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1. INTRODUCTION

1.1. BASIS FOR THE TRIALS EVENT SETUP AND SECTION BUILDING GUIDE

This guide is designed for use by the organisers of the *UCI Trials World Championships*, *UCI Trials Word Cup* and *UCI Trials World Youth Games*. It has been conceived and drawn up to assist the organisers of this event, by providing information of the guidelines on the event setup, design and building of the sections.

The success of the UCI Trials events is determined by the satisfaction level of the competitors, sponsors, media, officials and the general public. This success can only be achieved with a meticulous and methodical approach.

This document contains all the parameters to set up sections for competition.

The event setup and section building guide also intended give guidelines to build specific areas to practise the Trials discipline.

1.2. UCI CONTACTS

If you need further information about the *UCI Trials Event setup and Section building guide*, contact the following people:

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2. THE DISCIPLINE

2.1. AN INTRODUCTION TO THE DISCIPLINE

Trials is one of the most exciting and spectacular UCI cycling disciplines. Unlike other types of cycling disciplines, Trials is a sport where the main factors are the stability and the control of the bike in extreme situations where speed also plays an important role.

The discipline started in the 1970's in Europe and grew as an off-shoot of the motorised version of the sport.

Whether it takes place in the forest or in the city, the sport is practiced around the world by children as young as 5 years old through to adults over 40 years of age. Nowadays it is generally accepted and recognized that the skills and experience gained in the Trials discipline are fundamental to developing the skill sets required by other Off-Road cycling disciplines.

The objective of this sport is to get over obstacles grouped into sections, without setting foot on the ground or any part of the bicycle (only the wheels) touching the ground as this incurs penalties. After negotiating a series of sections, the rider who has the fewest penalty points is declared the winner.



2.2. UCI INTERNATIONAL EVENTS

The first *UCI Trials World Championships* took place in 1986. Fourteen years later, in 2000, the *UCI Trials World Cup* made its debut. The most World Champions titles have been won by riders from Belgium, France, Germany, Spain and Switzerland.

The *UCI Trials World Youth Games* is the most important international event destined for boys and girls under 16 years old. The first edition took place in 2000.

2.3. CLASSES AND CATEGORIES

There are three main classes, based on wheel size (regulated in the Trials rule book, article 7.1.002):

20" Class (between 18" to 23")	26" Class (between 24" to 26")	Open Class (between 18" to 26")
Men Elite	Men Elite	Women Elite
Men Juniors	Men Juniors	Youth Girls, Girls, Poussins, Benjamins, Minimes & Cadets

3. EVENT SETUP

The event can take place at outdoor or indoor places.

In order to be attractive, is highly recommended that all facilities be placed in a close area such as in city centres, in halls, in stadiums or in open country.

We have to differentiate the two main areas:

- Technical area
- Field of play

The venue for Trials contest is compacted and relatively easy to prepare.

Below is defined the ideal setup for a TV production

The area occupied by the **technical area, field of play** and safety area is normally square or rectangular in shape, occupying a space of approximately 2.100 square metres, with the field of play itself occupying a space of approximately 60m length x 35m wide.

On one of the end of the field of play is reserved to install the technical area occupying a space of approximately 20m long x 35m wide. The opposite site of the technical area installation is reserved to install the big screen that should be used for the live video and also to display live scoring.

Spectators' areas are available on the two longest sides of the field of play (situated opposite each other).

Both areas must be set up connected. The main reason is to avoid riders having to walk through the spectators during the event. If is not possible a riders corridor must be provided.

Other infrastructures and equipment must be set up near the mentioned areas.

The entire areas must be fenced off and shall be laid out in such way that spectators can easily follow the competition.

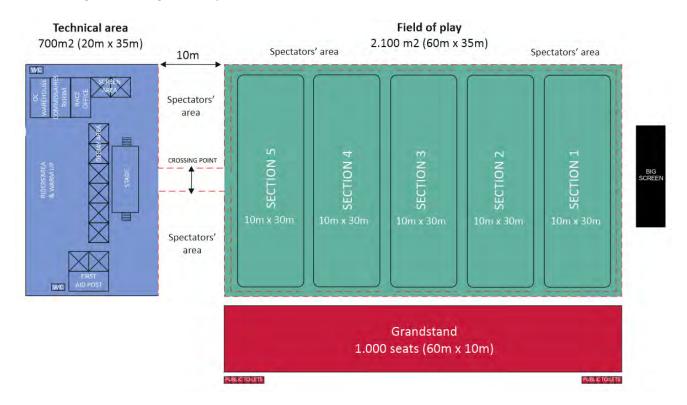
Watch below the sections presentation from latest UCI Trials World Championships and World Cup:

- 2017 Chengdu (CHN): http://ow.ly/HhpG30h2tEt
- 2017 Antwerp (BEL): http://ow.ly/cjez30h2sr6
- 2015 La Massana (AND): https://www.youtube.com/watch?v=BpcsP9LPK5c
- 2013 Pietermaritzburg (RSA): https://www.youtube.com/watch?v=Ufe5zfuDyzY



3.1. GENERAL SETUP

Below a diagram of the general layout





Example of compact setup - UCI Trials World Cup in Aalter (BEL)



3.2. MEASUREMENTS

Consider the following measurements:

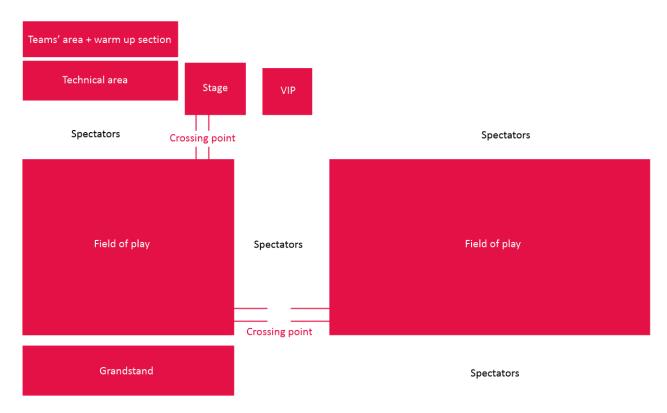
- Technical area: 700m² (20m x 35m)
- Field of play: 2100m² (60m x 35m)
 - o Sections: 10m x 30m or 15m x 15m. Do not need to be proportional
 - o Safety distance width between sections or between section and fences: 2m
 - o Double perimeter width: 1m
- Field of play (National Teams' Competition): 500m² (50m x 10m)
- Riders corridor width (if needed): 1,5m
- Crossing points width (if needed): 1,5m
- Distance between difference fields of play in case of choose separate setup: 5m allowing a flow walk for the spectators

The placement of the different facilities will depend on the space available.

3.3. OTHER OPTIONS FOR THE GENERAL SETUP

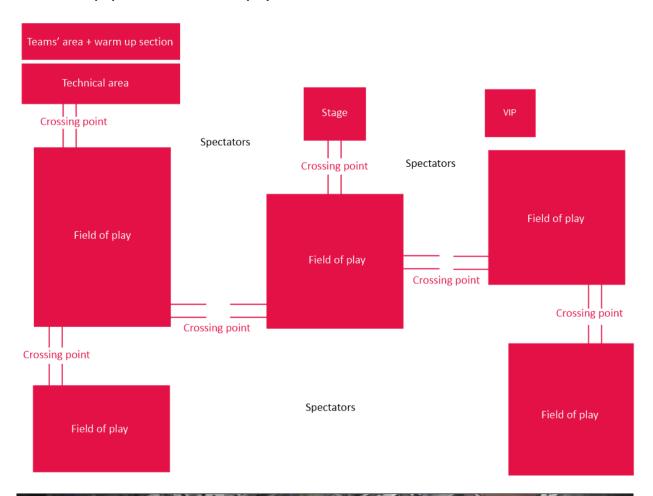
The general setup can be set compact or split taking in consideration the distance with the others facilities. Note that inside the field of play several sections can be set. Below we can see different diagrams for the general setup:

General setup split in two field of play.





General setup split in several field of play.





Example of split setup - UCI Trials World Cup in Geneva (SUI)



3.4. IMPORTANT CONSIDERATIONS

3.4.1. DOUBLE PERIMETER

When the event place is enough width and large is recommended establish a double perimeter around the field of play.

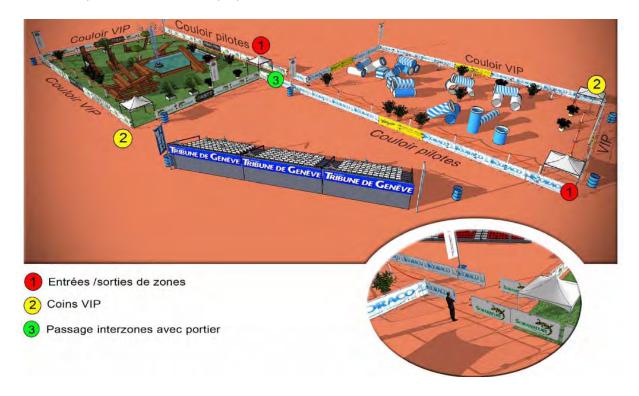
These areas will allow keep the minders and non-specialist media out of the section.



3.4.2. CONNECTED AREAS

The LOC must be provided the necessary rider's corridors using fences between the technical area and the different fields of play (sections) to allow riders easy access to the sections avoiding a situation in which riders have to walk through the spectators.

Below, a layout with two field of play connected:





3.4.3. CROSSING POINTS

The necessary crossing points must be provided in order to allow the spectators cross to the different sides of the spectators' area allowing a good flow.

These points must be clearly defined and easily identifiable. The crossings must be secured by marshals on each side.



Example of crossing point

4. INFRASTRUCTURE AND SERVICES

See extended description of the infrastructures and services at the UCI Organisers' guides.

Before marking and/or building the Trials sections, it is necessary to carry out a site visit at the location meant for the competition to determine where and in which areas the sections will be marked out and/or built.

What to do:

- Measure up the areas
- Define areas where the sections will be marked out and/or built
- Establish distance between sections
- Decide on location the placement of different facilities and services

4.1. MAIN FACILITIES

TECHNICAL AREA

- Race office
- Screen area
- Bulletin board
- Commissaires' room
- Riders area and Warm up section
- LOC warehouse
- First Aid Post
- Toilets service
- Sound system and Deejay area

FIELD OF PLAY

- Sections for the Individual competition
- Section for the National Teams' competition
- Stage / Starting are



4.2. COMPLEMENTARY FACILITIES

- Riders and Teams car park
- Press office
- VIP area
- Volunteers' room
- Broadcasting infrastructure (optional)
 - Production room
 - Commentator's room
 - Camera platforms
- Paddock
- Expo area
- Doping Control Station
- LOC office

4.3. BASIC SERVICES

- Power source
- Internet access
- Food and beverage service
- Communication system

4.4. GENERAL FACILITIES AND SERVICES

- Grandstand (recommended)
- Welcome desk
- Promotional boards (recommended)
- Big screen (recommended)
- Public car park
- Food and beverage service
- Crossing points
- Public' toilets
- Litter bins

5. HOW TO START?

Once we know the level of the event chosen is time to make an inspection on the area designated for this purpose. This site visit will help us to determine the spaces, the required infrastructure and necessary services, the working necessary days, the necessary material and tools to have a smooth preparation. We have to consider the following three points:

5.1. COMPETITION IN OUTDOOR SPACES WITH NATURAL SECTIONS

- Establish optimal main access in order to mark the sections and to organise the competition for the riders, public, media, first aid
- Take into account the seasons, e.g. in spring, grass and weeds grow, so removal of these might be necessary
- If using a stream, rivers, etc. pay special attention to the water level
- Prepare a marking plan to estimate how many days will be needed for the preparation of all sections.
- Awareness of the weather forecast and the hours of sunlight are necessary
- Prepare a checklist for the equipment to be used to mark the sections



5.2. COMPETITION IN OUTDOOR SPACES WITH SUPERIMPOSED ELEMENTS

- Establish optimal main access in order to mark the sections and to organise the competition for the riders, public, media, first aid
- The total weight of all elements to be known
- Both the maximum weight the surface can take and the position of the elements should be known.
- Coordination of transport and decision about which kind of machines (trailers, cranes, diggers...) will be necessary to move the elements around the competition site
- Prepare a marking plan to know how many days it will take to set-up all the sections
- Awareness of the weather forecast and the hours of sunlight are necessary
- Position of the entrance to the site and the area where the machines are to operate
- Establish which elements will be needed to build the sections as well as the equipment and materials to fix the elements
- Prepare a checklist for the materials & equipment which will be used to mark the sections

5.3. COMPETITION INDOORS WITH SUPERIMPOSED ELEMENTS

- Establish optimal main access in order to mark the sections and to organise the competition for the riders, public, media, first aid
- The total weight of all elements to be known
- The maximum weight the surface can take and where the elements will be placed
- Coordination of transport and decision about which kind of machines (trailers, cranes, diggers...) will be necessary to move the elements around the competition site
- Prepare a marking plan to know how many days it will take to set-up all sections
- Position of the entrance to the site and the area where the machines are to operate
- Establish which elements will be needed to build the sections as well as the equipment and materials to fix the elements
- Prepare a checklist for the materials & equipment which will be used to mark the sections

6. SECTIONS

6.1. SECTIONS DESCRIPTION

Sections have difficult stretches which group different obstacles. Each section will include a maximum of 5 principal difficulties (obstacles). The main obstacle or the obstacles which are considered the most difficult have to be in the centre or at the end of the section. They should never be at the beginning. The sections are marked using plastic course tape.

Sections must require a mixture of technical skills of the riders. The section designer/builder has to design the 5 sections applying different Trials skills.

The sections should be designed following the patterns below:

- Sections with balance elements
- Sections with jumps
- Sections with ramps (kick off)
- Long sections but low technical skills (endurance)
- · Short sections with high technical skills

This guideline is very important to keep a neutral and fair Trials competition for all riders.



In the following table are the general parameters regarding length and maximum drop-off height (regulated in the Trials rule book, articles 7.1.017 & 7.1025):

Catagory	Colour	Number of	Recommended	Maximum
Category	course	sections	length	drop-off height
Men Elite 26	Yellow course	5	30-50 metres	1,80 metres
Men Elite 20	Yellow course	5	30-50 metres	1,80 metres
Men Juniors 26	Red course	5	30-50 metres	1,40 metres
Men Juniors 20	Red course	5	30-50 metres	1,40 metres
Women Elite	Pink course	5	30-50 metres	1,40 metres
Girls	Pink course	5	30-50 metres	0,80 metres
Cadets	Black course	5	30-50 metres	1,20 metres
Minimes	Green course	5	30-50 metres	1,00 metres
Benjamins	Blue course	5	30-50 metres	0,80 metres
Poussins	White course	5	30-50 metres	0,60 metres
Youth Girls	White course	5	30-50 metres	0,60 metres

6.2. NUMBER OF SECTIONS FOR THE INDIVIDUAL COMPETITION

A total of 5 to 10 sections have to be created. Only 5 sections will be used during the competition. The rationale behind creating 10 sections is to avoid extra work during the days of the competition when there are modifications during the different rounds (¼ finals, ½ finals and final).

If the organisers have enough staff members, only 5 sections could be created. The creation of extra sections will depend on the requirements of the space available.

One more section should be created to be used as a warm-up inside to the teams' area. This section has not been marked using plastic course tape.

6.3. SECTION MEASUREMENTS

Consider the following measurements for a smooth section:

- Section space: 10m x 30m or 15m x 15m. Do not need to be proportional
- Section length: between 30m to 50m
- Start gate to the first obstacle: 3m minimum
- Finish line from the last obstacle: 3m minimum
- Width of the section: 1m minimum (at handlebar height)
- Tape above the ground : 20 to 30 cm
- Safety distance between sections or between section and fences: 2m
- Double perimeter: **1m**

Consider the following points:

- The obstacle considered the most difficult should never be at the beginning
- There must be **6 principal difficulties** (obstacles)
- The colour of the tape used to mark the section has to be different of the **neutral zone**, the **finish line** and the **cross-wise tape**

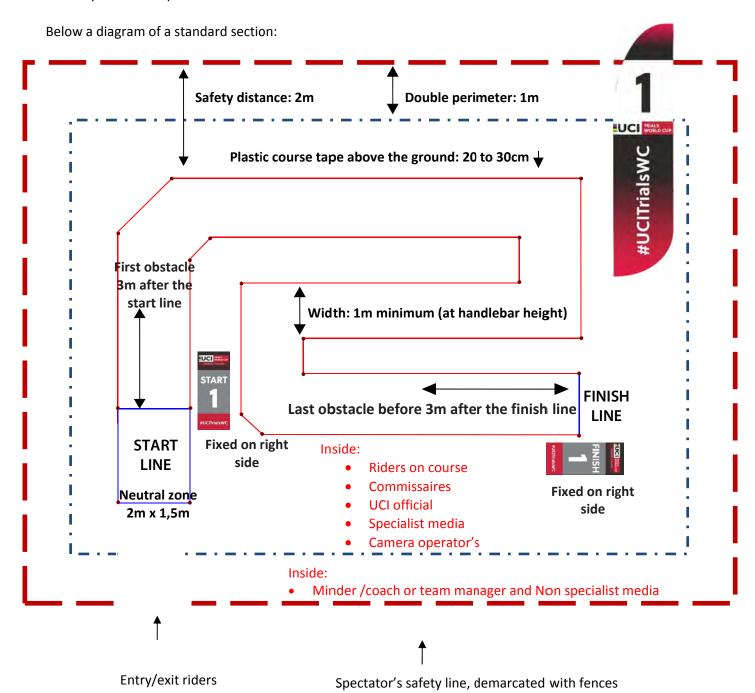


6.4. GENERAL CONFIGURATION

Sections shall design to be easily understood for the spectators, riders, commissaires and media.

6.4.1. INDIVIDUAL COMPETITION SECTION

Is highly recommended design the sections as I, L, U or S shaped; avoiding loops inside, becoming them as a labyrinth for all parties.





6.4.2. NATIONAL TEAM S' COMPETITION SECTION

Section must be designed according following parameters:

Lineal shape

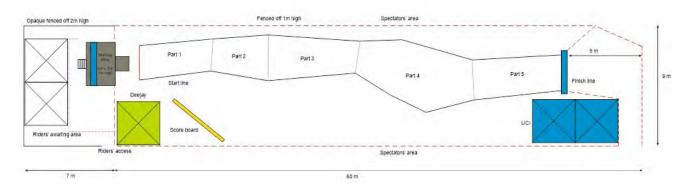
• Measurements: 70 m x 10 m

• Section length: between 30 m to 50 m

• Distance between different parts: 3 m

• Patterns indicated on point 6.1

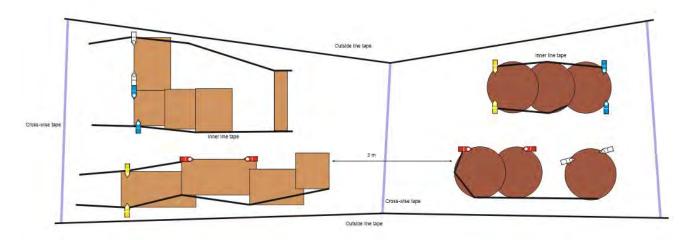
Below a diagram of the section for the national teams' competition with the facilities required for this event.



The section must be split in five parts; each part is composed by different obstacles marked with four different levels (gates) indicated with coloured arrows.

The five parts of each section must be clearly defined by a cross-wise tape on the ground in order to identify each part.

Below a diagram of two parts that compose the section showing the four different levels (gates):



Riders will get a different score depending on the level (gate) they choose to ride.

Gate colour	Level	Points scored
White	Easy	10
Blue	Medium	20
Red	Difficult	30
Yellow	High	40



6.5. STAFF

The minimum staff requirement responsible for marking out and/or building the sections is as follows:

- 1 sections designer: person with a large international trials competition experience
- 3 sections builder assistants
- 1 carpenter
- 1 painter
- 1 graffiti painter
- 1 large machine operator (crane, digger, etc.)

6.6. SECTIONS BUILD/MARKING TIME

The estimated time for total build and marking of the sections is two weeks prior to the event. The estimated time to mark out the sections is one week prior to the event.

7. TYPES OF SECTIONS

The sections can be created taking into account the elements (obstacles) used and the location of the competition:

- 1. They can be created with natural elements in outdoor spaces
- 2. They can be created with superimposed natural elements in outdoor or indoor spaces
- 3. They can be created with superimposed artificial elements in outdoor or indoor spaces

Depending on the venue and the elements available, the competition can combine the different kind of sections.

7.1. ELEMENTS AND PLACES

7.1.1. NATURAL ELEMENTS IN OUTDOOR SPACES

This is at the origin of the Trials competition. The competition takes place in natural settings; they can be located on a flat terrain or an embankment / inclines to get more difficulty. The most common elements that we can find are **rocks**, **soil**, **tree roots**, **grass**, **leaf litter**, **water**, etc. The weather condition plays an important role where the difficulty can increase due to the humidity, mud, dust, etc. All this process must be done with the environment in mind.

SECTION LOCATED IN A NATURAL EMBANKMENT WITH ROCKS, GRASS, LEAF LITTER, ETC.







SECTION LOCATED IN STREAM WITH ROCKS AROUND



SECTION LOCATED INSIDE A RIVER WITH ROCKS





7.1.2. SUPERIMPOSED NATURAL ELEMENTS IN OUTDOOR OR INDOOR SPACES

The competition can take place in a natural environment or indoors. In this case, the elements have to be moved to the competition site and set-up.

Many different types of obstacles and shapes can be created with superimposed elements; it all depends on the creativity of the sections designer.

The elements must be fixed safely to avoid any movement, which might cause injury or damage during the event. The most commonly used elements are: **pebbles rocks, squared rocks, logs** and **water.**

Element	Quantity - for one section	Size (approx.)	Painted	Where to find
Pebbles rocks	30	30 tons	tbc	River (if is allowed)
Pennies Tocks	30	1 tone per rock	tbc	Kivei (ii is allowed)
Caused rooks	20	30 tons	+h.c	Quarry
Squared rocks	30	1 tone per rock	tbc	
Logs	30-40	2.5m to 3m height	20	Cournill / Forest industry
Logs	30-40	0,20m to 0,40 wide	no	Sawmill / Forest industry
Water	tbc		no	Source / Tap

SECTION WITH PEBBLES ROCKS



SECTION WITH SQUARED ROCKS





LOGS CONSTRUCTION SECTION











SECTION WITH ARTIFICIAL WATER FALL



SECTION WITH ARTIFICIAL LAKE AND ROCKS AROUND





If the floor is completely flat, such as a grass field or a city square, then we can use a base material to create different levels or different surface. To create this we can use soil and gravel mixed with stone powder (sand).

Element	Quantity - for one section	Where to find
Soil	80m ² - 100m ²	Construction industry
Gravel + stone powder	60m ² - 80m ²	Construction industry / Quarry

SOIL EMBANKMENT WITH LOGS



MIX OF GRAVEL AND STONE POWDER WITH ROCKS





7.1.3. THEMATIC AND CUSTOMIZED SECTIONS

Sections can be customized following different thematic. They can be just decorated with paint to offer better aspect or painted with the branding of the sponsoring partners. See point 7.1.4 and 15

SECTION WITH PABBLE ROCKS PAINTED AS PANDAS



SECTION WITH LOGS PAINTED AS ZEBRAS



LOGS PAINTED AS GIRAFFE





SECTION WITH LOGS DECORATED AS CRAYONS



7.1.4. SUPERIMPOSED ARTIFICIAL ELEMENTS IN OUTDOOR OR INDOOR SPACES

The competition can take place in a natural environment or indoors. In this case, the elements have to be moved to the site and set up.

Many types of obstacles and shapes can be created with superimposed elements; it all depends on the creativity of the sections' designer.

The elements must be fixed safely to avoid any movement, which may cause injury or damage during the event.

Artificial elements are perfect to be painted. The organiser will enhance the quality of the event and they are perfect showcase to place the branding of sponsoring partners.

Below a list of the most commonly used elements:

Element	Quantity	Size (aprox.)	Painted	Where to find
Precast concrete pipes	6-12	From 0.5m to 2m height /1m wide	yes	Construction industry
Precast concrete elements	6-12	Different shapes and size	yes	Construction Industry
New Jersey barriers	6-12	1.1m height / 2m length	yes	Construction industry
Railway sleepers	100	2m long / 25cm wide / 15cm height	no	Construction, railway industry
Wooden spools	15	From 0.5m to 2m height / 1m wide	yes	Electricity Industry
Metallic structures		From 0.5m to 2m height / 1m wide	optional	Construction industry
Wooden structures	Undefined	From 0.5m to 2m height / 1m wide	optional	Carpenter
Wooden letters	Undefined	From 1m to 2m height / 1m wide	optional	Carpenter



SECTION WITH PRECAST CONCRETE PIPES ELEMENTS



SECTION WITH PRECAST CONCRETE ELEMENTS DECORATED AS CAKES AND CHOCOLATE



SECTION WITH PRECAST CONCRETE ELEMENTS DECORATED AS CHEESE





SECTION WITH PRECAST CONCRETE PIPES









SECTION WITH WOODEN ELEMENTS AS VEGETABLES



SECTION WITH WOODEN SPOOLS



SECTION WITH RAILWAY SLEEPERS OR BEAMS





SECTION WITH WOODEN STRUCTURES





SECTION WITH WOODEN STRUCTURES - KICKERS (Awareness that kickers are part of a section)













SECTION WITH WOODEN LETTERS AND BEAMS















Ensure the stability of the elements





Avoid corners in 90º on impact areas to avoid damages on the structure



8. SECTIONS MARKING MATERIAL

8.1. FIXING MATERIAL

The materials used to mark out the sections depend on which kind of surface has to be demarcated. If the competition is held in a natural environment with soil, the most frequent materials used will be **wooden stakes**. If the competition is held in squares or pavilions, the most frequent materials used will be **iron stakes**. When it is not possible to drill the floor to fix the stakes, heavy concrete bases can be used to fix the stakes.

Awareness the top of the stakes must be protected safely to avoid any damages. The top of the iron stakes must be bent or covered with a plastic cap.

Material / Q	Material / Quantity / Size		
Wooden stakes: 200 • 50 cm height / 4cm x 4cm		Construction industry / Carpenter	
wide		industry / Carpenter	
Wooden stakes: 50		Construction	
• 100 cm height / 4cm x 4cm wide		industry / Carpenter	
Iron stakes: 100		Construction,	
30 cm height / 10mm wide	The second secon	Metallurgical	
30 cm fleight / 10mm wide		industry	
Steel wire springs to fix the arrows:	50 mm	Construction,	
300		Metallurgical	
 15 cm height / 6mm wide 		industry	
 50 mm hole diameter 			
Precast concrete base: 10		Construction	
• 50 cm length		industry	
• 15 cm high			
30 cm wide			



Precast concrete base, 30cm diameter bottom part to ensure the stability

8.2. COURSE MARKING TAPE

All sides of every section must be marked out by plastic course tape.

The tape should be installed 20 to 30 cm above the ground. Plastic course tape can also be used inside the section to indicate different levels of difficulty or to close off some obstacles adding difficulty. Note that the tape used to mark the section has to be a different colour to the tape used to mark out the neutral zone and the finish line. Is recommended to use rolls 250m long, its handling is easier.



Materia	Where to find	
Roll of tape: 5		Sponsor
• 10 cm wide		
 400 μm thickness 		
• 250 m roll length		

8.3. ARROWS

The arrows are placed inside the section, to show the different categories the riders must go through. The arrows have to be fixed onto the stakes, never directly on the obstacle.

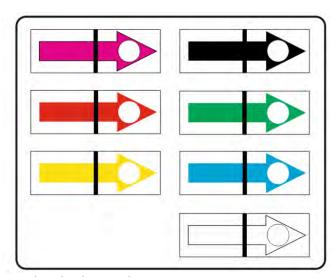
Arrows can indicate:

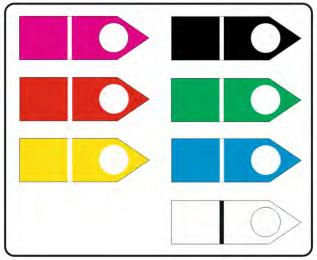
- Direction: one arrow indicating the rider's sense
- Gates: two arrows (same colour and number) pointing at each other with a space between them indicating where the riders must go through

Directions and gates in the section must be numbered for easier understanding. Riders must follow the order of the gate numbers, going through gate n° 1 first, then gate n° 2 and so on.

Arrows must be as below features:

- Material: flexible waterproof polypropylene
- Printed: single sided
- Thickness: 800 microns (μm)
- Dimensions: W 12 x H 4 cm
- White circle: to write the number of direction or gate
- Black or white vertical line: to indicate the limit of the arrow
- Both models are allowed: white background or whole coloured
- Recommended quantity: 100 units per colour





White background

Whole coloured

Pink	Red	Yellow	Black	Green	Blue	White
Women Elite						Poussins
Girls	Men Juniors	Men Elite	Cadets	Mimimes	Benjamins	Youth Girls



8.4. FIXING MATERIAL

We have to ensure that, in sections built with superimposed elements; these have been fixed safely to avoid any movement, which may cause injury or damage during the event. The most common materials used are listed below.

Material / Quantity / Size			
Screws torx tip T20/T30 • 4,5 x 50 mm/head AW 20: 1000 units • 6,0 x 100 mm/head AW 30: 100 units • 6,0 x 160 mm/head AW 30: 100 units • 6,0 x 200 mm/head AW 30: 100 units Self-Tapping Concrete Screws M8 • diameter: 10 mm • length 60 mm: 50 units • length 80 mm: 50 units			
 Wooden wedges length x high x wide 6 cm x 2 cm x 3 cm: 20 units 8 cm x 4 cm x 5 cm 20 units 10 cm x 6 cm x 8 cm: 20 units 20 cm x 10 cm x 10 cm: 20 units 			
Fast cement, bag: 25 kg: 2 units Polyurethane Foam Spray: 5 units	FAST SET POST IN THE POST OF T		
Ratchet straps tie downs: 10 units			
Metallic angles: 20 units • 10 cm x 10 cm			
 Carpentry sergeants opening 15 cm: 4 units opening 30 cm: 4 units 	Opening		
Corrugated bar: 30 units • length: 50 cm • diameter: 10 mm			
Zip ties, black colour 4,8 mm x 200 mm: 500 units 4,8 mm x 370 mm: 500 units			
Wooden battens 60 ml (lineal meters) • thickness: 2 cm • wide 10 cm	wide		



9. HAND TOOLS

9.1. BASIC HAND TOOLS

The basic hand tools used to mark out the sections depend on which kind of surface they will be placed. The most common and useful tools are indicated below.

Material / Quantity / Size		
Battery drill machine, SDS plus system: 2 units		
Stone bit drills SDS plus system size 6 mm: 3 units size 8 mm: 3 units size 11 mm: 5 units		
Wood bit drills		
Hammer: 3 units		
Battery screwdriver: 2 units		
Ratchet tool: 1 unit		
Hexagonal socket: 2 units • size 13 mm		
Torx drive bit	T20	
Bow saw: 1 unit • blade spare part		
Gasoline chainsaw: 1 unit • size sword: 50 cm • provide with: - chain spare part - oil chain - 10 litres fuel tank	STINL STINL	
Gasoline blower: 1 unit	STIHL	



Electric radial saw for wood: 1 unit	
Electric radial 750 W: 1 unit abrasive cutting disc INOX-METAL: 4 units diamond blade: 2 units	
Staple gun: 2 units • staples spares: 5000 units	
Measuring tape: 2 units • 8m length • 100 m length	
Cutter knife: 2 units • Spare blades	and the same of th
Bucket 14 litres: 3 units	
Trowel: 2 units	
Cutting pliers: 3 units	
Pliers: 2 units	
Adjustable wrench: 1 unit • size 250 mm	
Iron lever: 1 unit • size 600 mm	
Square shovel: 1 unit	
Rounded shovel: 1 unit	
Broom: 3 units	
Hoe: 1 unit	



Metallic rake: 2 units	
Double side ladder: 1 unit ■ high: 2 m	
Metallic brush: 2 units	THE PARTY OF THE P
Wheelbarrow: 2 units	
Paint set Roll 25 cm length: tbc Brushes: tbc Bucket: tbc	
Outside paint at water base • colour: tbc	KAYACH @
Spray paint	The state of the s
Tool box: 1 unit	

9.2. OTHER TOOLS

Other complementary tools that can be useful to build the sections are listed below:

Material / Quantity / Size	
Power supply (220 V / 50 Hz) or Gasoline Inverter Generator (1,5kW) with fuel: 1 unit	Kiron
Power cable extender reel: 2 units Power sockets: 2 units	



Water supply (source tap) or cans 30 litres: 3 units	
Plastic roll	
• wide: 2 m	
• length: 30 m	
Big bag container with pallet base: 2 units	
Manual lift: 1 unit	
Wood pallets: 10 units • size: EURO pallet or Asia pallet	

10. LARGE MACHINES

10.1. SECTION MARKING MACHINES

The use of a lorry or a digger with a hydraulic clamp is the most recommended to move all the heavy materials and for building the sections.

The kind and number of large machines and transports have to be decided according the sections that are planned to build.

Fork lift	ACK
Backhoe-loader • operator required	
Lorry equipped with hydraulic clamp crane	
Semi-trailer lorry • operator required	0 0 0 0



LORRY WITH HYDRAUIC CLAMP MOVING ROCK









DIGGER WITH HYDRAUIC CLAMP MOVING ROCK



LOADER SPREADING GRAVEL AND POWDER STONE

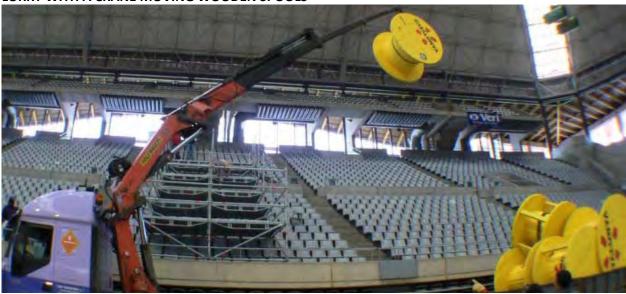




LORRY WITH A CRANE MOVING PRECAST CONCRETE PIPES



LORRY WITH A CRANE MOVING WOODEN SPOOLS



LORRY WITH A CRANE MOVING LOGS





11. CLEANING

11.1. BUILDING PROCESS AND AFTER THE EVENT

During the building process and marking out the sections some waste are produced. The organiser must arrange enough container/s (such as big bag) to throw out these leftover materials. Ensure to have an adequate machine to move the container/s.

After the last race of the event, all waste and advertising material must be removed from the course.

The LOC is responsible to throw the waste material on an adequate place. This process must be done with the environment in mind.

If is not possible move away the container before the start of the event, please keep hide of the general public.



Example of big bag container

11.2. COMPETITON DAYS

Awareness that during the competition days the technical area, the field of play and all around the event venue have to be regularly cleaned and checked.

Ensure the distribution of enough litter bins. The litter bins units must be dispersed around the venue. They must be regularly emptied and checked.



Example of litter bins



12. SAFETY

12.1. SAFETRY DISTANCE

Be aware a spectator's safety line, demarcated by fences, the minimum safety distance have to be $\underline{\mathbf{z}}$ metres between the section course tape and fences.



12.1.1. DOUBLE PERIMETER

When the event place is enough width and large is recommended establish a double perimeter around the field of play.

These areas will allow keep the minders and non-specialist media out of the section.



Example of double perimeter



12.2. SLIPPERY SURFACES

The whole of the sections must be rideable irrespective of the weather conditions. This basic consideration must be taken into account when designing the sections and its challenges. It is important to avoid slippery surfaces. In case of humidity conditions or rain, such surfaces are to be secured. Recommended for use:

- Cutting grooves into tree trunks using an electric saw
- Cutting grooves into rocks using a radial grinder
- Paint adding grains of sand or glass
- Chicken wire
- Sandpaper sticker

Crushed grainy marble, bag 20 kg: 1 unit • 0.8 / 1.8 mm granulometry	
Galvanized chicken wire roll: 30 m • hexagonal hole: 25 mm	





Grooves on the trunks

Grooves on a rock





Paint with grains of sand or glass

Chicken wire on a trunk



12.3. PROTECT HIGH PLACES

It is important to avoid setting up high obstacles, if the design of the section cannot avoid these, foam mattresses must be used to prevent injury.





Extra Thick Soft Play Landing Gym Mats: 6 units

size: 180 cm x 120 cm approx.

thickness: 10 cm minimum

• colour: preferable in black



12.4. STAKES PROTECTION

Awareness to cover the top of the stakes, they must be protected safely to avoid any damages. The top of the wooden stakes must be covered with a tennis ball or a plastic cap. The top of the iron stakes must be bent or covered with a plastic cap.



Wooden stake with tennis ball



Iron stake with plastic cap



Bent iron stake



13. MARKING THE SECTION

We take as examples a section with **natural elements in outdoor spaces** and a section with **superimposed natural elements in outdoor spaces** composed of rocks on grass.

In both these examples, when driving the stakes in, attaching the tape and fixing the arrows, the same procedure is applied.

To begin marking the section, follow these steps:

- Visualise the section, where it will start, finish and its total length
- Consider the main obstacles of the section
- Awareness of which sections will be used more than once in the different phases of the competition
- When marking the sections in natural outdoor spaces, tree trunks can sometimes be used as stakes
- Drive the stakes into the ground to mark the **outside lines**, the **neutral zone**, the **start** and **finishing line**. Envision a line between the stakes where the course tape is to be attached
- Attach the course tape onto the stakes
- Mark out the main obstacles using stakes, course tape and arrows
- Fix the arrows to indicate the different levels of difficulty

13.1. MARKING THE OUTSIDE LINES

After visualising the sections and observing the main obstacles, we have to drive the stakes into the ground to demarcate the **outside lines**, the **neutral zone**, the **start** and **finishing line**. One should visualise a line between the stakes where the course tape is to be attached.

NATURAL ELEMENTS IN OUTDOOR SPACES







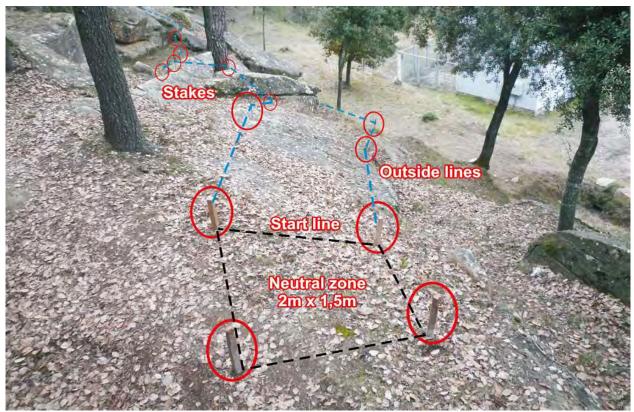
Visualise the section: where it will start, finish, the total length and consider the main obstacles.



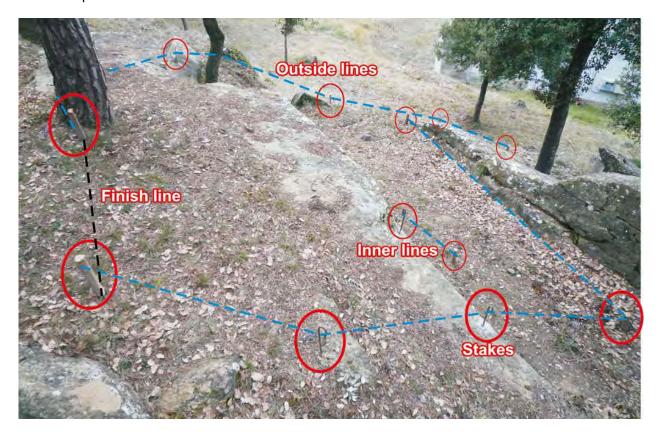
Drill the areas where it is not possible to drive in wooden stakes

An iron stake inserted after drilling



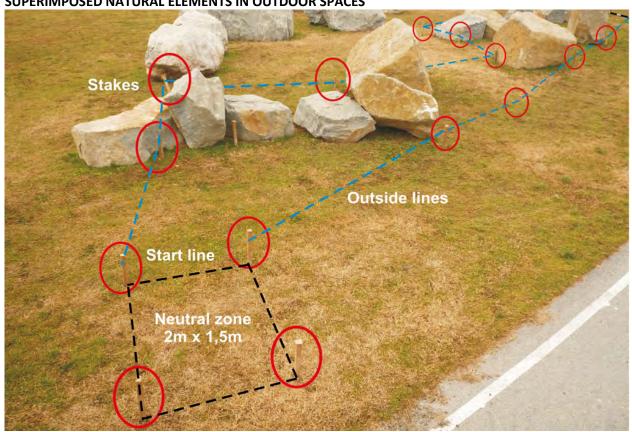


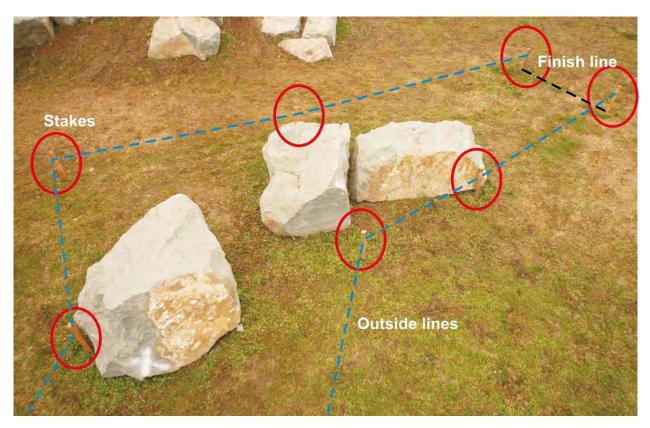
Allow for space around the neutral zone for the riders and bikes.



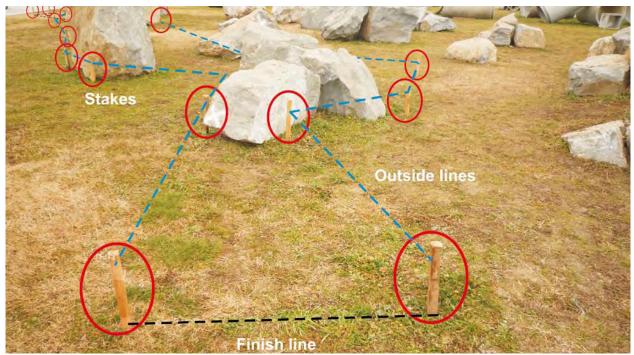


SUPERIMPOSED NATURAL ELEMENTS IN OUTDOOR SPACES









Visualise a line delimiting both sides of the section (right and left)

13.2. MARKING THE NEUTRAL ZONE

Each section shall comprise a "neutral zone", ahead of the starting line, which shall be designated for one single participant. The dimensions of the neutral zone are: $2m \times 1.5m$. The neutral zone has to be marked with a different coloured tape.





Attach the tape at ground level



If is not possible drive in the stake in the ground, then the solution is prepare a small wooden platform per each section or using a straps tie downs.



13.3. ATTACHING THE TAPE TO THE STAKES

Safely fix the tape onto the stakes, ensure the tape must be 25-30 cm above the ground. We can use following methods:

- On the first stake, fix the tape without knots; ensure the tape is visible. Fig 1
- Wrap the tape tightly around the stakes to avoid it becoming loose. Fig 2
- Use strong knots in some stakes to avoid it becoming loose. Fig. 3







Fig. 1: Fix the tape without knots; ensure the tape is visible







Fig. 2: Fix the tape by winding it round the stakes twice; ensure the tape is secure



Fig. 3: Secure the tape to the stake using strong knots / Tape should be 20-30 cm above the ground



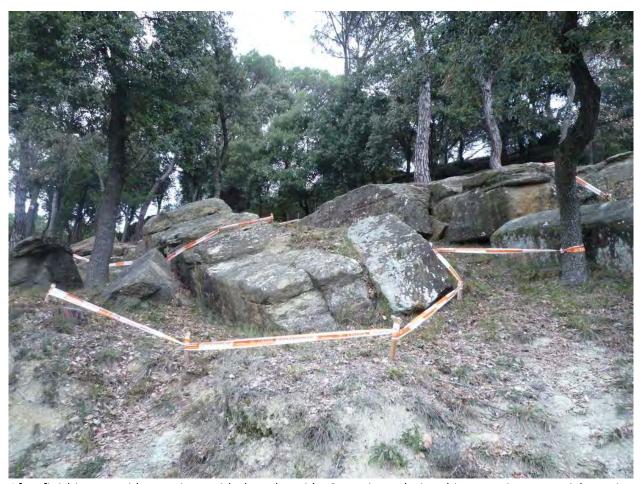
13.4. ATTACHING THE TAPE TO THE OUTSIDE STAKES

First, attach the tape on one side of the section.



In natural outdoor spaces, tree trunks can sometimes be used to tie the tape, respecting the 30 cm high above the ground rule





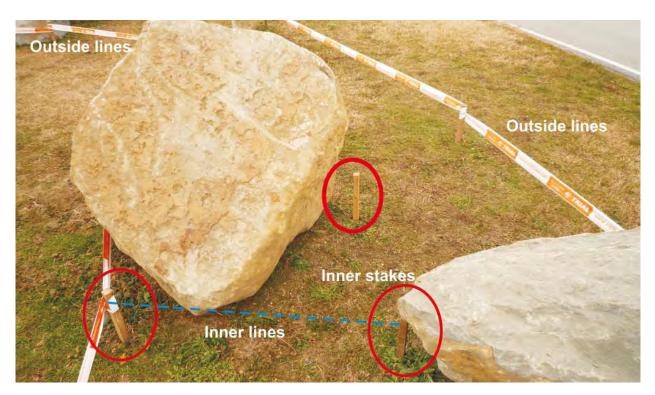
After finishing one side, continue with the other side. Sometimes during this operation, you might notice that more stakes are needed as the tape is not fixed as well as first thought.



13.5. ATTACHING THE TAPE TO THE INNER STAKES

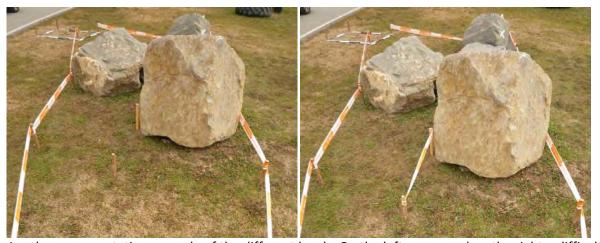
Attach the plastic course tape inside the section to indicate different levels of difficulty or to close off some obstacles adding difficulty.

Fixing the inner stakes with tape and arrows is very important to avoid any confusion by the commissaires and riders.

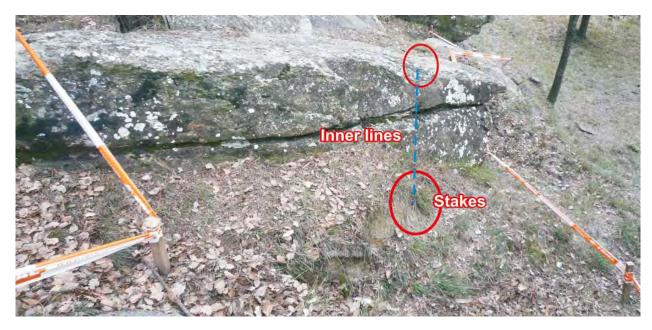








Another representative example of the different levels. On the left = easy and on the right = difficult





Use course tape to indicate different levels of difficulty



13.6. FIXING THE ARROWS

The arrows are placed inside the section to show the different categories which the riders must go through. The arrows have to be fixed on the wooden or iron stakes, never directly onto the obstacle.

Arrows can indicate:

- Direction: one arrow indicating the rider's direction
- Gates: two arrows (same colour and number) pointing at each other with a space between them which riders must go through

DIRECTIONAL ARROW



GATE

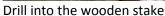


Directions and gates in the section must be numbered for easy understanding. Riders must follow the order of the gate numbers, going through gate n° 1 first, then gate n° 2 and so on.



Depending on the situation, the arrows will be placed on the wooden stake or directly on the obstacle (rocks, logs, concrete) using an iron stake.





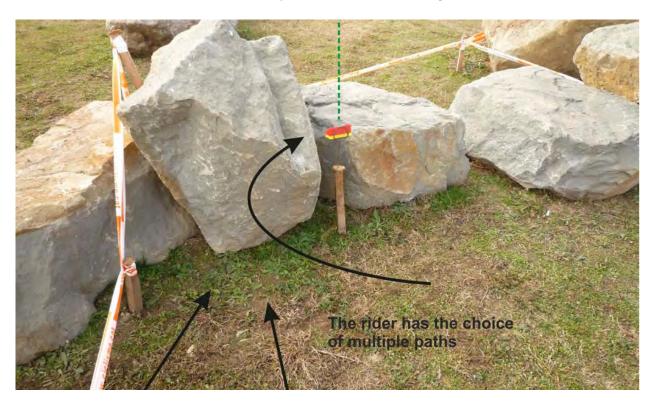


Drill directly into the obstacle



Fixing the arrows correctly is essential to avoid confusion.

In this case, the rider has the choice of multiple lines. Take note of the green discontinuous line.



Drive in another stake and attach tape between them.

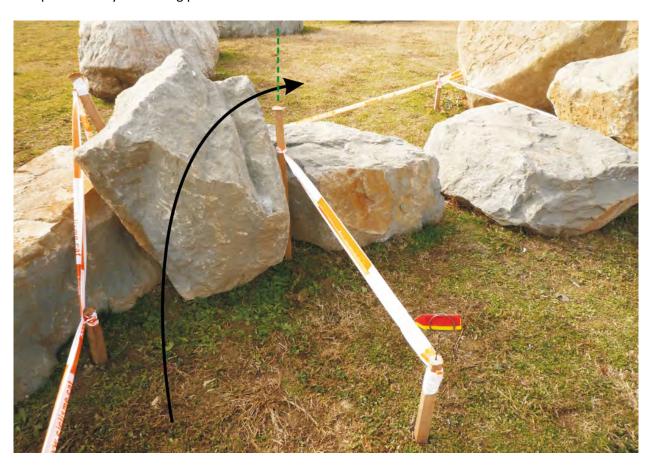




To avoid any problems for the commissaire, replace the short stake with a 1m long stake.

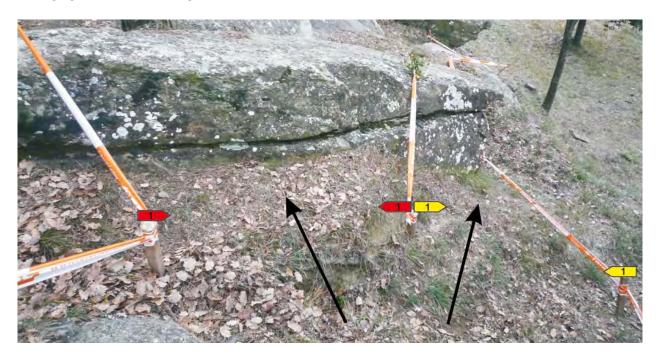


This prevents any conflicting point of view for the commissaries.





After attaching the course tape to indicate different levels of difficulty, mount the arrows. Below, there are two gates in the section (red level and yellow level) numbered for easier understanding. Riders must follow the order of the gate numbers and level corresponding, going through gate n° 1 first, then gate n° 2 and so on.



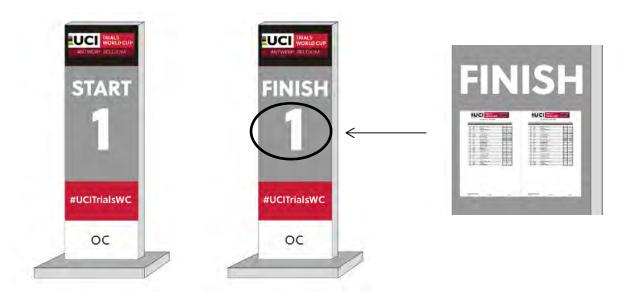
14. SECTION SIGNAGE

14.1. START/FINISH SIGNAGE

Each section shall have an entry and exit gate, marked by a start and finishing line with corresponding panels (START and FINISH). These panels must be numbered with the section's number (START 1 and FINISH 1 and so on). Both signs have to be displayed on the right side.

In order to fix the signs, LOC must ensure provide a stable vertical structure and a solid base for each one. These signs can be also stuck in the ground with a stake.

See the description in the Visual guideline.



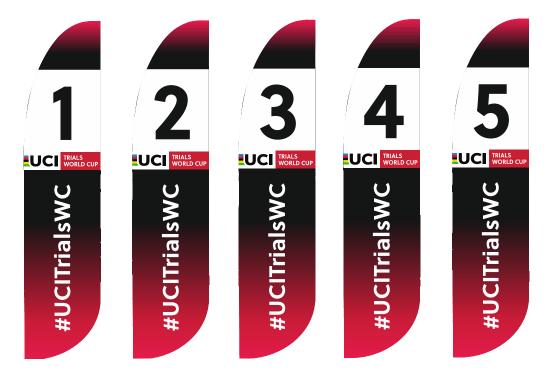


SECTION FLYING BANNERS

Each section has its own flying banner showing the number of the section. This flying banner can be driven into the ground by a spike feet or placed on the ground with a cross feet. They should be placed strategically to avoid reduced visibility to the spectators.

Please ensure all flying banner must be fastened safety to avoid any falls with the wind.





- Flying banner used at the UCI Trials World Cup.



15. DECORATION & ADVERTISING

The sections or the elements that are making up the sections can be decorated and painted. The organiser will enhance the quality of the event and they can offer a perfect showcase for the branding of their sponsoring partners.

They can be decorated painting the elements, using banners or anything else attractive such as simple plants or flowers.

Although it is not possible to establish a complete description of all kinds of decorations, some examples are described below.

15.1. PAINTING THE ELEMENTS

The elements that making up a section can be painted with the purpose of offer branding spaces to the sponsoring partners. of the event or simply to become a look nice section. Elements can be painted with graffiti.

Below a list of the necessary material to paint the elements:

- Base paint: emulsion paint applied with a paint roller
- Branding paint: spray paint using a template
- Riding area: See point 12.2 SAFETY, page 42

PRECAST CONCRETE ELEMENTS PAINTED WITH BRANDING







15.2. ADVERTISING ELEMENTS

If the field of play has enough space, products of the sponsoring partner can be displayed. They should be placed strategically to avoid reduced visibility to the spectators and media. Please ensure that all elements must be placed safety to avoid any movements.

CAR DISPLAYED ON A SECTION



15.3. ADVERTISING FLYING BANNERS

Advertising flying banners can be distributed around or inside the around the field of play. These flying banner can be driven into the ground by a spike feet or placed on the ground with a cross feet. They should be placed strategically to avoid reduced visibility to the spectators and media. Please ensure all flying banner must be fastened safety to avoid any falls with the wind.

FLYING BANNERS DISTRIBUTED AROUND THE GRANDSTAND





15.4. ADVERTISING HORITZONTAL BANNERS

Advertising banners can be placed around the field of play inside the fences. When using advertising banners, it is highly recommended that banners be placed facing into the field of play so they are visible to the spectators and media.

BANNERS PLACED INSIDE THE FENCES



BANNERS PLACED OUTSIDE THE FENCES - BAD PLACED





15.5. COMPLEMENTARY DECORATION

15.5.1. PLANTS

Plants and flowers can be used to decorate the field of play and sections. They should be placed strategically to avoid reduced visibility to the spectators and media. Please ensure all plants must be secured safety to avoid any falls with the wind.

DECORATION USD PLANTS



DECORATION SURFACE USING GRASS





15.5.2. **GROOVES**



Decorative grooves into tree trunks

15.5.3. GROUND



Ground covered with bark of tree



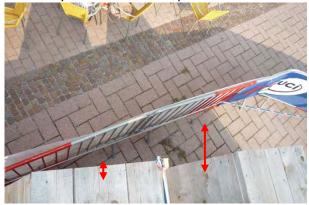
16. WHAT NOT TO DO AND WHAT TO AVOID

In order to preserve the image of UCI events, is highly recommended avoid the following:

- Not respecting measurements
- Attaching the tape with screws
- Attaching the tape with rocks
- Attaching the tape only on the floor
- Twisting the tape
- The tape should always be tense, not loose
- Avoid fixing the arrows with anything other than silicone
- Avoid lots of knots around the stake
- Avoid tapes tied in any way that go up and down and vice versa with no logical order
- Avoid broken re-tied tape
- Avoid a big amount of tape wrapped around trees, stakes, etc.
- Avoid attaching tape to the spectators' safety line (fences)
- To avoid reduced visibility, large machines should be placed strategically
- The sections need space so it is recommended that a lot of piled material is avoided
- Avoid have large machines around/inside the field of play in order to avoid seems a working zone

16.1. MEASUREMENTS

The safety distance is not respected.



Not correct

The neutral zone size is not correct. There is not enough space between the neutral zone and the first obstacle.



Not correct



16.2. TAPE

Attaching the tape to the floor will cause bad visibility. This can cause some difficulties for the commissaries which is best avoided.





Not correct Correct

Notice below the distance between the stake and the rock. This can cause some difficulties for the commissaries which is best avoided.





Not correct Correct

To avoid the tape becoming loose during the event, ensure the stakes are well driven in and the tape is tied securely.





Not correct Not correct



Don't tie lots of knots around the stake.



Don't tie lots of knots around the elements



Not correct Not correct

Don't attach tape to the spectators' safety line (fences).



Not correct

Don't tie tape in a way which goes up and down and vice versa in no logical order.





Not correct



16.3. GENERAL CONFIGURATION

The sections have to be easily understandable and therefore plenty of space is needed. It is recommended that neither large amounts of piled-up materials are used or sections that resemble labyrinth.



Like a labyrinth, difficult to understand



Piled-up materials as a working zone



Start and Finish line not correct and signs overlapped. Neutral zone not correct



Avoid mixed materials and large machines around the field of play to avoid seems a working zone

Large machines never must be used in a section as obstacle or placed around/inside the field of play. Not even if they are sponsor of the event. There are another better alternative and ways to show the products or making the ad.



Large machines never must be used in a section as obstacle.



Avoid have large machines around/inside the field of play







Avoid non-professional graffiti

Avoid use too many wooden battens to fix elements

16.4. BANNED MATERIAL

Not all materials can be used to build the sections and not anything is permitted.

In order to preserve the image of the UCI events is highly recommended do not use the following list of materials:

- Old cars
- Unpainted precast concrete
- Pallets
- Barrels
- Old spools
- Tires
- Large machines (cranes, diggers, ...)
- Dirty containers
- Slippery and movable elements
- Remains







Pallets







Old barrels

Slippery barrels





Old and unpainted spools

Tires





Beer boxes and barrels

Remains and more