Facility
Case Study

Creating a sporting habit for life

THE KING EDWARD VI SCHOOL, MORPETH

NORTHUMBERLAND

Status: Completed 2011
Client: The King Edward VI School
Value: £56,000

The water-based artificial grass hockey pitch at Bisham Abbey National Sports Centre (NSC) in Berkshire was showing signs of deterioration and was unfit for training UK players in the run-up to the 2012 Olympics. A decision was taken to replace the surface and, rather than simply disposing of the existing pitch, Sport England investigated ways for it to be re-used for school and community sport.

The potential re-use of the carpet was advertised and applicants were invited to put forward proposals. The King Edward VI (KEVI) School in Morpeth had long wanted to convert its hard porous mineral sports pitch to an artificial grass pitch (AGP) and prepared a successful application.

After careful preparatory works, the pitch surface was successfully relocated to the school to give a facility with a medium-term life expectancy.

The pitch after the move to Morpeth ...

...and as it was at Bisham Abbey NSC

The project was funded by Sport England.

There were insufficient funds to construct a new macadam base and Sport England's field-of-play consultants advised on an alternative approach. They were appointed to manage the procurement and supervision of preparation work to the existing hard porous pitch.

Because this grade of artificial grass has an integral foam shockpad, it was possible to install it directly onto the existing surface, following some localised regrading and minor drainage improvements.

General Description of Works

The works comprised careful removal of a water-based AGP from its original location, numbering the rolls to enable them to be correctly repositioned, transportation of the rolls to the new site and re-installation of the carpet onto the existing hard porous mineral sports pitch. After cutting along the seams, the carpet was rolled onto cores for ease of transportation and handling.

Schedule of Areas

Donor pitch	6,411 m^2
Recipient pitch	5,984 m^2

General Accommodation

Full-size hockey pitch	1 no.

Careful removal of the carpet from Bisham Abbey

Transport for the carpet waiting at Bisham Abbey

General Description of Key Specifications and Materials

Artificial grass surface	AGP system with stitched seams and woven-in lines
Donor base	Permeable macadam – surfacing loose-laid to the base
Recipient base	Hard porous mineral with concrete edgings (slightly smaller in both directions than the donor pitch)
Preparation of donor surfacing	Stitched seams carefully cut with a disc cutter. Each transverse strip cut to half pitch width to facilitate lifting and transportation. Each strip rolled and numbered carefully
Preparation of recipient base	A number of low spots filled with hard porous mineral. Small areas holding water decompacted. Treated with weedkiller. New timber edging installed at perimeter to provide anchorage for surfacing
Transportation	Three large articulated lorries required. Fork-lift truck at each location, to load, offload and position rolls of carpet
Method of installation	The rolls were set out along one side of the pitch at their correct location (in order to minimise traffic over the hard porous mineral base. The strips were unrolled and positioned, starting from the centre line. Seams were stitched and surplus trimmed from the perimeter, and carpet was nailed to perimeter timber edging

Summary of Elemental Costs

	Element	Total cost (£)	Cost (£) per m^2
	Preparatory costs		
1	Lifting the carpet carefully, loading it, transporting to recipient site (300 miles)	13,353	2.23
2	Unloading at recipient site	3,500	0.58
3	Weedkiller spray to recipient base	240	0.04
4	Excavation of pitch perimeter to receive timber edging	512	0.09
5	Supply and install edging board 100 x 50 mm	2,470	0.41
	Total preparatory costs	**20,075**	**3.35**
	Installation costs		
6	Installation of the existing artifical grass on the ready-prepared substrate according to the existing layout	26,714	4.46
7	Cost of Heras temporary enclosure at recipient site	1,485	0.25
8	Fork-lift (3 tonne), 10 days hire, including transportation	355	0.06
9	Unskilled labour	3,500	0.59
	Total installation costs	**32,054**	**5.36**
	TOTAL CONTRACTS SUM	**52,129**	**8.71**

Notes:

- Costs stated are rounded and based on first quarter 2011
- Costs stated exclude VAT
- Caution should be taken when using any sets of figures, and professional advice should be sought regarding current market rates.

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Environmental Sustainability

Re-use of an AGP on another site

Procurement / Programme

Tender	Three contractors appointed for the removal, preparation works and installation on new site
Contract	*JCT Minor Works with Contractor Design 2005*
Duration	Construction took eight weeks

Specific Items of Interest

Preparation	The existing hard porous mineral pitch required little preparatory work. Carpet was secured with a new timber perimeter edging
Relaying	AGP had an integral foam underlayer which meant the entire surface could be lifted and re-laid in one operation. An AGP installed above a separate shockpad would have been more difficult and expensive to move
Jointing	AGP was jointed with stitched seams. A carpet with adhesive-bonded seams might have been more difficult to re-lay

> *"...The installation of the AGP surface has boosted PE and sport at the school, with competitive hockey, inter-school matches and a variety of sporting activities throughout the year..."*

Simon Taylor

Headteacher of KEVI