1. General description of the brick and the manufacturing process
2. Pure plastic or mix ?
3. Self locking or piling ?
4. Need additional material to link the bricks ?
5. Need additional structure to hold the walls ?
6. Need additional material to cover the bricks ?
7. Size(s) of the brick(s) ?
8. Weight(s) of the brick(s) ?
9. Price per brick ?
10. Price per kg ?
11. Price per wall ?

# Recycled Plastic Brick 1.0

1. General description of the brick and the manufacturing process
   1. The recycled plastic brick is the original plastic brick designed by Precious Plastic and Recycle Rebuild. The brick is made by extruding plastic into a mould. This is done with the precious plastic extrusion.
2. Pure plastic or mix ?
   1. Pure Plastic. PP or HDPE
3. Self locking or piling ?
   1. Self Locking
4. Need additional material to link the bricks ?
   1. The bricks are interlocking, connect without extra materials.
5. Need additional structure to hold the walls ?
   1. Yes, a beam on top of the wall has to be connected to the foundation, this is done with threaded rod or rebar, threaded on the both ends. This is needed to connect the roof to the foundation. It also compresses the bricks together.
6. Need additional material to cover the bricks ?
   1. The bricks need additional fire resistance and UV protection. For example, render or plastering.
7. Size(s) of the brick(s) ?
   1. The brick is 300x100x165 (LxWxH)
8. Weight(s) of the brick(s) ?
   1. 1,5-1,7kg
9. Price per brick ?
   1. According to G. Talsma (2022) £0,91-1,76 per brick.
10. Price per kg ?

???

1. Price per wall ?
   1. According to G. Talsma (2022) per square meter £18,385 - £35,547.
2. Extra:
   1. According to M. Seeger (2021) the PP brick can withstand a force 271kN

# Recycled Plastic Brick 2.0

1. General description of the brick and the manufacturing process
   1. The Recycled Plastic Brick 2.0 is an improved version of the first version by Precious Plastic and Recycle Rebuild. The improved version is cheaper, uses less plastic and can be produced faster. It uses an extruder to produce the molten plastic which is then transferred to a compression moulding machine which compresses the plastic into a brick shape. A brick can be produced every 4 minutes. It has been designed to be low cost, both the brick and the production process.
2. Pure plastic or mix ?
   1. Pure Plastic. PP
3. Self locking or piling ?
   1. Self Locking
4. Need additional material to link the bricks ?
   1. The bricks are interlocking, connect without extra materials.
5. Need additional structure to hold the walls ?
   1. Yes, a beam on top of the wall has to be connected to the foundation, this is done with threaded rod or rebar, threaded on the both ends. This is needed to connect the roof to the foundation. It also compresses the bricks together.
6. Need additional material to cover the bricks ?
   1. The bricks need additional fire resistance and UV protection. For example, render or plastering.
7. Size(s) of the brick(s) ?
   1. The brick is 400x200x125 (LxWxH). A width to length ratio of 2x1, which increases versatility with building with the brick.
8. Weight(s) of the brick(s) ?
   1. 1,3kg
9. Price per brick ?
   1. According to G. Talsma (2022) £10,45 to £19,07 per square meter
10. Price per kg ?

???

1. Price per wall ?
   1. According to G. Talsma (2022) £10,45 to £19,07 per square meter
2. Extra:
   1. Designed to withstand 15kN of force and simulations show it can easily handle that force with a maximum deviation of 0,8mm

# Eco Bricks

1. General description of the brick and the manufacturing process
   1. <https://www.ecobricks.org/welcome.php> EcoBricks are PET bottles packed solid with clean and dry plastic waste. These bottles can then be used to build walls with or incorporate them in walls or other structures. Making ecobricks does not require any machinery.
2. Pure plastic or mix ?
   1. Mix, PET bottle filled with mixed plastic.
3. Self locking or piling ?
   1. Incorporated into for example concrete of mud walls or a piling option with Lego modules. They have created different methods on how you can build with EcoBricks.
4. Need additional material to link the bricks ?
   1. What you need depends on the method of building. For example earthen structures require earth/mud. Lego-ish methods require the bottles to be tied together or glued together with silicone.
5. Need additional structure to hold the walls ?
   1. See above
6. Need additional material to cover the bricks ?
   1. They differentiate between short term and long term. The short term is not covered, temporary constructions and lasts around a couple moths to a couple years. Long term is for example the earthen structures where the bottles are incorporated in those structures.
7. Size(s) of the brick(s) ?
   1. PET bottle sized
8. Weight(s) of the brick(s) ?
   1. ???
9. Price per brick ?
   1. ???
10. Price per kg ?
    1. ???
11. Price per wall ?
    1. ???

# EasyBrick

1. General description of the brick and the manufacturing process

<https://easy-brick.us/> EasyBrick is a brick. Made with injection moulding. It seems to be made with industry standard very expensive injection moulding machines with large machined mould. The design is quite detailed, and could be seen as if the recycled plastic brick was made with industry injection moulding.

1. Pure plastic or mix ?
   1. PP
2. Self locking or piling ?
   1. Self locking
3. Need additional material to link the bricks ?
   1. No
4. Need additional structure to hold the walls ?
   1. The construction is fairly similar to the recycled plastic brick. They have dry and wet construction. With dry construction the whole bottom row is placed on a thin metal U shaped plate. This metal plate is connected to the foundation with metal rods and all the bricks on the bottom row are fasted to this plate with screws. Furthermore, the bricks are stacks and are not fastened or hold together with other methods. With the wet method, a metal rod is placed in the foundation in the corner pieces. The wall is constructed and then the are corner pieces filled with cement, rebar can be added in the cement. All the corners are now a sort of column.
5. Need additional material to cover the bricks ?
   1. Exterior is covered with cladding and interior can be finished with for example drywall or tiling.
6. Size(s) of the brick(s) ?
   1. 30x15x15 cm and/or 15x15x15 cm
7. Weight(s) of the brick(s) ?
   1. 1000grams and 550grams
8. Price per brick ?
   1. ???
9. Price per kg ?
   1. ???
10. Price per wall ?
    1. ???