

**Site Address:** Appleshaw, Andover, SP11 9BS 29/09/2023

To supply and install a new non-turf cricket pitch to the specification and location agreed with Fin Hughes during the recent site visit.

#### The brief provided by the club was:

We can no longer maintain a grass wicket so are seeking to install a non-turf wicket on our ground at Appleshaw. We play 18 matches / season, plus we will offer it to the local school to use. We do need this in before next season.





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### Design & Specification Overview

After discussing the pitch specification options, the club preferred the Envelope System® due to the more realistic performance (slower when wet, quicker when rolled), and are confident that the two pre-season rolls and 4-6 in-season rolls (with a hand roller, 5-10 minutes per roll) are easily achievable.

The Envelope System® is a dynamic, porous base that mimics the performance of a natural pitch (i.e. slower/lower when wet, quicker after a light roll). The two key differences in the base between the Envelope System® and all other single shockpad systems are:

An intermediate layer of mid-sized stone is used between any of the large 63mm-dust Type 1 sub-base aggregate and the fine upper performance layer, creating much increased mid-long term consistency of performance

Each layer is individually wrapped (Enveloped®) with a non-degradable membrane to prevent migration of the larger stones into the smaller upper layers, again maximising long-term consistency of performance and reducing maintenance requirements

See specification overview on page 8 for full details

Through more than 30 years' experience, we have found it to be critical that no stone particles larger than 10mm be used anywhere within the upper 100mm of construction. The use of a Type 1 or similar aggregate within the upper 100mm of a cricket system is a specification element that we will not consider in any circumstance.

The proposed surface is the **new NottsGrass Ultra**, which being the **first and only** surface within ECB Approved systems to move away from the traditional fibrillated fibres used in cricket surfaces since the 1990s, is **Bringing Cricket Into the 21**st Century.

In 2018 NottsGrass Ultra was chosen by Lords for their non-turf cricket pitch and the outdoor nets within the new Cricket Ireland High Performance Centre, and a second pitch was installed at Lords in 2021.

The surface has been proven by LaboSport (non-turf pitch advisors to the ECB) to last up to six times as long in surface abrasion tests as the old Wilton woven surface technology (tested against an 11mm thickness Wilton weave weighing 1520g/sqm).

The monofilament fibres of the NottsGrass Ultra ensure that the structural integrity of the surface does not deteriorate as the material wears. Therefore while fibrillated yarns gradually split along the length of the grass fibres creating finer and finer strands that provide less grip, resulting in a more skiddy surface and reduced turn, the NGU monofilament fibres do not split. This ensures that the grip level remains throughout the life of surface, ensuring mediumlong term performance levels are maintained at original levels.



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Therefore as well as being unique within ECB Approved systems, the monofilament NGU provides both increased wear resistance and superior performance.

Due to the use of finer aggregate within the upper 100mm of construction, and the use of non-degradable shockpads and membranes to separate the different aggregates, all Notts Sport systems have been proven in the ground to be able to be resurfaced for more than 30 years, continuing to maintain full ECB Approval even with retaining the original base materials.

When the surfaces do eventually require replacement, assuming that the shockpads and base have not become exposed through holes in the surface material, the base layers will not have depreciated or degraded at all. As part of the Notts Sport service, we renew the warranty on the shockpads and base layers on refurbishment as if it was a new-build.

Therefore the combination of lower maintenance (due to the segregation of each layer of stone) and proven ability to resurface rather than fully replace, Notts Sport systems are designed to minimise medium-long term costs.

#### Works Overview

#### **Preliminaries**

Establish compound, working area and access route

Transport all plant & machinery to site

All ancillary equipment to be fitted with low ground pressure tyres.

Prepare site specific documentation as required (Health & Safety details, Construction Phase Plan, insurances, O&M manuals, etc)

#### **Tanalised Timber Frame**

#### 30.00m x 2.74m ECB Approved Notts Sport Envelope System® Match Pitch

Single shockpad system (aka dynamic base, or aggregate base)

Reacts like a natural pitch - pace and bounce reflects recent weather and ground conditions: slower and lower when wet, quicker and more bounce when rolled

All synthetic components fully separated by non-degradable membrane - no contamination possible of the upper performance aggregate, proven to ensure future resurface is possible rather than full/partial base replacement

#### No dynamic single-shockpad system requires less rolling

Stabilisation layer in order to increase load-bearing capacity of prepared area

Clean angular stone to provide solid, free draining base

NottsFilm geotextile membrane to prevent aggregate layers mixing or becoming contaminated, thereby ensuring the consistency of the upper performance layer and thus allowing future refurbishment of the facility without necessarily requiring full replacement of the base



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#### 30.00m x 2.74m ECB Approved Notts Sport Envelope System® Match Pitch (continued)

50mm consolidated depth of 4mm-dust hard porous to provide realistic, true, UK cricket performance levels Crease Protector Pads to prevent depressions at the blockholes or front foot creases from repeated impact 5mm thickness resin-bonded NottsPad shockpad to protect base levels and minimise maintenance

#### NottsGrass Ultra Surface – Bringing Cricket into the 21st Century

Supply and lay NottsGrass Ultra cricket surface, as chosen by Lords for all non-turf facilities 2018-2022 (2.395kg/sqm, 12 year new-for-old manufacturer's warranty – i.e. no depreciating scale on the warranty. Proven to last approximately six times as long as an 11mm fibrillated woven material weighing 1,520g/sqm in independent abrasion tests designed to indicate wear resistance)

#### Other Works

Mark out as per the rules of the game (see below for junior crease lengths – please advise those required) Reinstate to the outside of the facility, and access route if required, using excavated topsoil, and seed Transport all excavated material to a point elsewhere on site (exact location TBC)

Remove all general waste to landfill

Transport all plant and machinery from site

Leave working area and access route clean and tidy

ECB Adjusted Junior Formats (2019)	Pitch Length	Maximum Boundary	
Under 9	15 yards	30m (soft ball only)	
Under 10 & 11	17 yards	35m (soft ball)	$40m\ (hard\ ball)$
Under 12	18 yards	45m (girls)	50m (boys)
Under 13	19 yards	45m (girls)	50m (boys)
Under 14 & 15 (girls)	20 yards	50m	
Under 14 (boys)	21 yards	55m	
Under 15 (boys)	22 yards	55m	
Under 17	22 yards	55m (girls)	60m (boys)



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#### **Cost Summary**

To supply and install a new 30m x 2.74m Envelope System® non-turf pitch (NTP) as described above + VAT

#### **Terms & Conditions**

Quotation valid for 42 days

All spoil to remain on site at agreed location, unless otherwise stated

Any reinstatement to the outside of the synthetic materials will be made with excavated topsoil and reseeded Indicative works dates are only confirmed on receipt of official order & payment of deposit (*if applicable*)

#### **Standard Payment Terms**

Supply & Install If works are to start within 3 months of the order, no deposit required

If works are to start more than 3 months after order, a 10% deposit is required For projects estimated to take up to 4 weeks, full payment required 14 days after date

of invoice (date of completion)

Projects estimated to take over 4 weeks will include valuation invoices every four-

weeks, with each invoice due for payment 14 days after date of invoice

Supply & delivery only Payment required with order / before despatch



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#### NottsGrass Surface Overview

In 2012 Notts Sport first introduced the NottsGrass NG range of cricket surfaces to replace the old Wilton woven technology originally developed in the 1970's, and still used by many companies today.

The NottsGrass Ultra was introduced in February 2018, and became the **first and only** monofilament surface used within ECB Approved systems. Through being the first surface within ECB Approved systems to move away from the fibrillated fibres from the 1990's, NottsGrass Ultra is **Bringing Cricket into the 21**st Century.

The much increased resistance to wear compared to the Wilton woven surfaces is why Notts Sport offer a 12 year new-for-old replacement manufacturer's warranty on the NottsGrass Ultra material, and 8 years for the NottsGrass NG7. We no longer offer the old Wilton woven technology surfaces.

Both materials have been laid at Lord's Cricket Ground – the MCC chose the NG7 for their net surface in 2016, and Ultra for their non-turf pitch in 2018, and the 2018 Cricket Ireland High Performance Centre also featured NottsGrass Ultra on their multi-lane outdoor nets.

#### Notts Sport Base System Overview

Notts Sport base systems are unique in that all components are non-degradable, and all are individually fully Enveloped®. This physical barrier prevents each aggregate layer from being contaminated by aggregates above/below, or by outside materials, from any direction.

As the synthetic materials do not deteriorate, and the aggregates do not shatter even if there is a ground frost, the full Enveloping® of each layer ensures that the base system will remain structurally as new as long as the surface itself does not become holed.

Only Notts Sport systems can fully Envelope® each layer, and therefore only by using a Notts Sport system can clients be sure that when the surface does eventually wear out, the original base system can be resurfaced without any need for base replacement.

This is borne out by the fact that many of the early Enveloped Notts Sport base systems from the 1980s are still going strong with their second or even third surface.

Notts Sport base systems never include stone particles larger than 10mm in the upper 100mm of construction in order to provide maximum medium & long-term consistency



#### Notts Sport Cricket Facility Specification - Common Design Features & Benefits

(please check your specification for clarification of the options included in your design)

**NottsGrass surfaces** 8/12 year new-for-old manufacturing warranty

(NottsGrass NG7 / NottsGrass NGU respectively)

**Chosen by Lords & Cricket Ireland Performance Centre** 

Bringing Cricket into the 21<sup>st</sup> Century

NGU is the only monofilament surface used in ECB cricket systems – all others use the fibrillated style of yarns used

since the 1990s

**Coaching Lines** Factory fitted lines along the length of the surfaces to

indicate off, middle and leg stumps, in order to aid coaching

**Notts Sport Base Systems ECB** Approved

> Each layer individually and fully wrapped in geotextile, no risk of contamination of the stone, ensuring maximum

performance, minimum maintenance

Non-degradable materials, ensure multiple resurfaces of

original bases

**Crease Protector Pads** Prevent depressions forming at blockholes & front foot areas

**Bowlers Run-Up Extensions** Medium pace/spin bowlers have ample distance for nets

even if grass behind the nets is too wet to start run-up

4.0m High Cage Allows wide variety of flight/variation in delivery, especially

for younger/slower bowlers

Individual Nets to Each Lane No gaps in netting between roof and sides, double skin

between each lane

White Netting to End of Nets Helps bowlers pick straight drives coming back at them, and

denser mesh increased resistance to repeated impact

**Locking Collars To Cage** Prevents roof section of cage slipping

**Line Wire To Base Of Nets** Prevents excessive net billowing, and balls escaping under

the netting into adjacent lanes

**Wheeled Netted Gates** Prevent balls being bowled between creases

**Internal Dividing Screens** Prevent batsmen being distracted by movement outside nets

Sight screen material fixed to fence behind bowler's arm to Sight Screen

help batsmen pick the ball of the bowler's hand

**Recessed Power Points** Allow bowling machines to be plugged in within the facility

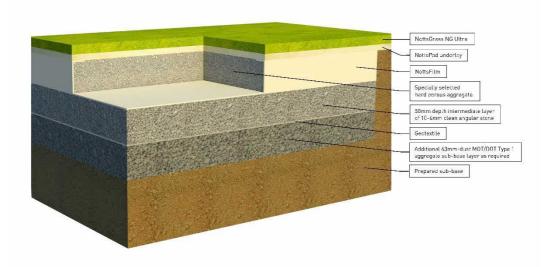
footprint, preventing leads causing trip hazards

**ECB NTP Code of Practice** Notts Sport have achieved the ECB NTP Code of Practice

Accreditation



## **ENVELOPE SYSTEM NG ULTRA**



NB – Notts Sport systems never include 63mm-dust Type 1 aggregate in the upper 100mm depth that directly affects consistency of performance

Unlike other single shockpad systems, the Notts Sport Envelope System® uniquely uses the NottsFilm nondegradable porous geotextile membrane to individually and fully wrap each layer, physically and permanently preventing the larger sub-base and base aggregates from mixing with each other, and most importantly with the upper 50mm performance layer that provides 80% of the consistency of bounce. This ensures that when the surfaces do require replacing, as long as the bases have not been exposed through the surfaces becoming holed, everything underneath will be protected from deterioration, and only the top material will need replacing.

Furthermore, the individually wrapped aggregate layers within the Envelope System® mean that the rolling requirement is lower compared to other single shockpad options. While some companies advise that no rolling is required to single shockpad systems, the majority within the non-turf cricket sector agree there are three main reasons to roll such pitches in order to provide the best medium-long term performance:

To maintain compaction of the base aggregates, preventing the stone layers from being able to mix, which would contaminate the fine upper performance layer (that provides 80% of the consistency) with the larger sub-base stones

To tailor performance as required (i.e. increasing pace and bounce after rain/watering)

To counter the effects of winter frosts decompacting the upper base (the process whereby water within the upper fine aggregate freezes and expands, causing movement in the aggregate)

If a pitch is not rolled after winter frosts, this movement of the aggregate will not be countered, which will lead to uneven levels and/or loss of compaction. In turn these lead to either inconsistent performance, or unseparated aggregates within the base mixing together. The former can be remedied by rolling, the latter will cause inconsistent or total loss of performance, and in unseparated systems will require a full base replacement.

Therefore while we believe that rolling single shockpad systems is extremely important, it is particularly the case if the separating membranes are removed.

The unique non-degradable NottsFilm geotextile removes the first of the above reasons to roll, meaning that maintenance is only required to tailor performance if/as required, or to counter any frost heave. As such bestpractice dictates that for the best long-term performance and ability to resurface the existing base system, all single shockpad systems benefit from occasional rolling.

As the remaining 20% of the consistency of performance is provided by the layer 50-100mm below the surface, Notts Sport systems never use any aggregates with particles of more than 10mm in the upper 100mm of any pitch construction. (Type 1 aggregate is an excellent sub-base material, but as the stone particles range from 63mmdust in size, there is a wide variance of compaction levels, depending on the concentration of large stones to dust particles. Therefore in order to ensure long-term consistency and performance we never use this large a stone at a depth that could affect performance.)



# The Key Notts Sport Cricket Pitch Design Principles

Developed over 30+ years' experience as the world's leading non-turf cricket specialists

### 1. The key to any cricket facility is how it plays:

All Notts Sport ECB Approved systems fully Envelope® each individual aggregate layer of the base, using the non-degradable NottsFilm geotextile to physically prevent the different stone types mixing. It is critical that the larger base stones do not mix with the fine upper performance aggregate layers.

Every synthetic component in a Notts Sport system is non-degradable, and each stone type is frost resistant. In conjunction with Enveloping each layer, this means that the original base remains structurally as-new, and can be resurfaced again and again. We even renew the performance warranties on our old systems when we resurface them.

The energy of a cricket ball penetrates up to 100mm into the ground, so the upper 100mm must be built to the most precise specification possible. Under the upper 50mm crushed limestone/granite, we use a 50mm intermediate layer with a maximum stone size of 10mm, and with no smaller particle than 6mm. This forms a very consistent, yet firm, layer at the 50-100mm depth which provides up to 20% of the consistency of performance.

We never use Type 1 roadstone or similar anywhere in the upper 100mm as the particle range is too great (63mm - dust) to provide the same level of consistency of firmness in a layer that directly affects how the cricket ball bounces.

#### 2. Use the best surfaces possible:

Our premium NottsGrass Ultra surface has been proven to last up to six times as long as an 11mm Wilton woven cricket carpet weighing 1520g/sqm.

The NottsGrass Ultra has a texturised monofilament that maintains vertical stability and does not split into finer strands like other cricket carpets, therefore ensuring both vastly increased durability and prevents deterioration of performance.

NottsGrass Ultra is the only surface within ECB Approved systems to use the monofilament fibre style. By moving from the fibrillated yarns developed in the 1990s, NottsGrass Ultra is Bringing Cricket Into the 21st Century

The NottsGrass NG7 has a twisted KDK pile that also helps prevent the pile flattening, ensuring better medium-long term performance than materials that flatten over time. Even the NottsGrass NG7 surface lasted nearly twice as long as the woven material.

When selecting their new non-turf cricket facilities, Lords Cricket Ground selected the NottsGrass surfaces, given these clear benefits of the materials.

#### 3. Keep clients' medium-long term costs as low as possible:

It is often less difficult to raise initial funds for a project than it is to cover on-costs, or refurbishment requirements. By using surfaces that last longer, refurbishment costs are deferred. By using fully Enveloped® base systems, when this resurface is required, as long as the base has not been holed, the costs will be limited to a new surface only: no base replacement should be required.

The Enveloped® bases also mean revenue costs (i.e. maintenance) can be reduced: there is no risk of the aggregate layers mixing and causing irreversible base contamination. Therefore in-season rolling is restricted only to tailoring performance as required. If the system includes the NottsBase D System, even this in-season rolling requirement is removed.



# **General Project Timeline**

# Initial Design Proposal & Costs

Pre-order site visits and design discussions with the client in order to confirm facility specification and site information (location, access, welfare facilities, etc) Production of bespoke initial Design Proposal, facility drawings where applicable, and costs

### **Ongoing Project Assistance**

Ongoing assistance with design amendments as required, general funding and planning advice

Production of OS Location Plans & Block Plans for planning (additional cost if required)

#### Order Confirmation

Completion and return of order form from client (using the form on the following page, or using client's own official order form if local authority, school, etc) (Generally no deposit is required for supply and install works - please refer to individual agreements for variations)

### **Construction Planning**

Arrange pre-start site meeting with Cricket Sales Director and Contracts Director, Project Manager, Site Supervisor/Foreman as required

Following pre-start meeting, adjust specifications/drawings as required Confirm start date and Site Supervisor/Foreman contact details with client

#### Construction

On first morning of works, re-confirm exact location of new-build facilities with client before commencing excavation (signature required)

Construct facility in accordance with finalised working documents

On final day of the works, ensure all works finished to client's satisfaction

#### Post Installation

Send invoice, with payment method details, warranties and facility maintenance document Acknowledge receipt of payment when received

In following years, full availability for advice via telephone, email or site visits as required in order to help client manage and maintain new facility to ensure maximum longevity

# **Project Contacts**

#### **Pre-Start Primary Contact Alex Bennett, Cricket Sales Director**

More than 20 years industry experience, designed and specified cricket projects for all types of client from domestic gardens to the most prestigious private schools, of all values to more than

#### **Primary Construction Contact Philip Slatter, Contracts Director**

More than 15 years' experience working in and running family company, successfully delivering multiple projects of more than value, including cricket, football, rugby and hockey pitches

#### **TBC** Site Supervisor/Foreman

We have five permanently employed cricket teams, all with supervisors who have more than eight years' experience, many with approximately 20 years.



# Notts Sport System Warranty Summary

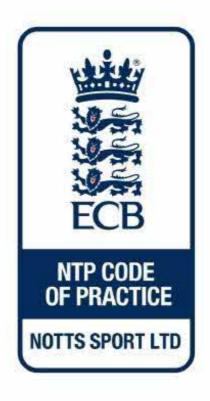
Manufacturers' Warranty Summary	
More than 30 years <u>in-the-ground evidence</u> on which to base system claims, durability and warranty	YES
NottsGrass NGU surface	12 years (new for old)
NottsGrass NG7 surface	8 years (new for old)
All new base synthetic materials (i.e. shockpads, performance pads, membranes)	10 years
Original base material warranties renewed <u>as if new</u> upon refurbishment <i>(if the original installation is a Notts Sport system)</i>	YES
Base Aggregate	Lifetime
Steelwork (42.4mm or 48.0mm)	25 years
3mm Netting	5 years
2.3mm Netting	3 years
Performance Warranty (for new installations and refurbishments of old Notts Sport systems)	5 years
System support	Lifetime



Notts Sport Ltd is pleased to confirm that we have been awarded the

England & Wales Cricket Boards

"NTP Code of Practice Accreditation"





# Non-Turf Cricket Facility - Order Form / Account Set-Up

Client Name		
Company Registration Number (if applicable)		
Client Invoice Address		
Client Invoice Contact Name		
Client Invoice Telephone		
Client Invoice E-Mail		
Project Site Address (if different from above)		
Works Contact Name		
Works Contact Telephone		
Works Contact E-Mail		
Quotation Reference		
General Description of Works		
Additional options to be included	Creases (yardages): 22 / 21 / 20 / 1	9 / 18 / 17 / 15
	Green Coaching Lines?: All lanes /	lanes / None
	Netting Colour:	Green / Black
Additional client information / requests		
Total Order Value	£	+ VAT
Client Purchase Order Number (if applicable)		
Order Form Submitted By & Date		
Signed		

#### **Terms & Conditions**

Quotation valid for 42 days

All spoil to remain on site at agreed location, unless otherwise stated

Any reinstatement to the outside of the synthetic materials will be made with excavated topsoil and reseeded Indicative works dates are only confirmed on receipt of official order & payment of deposit (if applicable)

#### **Standard Payment Terms**

Supply & Install If works are to start within 3 months of the order, no deposit required

If works are to start more than 3 months after order, a 10% deposit is required

For projects estimated to take up to 4 weeks, full payment required 14 days after date of

invoice (date of completion)

Projects estimated to take over 4 weeks will include valuation invoices every four-weeks, with

each invoice due for payment 14 days after date of invoice

Payment required with order / before despatch Supply & delivery only