

HAGS[®]



Materials Information For Prospect Park

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Prospect Park Design Visuals



Surfacing Materials

Surfacing

A singular wetpour pad has been requested underneath all equipment with the exception of the Zip Wire which is on grassmat. Please see details of these surfaces below

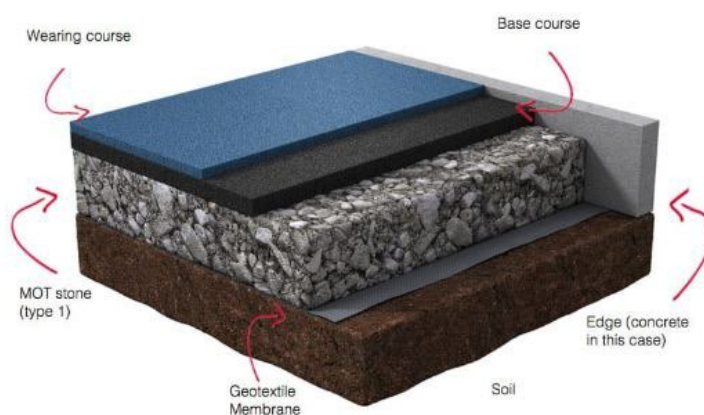
Wetpour Safety Surfacing

The wetpour surfacing must extend to the requirement of EN1176, noting that different product types have different requirements. All wetpour surfacing must comply with the requirements of BS7188. Materials used in the construction of wetpour surfacing must not contain any toxic substance, in accordance with Regulation (EC) 1907/2006 (REACH). The wetpour installation must be to the recommendations of the Association of Play Industries, such as detailed in their guide, 'API Code of Practice - Provision of Impact Attenuating Surfaces' - Version 3, revised July 2015.

The wetpour must be tested in accordance with EN1177 to determine the 'critical fall height'.

As required by EN1176 the wetpour surface must only be placed around playground equipment where the tested 'critical fall height' above, exceeds the maximum 'free height of fall' of the equipment.

The surface has passed the most comprehensive testing criteria which includes critical fall height, flammability, indentation and abrasive wear and is still the most widely used safety surface of choice throughout the UK, EN1177 tested and compliant.



Grass Matting Safety Surfacing

Rubber grass mat is an environmentally friendly non-slip, impact absorbing surfacing ideal as a natural looking alternative surfacing that will blend into its surroundings, reducing the visual impact while protecting the underlying grass surface.

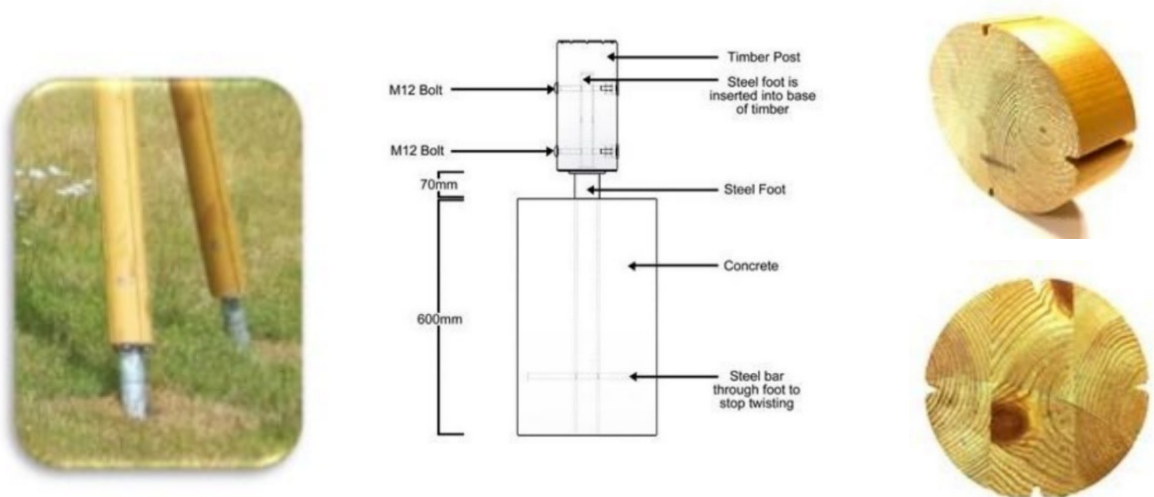


	Environmentally Friendly
	DDA Approved
	Drainage (SUDS compliant)
	UV Stability
	Thermal
	Critical Fall Height up to 3m (23mm) BS:EN: ISO 1177:2008
	Slip Resistance BS:EN 7188:1998
	Flame Retardent BS:EN: ISO 11925-2:2010
	Ease of Ignition BS:EN 4790:1987

Material and Quality of Equipment

Please see equipment materials and technical information below

HAGS timber: Slow grown in Scandinavian Forest, it is denser and less likely to crack. Our Uni Range posts which include the swing, play panel posts and Multi-units include 3 sections of wood laminated to increase durability with expansion grooves to allow the wood to breathe naturally without cracking. The posts have steel feet to avoid the timber touching the ground and avoiding rot.



Our wood is one of the most sustainable materials available. It is renewable, **FSC certified** from responsibly managed forests. Our wood cutting process is computerised, meaning we save around 100 pine and 100 birch trees a year. We only coat our wood with water based biodegradable solvents.



Recycled Material

Ekogrip is a recycled polyethylene-based material, 18mm thick, incorporating an additional 2mm textured top 'grip' layer. This makes it very suitable for step treads and platforms.

Play & Musical Panels : BS EN 1176 - Designed to British & European Standards
Materials: Panels - Two-Colour High-Density Polyethylene (HDPE), Post - 100% recycled plastic with a heavy textured finish, Musical - Bells - Stainless steel bells with brushed finish.

Entrance Sign post and Multi-way sign - Produced from Robinia hard wood with steel feet-10 year garentee

Net Jumper - Main Post - This will be 114.3mm OD galvanized steel tubing, finished with polyester powder coating.

Climbing Nets - This will be 20mm diameter, polyamide (nylon) rope cable with UV protection and fire-retardant solution. Each rope consists of 6 strands each containing 24 stainless steel reinforcing strands within a polyamide sleeve, wrapped around a solid polyamide core; each end of the cable having a junction loop attached onto the cable with a finished aluminium sleeve and lined with a stainless-steel wear bar. Edge ropes will contain a solid core of wound stainless-steel cables in place of the polyamide core.

Ball Knots - This will be a one-piece compressed aluminium ball, compressed in place with 150,000 pounds force (667 kN) to prevent the connection from moving and causing premature cable wear.

Basic Fasteners are stainless steel.

Pointy Top Toadstools- Heads- Cast Aluminium and stems are Aluminium pipes

Crocodile Swing - Produced from sustainably sourced Radiata Pine Suitable for most climates including hot or wet environments.

Steel feet hold the timber above ground level so there is no direct contact between the timber and the ground. The gap left between the timber and the ground makes surface maintenance easier as there is less risk of trimmer damage when grass cutting. Should timbers need to be replaced they can be unbolted with no need to dig new groundworks or damage the existing surfacing. **15 year in-ground guarantee.**

HAGS play equipment and surfacing installed in public areas should be inspected and maintained in accordance with European Standards recommendations for the routine and operational inspection and maintenance of playground equipment: EN1176-7.



- ✓ **Mild Steel:** Mild steel is the primary material used in our products. Our steel is sourced from a UK supplier direct to our UK factory, this reduces the impact upon the environment through unnecessary transportation. Before we begin manufacture,

approximately 30% of our steel has already been recycled. All mild steel sections are formed from structural grades and are blast cleaned prior to colour coating.

- ✓ **Primary Steel Work:** All hot finished primary structural steel sections conform to EN10210-2, manufactured from steel to EN10210-1, Grade S275J2H (BS 4360, Grade 43D)
- ✓ **Secondary Steel work:** All electric resistance welded steel tubes to BS6323: Part 5, manufactured from steel to EN10210-1, Grade S275J2H (BS4360, Grade 43D). All screwed and socketed tubes conform to BS1387. Channel sections used are produced in accordance with BS2994 from pre galvanized strip to BS2989.
- ✓ **Stainless Steel:** Our stainless steel is carefully selected from suppliers who use specialist workshops to prevent contamination of the steel during the manufacturing process. All sheets (to make slide chutes) are manufactured from 2mm thick material in a high-quality grade: 304 S16. All weld joints are ground smooth and polished to create a continuous surface. All stainless-steel sheets are manufactured to EN10259 2mm thickness from austenitic stainless steel which conforms to EN10088-2 Number 1.4301 (BS1449: Part 2, Grade 304S16) and satin polished.
- ✓ **Chains:** Short link chains, generally 8mm gauge are manufactured to ISO1834 from material to BS970: Part 1, Grade 040 A10. Chain assemblies are finished with a spun galvanized coating in accordance with BS EN ISO 1461:1999. Swing chains assemblies are proof load tested to 0.65 tonnes safe working load and are permanently marked with their batch identification for tractability.
- ✓ **Chain Shackles:** Swing chain shackles are drop forged, normalized and descaled, tolerances to BS4114, and using steel to BS970: Part 1, Grade 040 A04 and bright zinc plated. Shackle pins are machined from stainless steel to BS970: Part 1, 1970/72, Grade 303 S21. The shackle assembly is proof load tested to 1.02 tonnes safe working load.
- ✓ **Swing Bushes:** Special bush for shackle pin manufactured from manganese bronze and lanolin impregnated, with molybdenum additive to BS5600 Part 5.
- ✓ **Anti-wraps on Swings:** We have included Anti-wraps on our Swings included within the design. They allow unrestricted, free movement of the swing seat while eliminating costly visits to unwrap swing chains from the cross bar. They also increase the life of the chains and associated connecting parts.
- ✓ **Fixings**

In many cases decorative cladding is fixed via a steel spring loaded nut manufactured from steel to BS4360 Grade 43A and bright zinc plated to BS3382 Part 2. This nut is inserted into a galvanised steel channel section which forms part of the secondary steelwork structure.

Generally, bolts are special stainless steel tamper resisting button heads “torx” type manufactured to ISO3506 stainless steel, Grade A2.

- ✓ **Anti-Tamper Fixings** - All HAGS products are supplied with 'anti-tamper fixings', as shown in the image. The head of the fixing needs a special socket to allow for tightening. These are not widely available to the public. We will supply the Client with 'free of charge' sockets to aid this



- ✓ **Climbing Nets:** All climbing nets are manufactured from 18mm diameter galvanised 6 x 12 wire core combination rope, black nylon covered. Rope connections are made via fully enclosed stainless-steel clips with end terminations being of swaged aluminium ferrules to ISO 8793 incorporating galvanised steel eyes.
- ✓ **Uniplay & Unimini Panels** - are manufactured from sheets of high-density polyethylene (HDPE) to a thickness of 19mm. This material is especially formulated by 'co-extrusion' to provide a material that cannot splinter or delaminate and to give the best possible colour stability and UV resistance. Graffiti can be easily wiped away using a mild solvent to keep maintenance costs to a minimum.
- ✓ **Robust materials** - The equipment within our design features HAGS engineered robust 8mm construction grade steel. We manufacture all of our equipment using the highest quality materials, which will provide a lifetime of fun, low maintenance, play experiences and memories to the community.
- ✓ **Powder coating** - Our powder coating system is fully automated, and our 'Extra Life' finish is certified by Akzo Nobel. Powder coating gives customers one of the most **economical, long lasting, and most colour durable** quality finishes available on virtually any type of metal.
Powder coated surfaces:
 - Have a smooth, silky texture.
 - Are more resistant to chipping, scratching, fading, and wearing than other finishes.
 - Provide colour and interest to play area products.
 - Provide an insulating layer that is beneficial in very cold or hot environmental temperatures, to insulate unprotected skin from the underlying metal.
 - The HAGS paint system includes a mechanical grit blasting preparation, which provides a superior key for the coating, to extend its operating life.

Thorough tests on HAGS SMP equipment components have been carried out resulting in a life expectancy of over 5 years in "urban and industrial atmospheres with moderate sulphur dioxide pollution". For coastal areas, which have higher air salinity, we offer and recommend our optional galvanising zinc coating beneath the colour finish.

Colour Options

Please see 3D visual and quotation that demonstrates the proposed colour, should alternative colours be preferred there are alternative options below.

HAGS Standard Colour Palette

Steel

	Carnival Red NCS S 1580 Y90R
	Rosenlund Red NCS S 1070 Y90R
	Rosenlund Green NCS S 3040 B70G
	Lime Green BS12E51
	Vibrant Green NCS S 2060 G30Y
	Apple Green RAL 6012
	Forest Green RAL 6029
	Rosenlund Blue NCS S 30340 B10G

HDPE

	Green/White
	Green/Black
	Blue/Black
	Blue/Yellow
	Yellow/Black
	Orange/White
	Black/White
	White/Black

	Spectrum Blue NCS S 3060 R80B
	Arena Blue RAL 5002
	Spectrum Yellow NCS S 1070 Y10R
	Brown RAL 8014
	Folkstone Grey NCS S 2500N
	Steel Grey NCS S 3500N
	Tornado Grey NCS S 4500N
	Grey NCS S 5000N
	Silver RAL 7040

HPL with black core

	Carnival Red NCS S 1580 Y90R
	Green NCS S 2570 G30Y
	Blue NCS S 3060 R80B
	Blue NCS S 2050 R90B
	Spectrum Yellow NCS S 1060 Y10R
	Beige NCS S 2010-Y40R
	Cafe NCS S 3010 Y30R
	Storm Grey NCS S 6502B

	Titanium MW 112 F
	Storm Grey NCS S 6502B
	Anthracite RAL 7016
	Black RAL9005
	Diamond Black NCS S 9000N
	Alpino White NCS S 0502 G50Y
	White RAL 9010
	Stainless Steel
	Galvanised

	Folkstone Grey NCS S 2500N
	Black/White NCS S 9000-N/NCS S 0502-G50Y
	Diamond Black NCS S 9000N
	White NCS S 0500 N

HAGS Standard Colour Palette

Wood

	Red Brown
	Teak Red
	Park Green NCS S 8010 B906
	C Green
	Forest Green NCS S 6030G
	Moss Green NCS S 5040 650Y
	Bark Brown
	Silver Grey
	Grey NCS S 3005 G80Y
	White NCS S 1502Y
	C White
	Transparent White
	Tar Black

Rope

	Red
	Green
	Neon Green
	Dark Green
	Blue
	Purple
	Orange
	Yellow
	Beige
	Grey
	Black

Plastic

	Carnival Red NCS S 1580 Y90R
	Vibrant Green NCS S 2060 G30Y
	Spectrum Blue NCS S 3060 R80B
	Warm Yellow NCS S 0585 Y30R
	Brown (Recycled)
	Grey NCS S 4500 N
	Diamond Black NCS S 9005
	White NCS S 1580 Y90R

UniMini Standard Colours

Steel

	Carnival Red NCS S 1580 Y90R
	Spectrum Blue NCS S 3060 R80B
	Spectrum Yellow NCS S 1070 Y10R
	Steel Grey NCS S 3500N
	Grey NCS S 5000N
	Diamond Black NCS S 9000N
	Alpino White NCS S 0502 G50Y

HPL with black core

	Carnival Red NCS S 1580 Y90R
	Green NCS S 2570 G30Y
	Blue NCS S 2050 R90B
	Spectrum Yellow NCS S 1060 Y10R
	Beige NCS S 3020 Y20R
	Storm Grey NCS S 6502B
	Folkstone Grey NCS S 2500N
	Diamond Black NCS S 9000N
	White NCS S 0500 N

Wood

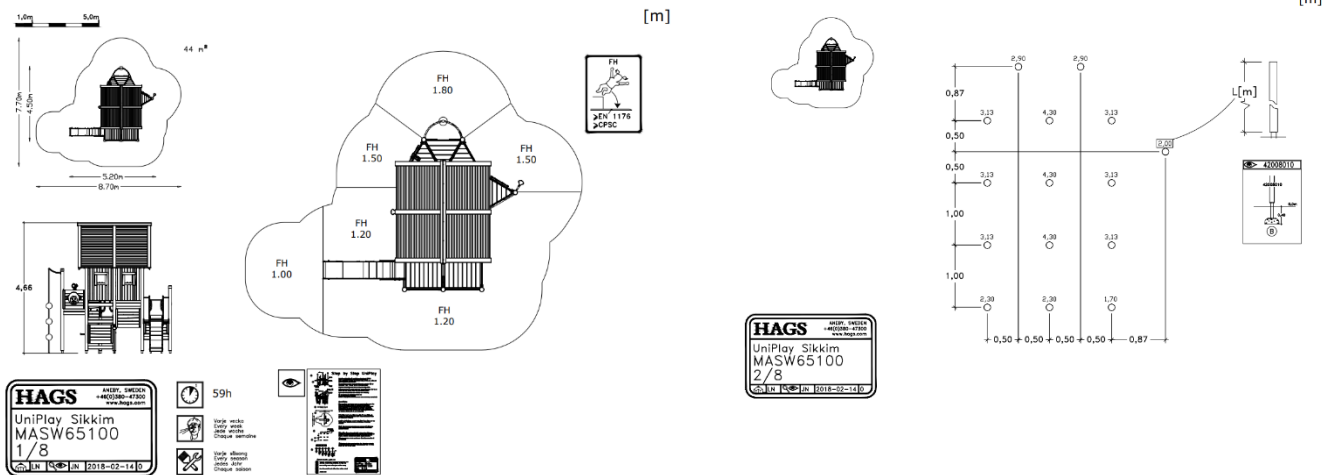
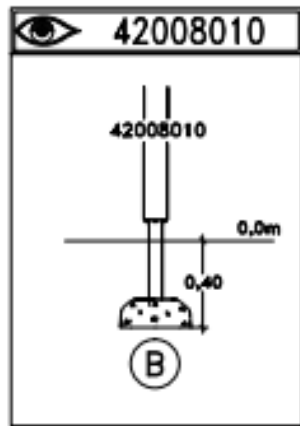
	Red Brown
	Forest Green NCS S 6030G
	Moss Green NCS S 5040 650Y
	Bark Brown
	Tar Black

Plastic

	Carnival Red NCS S 1580 Y90R
	Vibrant Green NCS S 2060 G30Y
	Diamond Black NCS S 9005

Construction

Example plan of HAGS Unimini installation posts



Freedom of Information

Non-disclosure of commercially sensitive documents under Freedom of Information Act

HAGS-SMP Ltd. consider our proposal return documentation to be commercially sensitive information under the Freedom of Information Act 2000. We request it is not disclosed on the grounds that its disclosure under this Act would, or would be likely to, prejudice the commercial interests of any person holding it without upholding any public interest.

Commercially sensitive extends to, but is not limited to: pricing, company structure and resources, method statements for the delivery of the works and services and descriptions of our products or bespoke environment designs. Release of this information would give commercial competitors an unfair advantage against HAGS-SMP Ltd. on any future proposal submissions.

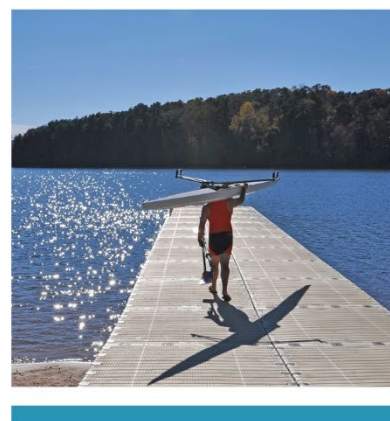
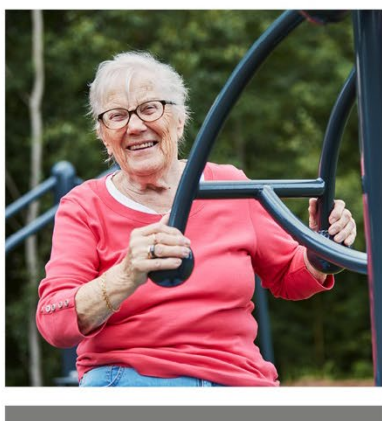
However, our 3D visual design drawings may be reviewed and released under a FOI Act request as this is generally available within the public domain or may have been displayed at a public event.



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