



nottssport[®]///:
Synthetic Surfacing / Multi-Sports

Design a Multi-Use Games Area in Minutes!
Our step-by-step guide to planning a bespoke sports and games facility

www.nottssport.com



Your guide to creating a tailor-made MUGA

Multi-Use Games Areas – or MUGAs – are the cost-effective way to provide a wide range of sports and activities in one self-contained area. Notts Sport's high-quality MUGA solutions comprise key components to create just the right performance for activities such as football, tennis, hockey and basketball, topped by a high quality synthetic turf surface available in a choice of energetic colours.

This handy guide takes you through all the options to create a first-rate MUGA up to the size of two tennis courts, tailor made to your needs with new build MUGAs having been delivered from as little as £35,000 + VAT.

Simply look at each step and choose the appropriate options for your facility.

The Notts Sport® Service

Notts Sport® is a leading specialist in the design and supply of synthetic surfacing systems for sport, play and leisure. The company has over 25 years' experience in providing non-turf technology for cricket, tennis, hockey and football as well as children's play and landscape environments.

Surfacing products in the Notts Sport® portfolio include specialist manufactured grass options: sand-filled, sand-dressed, third-generation (3G), non-filled, tufted and woven textiles. The package of design options also offers perimeter fencing and floodlighting, equipment and associated features.

By choosing Notts Sport® for your project, you can benefit from expert advice and assistance from the design stage to installation and aftercare – while retaining full control over the characteristics and components that make up your facility. Our experienced team is here to offer a guiding hand to help turn your dream project into a reality.

Since launching its first MUGA brochure, Notts Sport® has helped to guide hundreds of installations throughout the UK and worldwide and has built up an impressive client portfolio, working with local authorities, schools, clubs and sports bodies.

Notts Sport's complete Design & Advisory Service is provided with no up-front fee. This service is a foundation of the Notts Sport® ethos and is included to ensure its products are always installed to the highest standards and that every project is a success.

Design standards regularly incorporated into Notts Sport® MUGAs include:

- **Sport England:** Guide to the Design, Specification & Construction of Multi Sport Synthetic Turf Pitches
- **Sport England:** Selecting the Right Artificial Surface for Hockey, Football, Rugby League and Rugby Union
- **The International Hockey Federation (FIH):** Handbook of Performance Requirements
- **Rugby Football Union (RFU):** Artificial Grass Pitches for Rugby and Association Football Guidance Document
- **British Standards:** BS EN 15330 Synthetic Turf and Needle-punched Surfaces primarily for outdoor use
- **FIFA Quality Concept for Football Turf:** FIFA One Star category
- **International Rugby Board (IRB):** Performance Specification for Artificial Grass Pitches for Rugby

Benefits of a Notts Sport® MUGA

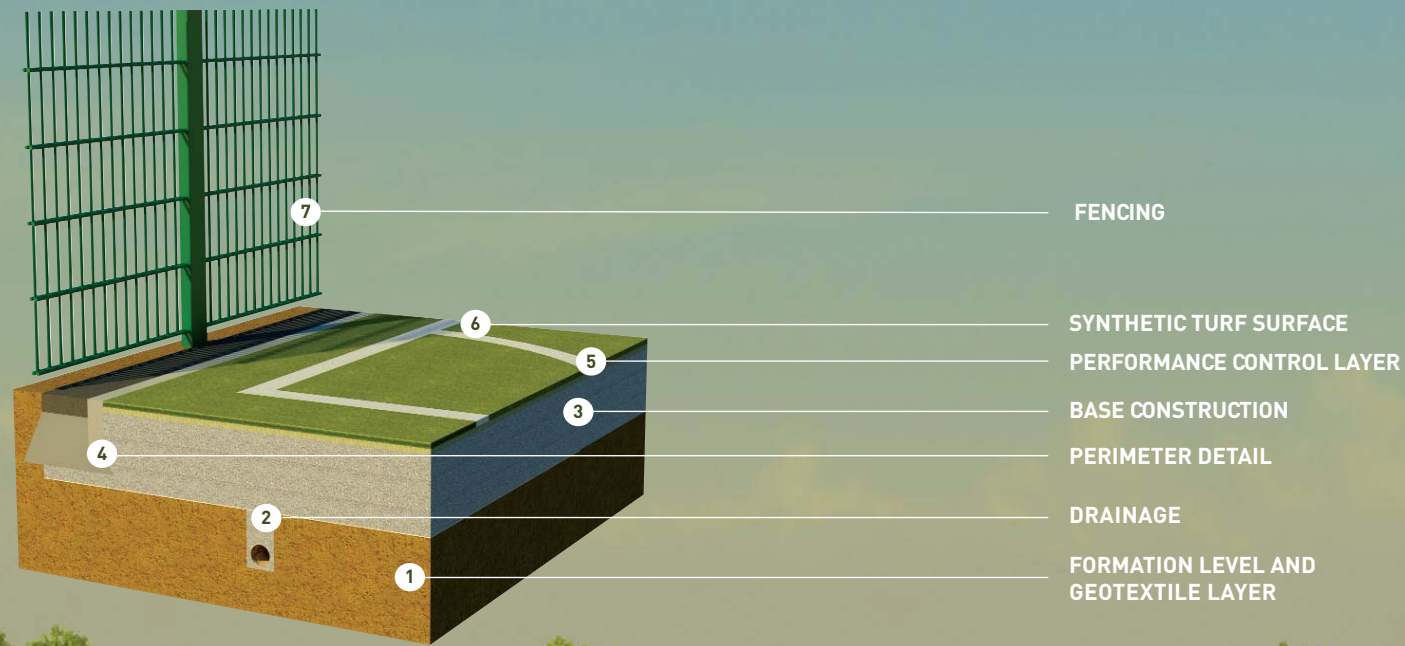
- High quality performance
- Sustainable designs
- Healthier lifestyles
- Revenue generation
- All Year-round use
- Compliant with the Disability Discrimination Act
- Socially inclusive
- Wider extracurricular activities

Our contractors are members of:



To play at your best, play on the best!

Consistent performance, low maintenance and a user-friendly design are key components of a top-class MUGA. Here's how they add up to a facility that will keep on playing for years.



1. FORMATION LEVEL AND GEOTEXTILE LAYER: The existing ground (e.g. grass) is stripped and the underlying ground (formation level) is levelled, compacted and covered by a geotextile layer.



2. DRAINAGE: A network of underground perimeter drains helps channel rainwater from the facility.



3. BASE CONSTRUCTION: Typically 300-400mm deep, the base construction offers suitable structural stability to support the activities and design chosen.



4. PERIMETER DETAIL: Concrete kerbs and tamper-resistant edging retains the playing surfacing and overall construction.



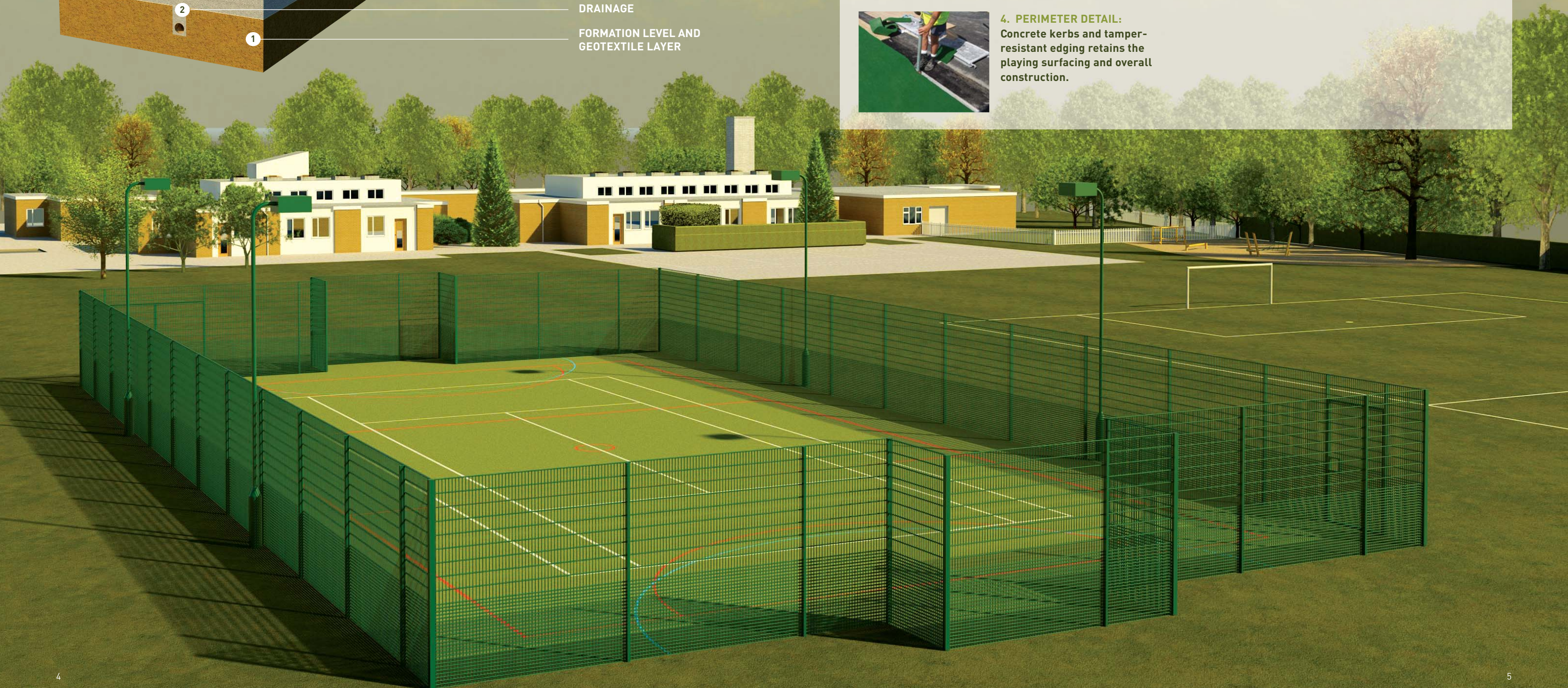
5. PERFORMANCE CONTROL LAYER: Choose from a range of specialist shockpad/performance control options to suit the performance standards of sports and activities you wish to support.



6. SYNTHETIC TURF SURFACE: Specialist synthetic grass surfaces are designed to meet the requirements of your sporting activities.



7. FENCING: Keep the ball in play and your MUGA secure with robust perimeter fencing and rebound features.



Step 1: Choose Your Base

The sports and activities you would like your MUGA to provide will determine your choice of base. There are two types available; the Dynamic Pitch Base and the Engineered Pitch Base.

DYNAMIC PITCH BASE: The Dynamic Pitch Base is made from layers of compacted and levelled stone aggregate. This offers a cost effective foundation over which the performance/shock pad layer is fitted. The aggregate also provides additional shock absorption for high-impact sports such as football and hockey.



ENGINEERED PITCH BASE: The Engineered Pitch Base consists of bitumen-bound macadam laid over compacted and levelled stone aggregate. This 'bound' base provides a highly stable construction for activities requiring ball bounce for sports such as netball, basketball and tennis.



Step 2: Pick a Perimeter Kerb

Your choice of perimeter should be determined by how secure your MUGA facility will be – for example, will it be open to the public and unsupervised, or limited to supervised classes or club users?

SINGLE LINE KERB



DOUBLE LINE KERB



SINGLE LINE KERB: A Single Line Kerb is an ideal standard for the majority of synthetic turf facilities. This traditional, cost-effective perimeter detail helps to ensure the longevity and tamper-resistance of the surface, by finishing flush with the surrounding ground and preventing surrounding vegetation encroaching onto the playing surface.

DOUBLE LINE KERB: A Double Line Kerb provides a superior-strength, tamper-resistant edge by enclosing the perimeter of the synthetic turf between two precast concrete kerbs and securing it below ground level. This finish also prevents surrounding vegetation encroaching onto the playing surface.

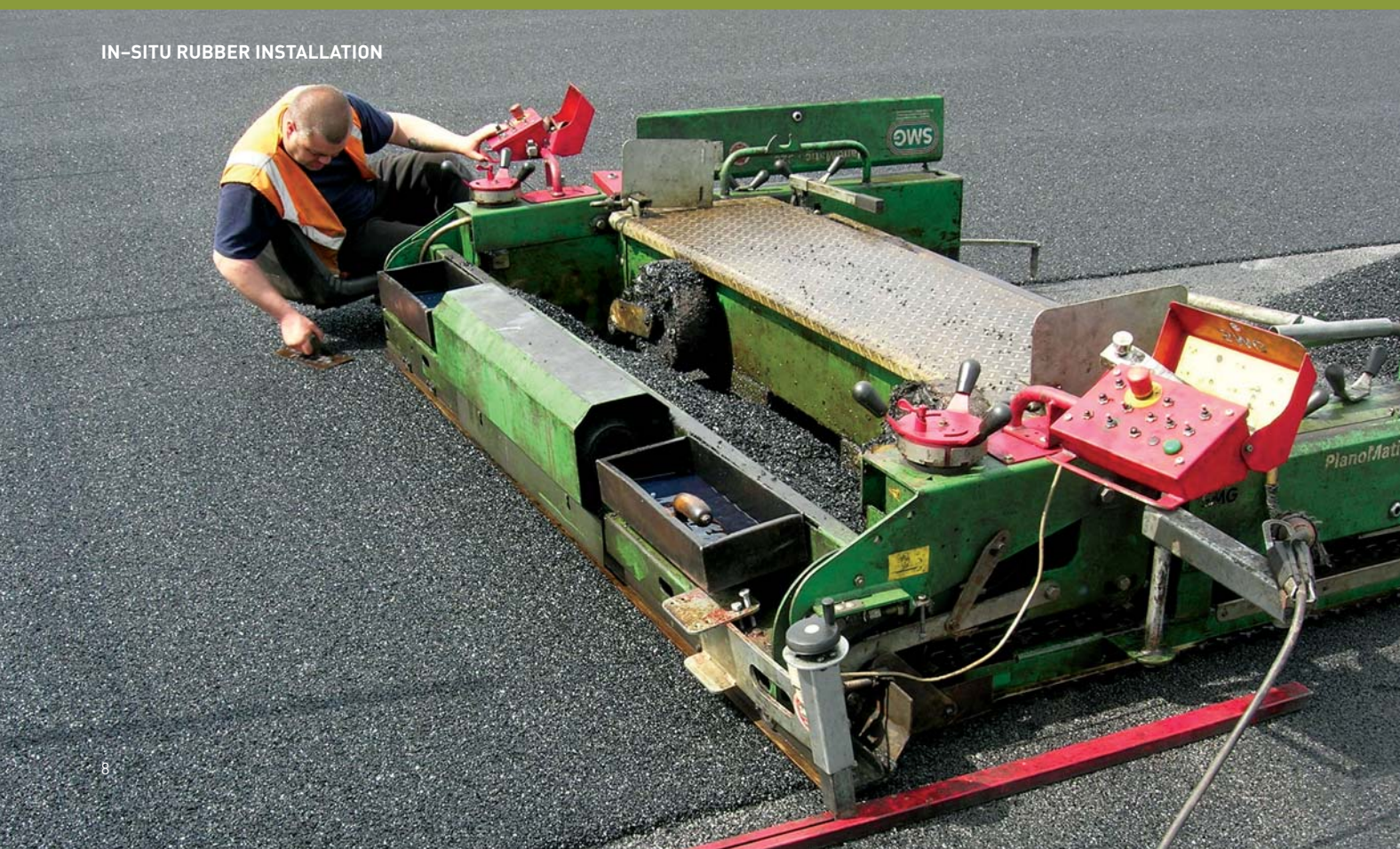




SAND ENVELOPE SYSTEM® INSTALLATION

Step 3: Decide on Performance

The shockpad layer will control your MUGA's playing performance for different sports and activities. It will also play a big part in determining the lifespan of the facility, and your project cost.



IN-SITU RUBBER INSTALLATION

SAND ENVELOPE SYSTEM®

The Sand Envelope System® accommodates the widest range of playing performance. It is regulated by a layer of sand, fully enclosed in NottsFilm® geotextiles to keep it clean and in place. This sits above a Dynamic stone aggregate base.

- Longer lifespan (equivalent to 2 synthetic turf surfaces)
- Long-term cost-effectiveness
- True multi-use performance for a wide variety of sports
- Very porous for playability after rain

NOTTSPAD® SP

The shock-absorbing NottsPad® can be laid over a Dynamic or Engineered Pitch Base. The shockpad makes it ideal for sports like hockey and football.

- Longer lifespan (equivalent to 2 synthetic turf surfaces)
- Long-term cost-effectiveness
- Quicker installation time and reduced construction costs
- Very porous for playability after rain

IN-SITU RUBBER

Playing performance is controlled by the bound rubber layer (typically 15mm for football/hockey and development level tennis/netball). This is laid over an Engineered Pitch Base only and the rubber is topped by your choice of synthetic turf.

- Rubber will typically need replacing at the same time of each synthetic turf surface
- Quick installation process and low initial installation cost
- Less porous than other systems and can only be laid onto a bound Engineered Base
- Machine laid to accurate tolerances

Shockpad Options	Activities Supported	Typical Lifespan	Base Option
Sand Envelope System®		25+ years	Dynamic
NottsPad® SP		20 years	Dynamic & Engineered
In-situ rubber		10-12 years	Engineered

NB above options are not the limit of choices we offer. Synthetic grass can be laid directly onto the base as a cost effective solution.

Step 4: A Choice of Toppings

The synthetic turf surface you choose will be largely determined by the activities your MUGA will offer. The surface will also offer additional protection for the underlying performance layer, the combination of which increases the lifespan and long-term cost-effectiveness of your facility.



SAND-DRESSED TUFTED GRASS

Sand-dressed tufted grass is the choice for high level hockey and requires minimal maintenance in its lifespan.

- Extremely impressive visual appearance
- Maintenance frequency increases over time
- Surface likely to wear quicker than sand-filled
- Seaming construction method offers standard seam strength



VHAF® SAND-FILLED NEEDLE-PUNCHED GRASS

Needle-punched grass has the longest lifespan with increased drainage capability and requires reduced frequency of maintenance.

- Versatile surface with longer lifespan
- Higher resistance to vandalism and low maintenance
- Excellent drainage
- Seaming construction method reduces risk of split seams



3RD GENERATION (3G) TUFTED MANUFACTURED SYNTHETIC GRASS

A long pile (40-70mm) synthetic grass, partially sand-filled with the remaining upper pile filled with loose rubber crumb to provide performance characteristics predominantly for football.

- Only generic type of surface that complies with FA requirements for competitive football but is not suitable as a multi sport surface
- Aesthetically the area will look as much like real turf as possible
- The long pile and loose infill requires increased maintenance and life costs
- The backing is a separate component to the fibres which produces standard seam strength

Synthetic Turf options	Activities Supported	Typical Lifespan*
Sand-dressed tufted grass		8-10 years
VHAF® Sand-filled Needle-punched grass		10-12 years
3G Grass		10 years

*Based on well used and well maintained areas



YOUR OWN LOGO



Footprint Options*

Your MUGA surface can be designed to suit the activities on offer, with inlaid lines used to mark out different sports and games.

VHAF® Sand-filled is also available in 15 energetic shades – from Grass Green to Sunset Orange – offering vast scope for using colour. They can also be used to compliment urban or rural landscapes.

Your organisation's name or a revenue-earning sponsor's logo can be inserted into the playing surface.

*Only available in VHAF® Sand-filled option.



Vivid Yellow

Sunset Orange

Tillet Red

Terracotta

Burgundy

Lavender

Navy Blue

Fjord Blue

Marine Green

Grass Green

Olive Green

Ochre

Chestnut

Platinum Grey

Black

Step 5: Set Your Perimeters

A perimeter fence will not only retain the ball during play, but also greatly improve the security of your MUGA.

The two fencing options available can feature rebound boards (or denser mesh) to the lower levels, and are fitted with high-quality lockable gates. Your choice of fencing will largely depend on budget and the activities the MUGA will be used for.



ROLLED WELDED MESH: Ideal where there is no requirement for a rebound capability, although timber rebound boards or higher density mesh can be incorporated into the design to provide this feature. Rolled welded mesh is also better suited to 'low-impact' use, in which there is little chance of a football being kicked at it regularly from close range.

PANELLED RIGID MESH: The most robust, durable and vandal-resistant option available and ideal for all MUGAs, especially where football is the predominant activity. Where rebound performance is necessary, the lower 1.2m is constructed from a denser mesh. This is also very valuable for public-use or school facilities in which a clear view of the facility is beneficial.

Step 6: Go into Extra Time with Floodlights

Floodlights can add many hours of extra playing time to your facility, particularly in winter. This can help to bring in extra revenue and allow for a more flexible programme of activities to be played, and a wider range of groups to be accommodated.

RAISE-LOWER COLUMN FLOODLIGHTS: The column can be quickly lowered to ground level using a simple counterbalance unit. This makes routine maintenance easier and safer. A large poured-concrete foundation is used to support each column.

STATIC COLUMN FLOODLIGHTS: This more economical alternative requires the groundsman or engineer to use an appropriate lifting vehicle to carry out maintenance. Pre-cast tubular foundations are sunk into a deep circular excavation to support each column.



Step 7: Get in Touch!

We hope this brochure helps to illustrate all the components that make up a great MUGA, and that you have already started to build up an idea of what your new facility will be like.

Of course, if you have any questions at this stage, simply give us a call and we will be happy to help. Alternatively, fill out the checklist below then visit our website to build and submit your design online at www.muga.nottssport.com



Your MUGA Shopping List

1. What best describes the surface of the proposed area?

grass asphalt redgra/shale

2. What is the approximate size of the available area?

.....

3. What is/was it used for?

.....

4. Do you have planning permission?

yes no n/a

5. Do you have funding grants?

yes no n/a

6. Your design choices:

BASE:

KERB EDGING:

SHOCKPAD:

SYNTHETIC GRASS:

FENCING:

FLOODLIGHTING:

Notts Sport
 Innovation House
 Magna Park
 Lutterworth
 Leicestershire
 LE17 4XH
 United Kingdom
 t: 01455 883 730
 f: 01455 883 755
 e: info@nottssport.com
 w: www.nottssport.com

Notts Sport
Innovation House
Magna Park
Lutterworth
Leicestershire
LE17 4XH
United Kingdom

t. +44 [0]1455 883 730
f. +44 [0]1455 883 755
e. info@nottssport.com
w. www.nottssport.com



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