The Reciprobooo Shelter Kit (RSK)

this is not a product

it is a new method for building shelters

that anyone can use
the problem with building a shelter

when given a tarpaulin

building the roof
is difficult
the reciprocal frame solution

80 Kg

poles are overlapped in turn to create a very strong self supporting reciprocal frame

in this example each pole supports 20kg

✓ Simple
✓ Strong
✓ Efficient
ridge pole “A” locks in frame stability

✓ Simple
✓ Strong
✓ Efficient

! look out for this frame in every slide from now on
Presentation overview

basic emergency shelter complete

✓ Simple
✓ Strong
✓ Efficient

7 bamboo poles
+ ropes
+ lashings
research on basic emergency shelter

University of Galway
- strength testing

UWE
- high speed wind tunnel tests

✓ Simple
✓ Strong
✓ Efficient

chief technician video
“the structure is fine, the structure is holding out really, really good”
the RSK uses 33% less bamboo

✓ Simple
✓ Strong
✓ Efficient

33% less transportation costs

conventional shelter

reciprocal shelter

150 ft of bamboo

90 ft of bamboo
Nepal workshop 2013

basic emergency shelter

elevated shelter

✅ Strong
✅ Simple
✅ Efficient
✅ Adaptable
Nepal workshop 2013

double shelter

✓ Strong
✓ Simple
✓ Efficient
✓ Upgradeable

double elevated shelter
Coventry University workshop 2014

- Strong
- Simple
- Efficient
- No skills needed

basic emergency shelter built on a steep incline
the IFRC shelter Kit used with the reciprocal frame for the first time

✓ rope
✓ wire
✓ handsaw
✓ machete
✓ shovel
✓ tarpaulins 6m x 4m
Myanmar 2015 - the basic emergency RSK

- 7 bamboo pole kit

- Floor = 4m x 3.8m > 15 sq.m

- Frame: £6.00

Total kit: £17.00

- Strong
- Simple
- Efficient
- Economical
the elevated RSK  a cooler shelter

10 to 12 bamboo pole kit

Total kit = £19.00

- Strong
- Simple
- Efficient
- Supports insulation
Myanmar 2015 - the double RSK

11 to 15 bamboo pole kit

2.2m

21.3 sq.m  Total kit = £20

✓ Strong
✓ Simple
✓ Efficient
✓ living space
the double elevated RSK

15 to 21 bamboo pole kit

2.4m

Total kit = £22

- Strong
- Simple
- Efficient
- Roof frames can be built on the ground
Myanmar: a vulnerable shelter

Weak structure / poorly constructed roof
Myanmar: a stronger shelter

- Improved strength.
- Improved tarpaulin support.
- Cooler shelter.
- Assemble on ground

the single elevated RSK
from basic shelter to a dignified living space

3 simple steps as more bamboo becomes available:

emergency RSK → double RSK → double elevated RSK
building a strong roof is no longer difficult

the reciprocal frame provides the answers

- Strong
- Simple
- Efficient
- Adaptable
- Upgradeable
- Minimal skills
- Economical
- Lightweight kit
- Supports insulation
- Build on ground

empowering the family to build their shelter
the Reciproboo Shelter Kit (RSK) vision

- Engage aid agencies to use this building method
- Set up disaster preparedness programs

for more information visit reciproboo.org

steel kit for a cold climate