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Validity

Users of any Agrément certificate should check its status: all currently valid certificates are listed on the website. In addition, check whether the certificate is [Active or Inactive](#).

The certificate holder is in possession of a confirmation certificate attesting to his status.

SANS 10400 The application of the National Building Regulations

Quick guide

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Subject:

RWPA Building System

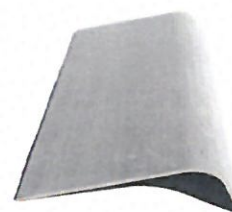
Certificate holder:

RWPA Solutions (Pty) Ltd

83 Central Street, Houghton, Johannesburg, 2198

Phone: +27 11 463 3967

E-mail: info@rwpa.co.za



Use

The certificate covers the use of RWPA Building System and Agriligna/Marley Eco-Tuff Barge Board System in all regions of South African for the erection of single-storey buildings for the occupancy classes (**SANS 10400: Table 1 of Regulation A (20) (1)**) set out below:

- places of instruction (A3)
- moderate and low risk commercial service (B2 & B3)
- moderate and low risk industrial (D2 & D3)
- large shop (F1)
- small shop (F2 & F3)
- domestic residence (outside external walls) (H3) and
- dwelling house (detached) (H4).

This certificate and Agrément South Africa's evaluation apply only to RWPA Building System buildings that are designed and erected as described and illustrated in this certificate, and where the terms and conditions of certification are complied with.

NB. The Agriligna/Marley Eco-Tuff Barge Board can be used on any conventional Building Systems.

General description

RWPA Building System is a timber frame structure designed and erected on site under the control of a professional engineer or approved competent person who:

- ensures the structural integrity of the entire building and
- adheres to the requirements of this certificate.

RWPA Building System makes use of isolated reinforced concrete bases set on a 1500 mm grid. Bases are 400 mm wide x 150 mm deep, with a tubular plastic post (125 mm \varnothing) cast onto each base.

SANS 952-1 Polymer Film for Damp-proofing and Waterproofing in Buildings

SANS 1783 Sawn Softwood Timber

SANS 1008 Timber frame buildings

RWPA Building System makes use of suspended timber floors consisting of a timber frame, a damp-proof membrane conforming to **SANS 952-1** and wood plastic composite (WPC) cladding panels attached to the frame. The timber frame conforming to **SANS 1783** and **SANS 10082** is made up of conventional 38 mm x 76 mm floor joists spaced at 400 mm centres supported on 38 mm x 152 mm bearers at 1500 mm centres, supported in turn on 125 mm diameter plastic posts.

Walls consist of 38 mm x 76 mm studs, noggins, and top and bottom wall plates. Walls are clad externally with WPC panels and lined internally with 12.5 mm thick gypsum fire resistant board. Before the walls are clad with WPC panels, a bracing strap is attached over the walls for additional support. The cavity formed between studs, noggins, wall plates, wall cladding and wall lining is filled with 60 mm thick Lambda board.

Roofs consist of 0.5 mm thick metal sheeting supported on 38 mm x 152 mm timber purlin rafters, spanning between external walls at 1200 mm centres. Gypsum ceilings (6 mm) are fixed to 50 mm x 50 mm brandering at 400 mm centres, fixed in turn to the inside of the purlin rafters. The cavity between the ceilings and roof sheeting is partially filled with 135 mm flexible polyester or fibreglass insulation. It is then finished with the Agriligna/Marley Eco-Tuff Barge Board System which can also be used on any conventional Building Systems. The boards are 200 mm X 80 mm and are between 4 mm and 5 mm in thicknesses and also available in 3 m, 3.6 m and 4.8 m lengths.

Window and door frames are conventional or Agrément approved and are purposely made to suit the design of the building.

Services are either surface mounted or installed in walls.

The interior and exterior of panel surfaces are finished with acrylic paint.

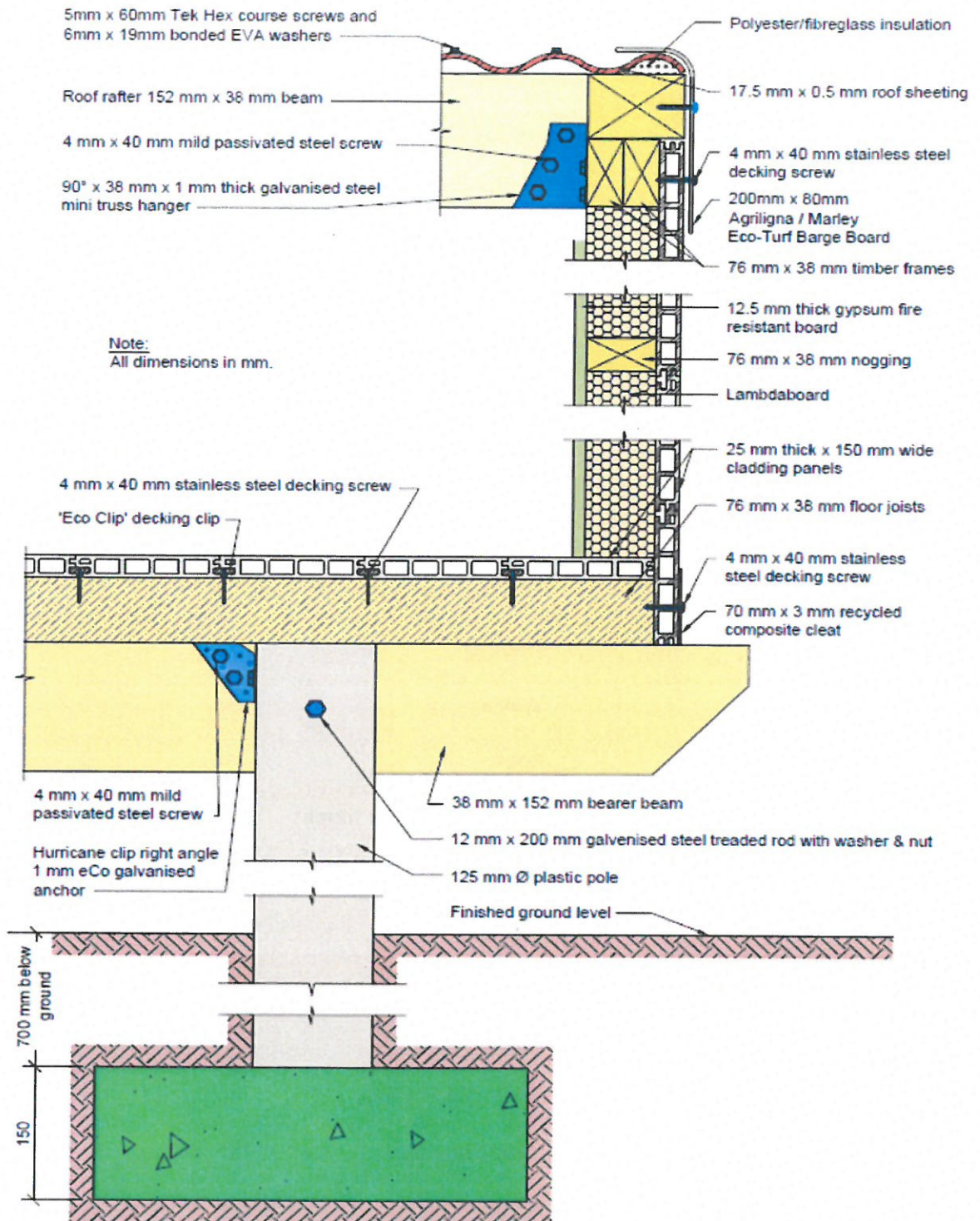


Figure 1: Vertical section through external wall

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PREAMBLE

This certificate is issued by Agrément South Africa in terms of the Agrément South Africa Act No. 11 of 2015. This certificate:

- has been granted after a technical appraisal of the performance of RWPA Building System buildings for the [uses](#) covered by the certificate
- is independent of any patent rights that may or may not subsist in the subject of the certificate and
- does not relieve the certificate holder from the obligation to obtain the prior approval of the building authority concerned for the use of the subject.

Agrément South Africa's opinion is that the quality and performance of RWPA Building System will be satisfactory, provided that the requirements stipulated in this certificate are adhered to. However, Agrément South Africa does not on behalf of itself, or the State, or any of its employees or agents guarantee such quality or performance.

Responsibility for compliance with the requirements of this certificate and the quality of the finished buildings resides with the certificate holder.

No action for damages, or any other claim whatsoever, lies against Agrément South Africa, its members, the State or any of its employees should the said components and materials fail to comply with the standard set out in this certificate.

Building authorities or users who are in any doubt about any detail or variation, should contact [Agrément South Africa](#).

The validity of this certificate is reviewed every three years. The certificate shall remain valid as long as Agrément South Africa is satisfied that:

- the certificate holder complies with the general and specific conditions of certification and the technical requirements stipulated in the certificate
- the performance-in-use of the subject is acceptable, and
- any changes in building legislation, regulations, relevant standards or Agrément performance criteria have not invalidated the technical assessment which formed the basis of certification.

Agrément South Africa reserves the right to withdraw the certificate at any time, should reasonable cause exist.

Notices affecting the validity of this certificate will be published in the *Government Gazette*.

PART 1: CONDITIONS OF CERTIFICATION

Licensee - any person or company appointed by the certificate holder and registered with Agrément South Africa to construct RWPB Building System in accordance with this certificate and authorized by the certificate holder to claim compliance with the certificate. It is the certificate holder's responsibility to ensure that the licensee carries out the works in compliance with this certificate and in accordance with the approved quality system.

RWPB Building System described in this certificate must:

- be designed and erected by the certificate holder or a licensee under the control of a professional engineer or approved competent person
- be constructed in accordance with the technical description (see [Part 3](#)) and the certificate holder's detailed specifications and quality management documentation
- comply with the Conditions of Certification.

Any person required to check on details of construction must refer to the documentation listed above, which is available from the certificate holder.

RWPB Building System and Agriligna/Marley Eco-Tuff Barge Board System is a combination of innovative and conventional construction. A change to any one aspect could result in one or more of the other aspects no longer complying with Agrément South Africa's performance criteria. For these reasons, no change may be made to RWPB Building System and Eco-Tuff Barge Board as described and illustrated in this certificate unless such change is approved in writing by Agrément South Africa before it is implemented.

SANS 17050-1 Conformity assessment-Supplier's declaration of conformity Part 1: General requirements.

SANS 17050-2 Conformity assessment-Supplier's declaration of conformity Part 2: Supporting documentation.

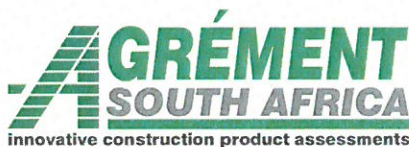
RWPB Solutions (Pty) Ltd shall be responsible for the accuracy of the information contained within the Material Data Sheets, Technical Data Sheets and Material Performance Specifications, and all other information pertaining to the supply and application of RWPB Building System and Agriligna/Marley Eco-Tuff Barge Board System. RWPB Solutions (Pty) Ltd shall submit a COA (Certificate of Analysis) and COC (Certificate of Compliance) in terms of the requirements stipulated in **SANS 17050-1** Suppliers declaration of conformity when requested by Agrément South Africa in accordance with the documentation requirements of **SANS 17050-2**. Should RWPB Solutions (Pty) Ltd change or substitute any ingredient in the formulation of the product in question, then a notification shall be addressed to Agrément South Africa immediately.

RWPB Building System

Tested and approved fit-for-purpose when constructed as specified in

CERTIFICATE 2017/559

(Amended June 2019)



General conditions

Marking

A plaque at least 100 mm x 75 mm, with Agrément South Africa's identification logo together with the number of this certificate, as depicted, must be fixed at an appropriate position to an external wall of all RWPB Building System buildings and all Agriligna/Marley Eco-Tuff Barge Board Systems.

Validity

The continued validity of this certificate is subject to a satisfactory review by Agrément South Africa every three years.

Quality monitoring

The certificate holder is required to participate in Agrément South Africa's post-certification quality management system, which requires:

- that the certificate holder shall continue to implement and manage the quality system approved by Agrément South Africa in the assessment of RWPA Building System and Agriligna/Marley Eco-Tuff Barge Board System
- the certificate holder to notify Agrément South Africa within 30 days of any change of address of a factory and any new factories brought into operation by the certificate holder, for the purpose of manufacturing the subject of the certificate
- the certificate holder at any time of commencement of each contract, to provide Agrément South Africa with construction sites or structures on which the subject is to be used and
- the co-operation of the certificate holder in facilitating post-certification quality monitoring by Agrément South Africa or its authorised agents.

Reappraisal

- must be requested by the certificate holder prior to making changes to the building system or the product
- will be required by Agrément South Africa if there are changes to the National Building Regulations or Agrément South Africa.

The conventional aspects of the construction are subject to the rules of good building practice (typically as described and illustrated in Agrément South Africa's [Supplement to certificates](#) and in the *Home building Manual* issued by the National Home Builders Registration Council), and must comply with the National Building Regulations.

This certificate may be withdrawn if the certificate holder or a registered licensee fails to comply with these requirements.

Requirements of *Supplement to certificates* that must be met

The [Supplement to certificates: good building practice](#) (revised 2001) applies to those conventional aspects of RWPA Building System that have not been specifically assessed (see Part 2: *Scope of assessment* on next page). Cognisance should be taken of the recommendations contained in the *Supplement to certificates* to ensure that an acceptable standard of construction is consistently maintained.

On behalf of the Board of Agrément South Africa

Signed



Chairperson

June 2019

PART 2: ASSESSMENT

Scope of assessment

This assessment applies to those innovative aspects of RWPA Building System described in [Part 3](#) of the certificate. It also applies to those conventional aspects of the building system which, in the opinion of Agrément South Africa, are influenced by the innovative aspects. The innovative aspects referred to are:

- foundations comprising plastic poles cast into concrete bases
- the use of suspended floors
- walls comprising a timber frame clad with wood plastic composite (WPC) panels and
- the fixing method of the WPC cladding.

The assessment was based on:

- documentation provided by the applicant
- inspections of the applicant's completed projects
- known behaviour of the materials used in the building system and
- the applicant's quality management system.

Assessment

In the opinion of Agrément South Africa, the building system as described in the certificate is suitable for the construction of buildings of the [types specified](#) (page 1).

The performance-in-use of buildings erected with this system will be such that they will satisfy:

- the relevant requirements for safety and health prescribed by Agrément South Africa
- the requirements of the National Building Regulations, where stated in Table 1
- Agrément South Africa's performance criteria and requirements for durability and habitability.

For details see Agrément South Africa's [Assessment criteria: building and walling systems](#)

Agrément South Africa's detailed comments on the assessment are set out in Tables 1, 2 and 3 below. Each aspect of performance was assessed by experts in that field.

Republic of South Africa. **National Building Regulations**, Government Notice No. R711, Government Gazette No. 34586, Pretoria, South Africa, 09 September 2011.

Compliance with the National Building Regulations

The innovative aspects of RWPA Building System and Agriligna/Marley Eco-Tuff Barge Board System relate to the National Building Regulations as set out in Table 1. Any regulation not specifically referred to is considered to be outside the scope of this certificate and must be applied by the local authority in the normal manner.

Table 1: Performance

Aspects of performance	Opinion of Agrément South Africa	National Building Regulations satisfied
<i>Fitness-for-purpose of materials used</i>	The materials described in Part 3 meet the requirements of the National Building Regulations.	A13(1)(a) <i>Materials</i>
<i>Behaviour in fire</i>	The wall panels are classified as type FR (non-combustible) with a fire resistance rating of 30 minutes.	<p>K4 <i>Walls</i></p> <p>J1 (1) b <i>Floors</i></p> <p>L2 <i>Roofs</i></p> <p>T1 (1) (b) and (c) are satisfied as far as walls are concerned.</p> <p>Comments made in <u>Supplement to certificates</u> must be taken into account when building plans are scrutinized by local authorities, to check compliance with Regulations T1 (1)(a), and T1 (1)(d) with regard to spread of smoke, and T1 (1)(e).</p> <p>Deemed-to-satisfy rules TT5.1(c) and TT5.2 (c) of Section 3 of SANS 10400 have been met.</p> <p>With regard to safety distances, external walls are classified type FR (non-combustible), as defined in deemed-to-satisfy rule TT2.1 (a) of Section 3 of SANS 10400 and safety distances as set out in the relevant rules of Part T can therefore be applied.</p>
<i>Structural performance</i>	Satisfactory. Provided the requirements of this certificate are complied with.	<p>J1(1) <i>Floors</i></p> <p>K1, K3, K4 <i>Walls</i></p> <p>L1 (b) and (c) <i>Roofs</i></p> <p>Regulations B1 (1) and (2) are deemed to be satisfied as the design and erection of RWPA Building System buildings are the responsibility of a professional competent engineer or approved competent person (deemed-to-satisfy rule BB4 of SANS 10400).</p> <p>Regulations H1(1) and H1 (2), <i>Foundations</i>, are deemed to be satisfied as follows:</p> <ul style="list-style-type: none"> • H1 (1) on non-problematic soils; • H1 (2) in all buildings where foundations are designed by a professional engineer or approved competent person and deemed-to-satisfy rule HH 1(a) applies.
<i>Water penetration and rising damp</i>	Satisfactory. RWPA Building System buildings meet Agrément South Africa's criteria for resistance to water penetration and rising damp throughout South Africa.	<p>K2 (1) <i>Walls</i></p> <p>J1(2) <i>Floors</i></p> <p>L1 (b) <i>Roofs</i></p>

Table 2: Habitability

Aspects of performance	Opinion of Agrément South Africa	Explanatory notes
Thermal performance	<p>External wall (114 mm thick) was assessed as having a total R-value of 2,252 m²K/W.</p> <p>SANS 10400 XA <i>The application of the National Building Regulations Part X: Environmental sustainability Part XA: Energy usage in buildings</i></p>	<p>When neither artificial heating nor cooling is applied to 53 m² RWPA Building System dwellings with insulated roofs, minimum and maximum temperatures will be similar to those occurring in standard buildings.</p> <p>The annual energy requirement and energy demand of a 53 m² RWPA Building System dwelling with roofs of sheet metal was determined using the BRE U-value Calculator and provided they are insulated in accordance with the requirements of Clauses 4.4.5.3 and 4.4.5.4 of SANS 10400 XA, their performance was assessed as being equivalent to that of standard brick house meeting the requirements of Clause 4.2.1 b) of SANS 10400 XA.</p>
Energy usage	The energy required to heat RWPA Building System buildings in winter will be less than that required for a standard brick house.	NB. Insulated ceilings must be installed in all instances.
Condensation	Satisfactory. When insulated ceilings are installed, RWPA Building Systems perform better than a standard brick house.	Condensation is generally a problem in the Southern Coastal Condensation Problem Area (SCCP Area). Agrément South Africa requires that the minimum standard of performance be equivalent to that of the standard brick dwelling which is, itself, not immune to condensation problems.
Acoustic performance	<p>Satisfactory. Agrément South Africa's performance criteria for sound attenuation between adjacent rooms and dwellings have been met.</p> <p>SANS 10218: Part 1 <i>Acoustical properties of buildings</i></p>	<p>Agrément South Africa's opinion is based on a theoretical analysis of the frequency-weighted sound reduction index, R_w the value that is likely to be obtained between adjacent rooms is 43 dB($D_{nT,w}$);</p> <p>This value meet Agrément South Africa's criteria and most of the recommended sound insulation values set out in SANS 10218: Part 1.</p> <p>A description of the degree of acoustic privacy that can be expected between specific rooms for various degrees of sound insulation is given in Supplement to certificates.</p>
Durability	<p>Satisfactory. Durability of RWPA Building System buildings will be satisfactory provided:</p> <p>the requirements given in this certificate are adhered to, as well as the buildings being regularly and adequately maintained.</p>	Agrément South Africa's opinion is based on knowledge of the materials used and an analysis of the construction details specified in the design of buildings constructed using RWPA Building System.

Table 3: Quality management system

Aspects of performance	Opinion of Agrément South Africa	Explanatory notes
Quality management system	The certificate holder's quality management system complies with Agrément South Africa's requirements. Properly applied, it will ensure that quality in the manufacture and erection of RWPA Building System will be consistently maintained.	<p>Agrément South Africa's requirements are based on SANS/ISO 9001.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p>SANS/ISO 9001 <i>Quality management systems – Requirements'</i></p> </div>

PART 3: TECHNICAL DESCRIPTION

RWPA Building System is a timber frame structure designed and erected on site under the control of a professional engineer or approved competent person who:

- ensures the structural integrity of the entire building and
- adheres to the requirements of this certificate.

RWPA Building System's structure is made up of isolated reinforced concrete bases set on a 1500 mm grid. Bases are 400 mm wide x 150 mm deep, with a tubular plastic post (125 mm ø) cast onto each base.

RWPA Building System makes use of suspended timber floors consisting of a timber frame, a damp-proof membrane conforming to **SANS 952-1** and wood plastic composite (WPC) cladding panels attached to the frame. The timber frame conforming to **SANS 1783** and **SANS 10082** is made up of conventional 38 mm x 76 mm floor joists spaced at 400 mm centres supported on 38 mm x 152 mm bearers at 1500 mm centres, supported in turn on 125 mm diameter plastic posts.

Walls consist of 38 mm x 76 mm studs, noggins, and top and bottom wall plates. Walls are clad externally with WPC panels and lined internally with 12.5 mm thick gypsum fire resistant board. Before the walls are clad with WPC panels, a bracing strap is attached over the walls for additional support. The cavity formed between studs, noggins, wall plates, wall cladding and wall lining is filled with 60 mm thick Lambda board.

Roofs consist of 0.5 mm thick metal sheeting supported on 38 mm x 152 mm timber purlin rafters, spanning between external walls at 1200 mm centres. Gypsum ceilings (6 mm) are fixed to 50 mm x 50 mm bracing at 400 mm centres, fixed in turn to the inside of the purlin rafters. The cavity between the ceilings and roof sheeting is partially filled with 135 mm flexible polyester or fibreglass insulation. It is then finished with the Agriligna/Marley Eco-Tuff Barge Board System which can also be used on any conventional Building Systems. The boards are 200 mm X 80 mm and are between 4 mm and 5 mm in thicknesses and also available in 3 m, 3.6 m and 4.8 m lengths.

Window and door frames are conventional or Agrément approved and are purposely made to suit the design of the building.

Services are either surface mounted or installed in walls.

The interior and exterior of panel surfaces are finished with acrylic paint.

Manufacturing

RWPA Building System is designed and installed by RWPA Building Solutions (Pty) Ltd.

RWPA Solutions (Pty) Ltd does not manufacture any components of the building system. All system components are purchased from reputable manufacturers, wholesalers or retailers.

Material Safety Data Sheets (MSDS) for all the components of the building system are available.

Handling, transportation and storage

RWPA Building System components must be transported under conditions that protect their original properties.

All the building components are pre-cut and strapped by the manufacturers and delivered to the storage warehouse on flatbed trucks.

Building components must be stored in a dry and well-ventilated location. All building materials are weather resistant therefore they can be stored outside as the build commences. The timber and WPC panels are stored on pallets, off the ground, to avoid moisture.

Due to the light-weight nature of the building materials, they can be hand-held. Care must be taken during the loading and offloading of building materials to prevent damage and avoid injury.

Erection process

Foundations and surface beds

A competent person classifies the site in accordance with the site class designation set out in Table 3 of the South African Institute of Engineering Geologists (SAIEG) publication titled *Guidelines for Urban Engineering and Geological Investigations*.

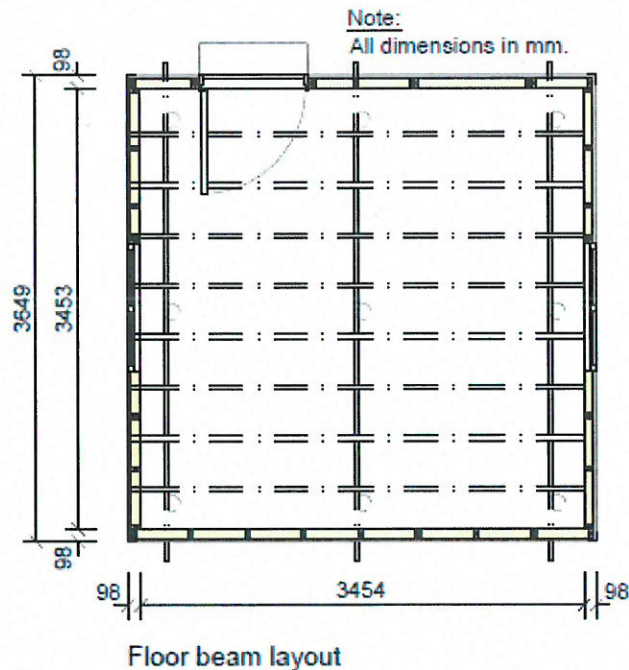
SANS 10161 *The design of foundations for buildings*

In all ground conditions, foundations are designed by a professional engineer in accordance with the requirements of **SANS 10161** and constructed accordingly.

The following section describes the erection process for a typical RWPA Building System structure:

Flooring

Floors are constructed using 38 mm x 76 mm timber floor joists spaced at 400 mm centres (**Typical example**). Mild passivated steel chipboard screws are used where the joists meet.



Typical example: Floor beam layout

Once the timber frame is assembled, it is placed on top of the foundation with joists running perpendicular to the timber bearers of the foundation. The timber frame sits 300 mm over the outer plastic posts in all directions.

A hurricane clip is attached at all intersections where the timber bearers of the foundation meet the timber joists of the floor frame. The hurricane clips are attached using 4 mm ϕ x 40 mm mild passivated steel chipboard screws.

A damp-proof membrane (DPM) is overlaid on the timber floor frame, overhanging on all edges. The DPM is joined to the timber floor frame using 3 mm ϕ x 25 mm galvanised steel clout nails. The DPM is nailed on top and around the edges of the frame.

The first WPC panel is aligned starting at one end of the frame down the edge of the frame. Each panel is 150 mm wide x 25 mm thick x 3650 mm long. The first and last panels are screwed directly into the timber frame using 4 mm ϕ x 40 mm stainless steel decking screws. Each panel in between is clipped in using the tongue and groove profile of the plank and using 'Eco Clip' decking clips and 4 mm ϕ x 40 mm stainless steel decking screws.

Walling

Front wall:

38 mm x 76 mm timber joists are cut as specified in the engineer's drawings.

The timber frame is assembled using the joists as the top and bottom, edges, as well as the 2 side edges and internal joists. A void must be left for the door. Double joists are used on either side of the door for support. Mild passivated steel chipboard screws (6 mm \varnothing x 100 mm) are used to assemble the wall frame. The frame is screwed on each side where the joists meet. Once the timber frame is complete, a steel door frame and door are inserted into the opening. Noggins are placed in between each joist and are assembled using 4 mm \varnothing x 100 mm round wire steel nails on each side of the noggins. A 25 mm x 1 mm steel cross brace is placed across the timber frame using 3.5 mm \varnothing x 75 mm round wire steel nails.

Once the frame is complete, it is then clad with the WPC panels and lined internally with 12.5 mm thick gypsum fire resistant board. The cavity formed between studs, noggins, wall plates, wall cladding and wall lining is filled with 60 mm thick Lambdaboard.

Side walls:

38 mm x 76 mm timber joists are cut as specified in the engineer's drawings.

The timber frame is assembled using the joists as the top and bottom, edges, as well as the 2 side edges and internal joists. A void is left for the window opening. Noggins are placed above and below the window opening using 6 mm \varnothing x 100 mm mild passivated steel chipboard screws on each side. Noggins are placed in between each joist and are assembled using 4 mm \varnothing x 100 mm round wire steel nails on each side of the noggins. A timber rafter is placed above the window as support for the roof rafters. A 25 mm x 1 mm steel cross brace is placed across the timber frame using 3.5 mm \varnothing x 75 mm round wire steel nails.

Once the frame is complete, it is then clad with the WPC panels and lined internally with 12.5 mm thick gypsum fire resistant board. The cavity formed between studs, noggins, wall plates, wall cladding and wall lining is filled with 60 mm thick Lambdaboard.

Rear wall:

38 mm x 76 mm timber joists are cut as specified in the engineer's drawings.

The timber frame is assembled using the joists as the top and bottom, edges, as well as the 2 side edges and internal joists. Mild passivated steel chipboard screws (6 mm \varnothing x 100 mm) are used to assemble the wall frame. The frame is screwed on each side where the joists meet. Noggins are placed in between each joist and are assembled using 4 mm \varnothing x 100 mm round wire steel nails on each side of the noggins. A 25 mm x 1 mm steel cross brace is placed across the timber frame using 3.5 mm \varnothing x 75 mm round wire steel nails.

Once the frame is complete, it is then clad with the WPC panels and lined internally with 12.5 mm thick gypsum fire resistant board. The cavity formed between studs, noggins, wall plates, wall cladding and wall lining is filled with 60 mm thick Lambda board.

Roofs

Roofs consist of 0.5 mm thick metal sheeting supported on 38 mm x 152 mm timber purlin rafters, spanning between external walls at 1200 mm centres. Gypsum ceilings (6 mm) are fixed to 50 mm x 50 mm brandering at 400 mm centres, fixed in turn to the inside of the purlin rafters. The cavity between the ceilings and roof sheeting is partially filled with 135 mm flexible polyester or fibreglass insulation. It is then finished with the Agriligna/Marley Eco-Tuff Barge Board System which can also be used on any conventional Building Systems. The boards are 200 mm X 80 mm and are between 4 mm and 5 mm in thicknesses and also available in 3 m, 3.6 m and 4.8 m lengths.

NB. The Agriligna/Marley Eco-Tuff Barge Board can be used on any conventional Building Systems.

Window and door frames

Window and door frames are steel or aluminium and are purposely made to suit the design of the building. Windows are fitted once the roof installation is complete.

Finishes

Once erected, walls are finished with conventional or Agrément approved paint. The WPC cladding panels are received from the manufacturer sanded on both sides. Two coats of Essence acrylic paint (or equivalent) are then applied to the interior and exterior of walls, including the timber frame, following the manufacturer's guidelines.

Fittings

Light- and medium-weight fittings with a maximum weight of 23 kg are fixed to the wall with anchor bolts.

Heavy-weight fittings with a weight of more than 23 kg must be floor-mounted or fixed to special framing members incorporated within the wall panels to support the fittings.

NB. The fixing of heavy-weight fittings to the wall panels is not permitted.

Services

Electrical services and/or conduits can be pre-fixed into walls or surface mounted. All services must be specified and installed in accordance with good building practice.

Maintenance

All maintenance schedules and guidelines must be adhered to as set out in the certificate holder's installation manual.

Walls in wet areas

In wet rooms (such as bathrooms, laundries, kitchens, shower cubicles, etc.) the following measures are adopted:

- plastic skirting approximately 100 mm high, fully bonded with a chloroprene-type contact adhesive must be used. Alternatively standard timber skirting with a strip of bitumen polyurethane foam (Evabond or equivalent) compressed between it and the floor, is used
- all wall surfaces are given one coat of alkaline barrier or an equivalent and painted with gloss paint (or similar), or tiled
- wall surfaces in shower cubicles are tiled
- wall surfaces immediately above baths, sinks and wash-hand basins may be provided with a tiled splash-back
- silicone sealant is used to seal wall junctions that are exposed to water.

Technical drawings

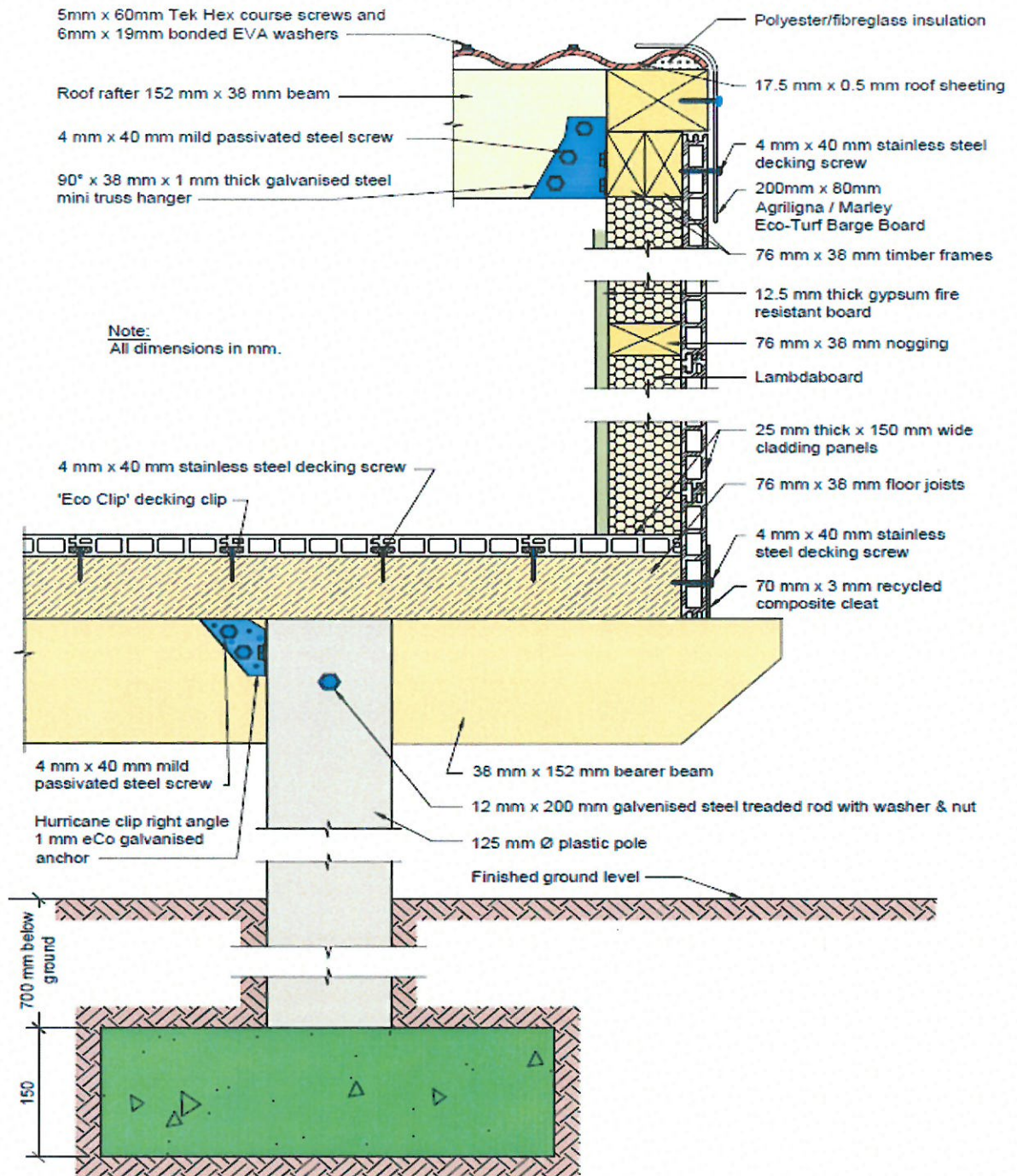


Figure 1: Vertical section through external wall

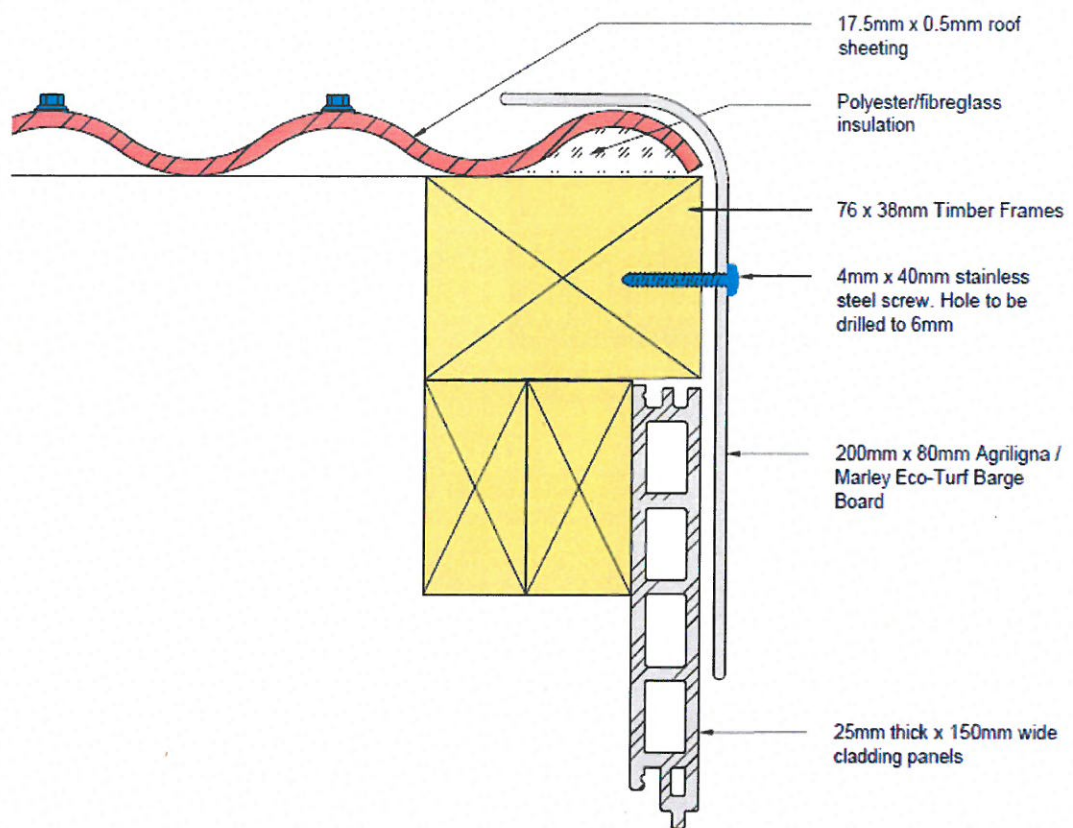
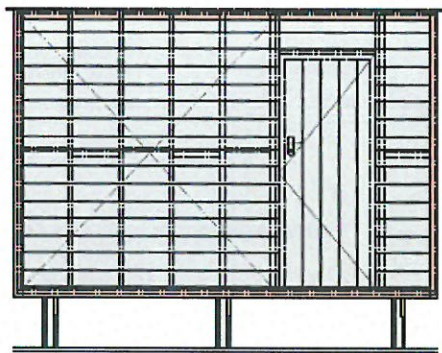
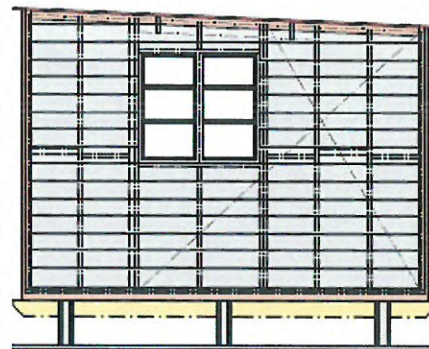


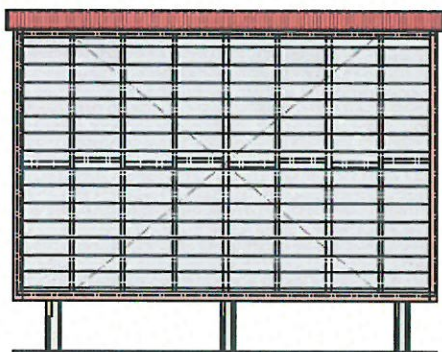
Figure 1b: Barge Board Connection Detail



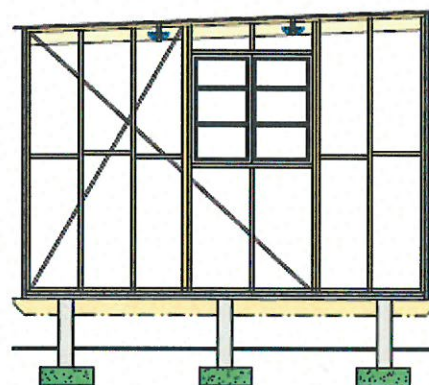
Front elevation



Side elevation

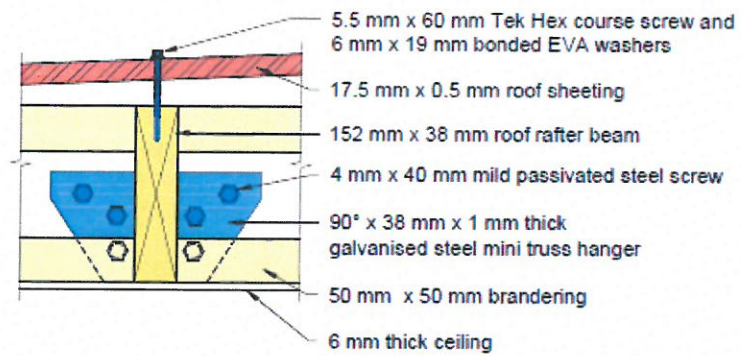


Back elevation

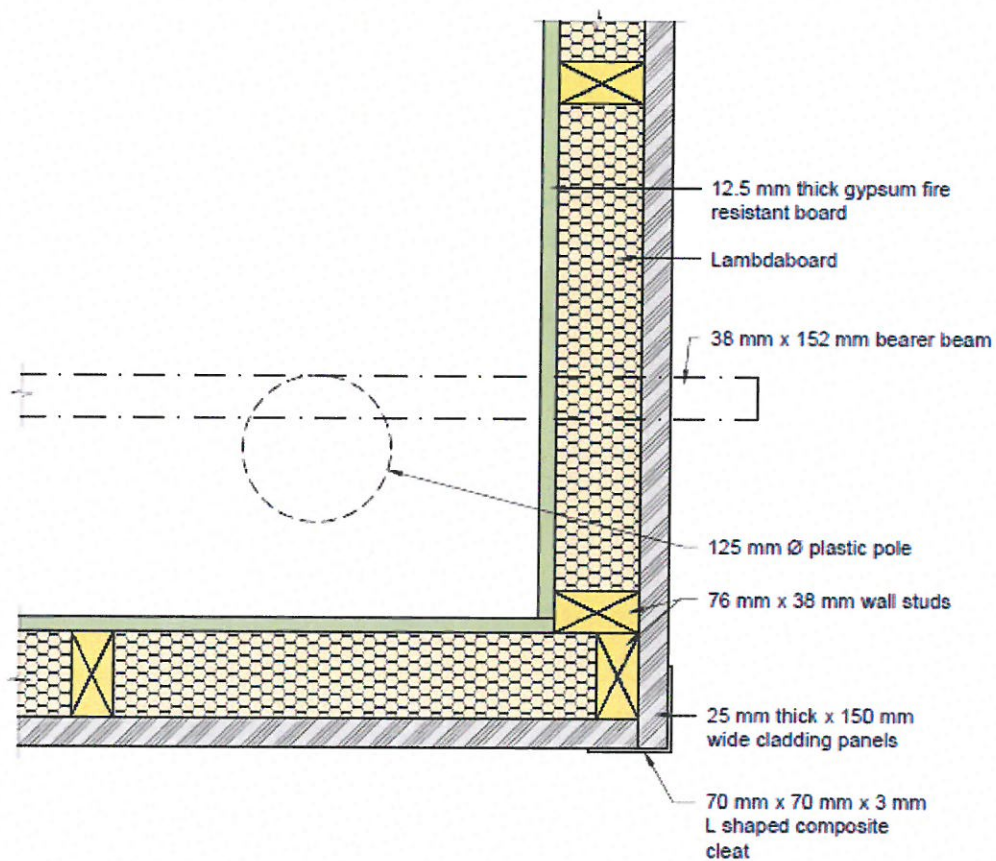


Section

Figure 2: Typical elevations and section

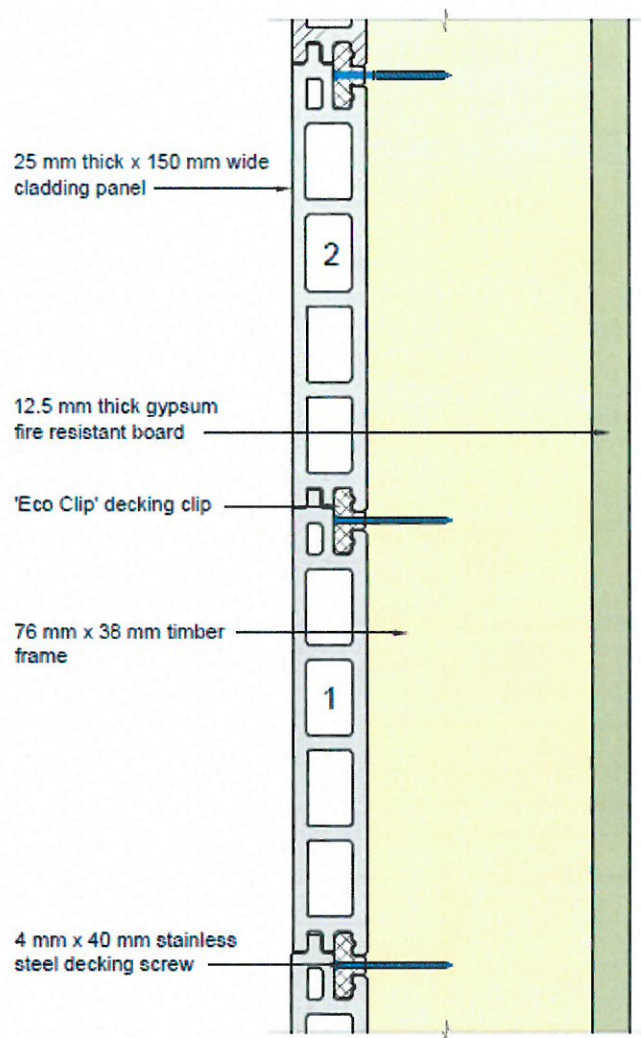


(a) Horizontal section through roof

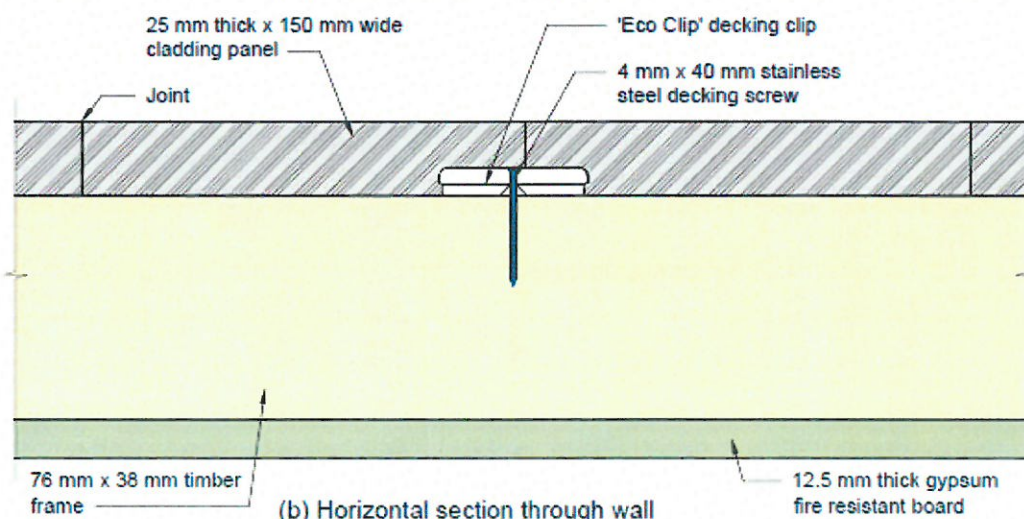


(b) Key floor plan

Figure 3: Roof and floor details

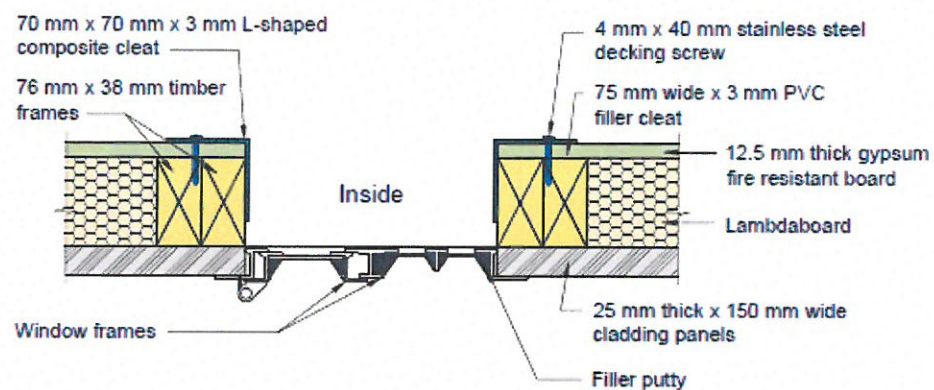


(a) Vertical section through wall

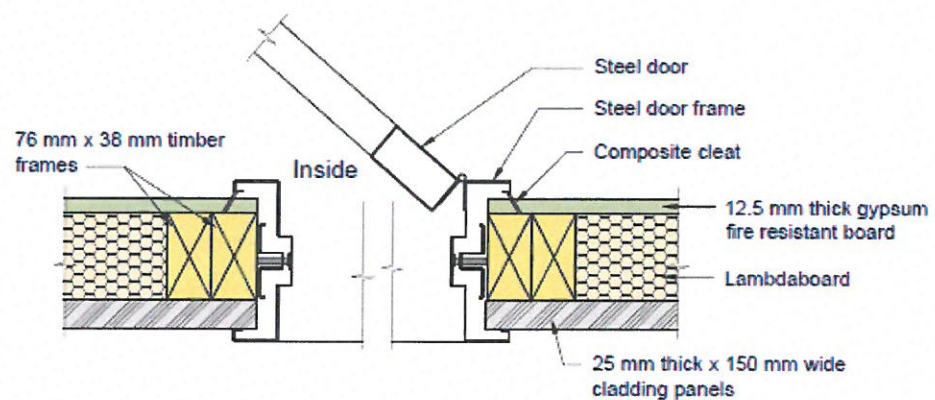


(b) Horizontal section through wall

Figure 4: Wall panel details



(a) Horizontal section through window



(b) Horizontal section through door

Figure 5: Window and door details

