



# Beach Handball

## Beach Handball Court Construction Guide

EHF Beach Handball Commission  
Promotion and Development  
Vienna, October 2012



## Guide topics

Location

Court, markings

Goals, lines

Construction

Sand quality requirements

Lighting requirements

Diagrams

Venue plan





# Beach Handball

## Location



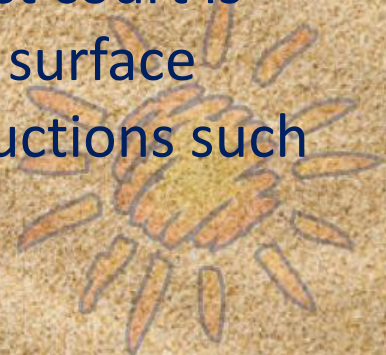


# Beach Handball

## Location

When planning the layout special attention must be paid to the orientation of the court. The court should run lengthwise North/South. If the court runs East/West, the court will be virtually unusable in the early morning and early evenings.

In the morning, the team on the West side of the court stares at the morning sun and in the evening, the team occupying the East court is blinded. The area above the playing surface should be clear and free of all obstructions such as tree branches and power lines.





# Beach Handball

## Court markings



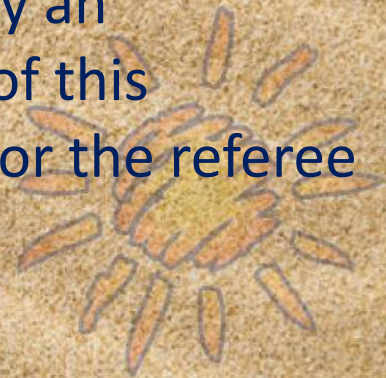


# Beach Handball

## Court, markings (continue)

The FOP is marked with lines. These lines belong to the areas of which they are boundaries. The two longer boundary lines are called side lines. The two shorter boundary lines are called goal lines, although there is no line between the goalposts. The goal area lines are six meters from and parallel to the goal line.

The FOP is divided into two halves by an imaginary halfway line. The middle of this imaginary line is the exact position for the referee throw.



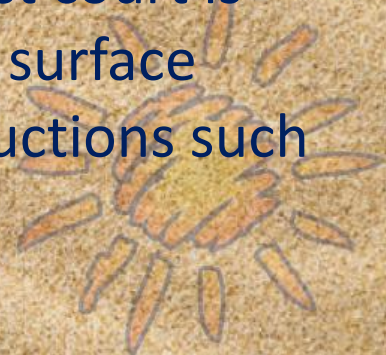


# Beach Handball

## Location

When planning the layout special attention must be paid to the orientation of the court. The court should run lengthwise North/South. If the court runs East/West, the court will be virtually unusable in the early morning and early evenings.

In the morning, the team on the West side of the court stares at the morning sun and in the evening, the team occupying the East court is blinded. The area above the playing surface should be clear and free of all obstructions such as tree branches and power lines.





# Beach Handball

## Court, markings (continue)

Dimensions of the court are 27 meters X 12 meters and are measured from the outer edge of the boundary lines. All lines are between five and eight centimeters wide and are made of solid color tape contrasting with the sand (blue, yellow or red). The tape must be flexible and hard-wearing but must not harm the players' and officials' feet, firmly anchored to the sand at each corner and at the intersection of each goal area line/sideline with buried deadman anchors.

(Diagram #3)





# Beach Handball

## Court, markings (continue)

A bungee cord should be attached to each corner and connected to buried wood or a plastic anchor disk (without sharp edges). The bungee will provide the tension necessary to keep the boundaries in place while giving the flexibility to reduce the chances of injury should a player or official catch their foot under the line. The goals are affixed to the lines with rubber rings attached to the posts. The anchors must not create a danger for the players and officials.





# Beach Handball

## Goals, nets





## Goals, nets

### Diagram #4

- a) A rectangular goal shall be positioned at the middle of each goal line. It must consist of two upright posts equidistant from each corner and joined at the top by a horizontal crossbar.
- b) The goal posts shall extend vertically and the height shall be two meters from the sand surface to the underside of the crossbar, and the internal distance between the vertical goal posts shall be three meters.

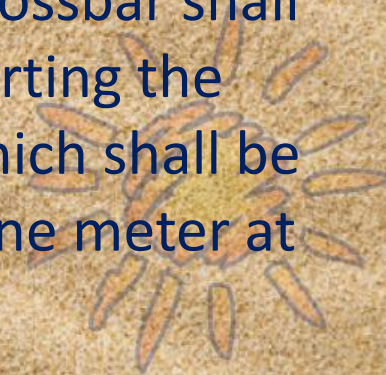




# Beach Handball

## Goals, nets (continue)

- c) The goal posts and horizontal crossbar that form the tubular aluminum frame shall be of a specified design with an external diameter of eight centimeters and shall be painted in a solid color contrasting clearly with the sand and with the background (yellow, blue, or red). The color of both goals must be the same.
- d) The goal posts and horizontal crossbar shall be completed by a frame supporting the netting, the deepest point of which shall be 80 centimeters at the top and one meter at the bottom.





# Beach Handball

## Goals, nets (continue)

- e) Each goal must include a net, made of heavy duty nylon (or other similar synthetic material, knotless, mesh 80 millimeters X 80 millimeters or smaller, thickness six millimeters) attached to the back of the goal posts and crossbar. This must be fastened in such a way that a ball thrown into the side of the goal cannot enter the net between the post and the net and be mistaken for a goal, and that a ball thrown into the goal does not leave the goal or pass out between the net and the posts of the goal and be mistaken for a miss, provided as well that is properly supported and do not interfere with the goalkeeper.



# Beach Handball

## Goals, nets (continue)

If necessary, a second net may be clasped to the back of the net on the inside.

The lower part of the net must be attached to curved tubing or another suitable means of support in such a way that a ball entering the goal cannot pass beyond the net. The color of the net must contrast against the sand and the background and be the same as the goal.





# Beach Handball

## Goals, nets (continue)

- f) For the safety of the players and officials, the bottom of each goal must be appropriately anchored beneath the sand. The anchors must not create a danger for the players.
  
- g) At three meters behind each goal area catch (stopping) nets must be loosely suspended along the entire length of the playing court (12 meters X 7 meters high). The catch (stopping) nets must adequately reach the sand.





# Beach Handball

# Construction





## Construction

The court area should be excavated to a 40 centimeters to 90 centimeters depth depending on how well the court site drains. A drainage ditch leading away from the lowest point of the court must be installed. Perforated drainage pipe should be laid across the court with one end capped and the other open to the drainage ditch. Proper drainage is extremely important, even if the court is built above ground because sand will still retain water.

(Diagram #5)



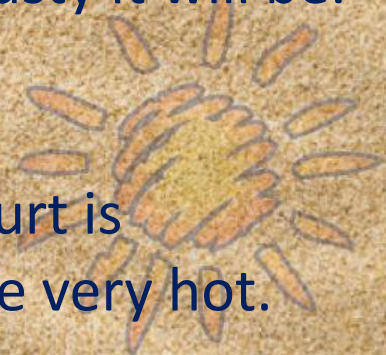


# Beach Handball

## Construction (continue)

Depending on how well the soil drains the court area must be overlaid with a 30 centimeters thickness of smooth rounded gravel. Landscape fabric must be placed above the gravel to prevent sand from washing through into the gravel base. A depth of 30 centimeters to 60 centimeters of beach sand or washed masonry sand should be deposited over the area and raked level. The more -the sand is washed the less dusty it will be. (Diagram #6)

Installing a water spigot near the court is encouraged, as the sand can become very hot.





# Beach Handball

## Sand quality requirements





# Beach Handball

## Sand quality requirements

Sand selection is probably the most important factor in court construction. The sand should be shifted to an acceptable size that is not too coarse, and is free of stones and dangerous particles. It should not be too fine otherwise it will cause dust and stick to the skin. Any sand that is used should incorporate the following specifications:

**Washed:** The sand should be double washed and free of silt and clay in order to prevent compaction





# Beach Handball

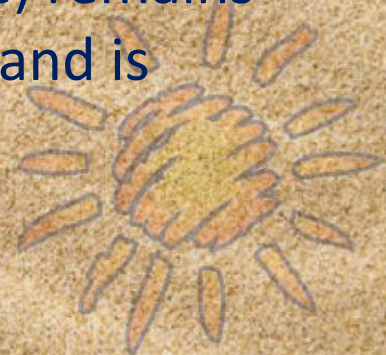
## Sand quality requirements (continue)

**Particle size:** The size of the sand particles should be between 0.5 and 1mm to allow for proper drainage and maximum safety.

**Particle shape:** A sub angular shape will resist compaction and assist the drainage.

**Color:** Tan colored sand absorbs less heat with minimal glare.

**Source:** A granite based sand (non-calcareous - no calcium or limestone) remains stable under all weather conditions and is unaffected by acid rain.





# Beach Handball

## Sand quality requirements (continue)

For high quality Beach Handball sand the following formula should be followed:

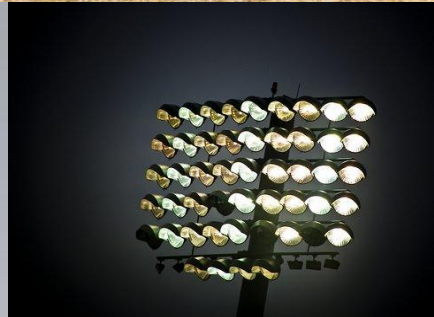
Name	Particle diameter	Specifications (% retention in sieves)
Fine gravel	2.0mm	0%
Very coarse sand	1.0mm - 2.0mm	0% - 6%
Coarse sand	0.5mm - 1.0mm	min. of 80%
Medium sand	0.25mm - 0.5mm	max. of 92%
Fine sand	0.15mm - 0.25mm	7% - 18%
Very fine sand	0.05mm - 0.15mm	not greater than 2.0%
Silt and clay	below 0.05mm	not greater than 0.15%

These requirements related to the particle sizes allow for excellent drainage and must be considered to successfully face differing weather conditions.



# Beach Handball

## Lighting requirements





## Lighting requirements

If play is to take place at night the court area should be illuminated to allow players, officials and those watching both at the grounds and at home on television to see the action clearly. This means the levels of brightness, contrast and glare must be correctly designed over the entire playing area. Lighting levels depend also on the size of the venue.





# Beach Handball

## Lighting requirements (continue)

In case of night international competition artificial lighting of 1000 to 1500 lux (minimum), measured at 1m above the playing surface must be available. Artificial light may also be operating during day time (upon television request) in order to reduce the impact of shadow. Lights should be fixed on a height of eight meters (minimum).

### Indicative minimum lighting (lux) levels:

Training 120 lux

Local competition up to 400 lux

International competition 1000 lux to 1500 lux



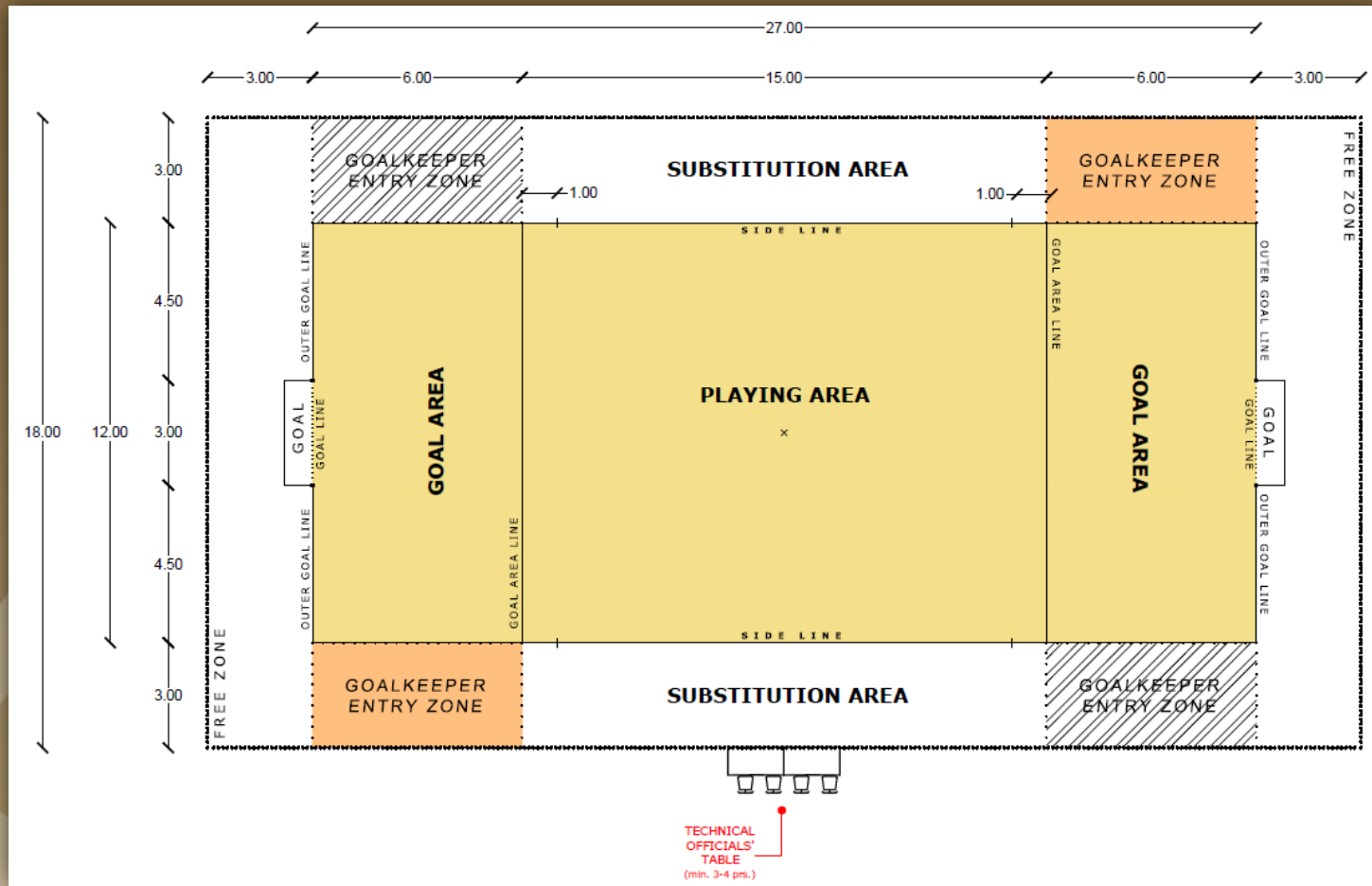


# Beach Handball

## Diagrams

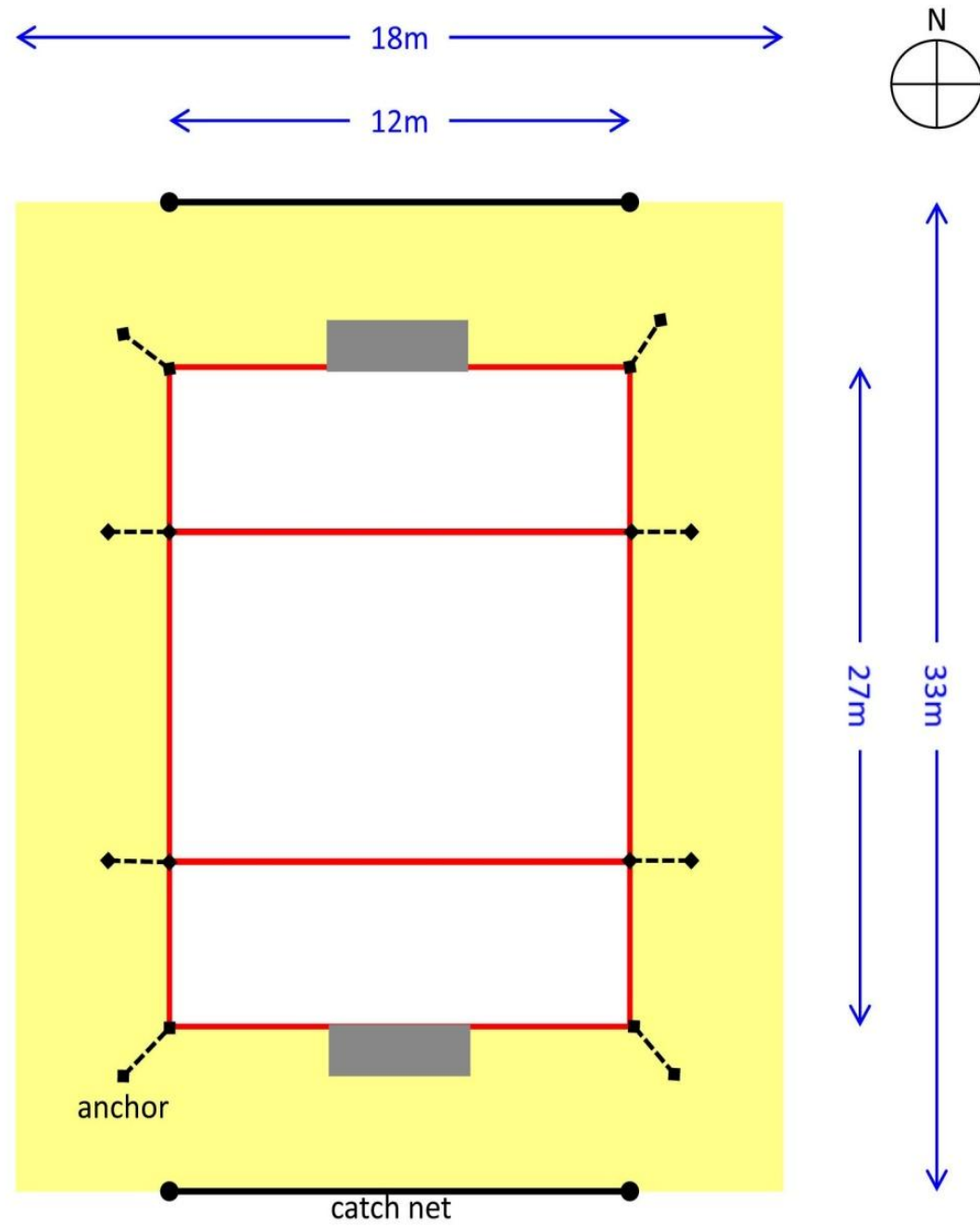


# Diagram #1



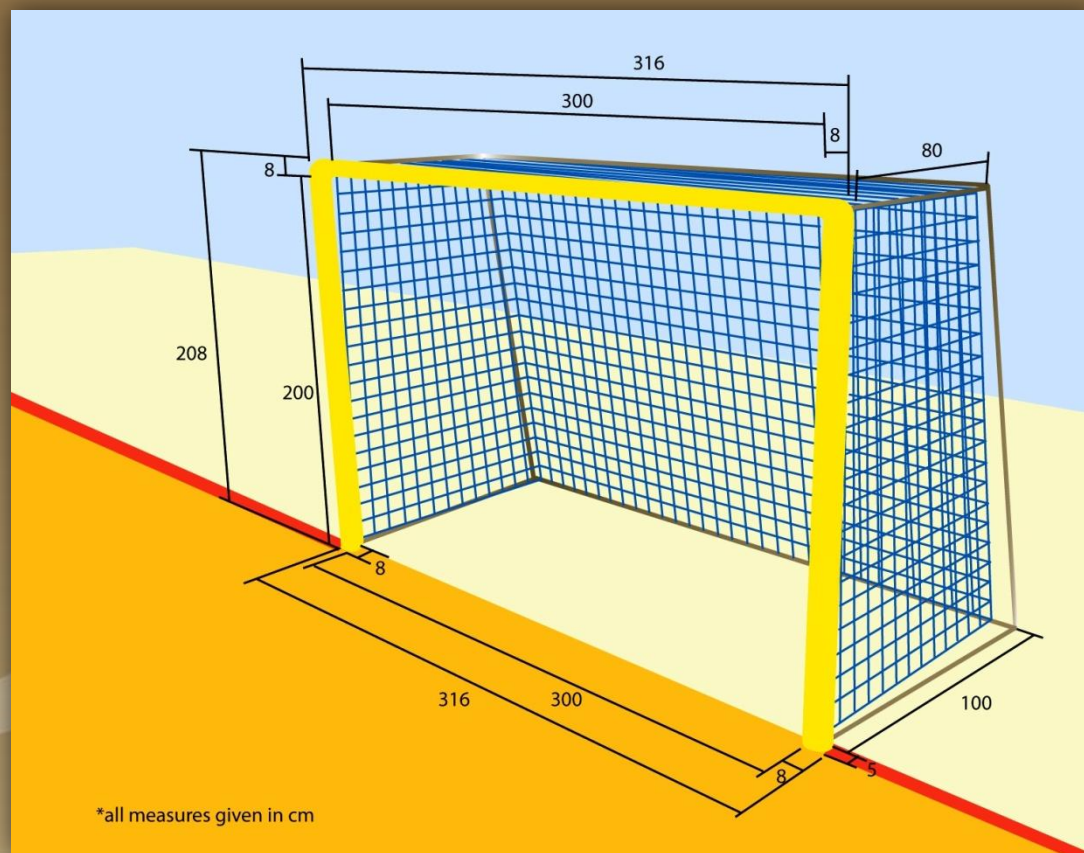


# Diagram #3



**Beach Handball court plan view**

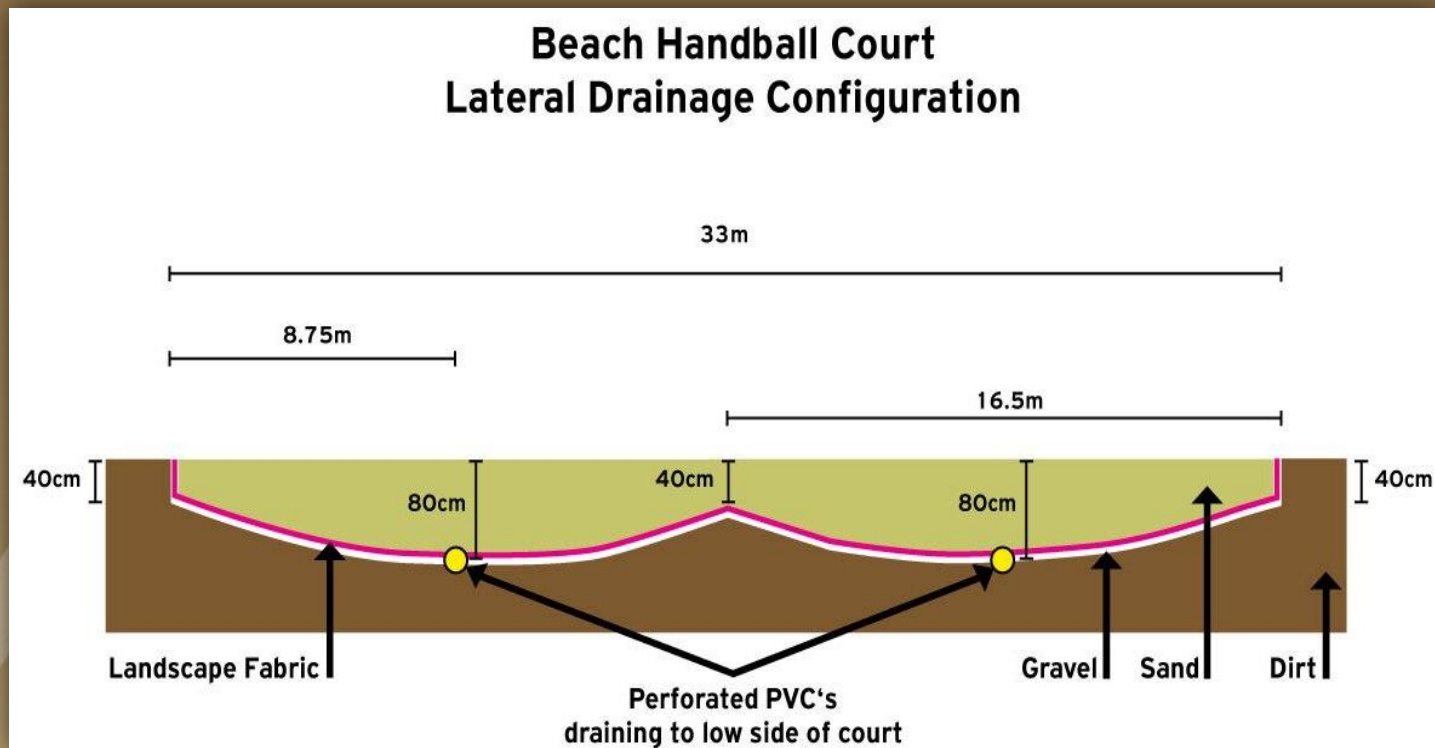
## Diagram #4



## Diagram #5



## Diagram #6

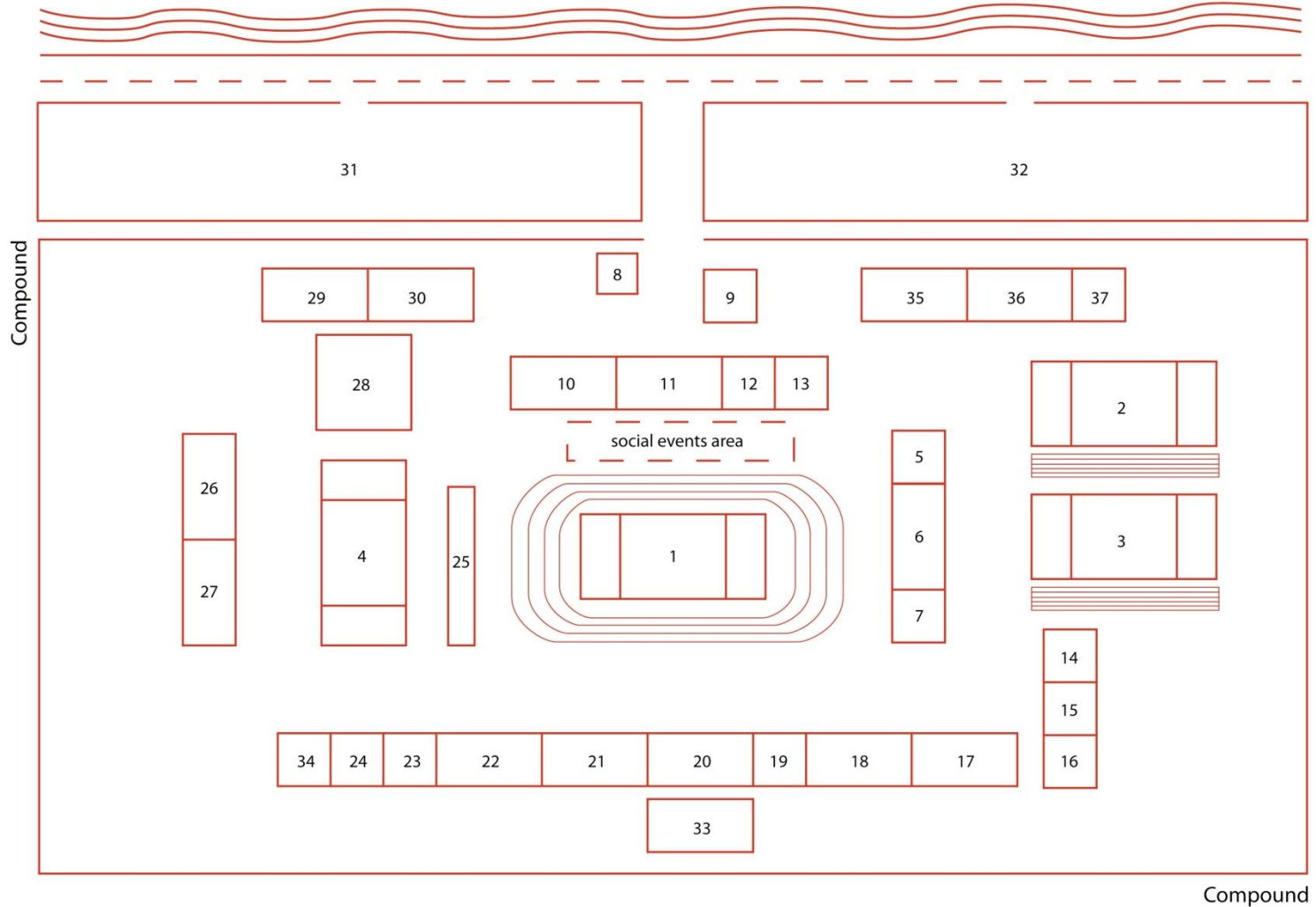
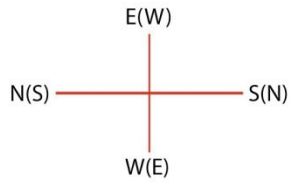




# Beach Handball

## Venue plan





- 1 Main court
- 2 Court #2
- 3 Court #3
- 4 Warm-up court
- 5 Technics (Loudspeaker)
- 6 D.J.
- 7 Speaker's T
- 8 Compound entrance/Check-in
- 9 Security office
- 10 Canteen
- 11 Sponsors area
- 12 Information desk
- 13 Merchandising
- 14 Medical/First aid
- 15 Physiotherapy
- 16 Doping control station
- 17 LOC office
- 18 IHF office
- 19 BAS office
- 20 Press center/Media workroom
- 21 VIP lounge
- 22 Technology room
- 23 Accreditation
- 24 Storage
- 25 TV production vans reserved space/Generators
- 26 Athletes lounge
- 27 Technical Officials lounge
- 28 Kids fun area
- 29 Public WC (men/disabled)
- 30 Public WC (women/disabled)
- 31 Parking area (staff, teams, officials, VIPs, ambulance, police, services)
- 32 Parking area (general public)
- 33 Office & VIP area WC (men/women)
- 34 Technical Officials changing rooms (men/women)
- 35 Athletes changing rooms (men/women)
- 36 Athletes WC (men/women)
- 37 Showers (open air)

# Beach Handball Venue Plan



*Get the infrastructure in  
place!*