Annex A - Technical Specifications

INVITATION TO BID: ITB/SOADEN/002/22
SUPPLY AND DELIVERY OF TRANSITIONAL SHELTER KITS

IMPORTANT: The bidder is requested to provide a sample for each item (as indicated in the table below) and Annex B has to be filled with the technical details. The bid has to meet at least the specifications of the products as set forth here below:

A. Technical Specifications

No.	Item description	UoM	Quantity Per Shelter	Note: All pictures below are for illustration and reference purpose only
1	**Walls**			
1a	**Wooden poles size, 70mm x 70mm x 4000mm as poles** Dimensions: 7x7 cm or more (section size) Length of pole: 400 cm (± 3 cm in length only) Colour: white or brown. Quality: hard quality, Heartwood Treatment: the wood must be certificated that was treated all parts of each pole against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	6	
1b	**Wooden poles size, 70mm x 70mm x 3000mm as poles** Dimensions: 7x7 cm or more (section size) Length of pole: 300 cm (± 3 cm in length only) Colour: white or brown. Quality: hard quality, Heartwood Treatment: the wood must be certificated that was treated all parts of each pole against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	7	
1c	**Wooden poles size, 50mm x 50mm x 3000mm as poles** Dimensions: 5x5 cm or more (section size) Length of pole: 300 cm (± 3 cm in length only) Colour: white or brown. Quality: hard quality, Heartwood Treatment: the wood must be certificated that was treated all parts of each pole against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	3	

1d	**Wooden plate size, 22mm x 100mm x 4000mm, as girt beam nailed to wall poles,** Dimensions: Plate width: 10 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 400 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	11	
1e	**Wooden plate size, 22mm x 100mm x 3000mm, as girt beams nailed to wall poles** Dimensions: Plate width: 10 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 300 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	7	
1f	**Door frame,** **Wooden plate 22mm x100mm x 4000mm (frame to fit opening size 900mm x2000mm)** Dimensions: Plate width: 10 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 400 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	1	
	Door frame, **Wooden plate 22mmx100mm x 3000mm(frame to fit opening size 900mm x2000mm.)** Dimensions: Plate width: 10 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 300 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with	No	1	

	moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack			
1g	**Plywood window - Window frame,** **Wooden plates 22mm x 100mm,x 3000mm to fit opening size 500mmx 600mm.** Dimensions: Plate width: 10 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 300 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	4	
1h	**Plywood panel size, 1200mm x 2400mm, 9mm thick,** should be first class Malaysian made or equivalent, minimum 7 plies, factory impregnated with anti-termite/insects. Dimensions: plywood width: 120 cm (±12 mm in width) Plywood length: 240 cm (±12 mm in thickness) Plywood thickness: 9mmm (±0. 5mm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health.	No	17	
1i	**Door Hinges,** length 15cm, Average width 6 cm, Thickness 1.5 mm, Materials: steel hinges coated with black paint, three screw holes in both sides, supplied with 6 screws.	No	3	
1j	**Door bolt: Latch barrel bolt,** Material: galvanized steel straight barrel latch bolt, length, 150mm supplied with 10 fixing screws	No	1	

1k	**Door bolt: Latch barrel bolt,** Materials: galvanized steel straight barrel latch bolt, length 100mm, supplied with 6no. fixing screws	No	1	
1l	**Window hinges,** Material: galvanized steel butt hinge coated with black paint, Length 75mm, Width 50mm supplied with 6no. fixing screws.	No	8	
1m	**Window latch,** galvanized steel straight barrel bolt latch completes with fixing screws Length:100mm, supplied with fixing screws	No	4	
1n	**Mosquito net/fly mesh,** to be fixed on gaps between plywood walls and CGI roof along the length of shelter and front face above plywood wall. Mosquito net: Dimension: Roll 1.0m X 18.0 m Thickness: 1.0 mm Textile net made from polyester or nylon yarn, white or gray colour. Net type: Rectangular, opening size not more than 2 mm.	roll	0.5	
1p	**Wooden plate 22mm x50mm x 4000mm (to fix mosquito next to shelter frame)** Dimensions: Plate width: 5 cm (±3 mm in width) Plate thickness: 2.2 cm (±1 mm in thickness) Plate length: 400 cm (± 3cm in length) Colour: white or brown. Quality: hard quality Treatment: the wood must be certificated that was treated all parts of each plate against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	4	
2	**Roofing**			
2a	**Wooden pole of size, 70mm x 70mm x 4000mm, as rafters** Dimensions: 7x7 cm or more (section size) Length of pole: 400 cm (± 3 cm in length only) Colour: white or brown. Quality: hard quality, Heartwood Treatment: the wood must be certificated that was treated all parts of each pole against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	5	

2b	**Wooden pole of size, 50mm x 50mm x 4000mm, as rafters** Dimensions: 5x5 cm or more (section size) Length of pole: 400 cm (± 3 cm in length only) Colour: white or brown. Quality: hard quality, Heartwood Treatment: the wood must be certificated that was treated all parts of each pole against the termite and insects; chemicals used for treatment must pose no risk to human health. Moisture Level: dry as much as possible with moisture level (if any) must be between 9% to 15%. Shake, Cracks: Free of crack	No	1	
2c	**Box profile galvanized iron sheets,** 0.5mm thick, 1000mm wide length 6000mm, with white color coating on both sides	No	4	
2d	**Thermal insulation:**15mm thick foam, silver layer or tin on both sides. (Roll size, 20m x 1m x 15 mm)	roll	1.5	
2e	**galvanized steel square wire mesh,** hole size 50mm x 50mm, (roll size 12m x 1m)	roll	2	
3	**Nails**			
3a	**Roofing/umbrella nails with rubber gasket,** Length: 63.25 mm (2.5 inches) (± 3 mm in the length), diameter of head: 12.65mm, (± 1 mm in dia.) Thickness: 3.5 mm twisted, (± 0.3 mm in the thickness) Box weight:1kg (± 100 grams)	box	3	
3b	**Nails,** Steel galvanized round wire common nail, Length:4 Inch (100mm), (± 3 mm in length) Diameter: 7 mm, (± 0.3 mm in the thickness) Box weight:1kg (± 100 grams)	box	2	

3c	**Nails,** Steel galvanized round wire common nail, Length: 2 Inch (50mm), (± 3 mm in length) Diameter: 3.5 mm, (± 0.3 mm in the thickness) Box weight 1kg, (± 100 grams)	box	3	
3d	**Nails,** steel galvanized round wire common nail, Length 25mm, (± 2 mm in length) Diameter: 2 mm, (± 0.2 mm in the thickness) Box weight:1kg, (± 100 grams)	box	2	
3e	**Paint:** Polyurethane paint, colour white, (to paint over plywood surface), juton or equivalent (packed in gallons)	gallon	1	
3f	**Paint brush,** 3" multi-purpose paint brush, should have wooden handle, ferrule and soft bristles.	No	1	
3g	**Padlock,** Size 40mm, hardened shackle of 8mm, with vertical clearance of 30mm, 50mm body width, 18mm body thickness, supplied with 3 keys, Tri circle or equivalent brand.	No	1	
4	**Tools**			
4a	**Hand saw,** Type: Stanley type, Size: 550 mm (±20mm) (22'') blade, (hard pointy teeth in two different sides), Materials: steel Stanley type Blade, thickness: 0.90 mm (±0.05mm), Handle: Plastic.	pcs	1.00	
4b	**Claw hammer,** Head size: steel head 5.5 inch, (13.5cm) (±7 mm), Head type: metal head with finger groove (claw) to remove the nails. Mirror polished, fine polished. Hammer weight (incl. head and handle): 0.650kg (±0.05kg) Materials: carbon steel Handle: Double colour plastic coating fiber glass handle. Handle length: 33 cm (±3cm).	pcs	1.00	
4c	**Pickaxe,** head: Iron head with two pointy edges, Handle: local wooden, straight, free of cracks and caries Handle Size: 60 cm, or more. Type: flat / pick edge The wooden handle thickness must fit into the hole of the iron head.	pcs	1.00	
4d	**Measuring tape,** make Stanley or equivalent, length 5m, clear metric scale, flexible metallic ribbon, must have tape casing with rubber cushion protection against impact and ribbon lock button.	pcs	1.00	

B. Packing

Goods must be adequately packed to meet the requirements of the transport mode stipulated and to withstand any rough handling during transit to destination.

The quantity of items (or primary packing units for items such as nails) in each packing unit must be standardized. The content information (item and quantity) must be clearly specified on a label on the outer packaging (potential secondary packing unit) along with the purchase order number.

C. Inspection

Details of the accepted cracks of the wooden Poles & Plates (Sawn wood)

- Below specifications and tolerances limits will be applied on bundle by the inspection Company during receiving the qty of delivered timbers by the suppliers.
  Notes:
  - Bundle of poles contains 196 pcs almost (±10 pcs)
  - Bundle of plates contains between 500 to 550 pcs almost.

Bundle of wooden poles

- **Inspection Mechanism:**

  - **Firstly: Wooden Poles:**

- **Initially: the acceptable bundles**

1- The acceptable bundle must be contained 60% free of cracks, if more: **Rejected.**

e.g., if the bundle (196pcs) of poles contains 117 pcs or more free of cracks, then the bundle is considered accepted, if less, then the bundle will be rejected.

2- **Minor cracks**: Presence of minor surface cracks (i.e., lattice cracks) is considered acceptable.

3- **Shake**: Allowable limit 3.5 cm (1/2 thickness)

- **Acceptable cracks** in the 40% (remaining in bundle) should be according to the following tolerance range:

  a. End Split: Longest split, 20 cm at each end.

  b. Dimensions of cracks in section of each pole 7x7 cm
  Width: up to 5.0 mm in max
  depth: up to 25.0 mm in max

  c. The cracked pole is considered rejected if the results of points a and b more than the tolerances limits.

  d. If the number of rejected cracked poles less than or equal 25% out of the 40% then the bundle will consider accepted, if more: **Rejected**

❖ Secondly: Wooden Plates:

- **Initially: the acceptable bundles**

1- The acceptable bundle must be contained 96% free of cracks per bundle, if more: **Rejected**

2- **Minor cracks**: Presence of minor surface cracks (i.e., lattice cracks) is considered acceptable.

3- Only the minor cracks are acceptable, any other cracks are considered unacceptable.

4- If the number of the rejected plates is more than 4% in each bundle, then the bundle is considered **Rejected.**

END