



# Play Catalogue: NNC





## Nurturing Neighbourhoods Challenge

---

**The Nurturing Neighbourhoods Challenge is hosted by the Smart Cities Mission, Ministry of Housing and Urban Affairs, Government of India, in collaboration with Bernard van Leer Foundation and with the technical support of WRI India.**

**This Challenge aims to incorporate a focus on neighbourhood-level improvements that promote healthy early childhood development (0-5-year-old children) in the planning and management of Indian cities.**

---

# Intent of the document

In India, play areas in public spaces often lack consideration for the requirements of children aged 0-5 years. This catalog aims to extend beyond the typical swings and slides found in such play areas by introducing innovative and age-appropriate play opportunities infused with natural and sensory components for young children. It compiles numerous child-friendly elements from projects undertaken across various cities under Nurturing Neighbourhoods Challenge, presenting comprehensive details for each element, including material specifications, dimensions, and suitability in specific settings.

These elements go beyond what is traditionally included in the Schedule of Rates (SOR) documents typically referred to by the cities. It serves as a collection of diverse procurement approaches for these items, which cities can choose from based on their specific needs.


The document's objectives are as follows:

- To serve as a ready reckoner for design, construction/implementation, execution, and procurement agencies, as well as urban professionals, in the adoption of new elements not covered under the Schedule of Rates (SOR)
- To provide specific information about the elements to city authorities, making it convenient for them to include these elements in the current SOR document.
- To encourage the provision of age-appropriate play equipment for young children, promoting their holistic development and well-being.

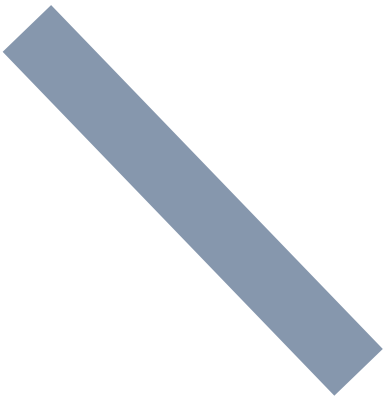
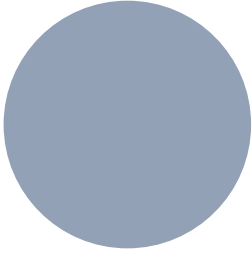


# Contents

## How to read the document

1. Sensory trail
  2. Balance bridge
  3. Interactive wall
  4. Sandpit
  5. Tunnel mound
  6. Stepping logs
  7. Sensory pathway
  8. Music wall
  9. Drum beat panel
  10. Telephone pipes
  11. Play sculpture
  12. Toy train
  13. Obstacle Course
  14. Abacus railing
  15. Climbing frame
  16. Illusion wall 1
  17. Illusion wall 2
  18. Tire swing
  19. Permeable boundary wall 1
  20. Permeable boundary wall 2
  21. Log seater
  22. Dice blocks
  23. EPDM flooring
  24. Lactation pod
- 





# How to read the document

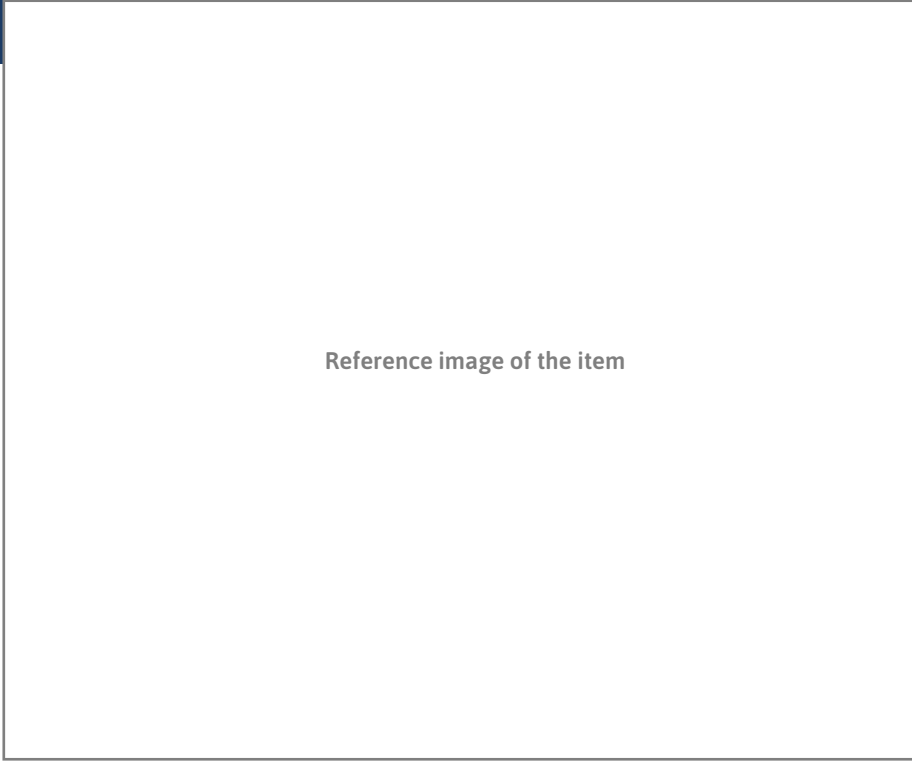




# Name of the element



NNC City in which the item was implemented



Reference image of the item

*Image source*

## Material Specifications

Detailed specifications of the materials used in the item. These specifications can be adopted as listed or customized to suit the context of the project/city

## Details

Illustration of the item with dimensions

## Type of Play

Different types of play for young children that the item attributes to

## Suitability

Suggested usage of item across different locations

# 01 Sensory trail



Image source: Rourkela Smart City Limited



Rourkela

## Material Specifications

### Pebbles

Supply and fixing of natural and stone polished river pebbles of 25mm diameter of approved quality, colour & finish to be laid over 50mm thick cement slurry of 1:6 ratio with approved pigmentation and as directed by the Engineer-in-charge. Rates include cost of material, labour, installation and any other required equipment or labour work.

### Bamboo

Providing 1 m long sticks of bamboo, each of 50mm diameter and fixing the bamboos within the designated slot of 1m X 1m with mortar on a M sand base with maximum of 2mm gap between the two consecutive bamboos as directed by the Engineer-in-charge.

### Wire cut brick

Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 7.5Newton per sqmm with cement mortar of 1:6 ratio for basement and superstructure (Machine molded Wirecut bricks). Rates including cost of materials, labour charges, scaffolding, curing complete as per specifications.

### Grasscrete tiles

Supplying and fixing of 50mm thick grasscrete tiles in a demarcated slot of 1m X 1m marked for the tiles and as directed by the Engineer-in-charge.

### Sand

Supply and spreading good quality red alluvial/sandy loam garden soil with medium fine texture (neither too coarse nor too fine) with a fair degree of water retaining capacity including cost of all materials, labour, labour cess, royalties, conveyance, applicable as directed by Engineer-in-charge.

### Wooden logs

Supplying and cutting of wooden logs in different heights and fixing the cut logs along the boundary of a free form sand pit as per the design. Logs to be ensured with rounded/chamfered edges and to be finished with approved tint and quality of varnish/paint to seal the gaps as directed by Engineer-in-charge.

### Tires

Supply and fixing of different sizes of tires of approved quality & finish, painted with synthetic enamel paint, fixed on ground by burring portion of tire as directed by the Engineer-in-charge over minimum 100mm PCC bed. Rates include cost of material, labour, installation and any other required equipment or labour work.

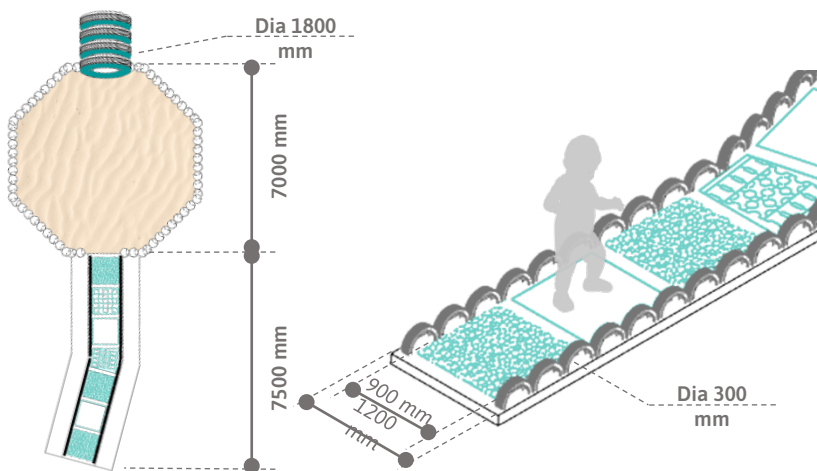
### Synthetic enamel paint

Finishing the tire with Synthetic Enamel paint (two coats) over one coat of primer applied as per manufacturer's specifications and as directed by the Engineer-in-charge.

### Korean grass

Supply and planting of 2" thick well grown disease free, carpet formed Korean grass as directed by Engineer-in-charge. Rates include cost of all materials, labour, labour cess, royalties, conveyance, applicable taxes and T&P etc complete in all respect.

## Details



## Suitability

Parks and Open Spaces

## Type of Play

Sensory, Physical, Social

# 02 Balance bridge

Jabalpur



Image source: Jabalpur Smart City Limited

## Material Specifications

### Wooden elements

Supply and fixing of seasoned sagwan/teak/babool or approved wooden logs in the form of battens of 50mm X15mm or as approved, fixed on supporting wooden columns to create balancing beams as directed by the Engineer-in-charge.

### Rivets

Providing and fixing M.S. rivets of approved sizes in position.

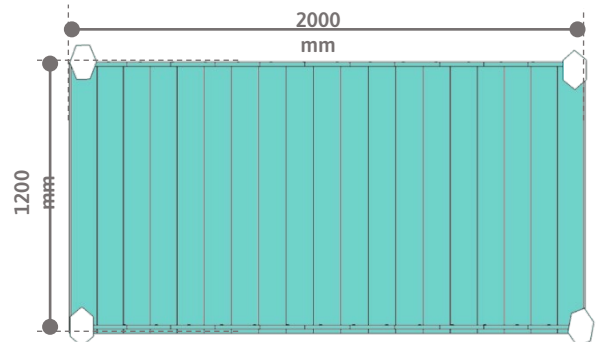
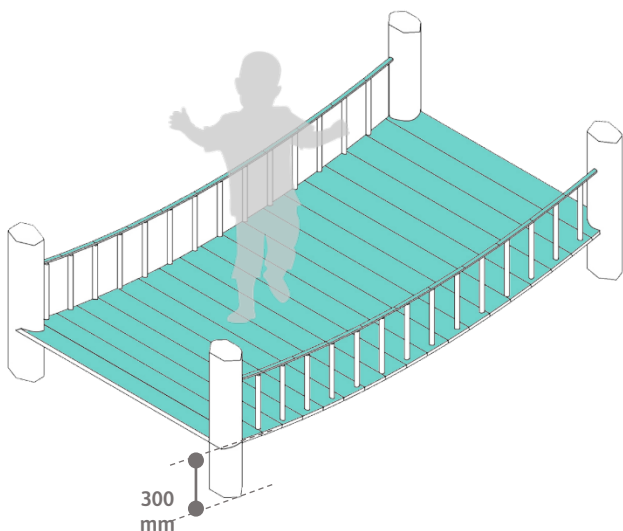
### Varnish

Two or more coats of glue sizing with copal varnish over an under coat of flattening varnish.

### Polish

Polishing on wood work with ready mixed wax polish of approved brand and manufacture: New work.

## Details



## Type of Play

Physical, Adventure

## Suitability

Parks & Open Spaces



# 03 Interactive wall

📍 Warangal



Image source: Greater Warangal Municipal Corporation

## Material Specifications

### Brick + mortar

Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 7.5Newton per sqmm with cement mortar of 1:6 ratio for basement and superstructure (Machine molded Wirecut bricks). Rates include cost of materials, labour charges, scaffolding, curing complete as per specifications.

### Cement plaster

Providing 12mm thick cement plaster of 1:4 ratio in single coat with cement mortar to brick masonry including rounding off corners wherever required. Rates include providing and removing scaffolding, cost of materials, labour, curing complete as per specifications.

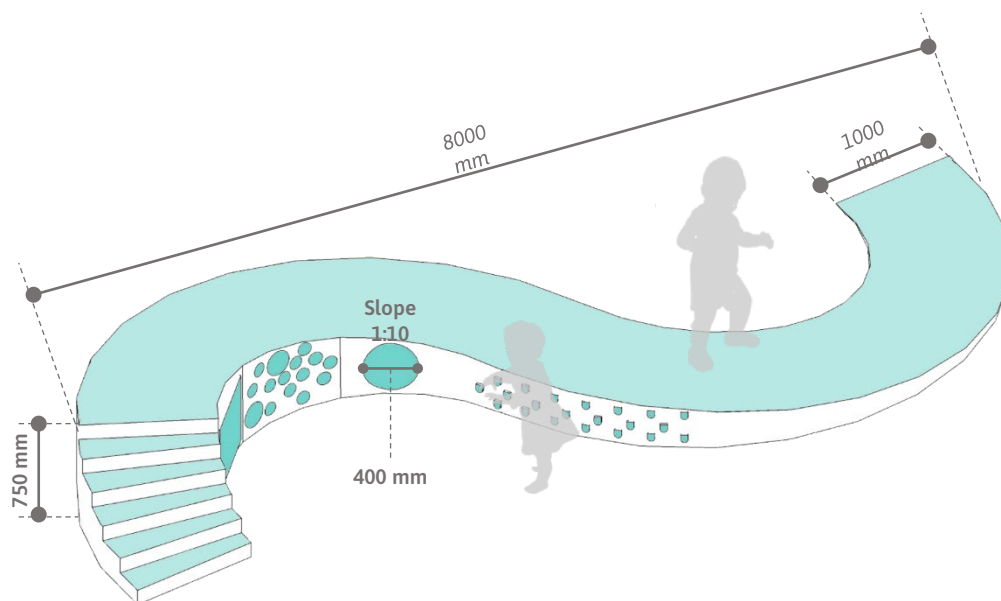
### Synthetic enamel paint

Painting surfaces with two coats with synthetic enamel paint in approved shades on new plastered concrete surfaces. Rate includes cost of materials, labour complete as per specifications.

### Synthetic flat matt emulsion paint

Painting surfaces with two coats of synthetic flat matt emulsion paint in approved shades as directed by Engineer-in-charge.

## Details



## Type of Play

Sensory, Social, Physical, Imaginative

## Suitability

Parks & Open Spaces, ECD Facilities

# 04 Sandpit

 Kakinada



Image source: Kakinada Smart City Corporation Limited

## Material Specifications

### Sand

Supplying and filling of good quality play sand in the free form shaped area marked for the sand pit upto a depth of 500mm with medium fine texture (neither too coarse nor too fine) with a fair degree of water retaining capacity including cost of all materials, labour, labour cess, royalties, conveyance, applicable as directed by Engineer-in-charge.

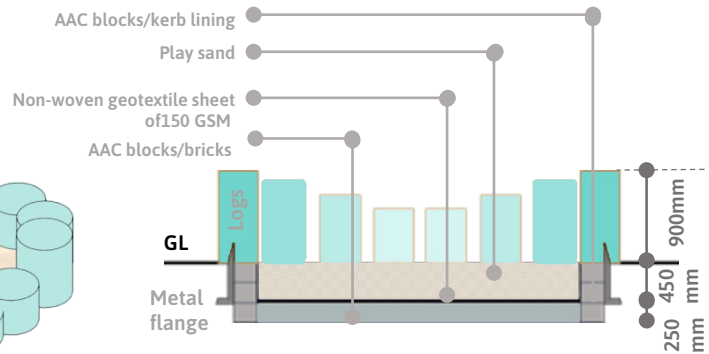
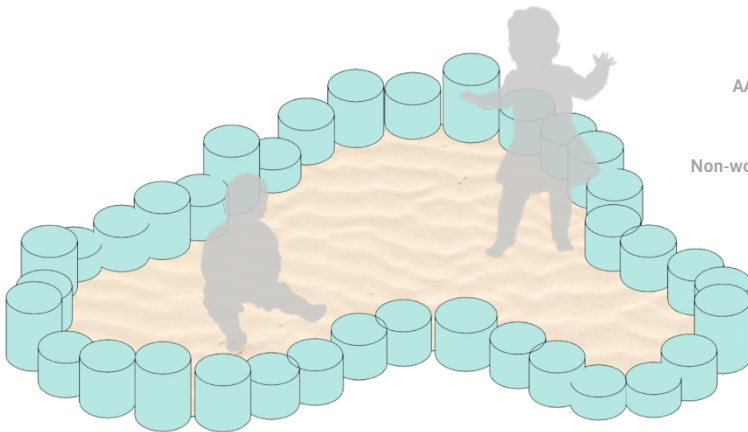
### Wooden Logs

Supplying, cutting in different heights and fixing of seasoned sagwan/teak/babool or approved wooden logs of 0.3m diameter along the boundary of a free form sand pit (As per the design) or as directed by the Engineer-in-charge.

### Varnishing

Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.

## Details



Sandpit area: 10 Sqm | Min height of the logs: 150 mm | Max height of the logs: 900mm

## Type of Play

Sensory, Social, Imaginative, Physical

## Suitability

Parks & Open Spaces, ECD Facilities



# 05 Tunnel mound

📍 Warangal



Image source: Swathi P S, WRI India

## Material Specifications

### Earthwork

Supplying and stacking of good earth as per the design of the mound-including watering and consolidating etc. at site including royalty and carriage upto 5 km complete (earth measured in stacks will be reduced by 20% for payment).

### Cement plaster

Providing and applying 30 mm thick cement plaster of mix 1:6(1 Cement :6 sand ) with curing as guided by the Engineer-in-charge to attain a full strength

### Concrete

Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work upto plinth level.

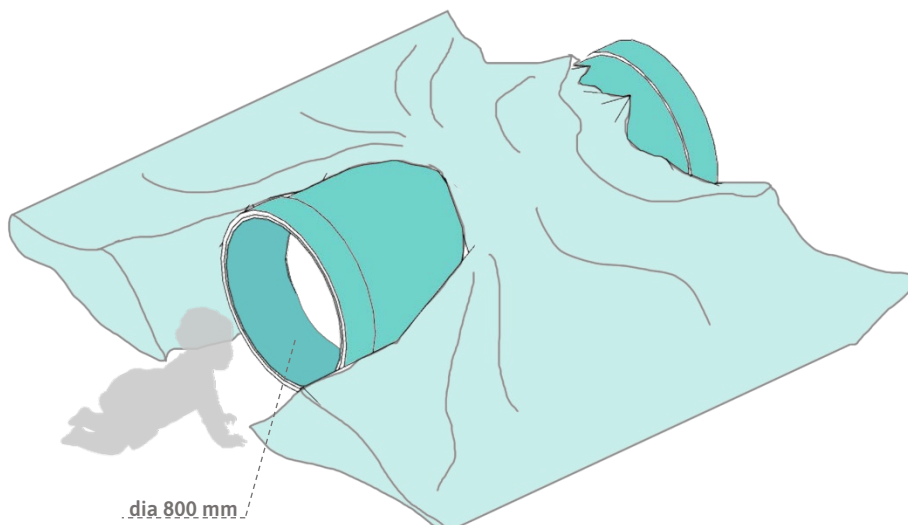
### Grass

Providing and laying Mexican grass/Pearl grass turf with earth 50mm to 60mm Thickness of existing ground prepared with proper level and ramming with tools wooden (Dhurmos) and then rolling the surface with light roller make the surface smoothen and light watering with sprinkler and maintenance for 30 days or more till the grass establish properly, as per direction of Officer-in-charge

### Cement concrete pipe

Providing and Laying non-pressure (NP3) RCC socket & spigot pipes of 600mm diameter with rubber gasket joint including testing of joints.

## Details



.dia 800 mm

## Type of Play

Physical, Adventure

## Suitability

Parks & Open Spaces, ECD Facilities

# 06 Stepping logs

Indore



Image source: Indore Smart City Development Limited

## Material Specifications

### Sagwan wood

Selecting and cutting, cleaning and shaping the sagwan/babool/teak/sal single/monolithic wood trunks to form logs of 300-450mm diameter each and heights as per the dimensions to form logs as directed by the Engineer-in-charge. Chamfering the edges to ensure safer playing experience. Fixing the elements on ground with the insertion depth of not less than 200mm.

### Metal flange

Fabricating flanges of SS 304 or of approved quality and minimum 600mm height/depth to fix the elements to the ground (depth to be calculated over and above 200mm) as directed by the engineer in charge.

### Rivets

Providing and fixing M.S. rivets of sizes in position.

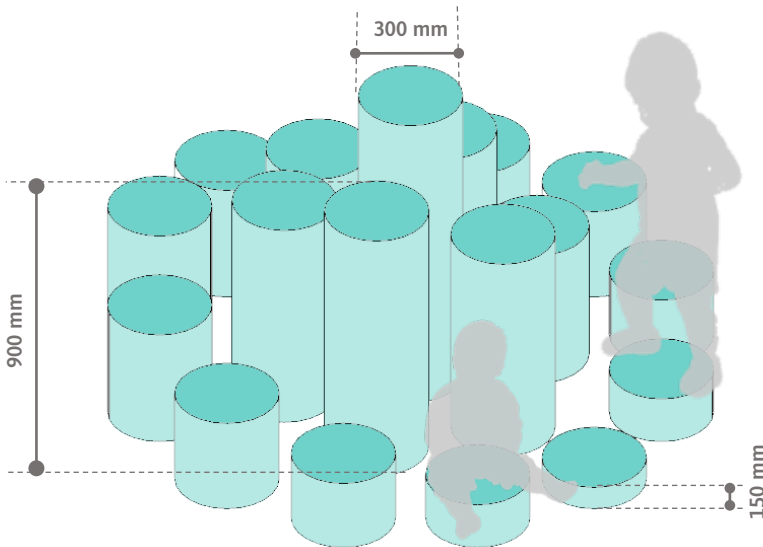
### Varnish

Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.

### Paint

Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied@0.75 ltr/ 10 sqm of approved brand or manufacture.

## Details



Min height of the logs: 150 mm | Max height of the logs: 900 mm

## Type of Play

Physical, Adventure

## Suitability

Parks & Open Spaces, Streets, ECD Facilities



# 07 Sensory pathway

 Bengaluru



Image source: Bengaluru Smart City Limited

## Material Specifications

### Wire cut bricks

Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 7.5 Newton per sqmm with cement mortar of 1:6 ratio for basement and superstructure (Machine moulded Wirecut bricks). Rates including cost of materials, labour charges, scaffolding, curing complete as per specifications.

### Sand

Supply and spreading good quality sand/red alluvial/sandy loam garden soil as approved with medium fine texture (neither too coarse nor too fine) with a fair degree of water retaining capacity to form a base layer of 20mm as directed by Engineer-in-charge including cost of all materials, labour, labour cess, royalties, conveyance, applicable.

### Pebbles

Supply and fixing of natural and stone polished river pebbles of 25mm diameter of approved quality, colour & finish to be laid over 50mm thick cement slurry of 1:6 ratio with approved pigmentation and as directed by the Engineer-in-charge. Rates include cost of material, labour, installation and any other required equipment or labour work.

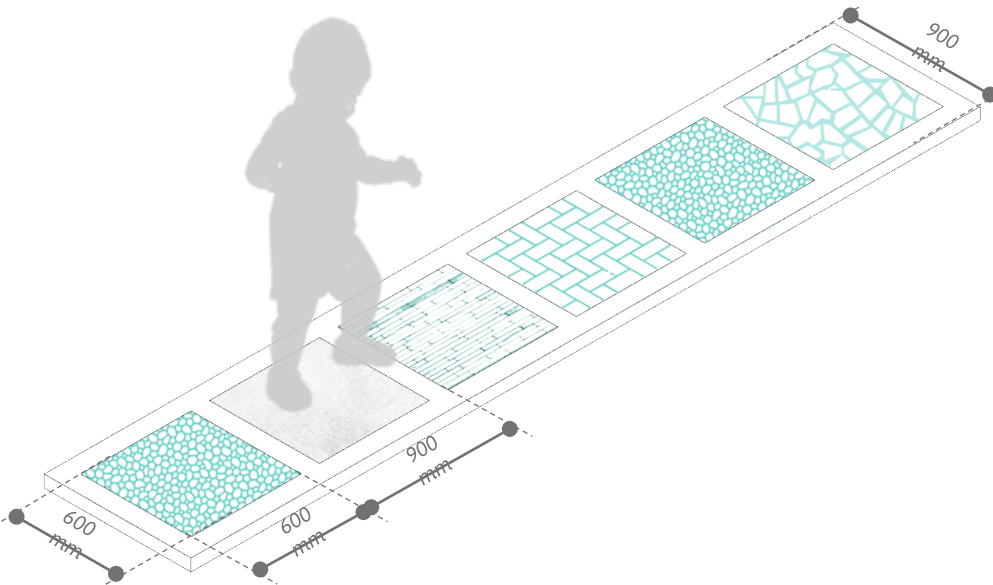
### Bamboo sticks

Providing 1 m long sticks of bamboo, each of 50mm diameter and fixing the bamboos within the designated slot of 1m X 1m with mortar on a M sand base with maximum of 2mm gap between the two consecutive bamboos as directed by the Engineer-in-charge.

### Buffalo grass

Supply and planting of 4" thick well grown disease free, carpet formed Buffalo grass over red soil as directed by Engineer-in-charge, Rates include cost of all materials, labour, labour cess, royalties, conveyance, applicable taxes and T&P etc complete in all respect.

## Details



## Type of Play

Sensory, Social, Physical

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 08 Music wall

 Rourkela



Image source: Rourkela Smart City Limited

## Material Specifications

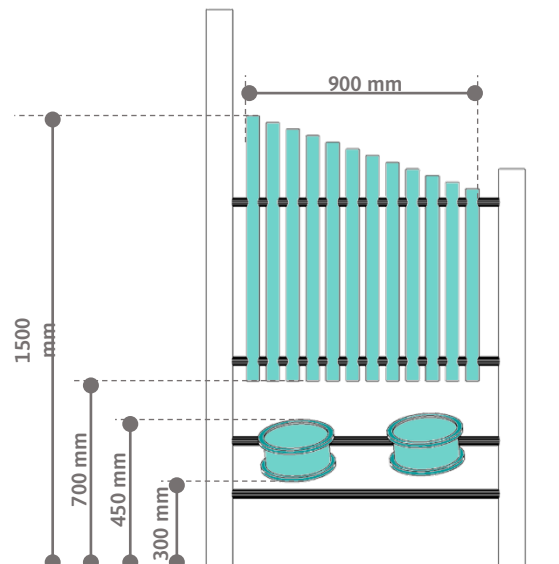
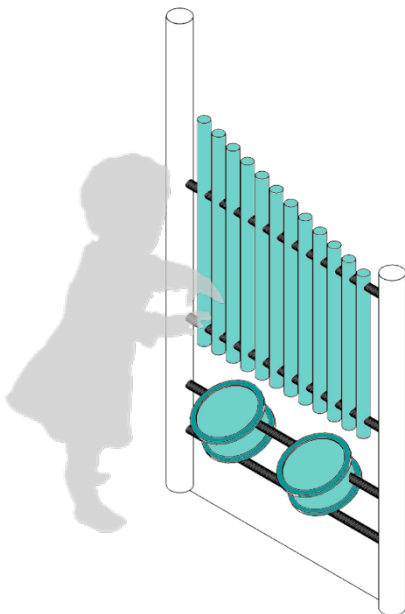
### Mild steel

Manufacturing and supplying xylophone bars made of rosewood/kelon/M S/bamboo as approved by the Engineer-in-charge and tuned to produce a particular note in minimum 3 octaves. to be lined with a frame made out of M.S. Tubes of 19-gauge thickness and size of 50mm diameter. Column to be erected by grouting in a concrete mix of 1 cement: 2 coarse sand: 4 Aggregate from the column foundation of minimum 600mm depth or as approved. M.S. frame to be coated with steel primers of approved make.

### Drums

Supplying and fixing on site play drums of 300mm diameter in the PHED panel as directed by the Engineer-in-charge.

## Details



## Type of Play

Sensory, Social, Cognitive, Imaginative

## Suitability

Parks & Open Spaces, Streets, ECD Facilities



# 09 Drum beat panel



Image source: Rourkela Smart City Limited

 Rourkela

## Material Specifications

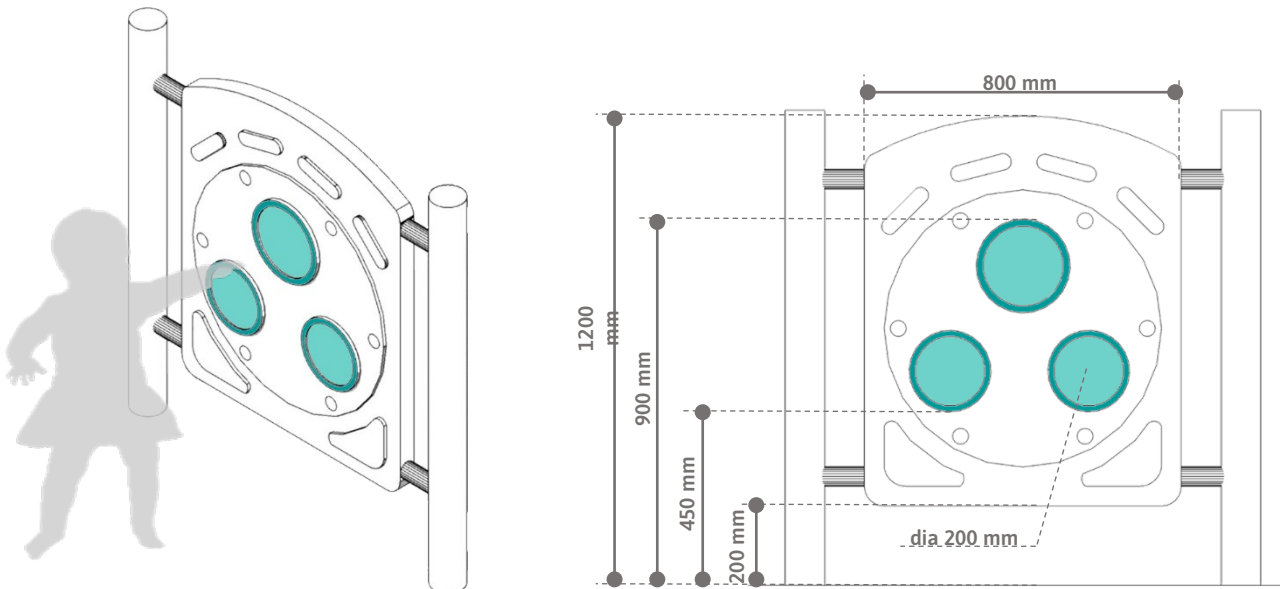
### PHED panel with M S frame

Providing and fixing factory-made polyethylene high-density pantographed panels (PEHD) without sharp edges with predefined voids for the play drums as directed by the Engineer-in-charge & as per the design. PHED panel to be lined with a frame made out of M.S. Tubes of 19-gauge thickness and size of 50mm diameter. Columns to be erected by grouting in a concrete mix of 1 cement: 2 coarse sand: 4 Aggregate from the column foundation of minimum 600mm depth or as approved. M.S. frame to be coated with steel primers of approved make.

### Drums (Non

Supplying and fixing on site play drums of 300mm diameter in the PHED panel as directed by the Engineer-in-charge.

## Details



## Type of Play

Sensory, Social, Cognitive, Imaginative

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 10 Telephone pipes

Bengaluru



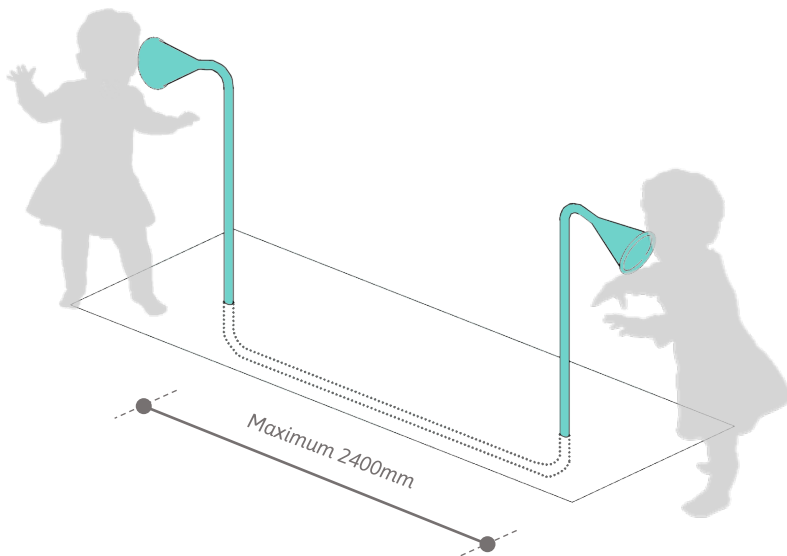
Image source: Suhani Gupta, WRI India

## Material Specifications

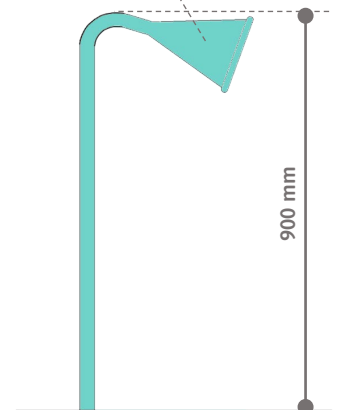
### Mild steel and hollow MS pipe finished with paint

Supply and Fixing of telephone pipes made in MS pipe with main structure pipe of 300mm length, 75mm diameter and 3mm thickness with four bends. 274mm long speaking cone in MS plate with outer diameter of 300mm and inner diameter of 75mm and thickness of 3 mm across length . One end of the cone to be capped with MS Jalli of 69mm diameter and 3mm thickness welded to the cone and the other end of the cone to have MS rod of 311mm diameter and 10mm thickness to be welded to the cone. 3 L-angle of dimensions 375x50x5mm to be welded to horizontal pipe for installation purposes. The entire fabrication to be hot dipped galvanised and coated with PU Paint.

## Details



Outer dia: 300mm;  
inner dia: 75mm



## Type of Play

Sensory, Social, Cognitive

## Suitability

Parks & Open Spaces, Streets, ECD Facilities



# 11 Play sculptures

Kochi



Image source: Amy Joseph , WRI India

## Material Specifications

### Concrete (foundation)

Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 35 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).

### Wooden molds in animal shape

Fabricating, fixing on site, molds made of wooden planks to pour concrete in the shape of animal as per the design and as directed by the Engineer-in-charge.

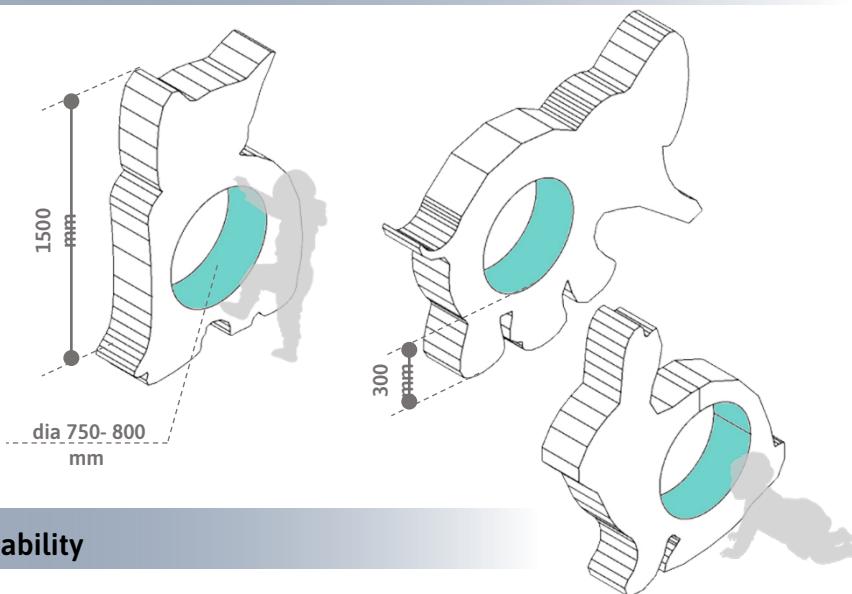
### Concrete (filling inside molds)

Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site on work in transit mixer for all leads, having continuous aggregate mixer, manufacturer as per mix design of specified grade for reinforced cement work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement. including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.

### Acrylic emulsion paint

Applying two coats of acrylic emulsion paint of approved brand and manufacturer over one coat of primer to ensure an even shade as directed by the Engineer-in-charge

## Details



## Suitability

Parks & Open Spaces, Streets, ECD Facilities

## Type of Play

Physical, Social

# 12 Toy train

Indore



Image source: Kshitija Pendharkar, WRI India

## Material Specifications

### Sagwan wood

Selecting and cutting as per the dimensions the sagwan/babool/teak/sal wood planks of minimum 18mm thickness each and cleaning & sealing the wooden panels as directed by the Engineer-in-charge. Shaping the wooden elements to ensure form as per the dimensions & Chamfering the edges to ensure safer playing experience. Assembling the elements to form toy train with each compartment of 1200mm X 900mm through bolting/riveting as approved.

### Metal flange

Fabricating flanges of SS 304 or of approved quality and minimum 600mm height/depth to fix the elements to the ground as directed by the engineer in charge.

### Rivets

Providing and fixing M.S. rivets of sizes in position.

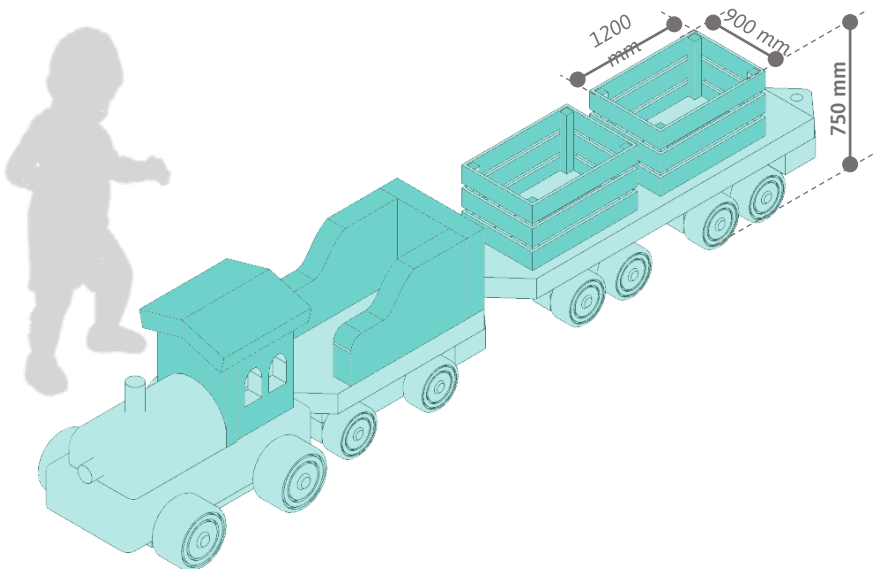
### Varnish

Two or more coats of glue sizing with copal varnish over an under coat of flattening varnish.

### Polish

Polishing on wood work with ready mixed wax polish of approved brand and manufacture: New work.

## Details



## Type of Play

Physical, Social, Imaginative

## Suitability

Parks & Open Spaces, ECD Facilities



# 13 Obstacle course

 Kakinada



Image source: Ravichandra G S, WRI India

## Material Specifications

### M S tubes

Hot finished seamless type tubular section (60mm diameter and 3.6mm thickness (round, square or rectangular Hollow tube etc.) trusses /frame work etc./ railing work etc. including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, welding and bolting including special shaped washers etc. complete.

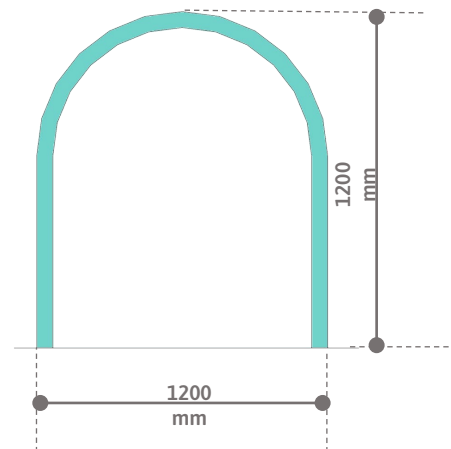
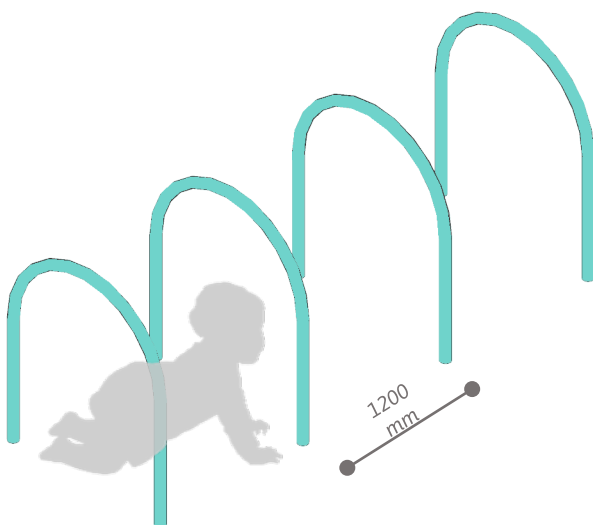
### Concrete

Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work upto plinth level. Cement concrete (1:3:6 mix) grade M-10 (Nominal Mix)with 20mm maximum size of stone aggregate using concrete mixer without Form work.

### Synthetic enamel paint

Painting surfaces with two coats of synthetic flat matt emulsion paint in approved shades as directed by Engineer-in-charge.

## Details



## Type of Play

Physical, Adventure

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 14 Abacus railing

Kochi



Image source: Amy Joseph , WRI India

## Material Specifications

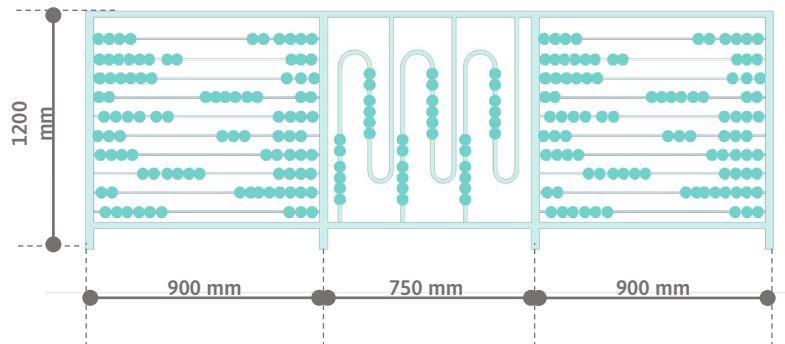
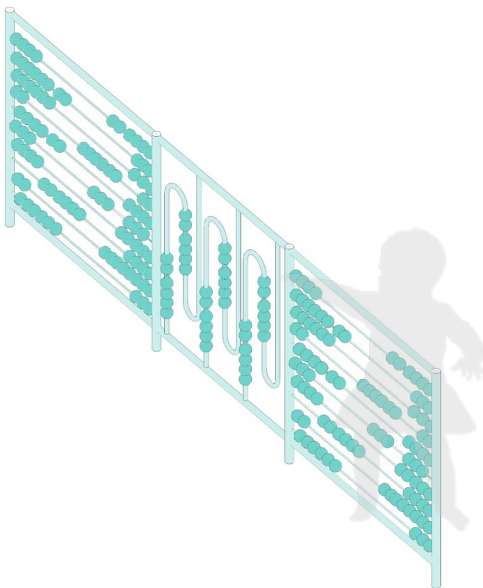
### Abacus rings

Supplying and installing in place non-toxic plastic rings of different colors with 10cm outer diameter and 5cm inner diameter

### Steel rod

Supplying, fabricating and fixing of climbing frame of builtup M.S. tubular section of 1.5-inch diameter (round, square or rectangular Hollow tube etc.) trusses /framework etc./ railing work etc. including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, welding and bolting including special shaped washers et c. complete.

## Details



## Type of Play

Cognitive, Sensory, Locomotor, Social

## Suitability

Parks & Open Spaces, Streets, ECD Facilities



# 15 Climbing frame

📍 Kakinada



Image source: Ravichandra G S, WRI India

## Material Specifications

### M S tubes

Supplying, fabricating and fixing of hot finished seamless type tubes of 60mm diameter and 3.6mm thickness including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, welding and bolting including special shaped washers etc. Complete.

### Nylon rope

Supplying and fixing of 12mm yellow nylon rope without any metal ties supported across span through bamboo/wooden/metal supports as per the provided design by the engineer

### Wooden block

Supplying the wood, carrying out necessary carpentry work and fixing the wooden pieces as per the provided design by the engineer

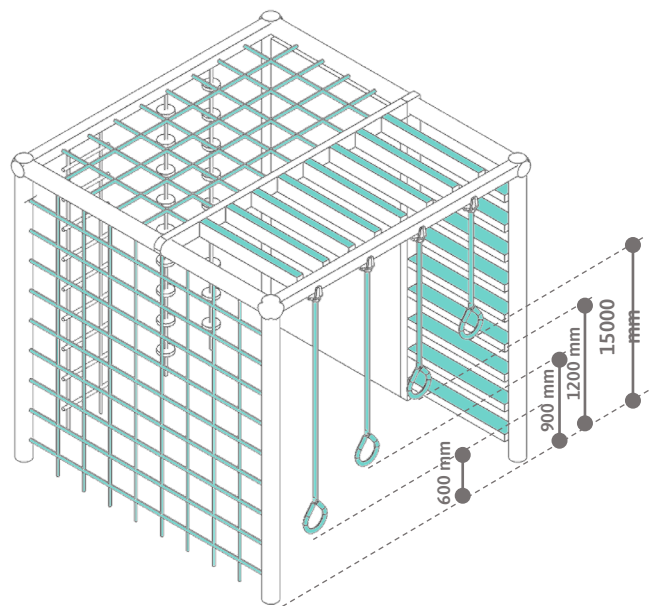
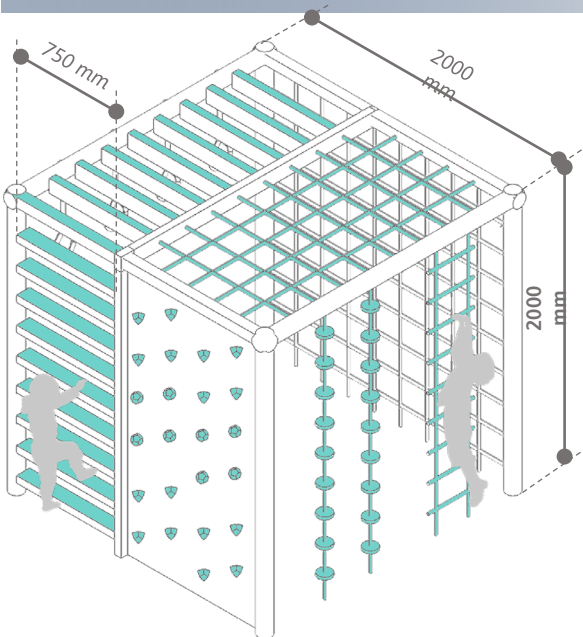
### Metal hooks

Supplying and fixing of 8mm brass anchor eye hook fasteners as per the provided design by the engineer

### Synthetic enamel paint

Painting surfaces with two coats of synthetic flat matt emulsion paint in approved shades as directed by Engineer-in-charge.

## Details



## Type of Play

Physical, Adventure

## Suitability

Parks & Open Spaces, ECD Facilities

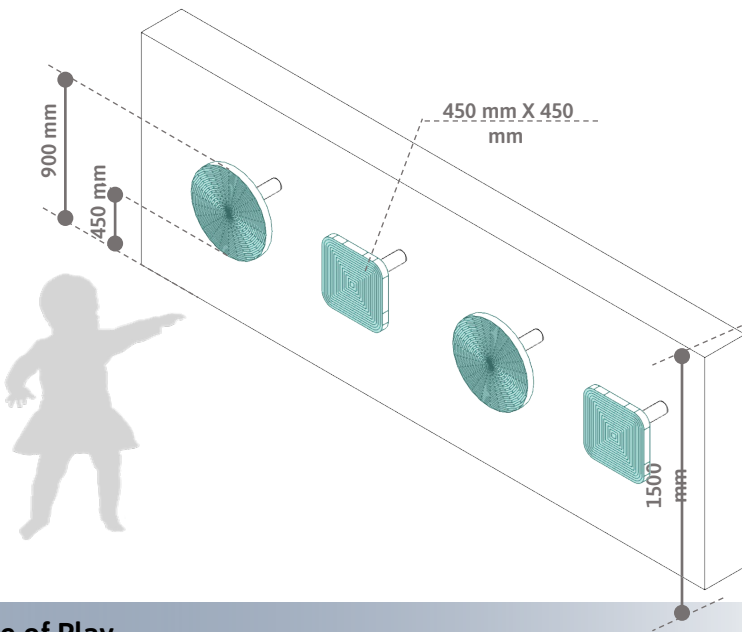
# 16 Illusion wall 1

 Kohima



Image source: Kohima Smart City Development Limited

## Details



## Type of Play

Locomotor, Sensory, Cognitive

## Material Specifications

### Mild steel plates

Fabricating 8mm thick MS plate of 450m X 450m as per design and bolted on 50mm Hollow MS Tubes and fixed on the wall panels

### Brick + mortar

Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 7.5Newton per sqmm with cement mortar of 1:6 ratio for basement and superstructure (Machine molded Wirecut bricks). Rates include cost of materials, labour charges, scaffolding, curing complete as per specifications.

### Cement plaster

Providing 12mm thick cement plaster of 1:4 ratio in single coat with cement mortar to brick masonry including rounding off corners wherever required. Rates include providing and removing scaffolding, cost of materials, labour, curing complete as per specifications.

### Synthetic enamel paint

Painting surfaces with two coats with synthetic enamel paint in approved shades on new plastered concrete surfaces. Rate includes cost of materials, labour complete as per specifications.

### Synthetic flat matt emulsion paint

Painting surfaces with two coats of synthetic flat matt emulsion paint in approved shades as directed by Engineer-in-charge.

## Suitability

Parks & Open Spaces, Streets, ECD Facilities



# 17 Illusion wall 2

📍 Warangal



Image source: Greater Warangal Municipal Corporation

## Material Specifications

### Galvanised steel plates

Fabricating 1.6mm thickness Galvanised sheet for the illusion box. Fixing of bearing No:6204 3/4" of L angles in 3mm thickness with High Quality Auto finishing Paint

### Galvanised steel pipes

Fabricating structure for the illusion box with 1" diameter pipes and conical wheel with 1/2" diameter pipes of 2mm thickness as directed by the Engineer-in-charge

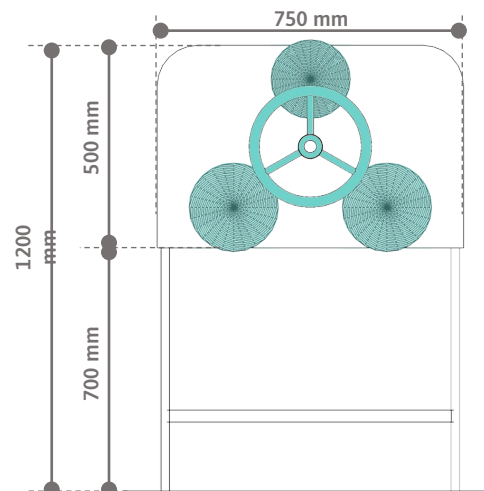
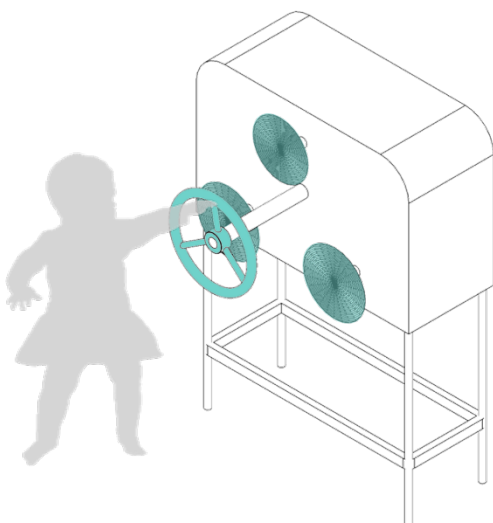
### Galvanised steel plates

Fabricating 8mm thick GI circular illusion plate of 200mm diameter as per design and bolted on 50mm Hollow GI Tubes and fixed on the GI panels

### Excavation and fixing

Providing and fixing in play equipment, including excavation of 0.45 x 0.45 x 0.45 m size pit and fixing the each supporting leg / anchoring arm of playing instrument in 1:1 1/2:3 grade concrete block of 0.45 x 0.45 x 0.45 m size

## Details



## Type of Play

Locomotor, Sensory, Cognitive

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 18 Tire swing

📍 Jabalpur



Image source: Kshitija Pendharkar, WRI India

## Material Specifications

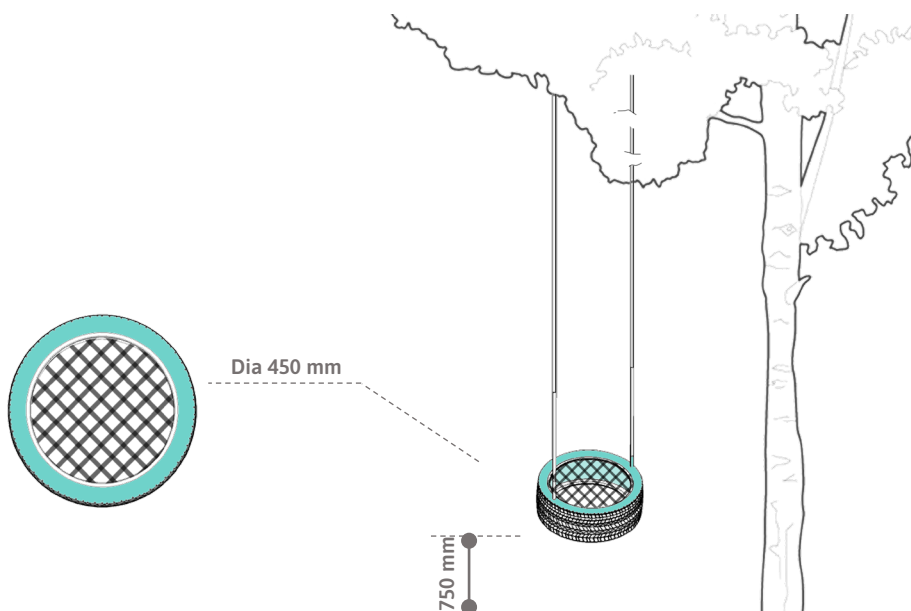
### Nylon rope

Supplying and fixing of 12mm yellow nylon rope without any metal ties supported with tree and creating swing seater of rope mesh of 50mm X 50mm.

### Recycled tire

Supplying and fixing of recycled tire (with maximum inner diameter of 450mm) as per the design provided by the engineer

## Details



## Type of Play

Physical, Social

## Suitability

Parks & Open Spaces, ECD Facilities



# 19 Permeable boundary wall 1

Jabalpur



Image source: Jabalpur Smart City Limited

## Material Specifications

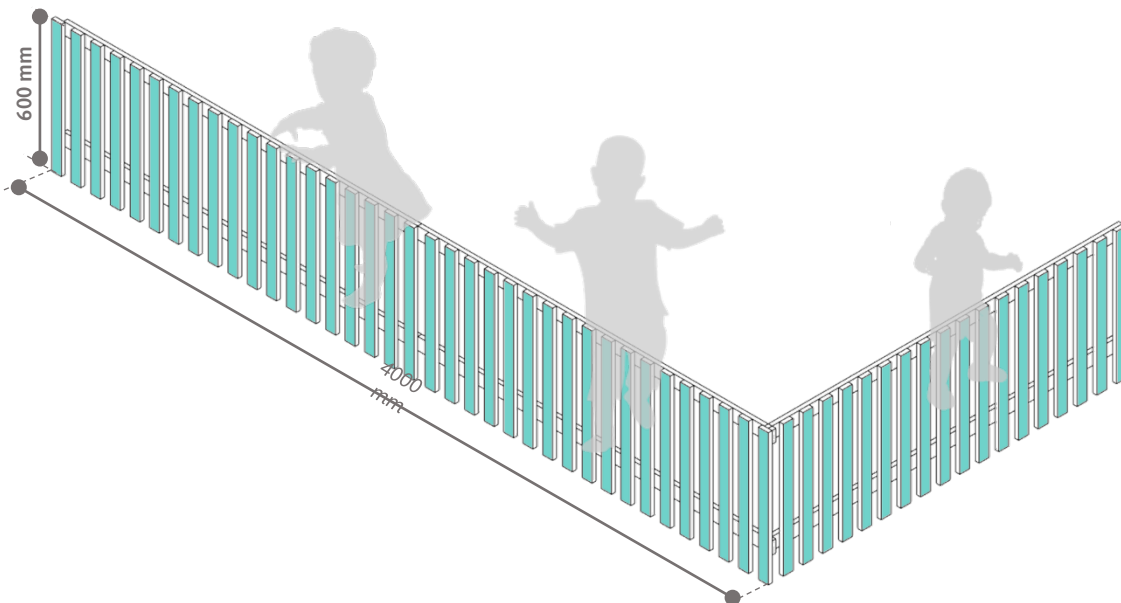
### Wooden planks

Supplying and cutting of the approved type and quality of wood into planks of 75mm x 25mm x 900mm (for members along the edges of the boundary wall) and 100mm x 100mm x 900mm (for corners).

### Synthetic enamel paint

Painting with Synthetic Enamel paints - One Coat

## Details



## Type of Play

NA

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 20 Permeable boundary wall 2

Vadodara



Image source: Shantaben Manubhai Patel School of Studies & Research in Architecture and Interior Design (SMAID)

## Material Specifications

### MS hollow section pipes

Supply and welding of 100mm diameter MS hollow pipes for frame and drilling holes as per the design for the tire assembly as directed by the Engineer-in-charge. Rates include cost of material, labour, installation and any other required equipment or labour work.

### Tire

Supply and fixing of 4.00-8 tires of approved quality & finish, drilling of holes and tying with binding wires/jute ropes as directed by the Engineer. Rates include cost of material, labour, installation and any other required equipment or labour work.

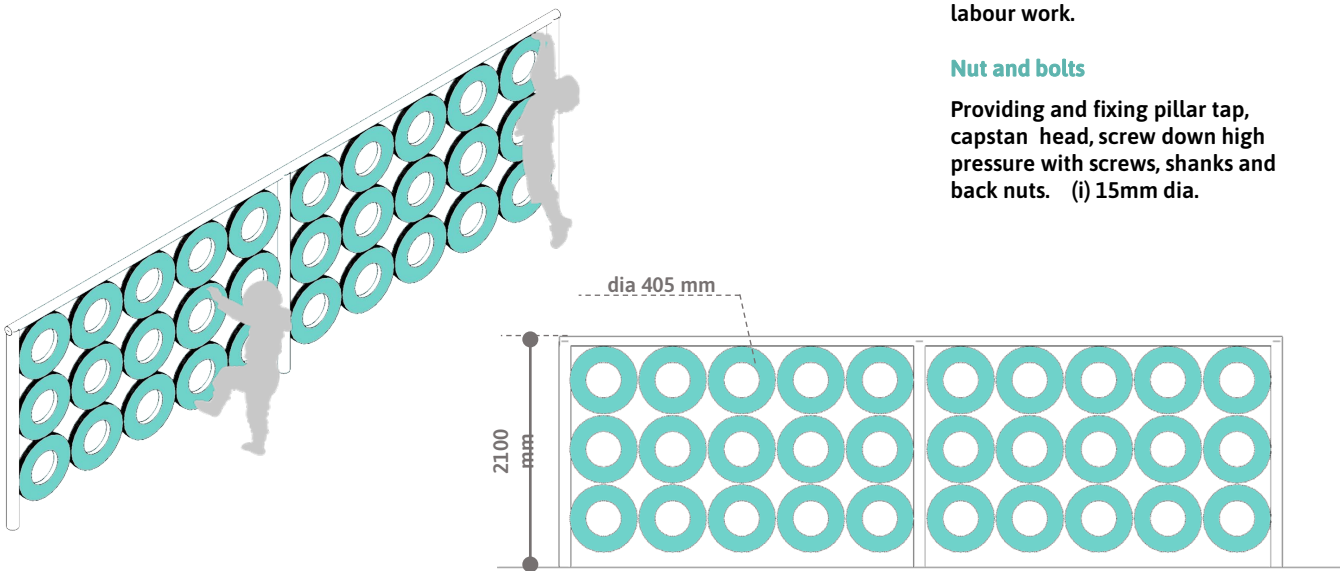
### Jute rope

Supply of 40mm thick jute rope of approved quality as directed by the Engineer. Rates include cost of material, labour, installation and any other required equipment or labour work.

### Nut and bolts

Providing and fixing pillar tap, capstan head, screw down high pressure with screws, shanks and back nuts. (i) 15mm dia.

## Details



## Type of Play

NA

## Suitability

Parks & Open Spaces, ECD Facilities



# 21 Log seater

Indore



Image source: Indore Smart City Development Limited

## Material Specifications

### Sagwan wood

Selecting and cutting, cleaning and shaping the sagwan/babool/teak/sal single/monolithic wood trunks to form sliced cylindrical seating top of 1500mm X 450mm X 150mm and two support members, each of 600mm X 250mm with a height to ensure total height of the seating as 250mm for children's seating and 450mm for the adult's seating as shown in the details and as directed by the Engineer-in-charge. Chamfering the edges to ensure safer playing experience. Assembling the elements to form seating through bolting/riveting as approved.

### Metal flange

Fabricating flanges of SS 304 or of approved quality and minimum 600mm height/depth to fix the elements to the ground (depth to be calculated over and above 200m) as directed by the engineer in charge.

### Rivets

Providing and fixing M.S. rivets of sizes in position.

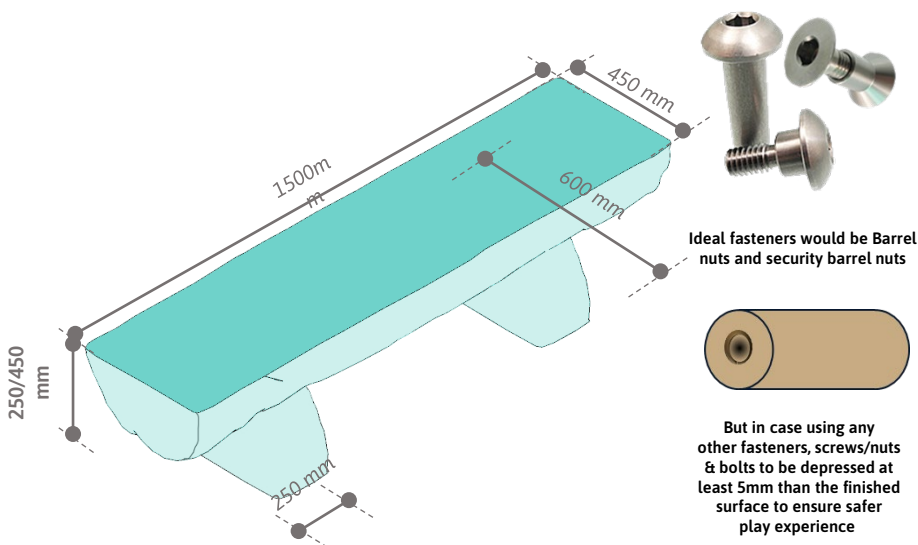
### Varnish

Two or more coats of glue sizing with copal varnish over an under coat of flattening varnish before assembling.

### Polish

Polishing on wood work with ready mixed wax polish of approved brand and manufacture after installation.

## Details



## Type of Play

NA

## Suitability

Parks & Open Spaces, Streets, ECD Facilities

# 22 Dice blocks

Jabalpur



Image source: Jabalpur Smart City Limited

## Material Specifications

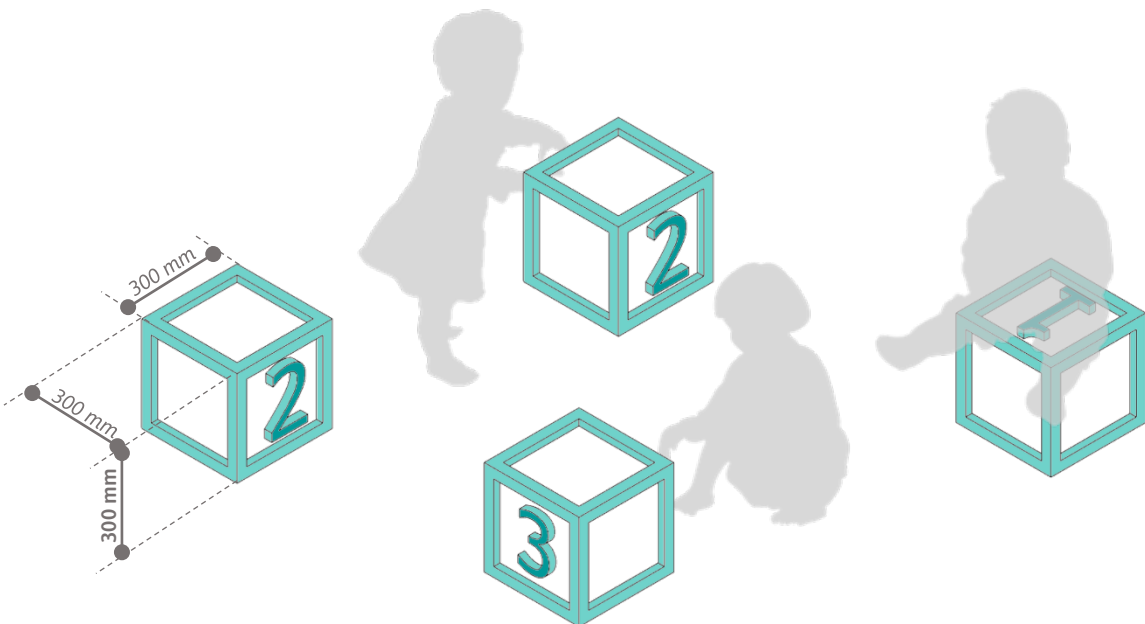
### Cubes

Creating cubes of 0.3m X 0.3m from acrylic/wood or any other soft and suitable material for young children with all edges chamfered to ensure safety and as approved by the Engineer-in-charge.

### Synthetic enamel paint

Finishing the blocks with Synthetic Enamel (two coats) paint over one coat of primer applied as per manufacturer's specifications and as directed by the Engineer-in-charge.

## Details



## Type of Play

Cognitive, Solitary, Social

## Suitability

Parks & Open Spaces, ECD Facilities



# 23 EPDM Flooring

Kochi



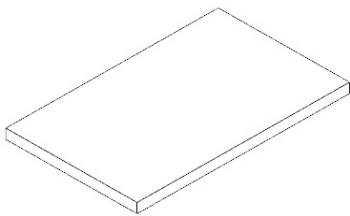
Image source: Amy Joseph , WRI India

## Material Specifications

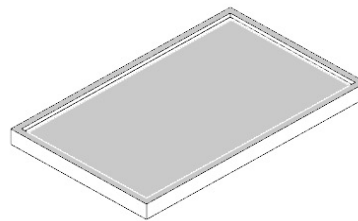
### Ethylene propylene diene monomer rubber (EPDM)

Supply and installation of 6 mm thick EPDM + 30 mm SBR System over Concrete sub base. Creating a primer with PU Binder over sub base. Providing 30 mm thick Black SBR Granules mix with P.U Binder as per Manufacturer Instruction and mixing 6 mm thick Ecolastic EPDM 1-4 mm Granules with P.U Binder

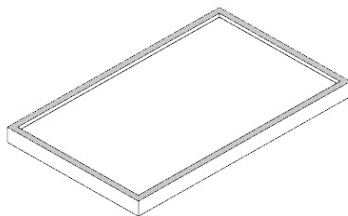
## Details



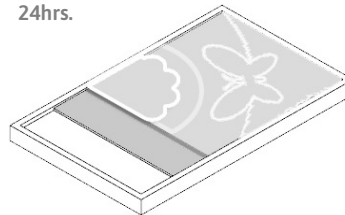
Step 1: Laying a base of PCC bed



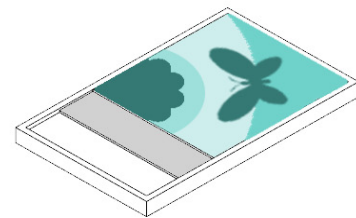
Step 3: Spread the first layer of EPDM (black granules mixed with adhesive) over the base. Leave it to dry for at least 24hrs.



Step 2: Constructing a border (50mm thick) around the intended area with concrete to retain the EPDM granules



Step 4: Draw the desired shapes or patterns on the first layer with a chalk.



Step 5: Add the second layer of EPDM (pigmented granules mixed with adhesive) within the outlined shapes. Leave it to dry for at least 24hrs.

## Type of Play

NA

## Suitability

ECD Facilities, Streets

# 24 Lactation pod



Rourkela



Image source: Arunima Saha, WRI India

## Material Specifications

### Wall panels

Providing and fixing PUF insulated sandwich panels for walls & roof of total thickness not less than 40 mm and minimum length & width as 1.2m having tongue and groove edge finish with camlock arrangement. Panel shall have 0.5mm thick pre-coated GI sheet on both side of polyurethane foam conforming to IS 12436:1988. The Pre-coated sheet shall be of minimum 240mpa steel grade conforming to IS 14246:1995 and shall have zinc coating of minimum 120gsm as per IS:277:1992, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 20 micron. The PPGI sheet shall have plastic protective guard film of minimum 25 microns to avoid scratches while transportation. The PU foam shall be self-extinguishing, fire retardant type having minimum density of 40 Kg/cum(+,-2 Kgs) including CFC Free panel should be GRIHA Certified. The panels shall be fixed to the steel frame structure with minimum 5 mm thick self tapping GI screws of required length and nos. with minimum spacing of 300 mm c/c .

### Chair

Supply and placing of single seater sofa finished with Fabric of approved shade & pattern, supported on wooden legs. Covered with top-quality imported faux leatherette/ Fabric. Contemporary design of elegance and comfortable & Upholstery Fabrics colour/patterns as approved by the Engineer-in-charge. Sponge: high quality polymeric urethane foam 1.4 minimum density as the difference part , seat and back. Spring: imported spring for strong support.

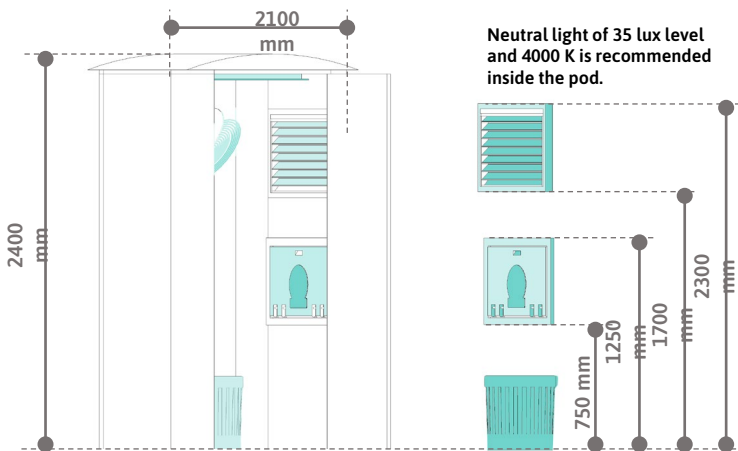
### Diaper changing station

Baby changing station body durable high-density polyethylene with Microban® antimicrobial with an 18 gauge, type 304 brushed stainless steel finish flange. Design of unit shall be recess-mounted. Unit shall be equipped with a pneumatic cylinder for controlled opening and closing of bed. Bed shall be secured to back plate with a concealed, full-length steel-on-steel hinge. No hinge structure shall be exposed on interior surfaces. Unit shall have 11-gauge steel mounting plates with mounting hardware included. Unit shall have Microban® antimicrobial embedded into plastic material. Bed shall have smooth concave changing area with a nylon safety strap and two hooks for bags or purses. Unit shall have a built-in Liner Dispenser for use with 3-ply chemical free biodegradable sanitary liners, universal instruction graphics

### Other elements

- Providing and fixing Stainless steel AISI - 304 (18/8) Wash basin 530mm X345 mm with all fixture.
- Providing and fixing of SS liquid soap dispenser complete as required. (Make : Jaquar Cat No. CAN 1135N)
- Supply and fixing of LED Tube light with batten suitable for up to 1 x 18 / 22 watt. LED plastic tube light, tube shall have 2100 lumen output with temperature of 4000K (neutral colour lighting)
- Supplying, installation, testing and commissioning of 450mm diameter wall bracket fan complete in all respect as required

## Details



Neutral light of 35 lux level and 4000 K is recommended inside the pod.

## Suitability

Parks and Open Spaces, ECD Facilities

## Type of Play

NA