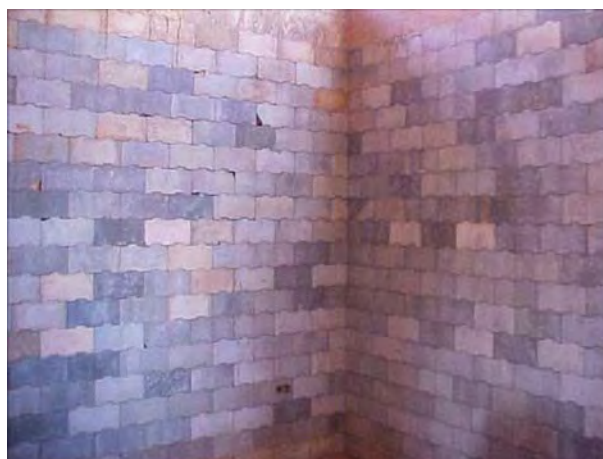


4. POSITIONING OF THE BLOCK

Make sure that the first course of blocks is level, straight and the surface free of debris.

Mortar may be used to level out possible uneven surfaces.

A piece of wood 12x25mm (1/2"x1") can be fixed to the slab – where practical – for alignment in the center of the wall (fits in the groove of the block).





5. SPECIAL BLOCKS

Special blocks – with electrical boxes incorporated – can be made. Care needs to be taken so that these boxes are placed in the right position as indicated in the wiring plan.

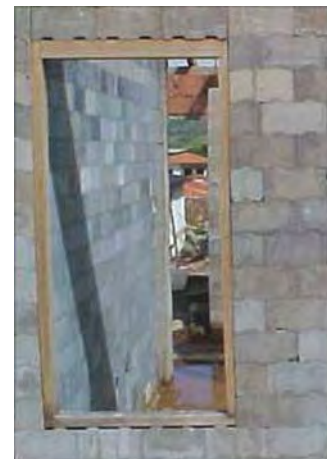


6. POSITIONING OF DOORS AND WINDOWS

Window and door frames can be fixed into position during the laying of the blocks.

Depending on the size of the opening and the height above the door/window, lintels may not be needed, since the blocks are lightweight.

If this is not practical, steel or regular concrete lintels can be used.





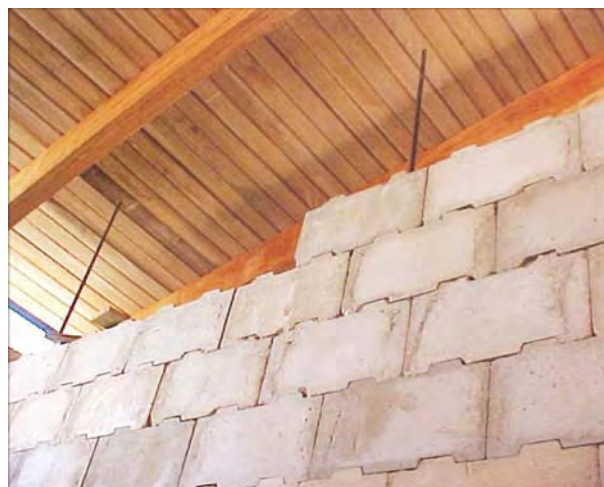
7. CASTING OF COLUMNS

When the wall has reached the desired height on each level, (minus the ring beam) regular mortar is being poured into the holes which have been fitted with the re-bars.



8. RING BEAM

Once all the walls on any floor have reached the required height and the columns have been poured, a ring beam is cast, with reinforcement as required, which is tied in with the re-bars from the columns.





9. CEILINGS

If a wall needs to be fitted to an existing ceiling or roof, the space between the ring beam and the ceiling will be filled with litebloks, cut to the shape required.

If another floor is added, the floorslab will rest on the ring beam with the vertical reinforcement from the lower floor being connected to the next floor.

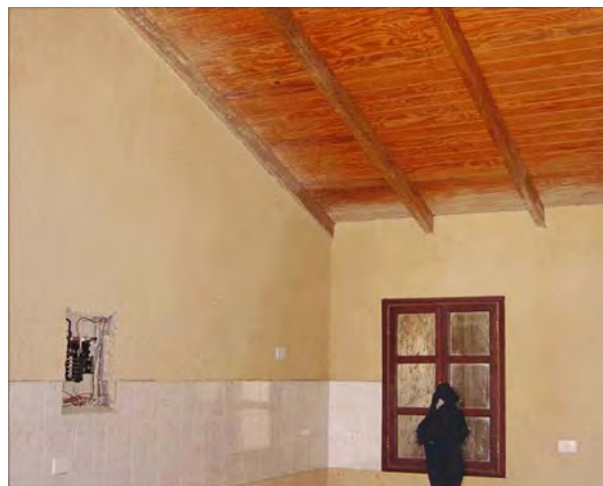


10. RENDERING AND PAINTING

As mentioned before, due to the accuracy of the blocks, the wall will be extremely smooth and only requires a thin coat of mortar, 2mm (1/8") is generally sufficient.

We recommend the use of **LITETOP POLYMER CONCRETE** finishes which can be sprayed or trowelled on and have a very high strength and abrasion resistance.

Alternatively, textured paints can be applied directly to the wall.





COMPLETED HOUSE USING THE LITEBUILT® LITEBLOK™ INTEGRATED CONSTRUCTION SYSTEM





COMPARISON OF THE THREE BUILDING SYSTEMS



TRADITIONAL BRICK CONSTRUCTION



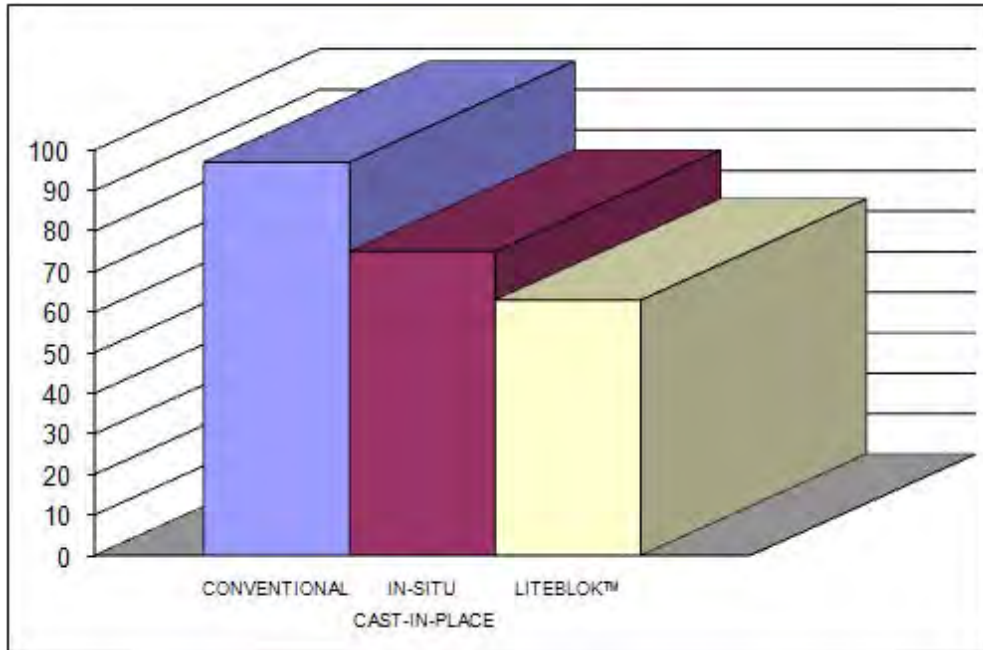
IN-SITU CAST OR CAST-IN PLACE



LITEBLOK™ INTEGRATED CONSTRUCTION SYSTEM



COST COMPARISON (IN %)



CONSTRUCTION TIME (IN DAYS)

