

DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

NO. 5462

25 October 2024

AGRÉMENT SOUTH AFRICA
(Approval of innovative construction products and systems)

Notice is hereby given that Agrément South Africa has, with effect from 22 April 2024, **reappraised** an Agrément certificate, details of which appear in the schedule hereto.

SCHEDULE

Agrément certificate 2011/398: (Reappraisal April 2024): Sandbag Building System

Subject: Sandbag Building System

Certificate holder: Avranex (Pty) Ltd trading as Ubuhle Bakha Ubuhle (UBU)

Description: Sandbag Building System is a timber frame structure consisting of timber lattice beams (Eco-Beam) as vertical and horizontal studs and wall plates with sandbags as in fills. The walls are finished by securing steel wire mesh on both sides of the frame structure and plastering with conventional cement-sand plaster 25 mm thick.

The Eco-beams are fabricated from two 38 mm square treated timber sections (**SANS 10005**) connected by continuous galvanised steel strap which zigzag between the timber to form a lattice beam 220 mm deep.

The foundation and ground floor slabs are conventional concrete strip footing and surface bed with screed finish which are always the responsibility of a professional engineer.

The walls are nominally 270 mm thick and constructed by fixing vertical Eco-beams (columns/studs) spaced at 900 mm centres to top and bottom Eco-beams (wall and sole plates). Bags made from UV protected non-woven polypropylene fabric and measuring 300 mm x 300 mm are filled with sand and packed in between the studwork up to the wall plate. Each layer is compacted slightly.

At the corners or junctions, the walls are Eco-beams reinforced with 6 mm diameter steel wire mesh at least 300 mm in length on both sides of the corner or junction. At window and door openings timber frames are built between Eco-beams with wire ties to restrain adjacent studs from buckling. Lintels are formed with welded steel wire mesh fixed to studs on both sides of the opening.

Electrical and plumbing services are positioned in place within the bags before the application of plaster.

The roof is constructed of eco-beams, timber rafters or conventional timber trusses and light- or heavy weight cladding. Window and door frames are incorporated as in timber frame structures and are conventional.

The Agrément certificate contains detailed information on the product and can be accessed at <http://www.agrement.co.za>.

Copies are obtainable from: Chief Executive Officer (CEO) Agrément South Africa, P O Box 1022, GARSFONTEIN, 0042