JUMANTA™

OUTDOOR COURSE

Jungle gym, Muscle Advance aNd Traffic Awareness

PROPOSAL

Includes Sign Language
Interpretations on All Videos

Pfunzo Ye Sive™

Suppliers Of Educational Kits

RAMBRASS INTERNATIONAL SINCE 2005

INTRODUCTION

JUMANTA OUTDOOR COURSE IS AN INTENSIVE EDUCATIONAL TOOL THAT IS NECESSARY FOR FUNCTIONAL EXERCISES TO ENHANCE THE CHILD`S MOTOR AND SENSORY SKILLS.

According to CAPS pg. 10 Life Skills policy document :

- There are important skills that young learners need to master and understand before they go to Grade one and Grade R which would help them in acquiring these skills.
- Learners must be developed holistically before they reach Grade one.
- The JUMANTA Outdoor Course is an intensive educational tool that is necessary for functional exercises to enhance the learner's motor and sensory skills.
- In Grade R Learners learn through play therefore the JUMANTA Outdoor Course is very crucial in a Reception class.
- The daily programme consists of activities, free play activities with both indoors and outdoor activities.

THE BENEFITS ARE:

Sequencing and memory : The JUMANTA Outdoor Course teaches the child to sequence a multi-step activity as well as challenge their memory.

Sensory Input : Within the JUMANTA Outdoor Course, we incorporate various activities to provide multiple sensory inputs. It provides proprioceptive (deep pressure) input by having your child engage in heavy work.
- For example, doing the up-and under exercise through the sand-pit, this really encourages them to engage in intensive movement. The JUMANTA Outdoor Course includes activities in all planes of vestibular movements, including linear (up and down), sagittal (side to side) and rotary (spinning).

Strengthening and balance : Multiple activities within the JUMANTA Outdoor Course provide opportunities to build the child's strength.

Motor Planning : JUMANTA Outdoor Course provides great opportunity for the child to improve motor planning by crawling/running/jumping/walking as a transitional step to get from one location to the next.

Bilateral coordination : We incorporate steps that challenge the child's bilateral coordination by having him /her climb across/through/over/under the obstacle apparatus.

Learn through play : The JUMANTA Outdoor Course provides an environment in which the child will associate exercise with fun, meaning that it will encourage an active lifestyle in later years. It also gives the child the opportunity to face their fears (e.g. fear of heights, etc.), and therefore manifesting courage in the child.

Team work : Through the use of the JUMANTA Outdoor Course as an educational tool for group work, the child is encouraged and taught to assist his/her team mates in completing the course. This is a necessary lesson to apply in the development of social skills.

1 JUMANTA FOCUSES ON SAFETY

- Safety is one of the most important features of children's play area and that is why its considered as the most important from the very beginning of the design process. JUMANTA Outdoor Course material has been recommended by the SABS (South African Bureau of Standards).

- We make sure that the play surface is significantly larger than the actual play structure to make sure that there is plenty room for a safe landing after launching off of slides or jumping off swings.

- We focus on using the best material for the JUMANTA Outdoor Course to ensure that children are safe from harsh material such as wood which has been proven by the SABS (South African Bureau of Standards) that it is not safe to be used at schools.

- As a result, it is safe to sanitize steel and plastic with 70% alcohol to remove all infections to ensure learner safety.

DISADVANTAGES OF A WOODEN OUTDOOR PLAYGROUND

- **Expensive to maintain :** Wood material can easily be displaced through rain absorption or wind which may cause patches and may need to be replenished regularly.

- **Material :** The wooden material produces sharp wooden chips which will most probably cause wooden splinters in the children hands or feet.

- **Sustainability :** A wooden jungle gym will have to be constantly monitored to ensure that the wood hasn't rotted and that its still intact and stable.

- **Dangerous chemicals :** There may be insect and rot deterring chemicals in pressure-treated wood. These chemicals, such as sanitizers with 70% alcohol, can seep out and the human body can absorb them, posing a risk of lung or bladder cancer.

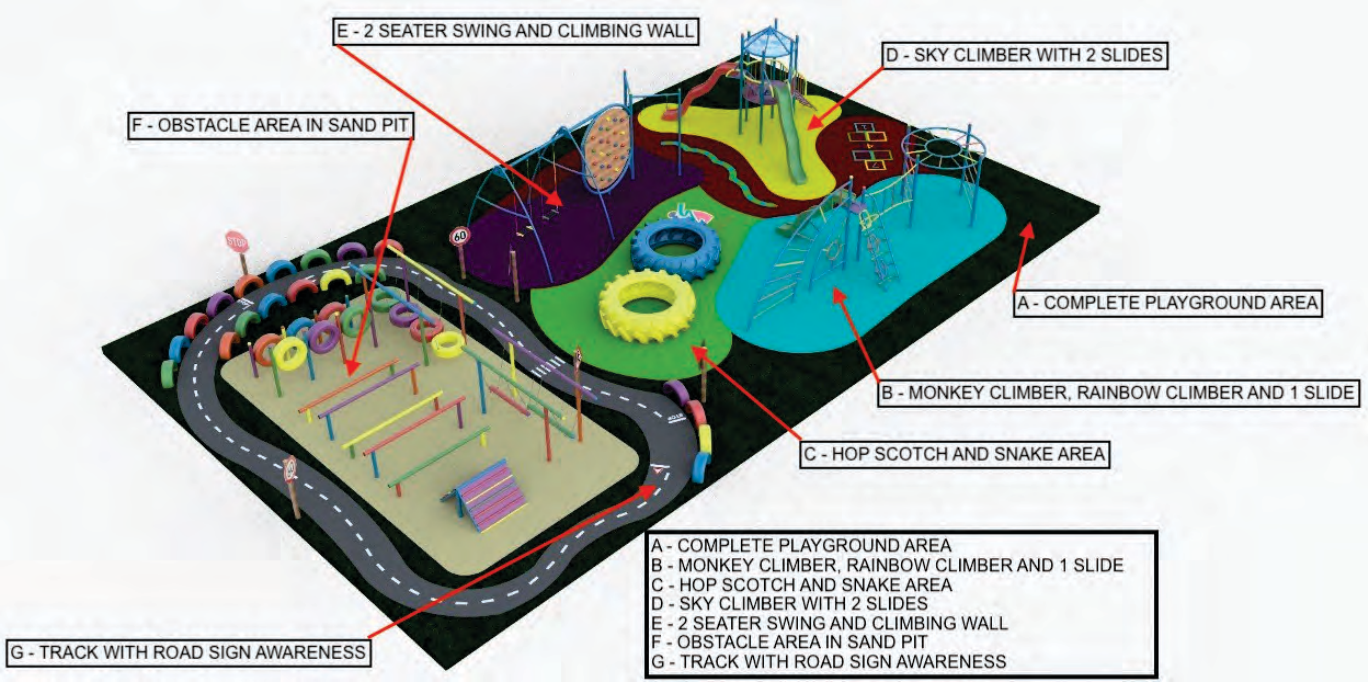
- **Easy absorption of germs and viruses** : Wood material easily absorbs bacteria and germs which may cause infections such as Influenza which is transmitted by touching a surface or object that has the virus on it.

- **Difficult to clean :** Considering the above mentioned disadvantages, wooden material is difficult to clean or disinfect compared to steel and plastic.

Reference: (SABS Standards) SANS 51176/1 2010, SANS 51176/2 2010, SANS 51176/3 2010, SANS 51176/4 2010, SANS 51176/5 2010, SANS 51176/7 2010. SANS 51176/10 2010, SANS 51176/11 2010, SANS 51177, SANS 54960 2.

2 JUMANTA OUTDOOR COURSE

JUMANTA OUTDOOR COURSE LAYOUT



20-meters x 12-meters (240 M2)

JUMANTA SPECIFIC KEYS

- Solid rubber surface
- Sky climber
- Recycled plastic climbing wall
- Sideways monkey climber
- Protection rubber flooring
- Tractor tyres
- Painted road
- Sand pit
- Fitness course
- Road safety signage
- Hopscotch

THE BENEFITS OF THE JUMANTA SPECIFIC KEYS

SOLID RUBBER SURFACE

- The surface is soft and conducive for Grade R Learners to play on it.
- Supervisors are essential to safe and inclusive outdoor play areas and play grounds.
- It reduces the behavioral referral issues and reduce minor injuries
- The surface provides the (ABC) knowledge i.e. **A**nticipation
  Behavior
  Consideration
- Learners can play without wearing their shoes as it has an excellent grip.
- It is easy to be cleaned and very solid.

TYRES

- They can be used together to create big and small climbing balance and coordination challenges for little bodies.
- They can be used for crawl through and stand on top of or just for balance.
- Invites opportunities for children to engage in open ended play and explore with their imaginations, problem solving skills, language and big and small muscles

CLIMBERS AND SLIDES

- They help the children to exercise their body in a natural way.
- Raising arms above their shoulders to hold onto the monkey bars increases cardiovascular flow.
- They also stretch their body ,which increase their flexibility.
- When they are climbing a ladder and pulling up with their hands and arms, they are building up their upper body, grip and arm strength.
- Climbing to the top of the ladder also helps with leg strength and coordination.

ROCK CLIMBING

- Climbing works almost every major muscle group in the body, so children increase upper body strength by using their arms and hands, their lower body by using their legs.
- They develop core stability, muscle control and balance when taking part in this activity
- It provides a full body workout and it is very exciting for kids
- It has a great benefits, such as increasing motion and flexibility

SAND PIT

- Sand pit play helps with **physical development**, **gross motor muscle** will be developed by digging ,pouring, sifting and scooping **sand.**
- **Sensory development -** the sense of touch through feeling, manipulating objects and moulding the sand .
- It develops their fine **motor skills**, eye **hand coordination**.
- **Socialization** and **Language development** :Promote creativity and imagination through role and developing stories.

FITNESS COURSE AND SWINGING

- It allows a child to develop coordinated movements.
- Children learn to jump over and to crawl under the fitness course.
- Through practice the motion of moving back and forth, they become successful in learning how to make a swing move.

HOPSCOTCH

- This game help learners to master body control.
- Hopping –midline development
- Leaping – muscle control
- One foot –balance
- Space- spatial awareness
- Pitching pebble –eye/hand coordination
- Picking up the pebble fine motor control

TRAFFIC AWARENESS TRACK

According to CAPS pg. 11 Life Skills policy document :

Traffic awareness will develop **Perceptual Skills**

- The development of **Perceptual Skills** in young learners is extremely important in laying a foundation for all future development and learning.
- Perception means using the sense to acquire information about the surroundings, environment or situation.
- The development of perceptual skills across all **four Study Areas**, **Languages** and **Mathematics** as well. The following are key perceptual skills that teachers should pay attention to:

It is a fully functional street scene with all the necessary signs to re-create and resemble real –life situations.

This enables teachers to teach children to :

- Play safe: how to walk near the road environment and how to cross the road safely.
- Practice stop , look, Listen and think, holding hands and using pedestrian crossing.
- Practice hand signals and road safety rules.

- **Visual Perception :** acquiring and interpreting information through the eyes- accurate visual perception enables the learner to read , write and do mathematics.

- **Visual discrimination:** the ability to see similarities, differences and details of objects accurately.

- **Visual memory** : the ability to remember what eyes have seen and the correct sequence in which things have been perceived.

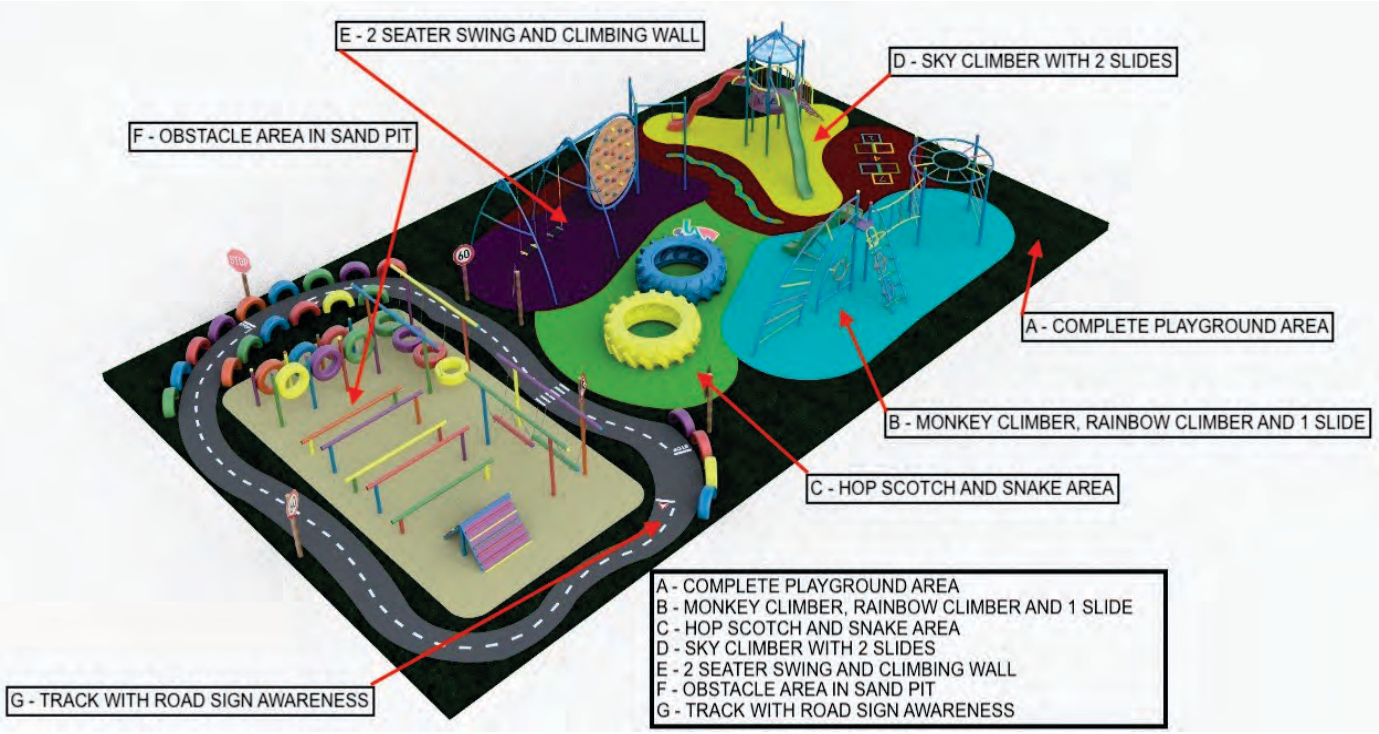
- **Auditory perception** : Acquiring and interpreting information through ears – accurate auditory perception enables the learner to give meaning to what is heard.

- **Auditory discrimination** : The ability to remember what the ears have heard and the correct sequence in which sounds have been perceived.

- **Hand-eye co-ordination** : The hands and eyes working together when performing a movement, e.g. throwing or catching a ball.
- **Body Image** : A complete awareness of one's own body. i.e. how it moves and how it functions.
- **Laterally** : Showing an awareness of each side of the body, i.e. which hand is waving.
- **Dominance** : Preferring to use one hand or side of the body, i.e. either right or left dominant.
- **Crossing the mid-line** : Being able to work across the vertical mid-line of the body, e.g. being able to draw a line from one side of the page to the other without changing the tool from one hand to the other.
- **Figure-ground perception** : Being able to focus attention on a specific object or aspect while ignoring all other stimuli, the object of the attention is therefore in the foreground of the perceptual field while all the rest is in the background e.g. being able to read one word in a sentence.
- **From perception** : The ability to recognize forms, shapes, symbols, letters. Etc. Regardless of position, size , background, e.g. can recognize a circle because of its unique shape.
- **Spatial orientation** : The ability to understand the space around the body, or the relationship between the object and the observer, e.g. the hat is on my head.

3 SPECIFICATIONS

UNIT A – COMPLETE PLAYGROUND AREA
Consisting of units B, C, D, E, F AND G



20-meters x 12-meters (240 M2)

CIVIL WORK

- Excavate 8.9-meter x 4.7-meter area
- Remove all vegetation
- Compact area to 93-degree mod aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 reinforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 240m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

UNIT B

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joins of round hollow steel tube to include mild steel inner sleeve of minimum 2.5mm thickness and a length of 150mm
- All welding to be done by coded welders

MAIN FRAME

- 6 off steel round hollow tubing 76 mm x 2.5 mm x 2500 mm, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water from entering and also to prevent rust.
- 6 off mild steel base plates 250 mm x 150 mm laser to shape including 2 off 14 mm holes for chemical anchor bolts
- Base plates are welded to round hollow tube 76mm x 2.5mm

CLIMBING SECTION - SIDE CLIMBING AND RAINBOW SECTION

- 2 off sections between uprights with 5 cross sections of steel round hollow tube 32mm x 2.5mm
- 1 off top monkey climbing ring made with rolled steel round hollow tube 50mm x 2.5mm x 1800mm diameter ring and rolled steel round hollow tube 25mm x 2.5mm x 600mm diameter, cross section of steel round hollow tubing to promote climbing
- 1 off rainbow climber made with rolled steel round hollow tube 50mm x 2.5mm x 3000mm with steel round hollow tube 32mm x 2.5mm cross section to join top and bottom section

STEPS WITH HAND RAIL

- 8 off steps steel round hollow tubing 32mm x 2.5 mm with safety hand rail of steel round hollow tubing 32mm x 2.5mm
- All welding to be grinded smooth from all sharp edges

SLIDE

- 1 off fiberglass slide 3000 mm long, UV resistant, various colours
- The slide is fiberglass re-enforced, bonded with UV stable resin
- The minimum weight per square meter is 1350 grams of glass
- The slide is made in 3 layers and finished with a marine quality gelcoat to carry a minimum weight of 120 kilograms.

UNIT C

TYRES

- Install recycled tyres as per illustration
- Install 2 off tractor or truck recycled tyres horizontally to create a seating area
- Tyres with exposed steel cannot be used
- Paint tyres 2 different colours

WET POURE RUBBER

- Layout similar to illustration
- Any installation of playground equipment must be done by an accredited installer
- Rubber is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe durable surface.
- Wet pour slab applications can accommodate an installation of a cushion/base layer to improve safety
- Wet pour rubber must not be less than 20 mm thick
- Paint hop scotch course using SABS approved road marking paint
- Hop scotch is a popular traditional game for boys and girls, it can be played alone or in a group.
- Use at least 4 different colours for the colour of the play area

UNIT D

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joints of round hollow steel tube to include mild steel sleeve of minimum 2.5mm thickness
- All welding to be done by coded welders

MAIN FRAME

- 6 off steel round hollow tubing 76 mm x 2.5 mm x 1800 mm, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water to enter and to prevent rust.
- 6 off mild steel base plates 250 mm x 150 mm laser to shape including 2 off 14 mm holes for chemical anchor bolts
- Base plates are welded to round hollow tube 76mm x 2.5mm

ROOF STRUCTURE

- 1800 mm diameter x 700 mm height
- 1 off steel round hollow tubing 32 mm x 2.5 mm for 1800 mm diameter circle design
- 6 off steel round hollow tubing 19 mm x 2.5 mm for 1800 mm diameter circle design
- 1 off steel hollow ball 150 mm

PLATFORM

- 1 off steel round hollow tubing 50 mm x 2.5 mm for .800 mm diameter circle design
- 4 off steel cross bracing hot rolled angle iron 50 mm x 50 mm x 4 mm, to support and hold plastic platform
- 6 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold and support plastic platform
- Fix plastic platform to steel circle with galvanized M10 cup square bolts, grade 8.8 with nylon nuts
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- Recycled UV resistant plastic 16 mm for the platform, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolt with nylon nuts
- 3 off sets mild steel hand rails consisting of round hollow tubing 32 mm x 2.5 mm for 1800 mm diameter circle design top and bottom, rolled and bended to shape with steel round hollow tubing 19 mm x 2.5 mm not further apart then 80 mm center to center, welded to steel round hollow tube 32 mm x 2.5 mm top and bottom, all welding to be grinded smooth from all shape edges
- STEPS WITH HAND RAIL
- 8 off steps steel round hollow tubing 32mm x 2.5 mm with safety hand rail of steel round hollow tubing 32mm x 2.5mm
- All welding to be grinded smooth from all sharp edges

SLIDES

- 2 off fiberglass slides 2400 mm long, UV paint resistant, various colours
- The slides are fiberglass re-enforced, bonded with UV stable resin
- The minimum weight per square meter is 1350 grams of glass
- The slides are made in 3 layers and finished with a marine quality gelcoat to carry a minimum weight of 120 kilograms.

UNIT E

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joints of round hollow steel tube to include mild steel sleeve of minimum 2.5mm thickness
- All welding to be done by coded welders
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SWING UNIT

- 2 off A frame steel round hollow tube 50mm x 3mm, 2500mm height and 1900mm wide, including 1 off steel round hollow tube 50mm x 3mm x 1000mm, welded between the frame for support, complete with laser cut circle flanges 300mm x 5mm, including 4 off 14 mm holes,
- 1 off top rail for swing, steel round hollow tube 76mm x 4mm x 2500mm, complete with laser cut profiles, welded to round tube 76mm x 4mm, this will be the hanging brackets for the swing.
- 4 off laser cut profile plate 4mm thick, welded to steel bushes to hold 8 off 6201 bearings
- 4 off 1800mm galvanized 6 mm long link chain, complete with custom 8 mm round bar s-shape, to support the swing seats and the chain from the custom laser cut brackets, open links to be welded closed to prevent theft
- 2 off recycled conveyer belts for seats (no steel), complete with steel plate 4mm thick, bend in u shape with 12mm round bar, plates to be bolted to seats with 4 off galvanized cup square grade 8.8 bolts and nylon nuts
- 1 off steel round hollow tube 50mm x 3mm out rigger to support A frame, complete with laser cut flange to be bolted to a frame flange with galvanized hex bolts grade 8.8 M12 with nylon nuts and laser cut base plate. Set in concrete.

- **CLIMBING WALL**
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- 1 off steel frame oval shape steel round hollow tubing 50mm x 2.5mm x 1800mm x 1000mm, 6 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold and support plastic platform
- 1 off climbing wall recycled UV resistant plastic 16 mm thick, oval shape as above for the wall, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolt with nylon nuts, complete with 12 off fiberglass climbing brackets bolted to the 16 mm plastic board
- 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm
- Climbing wall to be mounted to a frame of the swing's laser cut flanges with galvanized hex M12 grade 8.8 bolts and nylon nuts
-
- **V SHAPE CLIMBING SECTION**
-
- Main frame, 3 off steel round hollow tubing 76mm x 2.5mm x 2500mm uprights, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water to enter and to prevent rust.
- 4 off horizontal steel round hollow tubing 50mm x 2.5mm x 1000mm
- Ball climbing section, 2 off vertical steel round hollow tubing 32mm x 2.5mm, complete with 5 off steel hollow balls, holes to be drilled through the steel balls and the round hollow tubing 32mm x 2.5mm to go through the steel balls and to be welded top and bottom on the steel balls, also to be welded to the horizontal steel round hollow tubing 50mm x 2.5mm
- Gymnast rings and swing pole, 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold 4 off 6 mm long link chain, 2 off chains mounted to swing steel round hollow tubing 32mm x 2.5mm x 600mm, complete with 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm and 2 off chains mounted to 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm for triangle shape arm swing, 12 mm round bar with steel round hollow tubing 19mm x 2.5mm over the 12 mm round bar handle

UNIT F

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joints of round hollow steel tube to include mild steel sleeve of minimum 2.5mm thickness
- All welding to be done by coded welders

OBSTACLE COURSE

- 4 recycled tyres bolted together suspended with 8 off 1000mm x 6mm long link galvanized chain from 2 off steel frames made of steel round hollow tube 76mm x 2.5mm x 1400mm.
- 2 off steel round hollow tube 76mm x 2.5mm x 3000mm cross members welded to uprights, cross members open ends, capped with steel hollow balls 80mm to prevent rust and injury.
- 1 off steel balance, 1 off steel round hollow tube 76mm x 2.5mm x 2500mm, capped with steel hollow balls 80mm to prevent rust and injury, suspended with 6 lengths 1000mm x 6mm long link galvanized chain.

- 1 set of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 600mm.
- 2 sets of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 400mm.
- 2 sets of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 300mm.
- 2 sets of 3 tyre hoops, 3 off recycled tyres per set mounted in a row to steel round hollow tube 76mm x 2.5mm with galvanized M12 hex bolts grade 8.8 complete with nylon nuts. Installed diagonal to each other at 2 different heights 1000mm and 1200mm high.
- Tyres minimum 400 mm diameter and must be washed with high pressure washer and clean from any dirt.

V SHAPE CLIMBING SECTION

- 1 off climbing A-frame steel angle iron frame 50 x 50 x 4, 2400mm x 1400mm x 1000mm, cladded on both sides with UV resistant plastic 16 mm for the wall, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolt with nylon nuts, complete with 12 off fiberglass climbing brackets bolted to 16 mm plastic board, 6 per side.

SAND PIT

- 8.5-meters x 4.5-meters (38 M2)
- Dig open holes for the above equipment, hole size 300mm x 300mm x 300mm
- Mix concrete 20mpa, install equipment in the holes, bracing the equipment so that it remains straight and level till concrete cures.
- Fill with washed playpen Silica sand, at least 150 mm deep
- Mix 50 kilograms coarse sea salt into the sand. This is hygienic and will prevent bugs and insects from making it their home.

UNIT G

ROAD SIGNS

- 9 off steel round hollow tube 50mm x 2.5mm x 1500mm, capped / welded with 80mm steel hollow balls to prevent rust and injury
- 9 off road signs using 6 mm foam board, road signs to be digitally printed directly onto the foam board
- 9 off road signs to be fixed to steel round hollow tube with galvanized grade 8.8 M12 cup square bolts with nylon nuts
- Open holes for 9 off road signs, hole size 300mm x 300mm x 300mm
- Mix concrete 20mpa, install equipment in the holes, bracing the equipment so that it remains straight and level till concrete cures.

TYRES

-
- Install recycled tyres as per illustration
- Install 18 off recycled tyres around the track on the inside and the outside as per illustration
- Tyres with exposed steel cannot be used
- Tyres minimum 400 mm diameter and must be washed with high pressure washer and clean from any dirt.

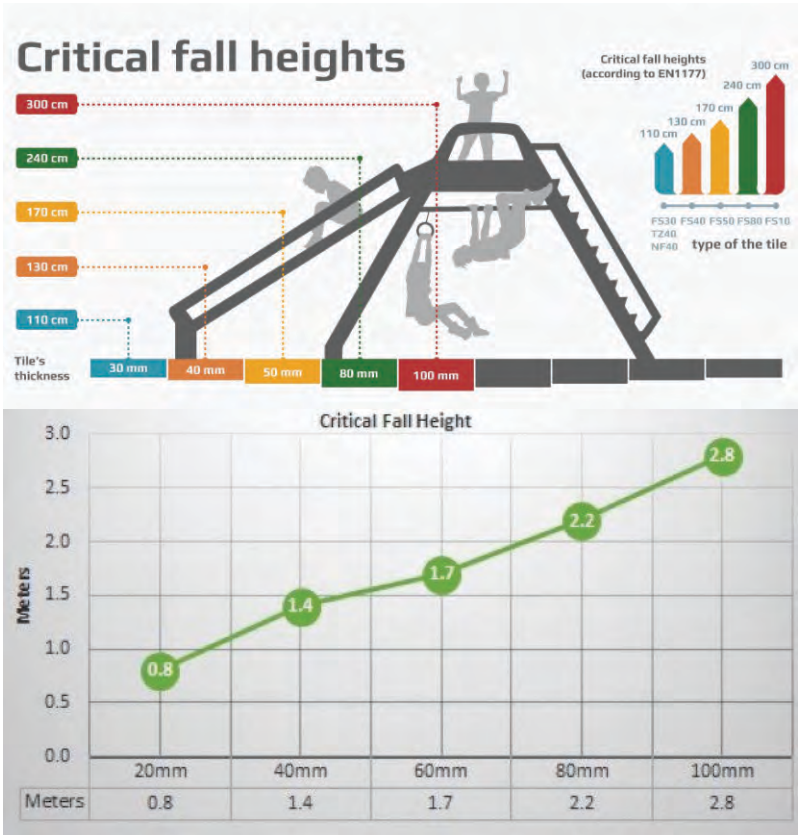
- Tyres planted into the soil at least 200 mm deep
- All tyres to be bolted to each other with galvanized M12 grade 8.8 bolts with nylon nuts, laser cut plates to be inserted on the inside of the tyres, so that the bolts do not pull through the tyre

WET POUR RUBBER

- Any installation of playground equipment must be done by an accredited installer
- Rubber which is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of a cushion/base layer to improve safety.
- Wet pour rubber must be a minimum thickness of 10 mm, including 4 off speed humps and a safety edge on both sides of the track, minimum 150 mm high
- Track to be painted with traffic lines, stop sign, yield sign and speedhump signs
- Road markings to be painted using SABS approved road marking paint, in correct design and colours.

PAINTING OF STEEL POSTS

- Durability of Powder Coating, all steel is shot blasted and primed with an anti-corrosion coating then polyester powder coated and baked to 200°C, this gives all our steel work a very smooth, clean durable finish.
- Alternative all steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel, final coat to be wet sprayed with automotive 2K paint in various colours, minimum 3 colours to be used on steel unit



UNIT B – MONKEY CLIMBER, RAINBOW CLIMBER AND 1 SLIDE

·8.9 meters x 4.7 meters (41 M2)

CIVIL WORK

- Excavate 8.9-meter x 4.7-meter area
- Remove all vegetation
- Compact area to 93-degree mod Aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 reinforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 31.85 m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

STEEL WORK

- · approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joints of round hollow steel tube to include mild steel inner sleeve of minimum 2.5mm thickness and 150mm long
- All welding to be done by coded welders

MAIN FRAME

-
- 6 off steel round hollow tubing 76 mm x 2.5 mm x 2500 mm, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water to enter and to prevent rust.
- 6 off mild steel base plates 250 mm x 150 mm laser to shape including 2 off 14 mm holes for chemical anchor bolts
- Base plates are welded to round hollow tube 76mm x 2.5mm

- **CLIMBING SECTION - SIDE CLIMBING AND RAINBOW SECTION**

- 2 off sections between uprights with 5 cross sections of steel round hollow tube 32mm x 2.5mm
- 1 off top monkey climbing ring made with rolled steel round hollow tube 50mm x 2.5mm x 1800mm diameter ring and rolled steel round hollow tube 25mm x 2.5mm x 600mm diameter, cross section of steel round hollow tubing to promote climbing
- 1 off rainbow climbing made with rolled steel round hollow tube 50mm x 2.5mm x 3000mm with steel round hollow tube 32mm x 2.5mm cross section to join top and bottom section

STEPS WITH HAND RAIL

- 8 off steps steel round hollow tubing 32mm x 2.5 mm with safety hand rail of steel round hollow tubing 32mm x 2.5mm
- All welding to be grinded smooth from all sharp edges

SLIDE

- 1 off fiberglass slide 3000 mm long, UV resistant, various colours
- The slides are fiberglass re-enforced, bonded with UV stable resin
- The minimum weight per square meter is 1350 grams of glass
- The slide is made in 3 layers and finished with a marine quality gelcoat to carry a minimum weight of 120 kilograms.

PAINTING

- Durability of Powder Coating, all steel is shot blasted and primed with an anti-corrosion coating then polyester powder coated and baked to 200°C, this gives all our steel work a very smooth, clean durable finish.
- Alternative all steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel, final coat to be wet sprayed with automotive 2K paint in various colours, minimum 3 colours to be used on steel unit

INSTALLATION OF EQUIPMENT

- All bolts and nuts to be galvanized, grade 8.8 M10 bolts with nylon washers
- Cup square bolts to be used for platform areas
- Hex bolts to be used to assemble the balance of the items
- Chemical anchors to be used to fix base plates to concrete slab, with chemical anchor and M12
- chemical studs (not threaded rod)
- 14mm hole must be drilled into the concrete, not deeper than 90mm
- Hole to be brushed out with brush
- All dust and debris to be removed from the hole
- Inject the chemical anchor
- Install chemical anchor studs
- Leave chemical to dry, as per specification from supplier
- Tighten hex nuts, weld nuts to the based plates, to prevent theft

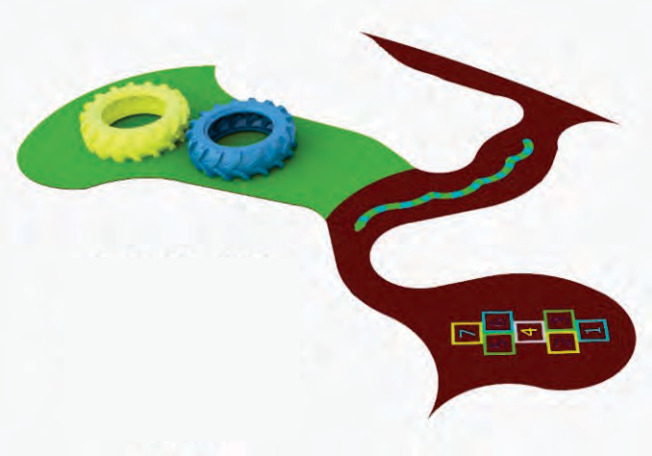
WET POUR RUBBER

- Any installation of playground equipment must be done by an accredited installer
- Rubber which is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.

5

- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of cushion/base layer to create a safe play area.
- Wet pour rubber must be at least 20 mm thick, as per fall height diagram

UNIT C – HOP SCOTCH AND SNAKE AREA



27-running meters x 1.53-meters wide (28M2)

- **CIVIL WORK**
-
- Excavate 8.5-running meters x 900mm area
- Remove all vegetation
- Compact area to 93-degree mod aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 re-enforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 28m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

TYRES

-
- Install tyres as per illustration
- Install 2 off tractor or truck recycled tyres horizontally to create a seating area
- Tyres with exposed steel cannot be used
- Paint tyres 2 different colours using a suitable paint

WET POUR RUBBER

-
- Layout similar to illustration
- Any installation of playground equipment must be done by an accredited installer
- Rubber is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.

- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe play surface.
- Wet pour slab applications can accommodate an installation of cushion/base layer for extra safety and fall protection.
- Wet pour rubber must not be less than 20 mm thick
- Paint hop scotch course using SABS approved road marking paint
- Hop scotch is a popular traditional game for boys and girls, it can be played alone or in a group
- Use at least 4 different colours for the colour of the rubber

UNIT D – SKY CLIMBER WITH 2 SLIDES

6.5 meters x 4.9 meters (31.85 M2)

CIVIL WORK

- Excavate 6.5-meter x 4.900-meter area
- Remove all vegetation
- Compact area to 93-degree mod Aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 reinforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 31.85 m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joins of round hollow steel tube to include mild steel inner sleeve of minimum 2.5mm thickness and 150mm long
- All welding to be done by coded welders

MAIN FRAME

- 6 off steel round hollow tubing 76 mm x 2.5 mm x 1800 mm, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water to enter and to prevent rust.
- 6 off mild steel base plates 250 mm x 150 mm laser to shape including 2 off 14 mm holes for chemical anchor bolts
- Base plates are welded to round hollow tube 76mm x 2.5mm

ROOF STRUCTURE

- 1.800 mm diameter x 700 mm height
- 1 off steel round hollow tubing 32 mm x 2.5 mm for 1800 mm diameter circle design
- 6 off steel round hollow tubing 19 mm x 2.5 mm for 1800 mm diameter circle design
- 1 off steel hollow ball 150 mm to finish center of structure

PLATFORM

- 1 off steel round hollow tubing 50 mm x 2.5 mm for 1800 mm diameter circle design
- 4 off steel cross bracing hot rolled angle iron 50 mm x 50 mm x 4 mm, to support and hold plastic platform to above circle and support plastic platform
- 6 off laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold and support plastic platform to circle design steel frame
- Fix plastic platform to steel circle with galvanized M10 cup square bolts, grade 8.8 with nylon nuts
- Recycled UV resistant plastic 16 mm for the platform, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolt with nylon nuts
- 3 off sets mild steel hand rails consisting of round hollow tubing 32 mm x 2.5 mm for 1800 mm diameter circle design top and bottom, rolled and bended to shape with steel round hollow tubing 19 mm x 2.5 mm not further apart then 80 mm center to center, welded to steel round hollow tube 32 mm x 2.5 mm top and bottom, all welding to be grinded smooth from all shape edges

STEPS WITH HAND RAIL

- 8 off steps steel round hollow tubing 32mm x 2.5 mm with safety hand rail of steel round hollow tubing 32mm x 2.5mm
- All welding to be grinded smooth from all sharp edges

SLIDES

- 2 off fiberglass slides 2400 mm long, UV resistant, various colours
- The slides are fiberglass re-enforced, bonded with UV stable resin
- The minimum weight per square meter is 1350 grams of glass
- The slides are made in 3 layers and finished with a marine quality gelcoat to carry a minimum weight of 120 kilograms.

PAINTING

- Durability of Powder Coating, all steel is shot blasted and primed with an anti-corrosion coating then polyester powder coated and baked to 200°C, this gives all our steel work a very smooth, clean durable finish.
- Alternative all steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel, final coat to be wet sprayed with automotive 2K paint in various colours, minimum 3 colours to be used on steel unit

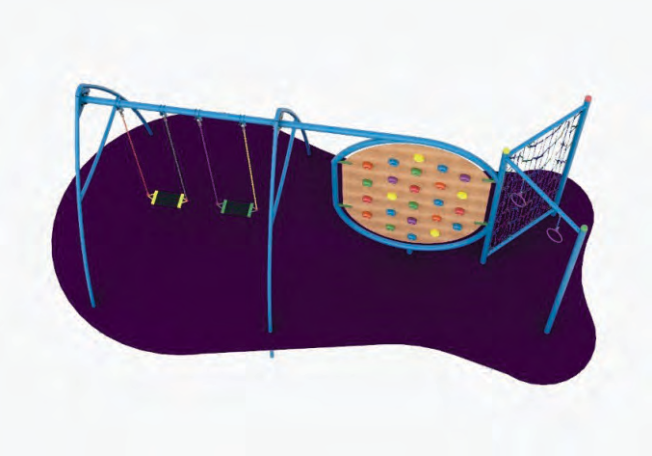
INSTALLATION OF EQUIPMENT

- All bolts and nuts to be galvanized, grade 8.8 M10 bolts with nylon washers
- Cup square bolts to be used for platform areas
- Hex bolts to be used to assemble the balance of the items
- Chemical anchors to be used to fix base plates to concrete slab, with chemical anchor and M12 chemical studs (not threaded rod)
- 14mm hole must be drilled into the concrete, not deeper than 90mm
- Hole to be brushed out with brush
- All dust and debris to be removed from the hole
- Inject the chemical anchor
- Install chemical anchor studs
- Leave chemical to dry, as per specification from supplier
- Tighten hex nuts, weld nuts to the based plates, to prevent theft

WET POUR RUBBER

- Any installation of playground equipment must be done by an accredited installer
- Rubber which is weather resistant and absorbs less solar heat, is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of cushion/base layer which creates a safe fall area.
- Wet pour rubber must be at least 20 mm thick, as per fall height diagram

UNIT E – SWING / CLIMBING WALL COMBO PLAY GROUND UNIT



8.9 meters x 4.7 meters (41.83 M2)

CIVIL WORK

- Excavate 8.9-meter x 4.7-meter area
- Remove all vegetation
- Compact area to 93-degree mod Aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped

- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 reinforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 31.85 m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joints of round hollow steel tube to include mild steel sleeve of minimum 2.5mm thickness
- All welding to be done by coded welders

SWING UNIT

- 2 off A frame steel round hollow tube 50mm x 3mm, 2500mm height and 1900mm wide, including 1 off steel round hollow tube 50mm x 3mm x 1000mm, welded between the frame for support, complete with laser cut circle flanges 300mm x 5mm, including 4 off 14 mm holes,
- 1 off top rail for swing, steel round hollow tube 76mm x 4mm x 2500mm, complete with laser cut profiles, welded to round tube 76mm x 4mm, this will be the hanging brackets for the swing.
- 4 off laser cut profile plate 4mm thick, welded to steel bushes to hold 8 off 6201 bearings
- 4 off 1800mm galvanized 6 mm long link chain, complete with custom 8 mm round bar s-shape, to support the swing seats and the chain from the custom laser cut brackets, open links to be welded closed to prevent theft
- 2 off recycled conveyer belts for seats (no steel), complete with steel plate 4mm thick, bend in u shape with 12mm round bar, plates to be bolted to seats with 4 off galvanized cup square grade 8.8 bolts and nylon nuts
- 1 off steel round hollow tube 50mm x 3mm out rigger to support A frame, complete with laser cut flange to be bolted to a frame flange with galvanized hex bolts grade 8.8 M12 with nylon nuts and laser cut base plate. Set in concrete.

CLIMBING WALL

- 1 off steel frame oval shape steel round hollow tubing 50mm x 2.5mm x 1800mm x 1000mm, 6 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold and support plastic platform
- 1 off climbing wall recycled UV resistant plastic 16 mm thick, oval shape as above for the wall, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolt with nylon nuts, complete with 12 off fiberglass climbing brackets bolted to the 16 mm plastic board
- 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm
- Climbing wall to be mounted to a frame of the swing's laser cut flanges with galvanized hex M12 grade 8.8 bolts and nylon nuts

V SHAPE CLIMBING SECTION

- Main frame, 3 off steel round hollow tubing 76mm x 2.5mm x 2500mm uprights, close open top end with 100 mm steel hollow balls, welded to 76 mm round hollow tube, to prevent water to enter and to prevent rust.

- 4 off horizontal steel round hollow tubing 50mm x 2.5mm x 1000mm
- Ball climbing section, 2 off vertical steel round hollow tubing 32mm x 2.5mm, complete with 5 off steel hollow balls, holes to be drilled through the steel balls and the round hollow tubing 32mm x 2.5mm to go through the steel balls and to be welded top and bottom on the steel balls, also to be welded to the horizontal steel round hollow tubing 50mm x 2.5mm
- Gymnast rings and swing pole, 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm, including 12 mm hole, welded to steel hollow tubing 50 mm x 2.5 mm to hold 4 off 6 mm long link chain, 2 off chains mounted to swing steel round hollow tubing 32mm x 2.5mm x 600mm, complete with 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm and 2 off chains mounted to 4 off steel laser cut steel lugs 40 mm x 40 mm x 5 mm for triangle shape arm swing, 12 mm round bar with steel round hollow tubing 19mm x 2.5mm over the 12 mm round bar handle

PAINTING

- Durability of Powder Coating, all steel is shot blasted and primed with an anti-corrosion coating then polyester powder coated and baked to 200°C, this gives all our steel work a very smooth, clean durable finish.
- Alternative all steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel, final coat to be wet sprayed with automotive 2K paint in various colours, minimum 3 colours to be used on steel unit

INSTALLATION OF EQUIPMENT

- All bolts and nuts to be galvanized, grade 8.8 M10 bolts with nylon washers
- Cup square bolts to be used for platform areas
- Hex bolts to be used to assemble the balance of the items
- Chemical anchors to be used to fix base plates to concrete slab, with chemical anchor and M12 chemical studs (not threaded rod)
- 14mm hole must be drilled into the concrete, not deeper than 90mm
- Hole to be brushed out with brush
- All dust and debris to be removed from the hole
- Inject the chemical anchor
- Install chemical anchor studs
- Leave chemical to dry, as per specification from supplier
- Tighten hex nuts, weld nuts to the based plates, to prevent theft

WET POURED RUBBER

- Any installation of playground equipment must be done by an accredited installer
- Rubber which is weather resistant and absorbs less solar heat, is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of cushion/base layer which creates a safe fall area.
- Wet pour rubber must be at least 20 mm thick, as per fall height diagram

UNIT F – OBSTACLE AREA IN SAND PIT

8.5-meters x 4.5-meters (38 M2)

CIVIL WORK

- Excavate 8.5-meter x 4.5-meter area
- Remove all vegetation
- Compact area to 93-degree mod Aashto using mechanical compactor
- Set levels to fall.
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage

STEEL WORK

- SABS approved mild steel structure, as per illustration
- Round hollow tube 76mm x 2.5mm, 50mm x 2.5 mm, 32mm x 2.5mm and 19 mm x 2.5mm
- All open tops to be capped off with hollow steel balls
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, only A grade steel to be used
- All joins of round hollow steel tube to include mild steel inner sleeve of minimum 2.5mm thickness and a length of 150mm
- All welding to be done by coded welders

OBSTACLE COURSE

- 4 recycled tyres bolted together suspended with 8 off 1000mm x 6mm long link galvanized chain from 2 off steel frames made of round hollow tube 76mm x 2.5mm x 1400mm.
- 2 off steel round hollow tube 76mm x 2.5mm x 3000mm cross members welded to uprights, cross members open ends, capped with steel hollow balls 80mm to prevent rust and injury.
- 1 off steel balance beam, 1 off steel round hollow tube 76mm x 2.5mm x 2500mm, capped with steel hollow balls 80mm to prevent rust and injury, suspended with 6 lengths 1000mm x 6mm galvanized chain.
- 1 set of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 600mm.
- 2 sets of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 400mm.
- 2 sets of hurdles horizontal steel round hollow tube 76mm x 2.5mm x 1600mm, capped with steel

- hollow balls 80mm to prevent rust and injury, uprights steel round hollow tube 76mm x 2.5mm x 300mm.
- 2 sets of 3 tyre hoops, 3 off recycled tyres per set mounted in a row to steel round hollow tube 76mm x 2.5mm with galvanized M12 hex bolts grade 8.8 complete with nylon nuts. Installed diagonal to each other at 2 different heights 1000mm and 1200mm high.
- Tyres minimum 400 mm diameter and must be washed with high pressure washer and clean from any dirt.
-

V SHAPE CLIMBING SECTION

- 1 off climbing A-frame steel angle iron frame 50mm x 50mm x 4,mm material. 2400mm wide x 1.400mm high x 1.000mm leg width, cladded on both sides with UV resistant plastic 16 mm for the wall faces, fix to the steel sub frame with galvanized M10 grade 8.8 cup square bolts with nylon nuts, complete with 12 off fiberglass climbing brackets bolted to 16 mm plastic board, 6 per side.

SAND PIT

- 8.5-meters x 4.5-meters (38 M2)
- Dig open holes for the above equipment, hole size 300mm x 300mm x 300mm
- Mix concrete 20mpa, install equipment in the holes, bracing the equipment so that it remains straight and level till concrete cures.
- Fill with washed playpen Silica sand, at least 150 mm deep
- Add 50 kilograms coarse sea salt and mix into sand. This will keep it hygienic and will prevent bugs and insects from making their home in the sand pit.

PAINTING

- Durability of Powder Coating, all steel is shot blasted and primed with an anti-corrosion coating then polyester powder coated and baked to 200°C, this gives all steel work a very smooth, clean durable finish.
- Alternative all steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel, final coat to be wet sprayed with automotive 2K paint in various colours, minimum 3 colours to be used on steel unit

INSTALLATION OF EQUIPMENT

- All bolts and nuts to be galvanized, grade 8.8 M10 bolts with nylon washers
- Cup square bolts to be used for platform areas
- Hex bolts to be used to assemble the remainder of the items

UNIT G – TRACK WITH ROAD SIGN AWARENESS

8.5-running meters x 900mm (34.2 M2)

CIVIL WORK

- Excavate 8.5-running meters x 900mm area
- Remove all vegetation
- Compact area to 93-degree mod Aashto using mechanical compactor
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shaped
- Plastic, place damp proof course 250 microns to prevent rising damp and growth of vegetation that will cause structural damage
- Place reference 193 re-enforcing steel to ensure a strong and durable concrete surface
- Cast a concrete slab of at least 20mpa strength covering the entire 31.85 m2 area with minimum thickness of 100 mm. Ensure that the fall will allow water to run off the casted concrete
- Finish concrete to a smooth finish with wooden float

ROAD SIGNS

- 9 off steel round hollow tube 50mm x 2.5mm x 1500mm, capped / welded with 80mm steel hollow balls to prevent rust and injury
- 9 off road signs using 6 mm foam board, road signs to be digitally printed directly onto the foam board
- 9 off road signs to be fixed to steel round hollow tube with galvanized grade 8.8 M12 cup square bolts with nylon nuts
- Open holes for 9 off road signs, hole size 300mm x 300mm x 300mm
- Mix concrete 20mpa, install equipment in the holes, bracing the equipment so that it remains straight and level till concrete cures.

TYRES

- Install recycled tyres as per illustration
- Install 18 off recycled tires all-round the track on the inside and the outside
- Tyres with exposed steel cannot be used
- Tyres to be a minimum 400 mm diameter and must be washed with high pressure washer and clean from any dirt.
- Tyres planted into the soil at least 200 mm deep
- All tyres to be bolted to each other with galvanized M12 grade 8.8 bolts with nylon nuts, laser cut plates to be inserted on the inside of the tyres, so that the bolts do not pull through the tyre

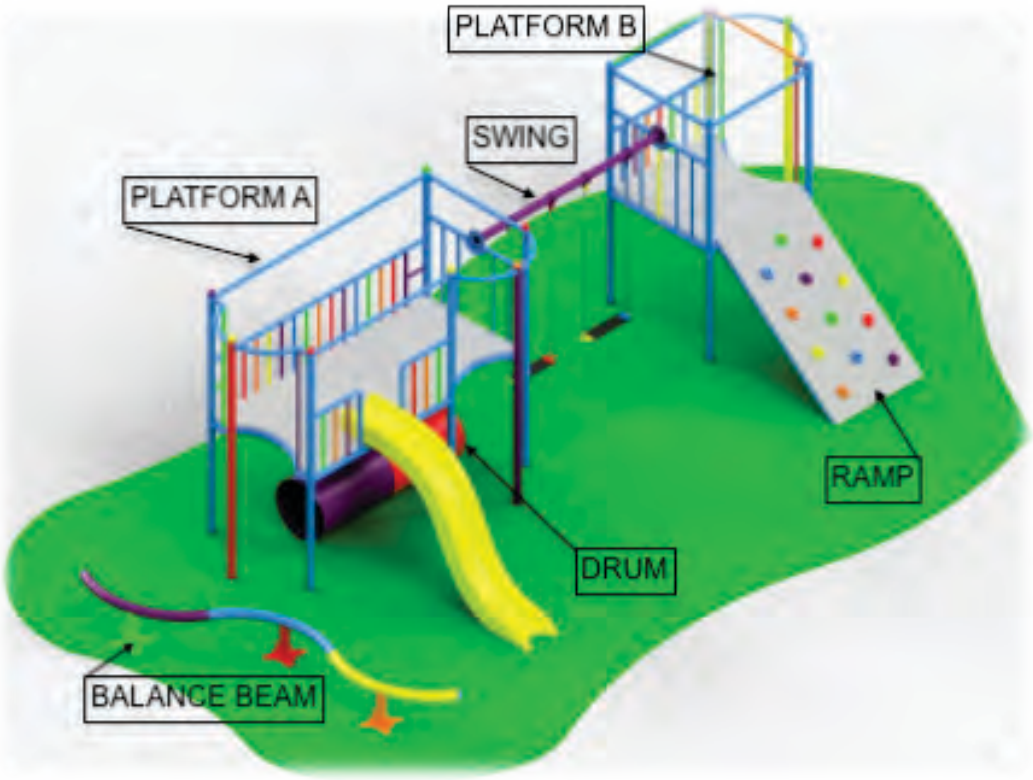
WET POUR RUBBER

- Any installation of playground equipment must be done by an accredited installer
- Rubber which is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better withstand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface
- Wet pour slab applications can accommodate an installation of cushion/base layer to create a safe play area.
- Wet pour rubber must be at least 10 mm thick, including 4 off speed humps and a safety edge on both sides of the track, minimum 150 mm high
- Track to be painted with traffic lines, stop sign, yield sign and speed hump signs
- Road markings to be painted using SABS approved road marking paint, in correct design and colours.

INSTALLATION OF EQUIPMENT

- All bolts and nuts to be galvanized, grade 8.8 M10 bolts with nylon washers
- Cup square bolts to be used for platform areas
- Hex bolts to be used to assemble the balance of the items

UNIT H – SECONDARY INNER PLAYGROUND



10-meter x 6-meter = (60 M2)

ALL ITEMS BELOW ARE BUILT TO SABS STANDARDS:

- SANS 51176/1 2010
- SANS 51176/2 2010
- SANS 51176/3 2010
- SANS 51176/4 2010
- SANS 51176/5 2010
- SANS 51176/7 2010
- SANS 51176/10 2010
- SANS 51176/11 2010
- SANS 51177SANS 54960 2010
- Standard fall height rubber

GENERAL INFO

- SABS approved mild steel structures to be manufactured.
- SABS approved 2-seater swing complete with heavy duty steel bushes and bearings.
- Round hollow tube 32mm x 2mm, 30mm x 3mm, 50mm x 2mm, 76mm x 3mm, 76mm x 2mm, angle 40mm x 40mm x 3mm including mild steel laser cutting.
- All open tops to be capped off with hollow steel balls or steel plates to prevent rust and insect infestations.
- All mild steel to be washed with degreaser, sprayed with red oxide primer, and wet sprayed with 2K automotive paint.
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, no B grade steel to be used.
- Recycled plastic 16mm thick to be used for platforms, climbing ramp and handrail guards.
- Climbing grips for climbing ramp.
- All uprights, drum, ramp, and fireman pole to be anchored to concrete with M10 stud anchors.
- All bolts grade 8.8 and nylon nuts, all galvanized.
- All welding to be done by coded welders.
- All bolts to be cut off flush with the nuts, to prevent injury.
- All rubble to be removed from site.
- Manufacturer will supply detailed shop drawing for approval before manufacturing can start.

PREP AND CIVIL WORK

- Excavate 10-meter x 6-meter area
- Remove all vegetation.
- Compact area to 93-degree mod aashto using mechanical compactor.
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shapes.
- Place 250mic plastic underlay on surface to prevent rising damp and growth of vegetation that will cause structural damage.
- Place reference 100 reinforcing steel to ensure a strong and durable concrete surface, suspended from surface by 20mm.
- Cast a concrete slab of 20mpa strength covering the entire 60m2 area with a minimum thickness of 100 mm.
- Ensure that the fall will allow water to run off the cast concrete slab.
- Set the equipment as per basic level mark.

PLATFORM A

- Size 2400mm x 1200mm x 3000mm, platform 2500mm x 1200mm, platform height 1500mm.
- Platform outer frame mild steel square tube 50mm x 50mm x 2mm, dimension 2300mm x 1200mm outer dimension, including angle 50mm x 50mm x 3mm cross supports 2 off 1200mm and 1 off cross support 2300m welded to square tube 50 x 50 x 3, secure the recycled plastic sheet, to angle with 16 off M12 galvanized M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 1 off mild steel laser cut flange 250mm x 180mm x 6mm thick with 4 off 16mm hole for swing cross member to be welded to main frame of the platform welded to rectangular tube 76mm x 38mm x 3mm. This will be used for the swing cross member to be bolted on.
- Canopy top frame, mild steel round tube 50mm x 2mm welded to the shape of the platform/ outer frame.
- 1 off recycled plastic 16mm sheets secured to frame with 16 off M12 galvanized M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 4 off mild steel uprights, round tube 76mm x 2mm, 3000 mm capped with 100mm mild steel balls, complete with laser cut base plates 250mm x 180mm x 16mm with 2 off 16 mm hole, to be secured with chemicals and M12 studs to concrete.
- 1 off round hollow tube 32mm x 3mm x 3000mm fireman poles welded to the top of the canopy and complete with laser cut base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs to concrete.
- 1 off 2400mm fibre glass slide, UV paint resistant, to be bolted to the platform. The slides must carry a minimum weight per square meter of 1,350g of glass. The slides must be made of 3 layers and finished with a marine quality gel-coat to carry a minimum weight of 120kg. The slides are manufactured from re-enforced fiberglass (3 layers), bonded with UV stable resin. All edges on slide needs to be strong and smooth, to avoid injury. Including 2 off round hollow tube 32mm x 2mm handrails fixed to the platform, slide to be secured to the concrete with chemicals and 2 off M12 studs.
- 1 off steps complete with hand rail, main frame round tube 32mm x 2mm, hand rail height 420mm with 3 off supports, rolled and bend to shape, 8 off steps round tube 32mm x 2mm, fully welded to main frame, steps bolted to platform frame with 2 off laser cut lugs 40mm x 50mm x 6mm, base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs to concrete.
- Hand rail rolled and shaped to the platform shape, horizontal mild steel round tube 32mm x 2mm and vertical mild steel tube 19mm x 2mm, 80 mm centre apart. 600mm in height with 3 off 80mm round steel balls.
- 1 off tunnel, made with 2 off 210 liter recycled steel drum, oil or grease to be removed and unit to be cleaned with degreaser, also mild steel round tube 32mm x 2mm to be welded to the entrance and exit to reinforce the drum, rolled to shape of the drum, drum to be secured to concrete at 4 places with chemical anchors with M12 studs, drum to be sloped to prevent water collection on the inside.
- Hand rail on the swing side, weld rectangular tube 76mm x 38mm x 3mm between two round tube 76mm, weld 2 off laser cut lugs 40mm x 50mm x 6mm to rectangular 76mm x 38mm tube, weld 3 off laser cut lugs 40mm x 50mm x 6mm to both 76mm uprights and weld 2 off laser cut lugs 40mm x 50mm x 6mm recycled plastic to the square tube 50mm x 50mm, recycled plastic pieces 1100mm x 1100mm, router to shape with rounded corners, to be bolts to 10 off laser cut lugs 40mm x 50mm x 6mm with M12 cup square bolts galvanized with nylon nuts, all bolts to be cut level with nuts, to prevent injury.

PLATFORM B

- Size 1200mm length x 1200mm width x 3000mm height, platform 1200mm x 1200mm
- Platform outer frame mild steel square tube 50mm x 50mm x 2mm, dimension 1200mm x 1200mm outer dimension, including angle 50mm x 50mm x 3mm cross supports 2 off 1200mm and 1 off cross support 1200mm welded to square tube 50 x 50 x 3, secure the recycled plastic sheet, to angle with 12-
-

- off M12 galvanized M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 1 off mild steel laser cut flange 250mm x 180mm x 6mm thick with 4 off 16mm hole for swing cross member to be welded to main frame of the platform. This will be used for the swing cross member to be bolted on.
- Canopy top frame, mild steel round tube 50mm x 2mm welded to the shape of the platform/ outer frame, canopy 1200mm x 1200mm x 700mm height, 4 off round hollow 32mm x 2mm tube with 1 off 150mm steel ball
- 1 off recycled plastic 1200mm x 1200mm x 16 mm secured to frame with 6 off M12 galvanized cup square bolts.
- 4 off uprights, mild steel round tube 76mm x 2mm, 3000 mm capped with 100 mm mild steel balls, complete with laser cut base plates 250mm x 180mm x 6mm thick with 2 off 16mm hole, to be secured with chemicals and M12 studs.
- 2 off round hollow tube 32mm x 3mm fireman poles welded to the top of the canopy and complete with laser cut base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs, capped with round steel plate 3mm.
- Hand rail rolled and shaped to the platform shape, horizontal mild steel round tube 32mm x 2mm and vertical mild steel tube 19mm x 2mm, 80 mm centre apart. 600mm in height with 2 off 80mm round steel balls.
- Hand rail on the swing side, weld rectangular tube 76mm x 38mm x 3mm between two round tube 76mm, weld 2 off laser cut lugs 40mm x 50mm x 6mm to rectangular 76mm x 38mm tube, weld 3 off laser cut lugs 40mm x 50mm x 6mm to both 76mm uprights and weld 2 off laser cut lugs 40mm x 50mm x 6mm recycled plastic to the square tube 50mm x 50mm, recycled plastic pieces 1100mm x 1100mm, router to shape with rounded corners, to be bolts to 10 off laser cut lugs 40mm x 50mm x 6mm with M12 cup square bolts galvanized with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 1 off climbing ramp, mild steel square tube 38mm x 38mm x 2mm, flat bar 38mm x 4mm to be welded on the inside of the square to secure the recycled plastic sheet to the frame and for the plastic to sit flush with the square tube frame, 1 off angle iron 40mm x 40mm x 3mm x 1500mm cross centre support and 2 off angle iron 40mm x 40mm x 3mm x 1000mm cross off centre support. 3 off laser cut lugs 40mm x 50mm x 6mm welded to platform vertical to secure ramp to platform, lugs to be bolted with M12 cup square bolts galvanized with nylon nuts, all bolts to be cut level with nuts, to prevent injury.1 off recycled plastic 16 mm sheet fixed to flat bar with 10 off M12 cup square bolts, fixed and secured to angle iron.
- 12 off climbing grips fixed to the recycled plastic with galvanized steel bolts M12 x 60mm.

SWINGS

- 1 off 2200mm horizontal 76mm x 3mm round hollow tube mild steel, including 2 off steel laser cut flange 250mm x 180mm x 6mm thick, including 4 off 16 mm holes fully welded to round tube 76mm x 3mm at both ends. Pole to be bolted in between platform A and B. The 76mm x 3mm top rail round tube should be recessed into the flange as to create a seating and not only welded
- 8 off 4mm laser cut flanges to hold the mild steel bushes laser cut plate to fit over 76mm round tube and to be fully welded.
- 4 off mild steel bushes with 8 off bearings with laser cut plate to fit over bush and to be fully welded to bush.
- 8 off bearings 6201-RS2 VBF fitted into the bushes.
- 4 off 6mm long link galvanized chains, complete with 8 off stainless steel 8 mm tamper proof S brackets to secure chain to bushes and seats, swing seats 500mm above ground.
- The distance between the side of a swing seat and the adjacent structure in the rest position shall be > 20% length of suspension member (plus 200mm)
- 2 off recycled conveyer belt seats (with no steel) with mild steel brackets bolted to the seats, brackets to made from 12 mm round bar and 4 mm plates. Bolted to top and bottom of the conveyer belt on both sides. Secure with M12 galvanized bolts.

- The minimum horizontal dimension between adjacent swing seats in the rest position shall be ≥ 20 % length of the suspension member (+ 300 mm).
- The lateral stability of swing seats. The distance between the suspension member shall be: ≥ seat length + 5 % length of the suspension member.
- In each swing bay the impact area shall have a minimum width of 1750mm.
- Test reports shall be in accordance with EN 1176-1:2008, Clause 5, in addition to the following:
  a) test report regarding compliance with EN 1176-2;
  b) certification of conformity with the relevant requirements of EN 1176-1 and EN 1176-2

The swings shall be marked as follows, marking shall be positioned on the swing in a location that will be visible when erected on site. This marking must:

- Detail equipment number
- Year manufactured/supplier o Details of the manufacturer o Basic level mark
- SANS 51176-2 displayed
- Must have no sharp edges or corners
- Be made of a durable material
- Be visible

BALANCE BEAM

- 1 off 2400mm x 500mm x 300mm mild steel round tube 76mm x 2mm, rolled to s shape.
- 3 off uprights 300mm high, welded onto the shape with base plates 250mm x 180mm x 6mm thick with 2 off 16mm hole on each plate.
- Anchor 3 off base plates 250mm x 180mm x 6mm thick with 2 off 16mm holes to concrete.
- Both ends to be capped off with 80mm round steel balls

WET POUR RUBBER

- Entire area to be covered with wet poured rubber, area 10.000 x 6.000mm
- Rubber is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to better with stand temperatures associated with environmental factors such as UV weathering and water swell.
- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of a cushion/base layer to improve safety.
- Wet pour rubber must be a minimum thickness of 20mm in play areas. At all fall heights rubber must be 40 mm thick and areas up to 1500 mm critical fall height must have surfacing extending 1500 mm from the equipment AND Areas over 1500 mm critical fall height MUST use this formula: 2/3 fall height + 500 mm.
- Minimum four bright colours to be used for the rubber.
- Wet pour rubber must carry a minimum guarantee of 1 year from date of installation.
- Test report must be made available for the surfacing materials (Wet pour rubber)

PAINTING OF STEEL

- All steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel.
- Final coat to be wet sprayed with automotive 2K paint in various colours.
- Minimum 4 bright colours to be used on steel unit.

MANDATORY INFORMATION TO BE PROVIDED BY THE MANUFACTURER/SUPPLIER INSTALLATION INFORMATION

1. The manufacturer/supplier shall supply an equipment delivery parts list with the equipment.

2. The manufacturer/supplier shall supply installation instructions for the correct assembly, erection and placing of the equipment.

3. Detailed manufacturing drawings to be submitted before production can start, drawings to be signed off prior to manufacturing.

The information shall include at least the following

MINIMUM SPACE REQUIREMENTS AND SAFETY CLEARANCES

1. Equipment and parts identification.

2. Erection sequence (Assembly instruction and installation details)

3. Matching aids where necessary, e.g. signs on parts accompanied by appropriate instructions;

4. Need for any special tools, lifting devices, templates or other assembly aids to be used and any precautionary measures to be taken. Where necessary, torque values should be given;

5. Constructional space required to install the item of equipment;

6. Orientation where necessary, in relation to sun and wind;
   a)Details of the required foundation, under normal conditions, anchorage in the ground and the design and the location of the foundation (with a note that care should be taken concerning normal conditions)

7. Specific instructions if a particular landscape profile is necessary for safe operation, e.g. falling height;

8. Free height of fall (for impact attenuation surfacing needs);

9. Need for and details of the application of any painting or treatment; and

10. Removal of assembly aids before the equipment is used.

11. Drawings and diagrams shall clearly specify the principal dimensions of the equipment and the relevant space, heights and areas required for installation.

The manufacturer/supplier shall supply the details necessary for inspection of the playground equipment prior to its first use.

UNIT I – SECONDARY INNER AND TRACK PLAYGROUND

12-meters x 8-meters (96M2)

All items below are built to SABS standards

- SANS 51176/1 2010
- SANS 51176/2 2010
- SANS 51176/3 2010
- SANS 51176/4 2010
- SANS 51176/5 2010
- SANS 51176/7 2010
- SANS 51176/10 2010
- SANS 51176/11 2010
- SANS 51177SANS 54960 2010
- Standard fall height rubber

GENERAL INFO

- SABS approved mild steel structures to be manufactured.
- SABS approved 2-seater swing complete with heavy duty steel bushes and bearings.
- Round hollow tube 32mm x 2mm, 30mm x 3mm, 50mm x 2mm, 76mm x 3mm, 76mm x 2mm, angle 40mm x 40mm x 3mm including mild steel laser cutting.
- All open tops to be capped off with hollow steel balls or steel plates to prevent rust and insect infestations.
- All mild steel to be washed with degreaser, sprayed with red oxide primer, and wet sprayed with 2K automotive paint.
- All steel to be free from sharp edges, all welding to be smooth, steel sections to be deburred, no B grade steel to be used.
- Recycled plastic 16mm thick to be used for platforms, climbing ramp and handrail guards.
- Climbing grips for climbing ramp.
- All uprights, drum, ramp, and fireman pole to be anchored to concrete with M10 stud anchors.

- All bolts grade 8.8 and nylon nuts, all galvanised.
- All welding to be done by coded welders.
- All bolts to be cut off flush with the nuts, to prevent injury.
- All rubble to be removed from site.
- Manufacturer will supply detailed shop drawing for approval before manufacturing can start

REP AND CIVIL WORK

- Excavate 10-meter x 6-meter area
- Remove all vegetation.
- Compact area to 93-degree mod aashto using mechanical compactor.
- Set levels to fall.
- Place shutter board or steel shuttering to layout and designed shapes.
- Place 250mic plastic underlay on surface to prevent rising damp and growth of vegetation that will cause structural damage.
- Place reference 100 reinforcing steel to ensure a strong and durable concrete surface, suspended from surface by 20mm.
- Cast a concrete slab of 20mpa strength covering the entire 60m2 area with a minimum thickness of 100 mm.
- Ensure that the fall will allow water to run off the casted concrete slab.
- Set the equipment as per basic level mark.

PLATFORM A

- Size 2400mm x 1200mm x 3000mm, platform 2500mm x 1200mm, platform height 1500mm.
- Platform outer frame mild steel square tube 50mm x 50mm x 2mm, dimension 2300mm x 1200mm outer dimension, including angle 50mm x 50mm x 3mm cross supports 2 off 1200mm and 1 off cross support 2300m welded to square tube 50 x 50 x 3, secure the recycled plastic sheet, to angle with 16 off M12 galvanised M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 1 off mild steel laser cut flange 250mm x 180mm x 6mm thick with 4 off 16mm hole for swing cross member to be welded to main frame of the platform welded to rectangular tube 76mm x 38mm x 3mm. This will be used for the swing cross member to be bolted on.
- Canopy top frame, mild steel round tube 50mm x 2mm welded to the shape of the platform/ outer frame.
- 1 off recycled plastic 16mm sheets secured to frame with 16 off M12 galvanised M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 4 off mild steel uprights, round tube 76mm x 2mm, 3000 mm capped with 100mm mild steel balls, complete with laser cut base plates 250mm x 180mm x 16mm with 2 off 16 mm hole, to be secured with chemicals and M12 studs to concrete.
- 1 off round hollow tube 32mm x 3mm x 3000mm fireman poles welded to the top of the canopy and complete with laser cut base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs to concrete.
- 1 off 2400mm fibre glass slide, UV paint resistant, to be bolted to the platform. The slides must carry a minimum weight per square meter of 1,350g of glass. The slides must be made of 3 layers and finished with a marine quality gelcoat to carry a minimum weight of 120kg. The slides are manufactured from re-enforced fiberglass (3 layers), bonded with UV stable resin. All edges on slide needs to be strong and smooth, to avoid injury. Including 2 off round hollow tube 32mm x 2mm handrails fixed to the platform, slide to be secured to the concrete with chemicals and 2 off M12 studs.

- 1 off steps complete with hand rail, main frame round tube 32mm x 2mm, hand rail height 420mm with 3 off supports, rolled and bend to shape, 8 off steps round tube 32mm x 2mm, fully welded to main frame, steps bolted to platform frame with 2 off laser cut lugs 40mm x 50mm x 6mm, base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs to concrete.Hand rail rolled and shaped to the platform shape, horizontal mild steel round tube 32mm x 2mm and vertical mild steel tube 19mm x 2mm, 80 mm centre apart. 600mm in height with 3 off 80mm round steel balls.
- 1 off tunnel, made with 2 off 210 litre recycled steel drum, oil or grease to be removed and unit to be cleaned with degreaser, also mild steel round tube 32mm x 2mm to be welded to the entrance and exit to reinforce the drum, rolled to shape of the drum, drum to be secured to concrete at 4 places with chemical anchors with M12 studs, drum to be sloped to prevent water collection on the inside.
- Hand rail on the swing side, weld rectangular tube 76mm x 38mm x 3mm between two round tube 76mm, weld 2 off laser cut lugs 40mm x 50mm x 6mm to rectangular 76mm x 38mm tube, weld 3 off laser cut lugs 40mm x 50mm x 6mm to both 76mm uprights and weld 2 off laser cut lugs 40mm x 50mm x 6mm recycled plastic to the square tube 50mm x 50mm, recycled plastic pieces 1100mm x 1100mm, router to shape with rounded corners, to be bolts to 10 off laser cut lugs 40mm x 50mm x 6mm with M12 cup square bolts galvanised with nylon nuts, all bolts to be cut level with nuts, to prevent injury.

PLATFORM B

- Size 1200mm length x 1200mm width x 3000mm height, platform 1200mm x 1200mm
- Platform outer frame mild steel square tube 50mm x 50mm x 2mm, dimension 1200mm x 1200mm outer dimension, including angle 50mm x 50mm x 3mm cross supports 2 off 1200mm and 1 off cross support 1200mm welded to square tube 50 x 50 x 3, secure the recycled plastic sheet, to angle with 12 off M12 galvanised M12 cup square bolts with nylon nuts, all bolts to be cut level with nuts, to prevent injury.
- 1 off mild steel laser cut flange 250mm x 180mm x 6mm thick with 4 off 16mm hole for swing cross member to be welded to main frame of the platform. This will be used for the swing cross member to be bolted on.
- Canopy top frame, mild steel round tube 50mm x 2mm welded to the shape of the platform/ outer frame, canopy 1200mm x 1200mm x 700mm height, 4 off round hollow 32mm x 2mm tube with 1 off 150mm steel ball
- 1 off recycled plastic 1200mm x 1200mm x 16 mm secured to frame with 6 off M12 galvanized cup square bolts.
- 4 off uprights, mild steel round tube 76mm x 2mm, 3000 mm capped with 100 mm mild steel balls, complete with laser cut base plates 250mm x 180mm x 6mm thick with 2 off 16mm hole, to be secured with chemicals and M12 studs.
- 2 off round hollow tube 32mm x 3mm fireman poles welded to the top of the canopy and complete with laser cut base plates 250mm x 180mm x 6mm with 2 off 16mm hole, to be secured with chemicals and M12 studs, capped with round steel plate 3mm.
- Hand rail rolled and shaped to the platform shape, horizontal mild steel round tube 32mm x 2mm and vertical mild steel tube 19mm x 2mm, 80 mm centre apart. 600mm in height with 2 off 80mm round steel balls.
- Hand rail on the swing side, weld rectangular tube 76mm x 38mm x 3mm between two round tube 76mm, weld 2 off laser cut lugs 40mm x 50mm x 6mm to rectangular 76mm x 38mm tube, weld 3 off laser cut lugs 40mm x 50mm x 6mm to both 76mm uprights and weld 2 off laser cut lugs 40mm x 50mm x 6mm recycled plastic to the square tube 50mm x 50mm, recycled plastic pieces 1100mm x 1100mm, router to shape with rounded corners, to be bolts to 10 off laser cut lugs 40mm x 50mm x 6mm with M12 cup square bolts galvanised with nylon nuts, all bolts to be cut level with nuts, to prevent injury.

- 1 off climbing ramp, mild steel square tube 38mm x 38mm x 2mm, flat bar 38mm x 4mm to be welded on the inside of the square to secure the recycled plastic sheet to the frame and for the plastic to sit flush with the square tube frame, 1 off angle iron 40mm x 40mm x 3mm x 1500mm cross centre support and 2 off angle iron 40mm x 40mm x 3mm x 1000mm cross off centre support. 3 off laser cut lugs 40mm x 50mm x 6mm welded to platform vertical to secure ramp to platform, lugs to be bolted with M12 cup square bolts galvanised with nylon nuts, all bolts to be cut level with nuts, to prevent injury.1 off recycled plastic 16 mm sheet fixed to flat bar with 10 off M12 cup square bolts, fixed and secured to angle iron.
- 12 off climbing grips fixed to the recycled plastic with galvanized steel bolts M12 x 60mm.

SWINGS

- 1 off 2200mm horizontal 76mm x 3mm round hollow tube mild steel, including 2 off steel laser cut flange 250mm x 180mm x 6mm thick, including 4 off 16 mm holes fully welded to round tube 76mm x 3mm at both ends. Pole to be bolted in between platform A and B. The 76mm x 3mm top rail round tube should be recessed into the flange as to create a seating and not only welded
- 8 off 4mm laser cut flanges to hold the mild steel bushes laser cut plate to fit over 76mm round tube and to be fully welded.
- 4 off mild steel bushes with 8 off bearings with laser cut plate to fit over bush and to be fully welded to bush.
- 8 off bearings 6201-RS2 VBF fitted into the bushes.
- 4 off 6mm long link galvanised chains, complete with 8 off stainless steel 8 mm tamper proof S brackets to secure chain to bushes and seats, swing seats 500mm above ground.
- The distance between the side of a swing seat and the adjacent structure in the rest position shall be > 20% length of suspension member (plus 200mm)
- 2 off recycled conveyer belt seats (with no steel) with mild steel brackets bolted to the seats, brackets to made from 12 mm round bar and 4 mm plates. Bolted to top and bottom of the conveyer belt on both sides. Secure with M12 galvanised bolts.
- The minimum horizontal dimension between adjacent swing seats in the rest position shall be ≥ 20 % length of the suspension member (+ 300 mm).
- The lateral stability of swing seats. The distance between the suspension member shall be: ≥ seat length + 5 % length of the suspension member.
- In each swing bay the impact area shall have a minimum width of 1750mm.
- Test reports shall be in accordance with EN 1176-1:2008, Clause 5, in addition to the following:
  a) test report regarding compliance with EN 1176-2;
  b) certification of conformity with the relevant requirements of EN 1176-1 and EN 1176-2

The swings shall be marked as follows, marking shall be positioned on the swing in a location that will be visible when erected on site. This marking must:

- Detail equipment number
- Year manufactured/supplier o Details of the manufacturer o Basic level mark
-SANS 51176-2 displayed
-Must have no sharp edges or corners
-Be made of a durable material
-Be visible

BALANCE BEAM

- 1 off 2400mm x 500mm x 300mm mild steel round tube 76mm x 2mm, rolled to s shape.
- 3 off uprights 300mm high, welded onto the shape with base plates 250mm x 180mm x 6mm thick with 2 off 16mm hole on each plate.
- Anchor 3 off base plates 250mm x 180mm x 6mm thick with 2 off 16mm holes to concrete.
- Both ends to be capped off with 80mm round steel balls.

- ROAD SIGNS

- 9 off road sign uprights, round tube 50mm x 2mm x 1500mm, capped with round steel ball 80mm at the top, uprights to be casted into the ground with concrete into hole 300mm x 300mm x 300mm.
- 9 off road signs using 16mm recycled plastic, profile cut road signs and road to be digitally printed directly onto the recycled plastic.
- 3 off 60km/h, 2 off pedestrian crossing, 2 off stop and 2 off yield road signs.
- Manufacture and supply road signs post in mild steel round tube 50mm x 2mm, capped with 80mm round steel balls.
- Custom UV printed 3 mm ABS board road signs 300mm x 300mm cut to shape and fixed to round tube with galvanized M12 cup square bolts.
- Install into ground with concrete, 300mm x 300mm x 300mm.
- Secure road signs to uprights with M10 x 80 galvanised cup square bolts and nuts, galvanized and nylon nuts.

TRACK

- Remove existing playground equipment.
- Excavate ground.
- Compact soil.
- Track must be in a shape like illustration.
- Place 250mic plastic underlay on surface to prevent rising damp and growth of vegetation that will cause structural damage.
- Install ref 100 steel mesh.
- Install 2 off 100mm openings for drainage.
- Cast 20MPA concrete 100 mm thick.
- Install wet poured recycled plastic rubber floor 10 mm thick, all round the track.
- The rubber for the road surface should be at least 10mm thick for the entire track including the speed humps and the 2 safety edges.
- There shall be a safety edge on both sides of the track. The safety edge shall be 150mm high.
- · At least 2 off 100mm openings on safety edge of track to allow free drainage of water at the lowest section of the track
- Road markings should marked be painted in enamel paint.
  18 off tyres to be painted in various colours with paint, no steel exposed.
  Tyres to be concreted into the ground to prevent injury, if tyres touch another, tyres to be bolted to each other with M12 bolts, nylon nuts with laser cut washers, washers to be galvanized.

TYRES

Install recycled tyres right against track curb as per illustration.
Install 18 off recycled tyres around the track on the inside 4 off and the outside 16 off as per illustration, all concreted into the ground and painted at 4 different colours, 2 coats.
Tyres with exposed steel cannot be used.
Tyres minimum 300 mm diameter and must be washed with high pressure washer and clean from any dirt.

- Tyres planted into the soil at least 200 mm deep with concrete.
- All tyres to be bolted to each other with galvanized M12 grade 8.8 bolts with nylon nuts, laser cut plates to be inserted on the inside of the tyres, so that the bolts do not pull through the tyre

WET POUR RUBBER

- Entire area to be covered with wet poured rubber, area 10.000 x 6.000mm
- Rubber is weather resistant and absorbs less solar heat. It is extremely versatile with the ability to

better with stand temperatures associated with environmental factors such as UV weathering and water swell.

- Rubber is produced from black rubber tyres that are stripped of their metal reinforcing and then mechanically shredded into granules. These rubber granules are graded and available in different sizes, that can be coloured and used as an economical safe and durable surface.
- Wet pour slab applications can accommodate an installation of a cushion/base layer to improve safety.
- Wet pour rubber must be a minimum thickness of 20mm in play areas. At all fall heights rubber must be 40 mm thick and areas up to 1500 mm critical fall height must have surfacing extending 1500 mm from the equipment AND Areas over 1500 mm critical fall height MUST use this formula: 2/3 fall height + 500 mm.
- Minimum four bright colours to be used for the rubber.
- Wet pour rubber must carry a minimum guarantee of 1 year from date of installation.
- Test report must be made available for the surfacing materials (Wet pour rubber)

PAINTING OF STEEL

- All steel to be cleaned with degreaser and cloth, red oxide primer to be sprayed on cleaned steel.
- Final coat to be wet sprayed with automotive 2K paint in various colours.
- Minimum 4 bright colours to be used on steel unit.

MANDATORY INFORMATION TO BE PROVIDED BY THE MANUFACTURER/SUPPLIER INSTALLATION INFORMATION

1. The manufacturer/supplier shall supply an equipment delivery parts list with the equipment.

2. The manufacturer/supplier shall supply installation instructions for the correct assembly, erection and placing of the equipment.

3.Detailed manufacturing drawings to be submitted before production can start, drawings to be signed off prior to manufacturing.

The information shall include at least the following

MINIMUM SPACE REQUIREMENTS AND SAFETY CLEARANCES

1. Equipment and parts identification.

2. Erection sequence (Assembly instruction and installation details)

3. Matching aids where necessary, e.g. signs on parts accompanied by appropriate instructions;

4. Need for any special tools, lifting devices, templates or other assembly aids to be used and any precautionary measures to be taken. Where necessary, torque values should be given;

5. Constructional space required to install the item of equipment;

6. Orientation where necessary, in relation to sun and wind;
   a)Details of the required foundation, under normal conditions, anchorage in the ground and the design and the location of the foundation (with a note that care should be taken concerning normal conditions)

7. Specific instructions if a particular landscape profile is necessary for safe operation, e.g. falling height;

8. Free height of fall (for impact attenuation surfacing needs);

9. Need for and details of the application of any painting or treatment; and

10. Removal of assembly aids before the equipment is used.

11. Drawings and diagrams shall clearly specify the principal dimensions of the equipment and the relevant space, heights and areas required for installation.

The manufacturer/supplier shall supply the details necessary for inspection of the playground equipment prior to its first use.

JUMANTA™
OUTDOOR COURSE

Jungle gym, Muscle Advance aNd Traffic Awareness

SAFETY GUIDE

RISK AWARENESS TRAINING MANUAL FOR E.C.D. OUTDOOR EQUIPMENT

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JUMANTA™ OUTDOOR COURSE

THIS CERTIFICATE OF ATTENDANCE IS AWARDED TO:

FOR THE COMPLETION OF THE RISK AWARENESS TRAINING FOR E.C.D. OUTDOOR EQUIPMENT

DATE OF ISSUE

28/07/2022

Training Manager
Mr. Neo Ngesi

Training Manager Accreditation:

higher education & training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

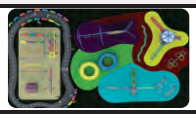
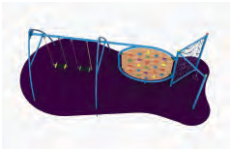
ETDP•SETA

W&RSETA
WHOLESALE & RETAIL SETA
Skills Development for Economic Growth

Health and Welfare Sector Education and Training Authority
HWSETA

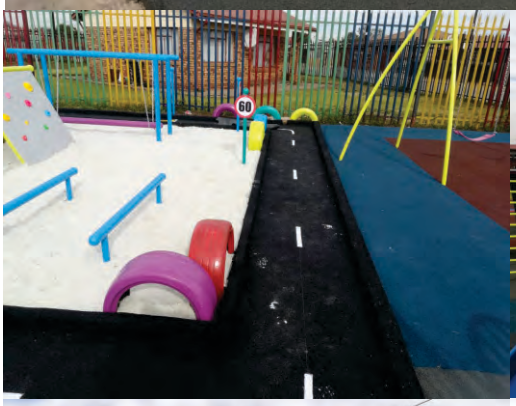
university of south africa
UNISA

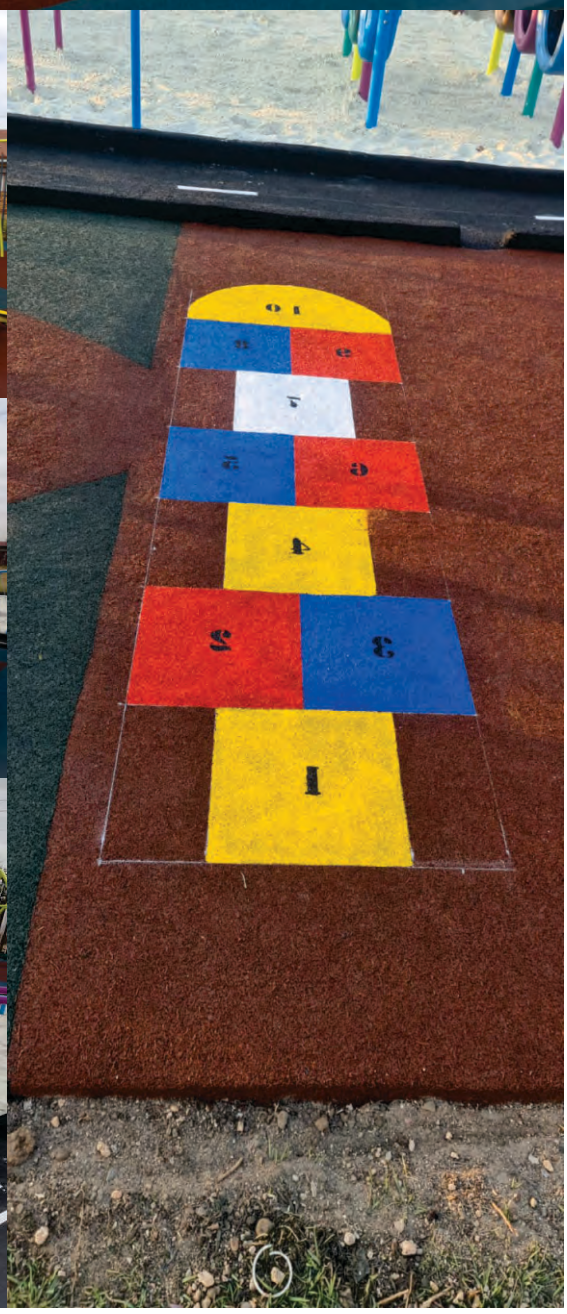
4 JUMANTA OUTDOOR COURSE COST BREAKDOWN

ITEM	ILLISTRATION	ESTIMATED SIZE	DESCRIPTION	UNIT PRICE
A			PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK, SAND PIT, ROAD SIGNS AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
B		8.900 X 4.700 X 2.600 (31 m2)	BLUE AREA - PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
B.1		8.900 X 4.700 X 2.600 (31 m2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
B.2		8.900 X 4.700 X 2.600 (31 m2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
B.3		8.900 X 4.700 X 2.600 (31 m2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
C		13.000 X 9.200 X 0.600 (41.5M2)	RED AREA - PAY GROUND, USED TRUCK OR TRACTOR TYRES, RUBBER, CIVIL WORK AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
C.1		13.000 X 9.200 X 0.600 (41.5M2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
C.2		13.000 X 9.200 X 0.600 (41.5M2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
C.3		13.000 X 9.200 X 0.600 (41.5M2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
D		6.500 x 4.900x 3.200 (16 m2)	YELLOW AREA - PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
D.1		6.500 x 4.900x 3.200 (16 m2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
D.2		6.500 x 4.900x 3.200 (16 m2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
D.3		6.500 x 4.900x 3.200 (16 m2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
E		7.000 x 3.700 x 2.600 (21 m2)	PURPLE AREA - PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
E.1		7.000 x 3.700 x 2.600 (21 m2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
E.2		7.000 x 3.700 x 2.600 (21 m2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
E.3		7.000 x 3.700 x 2.600 (21 m2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
F		8.500 x 4.500 x 200 (38m2)	SAND PIT AREA - COMPLETE WITH SILIKA SAND, CIVIL WORK, STEEL FITNESS AREA, INCLUDING RECYCLED PLASTIC SECTION, USED TYRES, CHAN AND ROPE WITH NETTING INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
F.1		8.500 x 4.500 x 200 (38m2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
F.2		8.500 x 4.500 x 200 (38m2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
F.3		8.500 x 4.500 x 200 (38m2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
G		12.000 x 8.000 x 1.600 (22 M2)	TRACK - COMP-LETE WITH CIVIL WORK, USED TYRE, 12 OFF TRFFIC SIGNS, INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
G.1		12.000 x 8.000 x 1.600 (22 M2)	PREPARE AND INSTALL CONCRETE SLAB	PRICE ON REQUEST
G.2		12.000 x 8.000 x 1.600 (22 M2)	INSTALLATION OF RUBBER FLOORING	PRICE ON REQUEST
G.3		12.000 x 8.000 x 1.600 (22 M2)	PLAYGROUND EQUIPMENT AND INSTALLATION	PRICE ON REQUEST
H		10.000 X 6.000 (60 m2)	PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK, INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST
I		12.000 X 8.000 (96 m2)	PLAY GROUND COMPLETE WITH MILD STEEL, RUBBER, CIVIL WORK, ROAD SIGNS AND INDEMNITY SIGN, TRANSPORT AND INSTALLATION	PRICE ON REQUEST

5 GALLERY









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AMAZI PROGRAM

OUTDOOR JUNGLE GYM OFFICIALLY UNVEILED

Thapelo Magola

The newly completed outdoor Jungle gym facility at the Margaret Gwele primary school in Dobsonville is already a runway success.

The unveiling ceremony held on Friday, October 09, saw Pfunzo Ye Sive executive Chairperson Nthavha Nemukula snipping the ribbon. Invented by Pfunzo Ye Sive suppliers of educational kits, the park, built on a piece of vacant land, incorporates track with road signs, hop scotch and snake area, complete playground area, obstacle area in sand pit, monkey climber and many more activities for kids. Gym and play apparatus are modern and include an area for teachers to sit and relax while they watch over their kids.

In his address, Nthavha Nemukula said the innovative facility is part of the entity's effort to make world class fitness, free and accessible in schools across the country. "The outdoor gym is a fantastic means by which children can have fun and keep healthy and fit", added Nemukula.

The exercise equipment has been permanently installed and mounted on a rubber matting, making it suitable for children to work up a sweat.

SES JW ECD Foundation phase teacher, Orah Matjila, emphasized that a healthy mind should be accompanied by a healthy body and assured event attendees that the students will also use the facilities to de-stress. "Being physically active has many benefits for kids as it reduces obesity risk and improves overall physical and mental health, fostering both social and emotional development whilst boosting academic performance," mentioned Matjila. Adresing guests, she further related that the outdoor Jungle gym facility will address the fitness needs of students especially in sport.

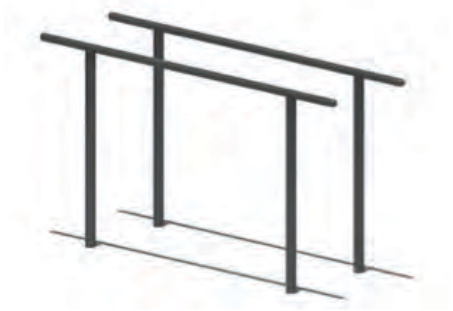
Pictures: Thapelo Magola

6 OUTDOOR FITNESS EQUIPMENT

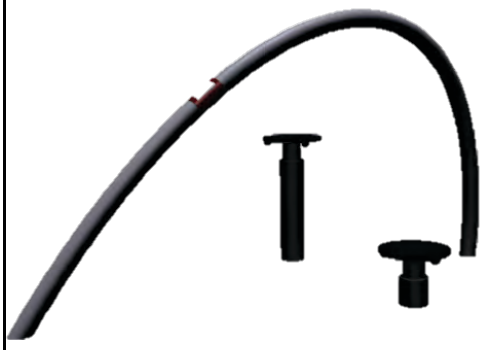
PICTURE	PRODUCT NAME
	CHEST
	BACK
	ARM AND LEG PRESS
	LEG PRESS

PICTURE	PRODUCT NAME
	4 SEATER LEG PRESS
	4 SEATER CHEST PRESS
	DOUBLE ROWER
	SINGLE ROWER
	AIR SKIER

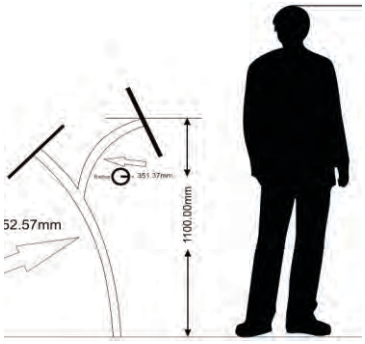
PICTURE	PRODUCT NAME
	DOUBLE AIR SKIER
	AIR WALKER
	DOUBLE LOWER BCK TRAINER
	KNEE RAISE AND DIP COMBO
	PULL UP AND DIP COMBO

PICTURE	PRODUCT NAME
	PARALELL BARS
	PEDAL COMBO
	COMPOUND PUSHUP
	SIT-UP
	PULL UP

PICTURE	PRODUCT NAME
	SCALLING LADDER
	BAR
	PUSH UP BARS
	CROSS
	STEPPER

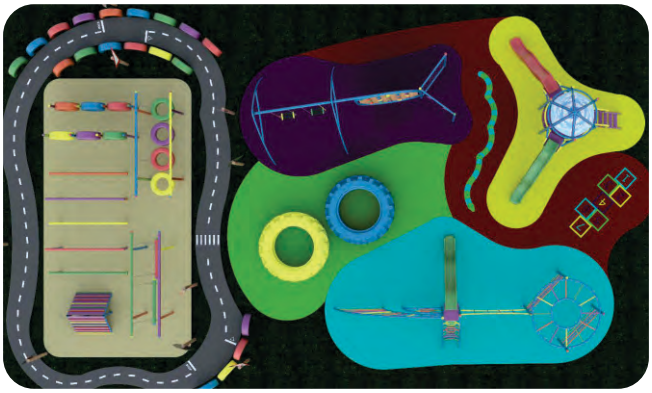
PICTURE	PRODUCT NAME
	HIP
	HIP TWISTER
	STATIC SPRINGER
	STATIC HIP TWISTER
	STEP BALANCE DOUBLE HIP TWIST

PICTURE	PRODUCT NAME
	STRETCH
	BENCH
	BENCH
	PING PONG
	WAP BOARD

PICTURE	PRODUCT NAME
	INFORMATION SIGN
	CAL 001
	MULTI STATION LARGE
	MULTI STATION MEDIUM
	MULTI STATION SMALL

PICTURE	PRODUCT NAME
	PARK BENCH 001
	PARK BENCH 002
	LEG LIFT

NOTES:



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