

# ST MARK'S ACADEMY

## MERTON

**Status:** Completed 2012

**Client:** London Borough of Merton

**Value:** £199,000



St Mark's Academy is a secondary school with a strong sports ethos. This project involved the construction of a 'regional standard' floodlit BMX track on a parcel of land next to the school.

Some 6,000 m<sup>3</sup> of clay-based sub-soil was imported to create the track, which has a hard, porous riding surface and is configured in a 'U within a U' shape. Macadam was used to create the start hill and the spectator areas at the top of the steep banks, or 'berms'.

The project also included the installation of a Bensink start gate, staging pens behind the start hill and a shipping container for compressor and bike storage. Four 3 x 3 m areas for officials were constructed from macadam on the inside of the track.

An inspection was conducted by The Royal Society for the Prevention of Accidents (ROSPA) on completion.



Original greenfield site

*The project was jointly funded by St Marks Academy, London Marathon Charitable Trust, the Mayor's Sports Legacy Fund, Play Sport London and the London Borough of Merton.*

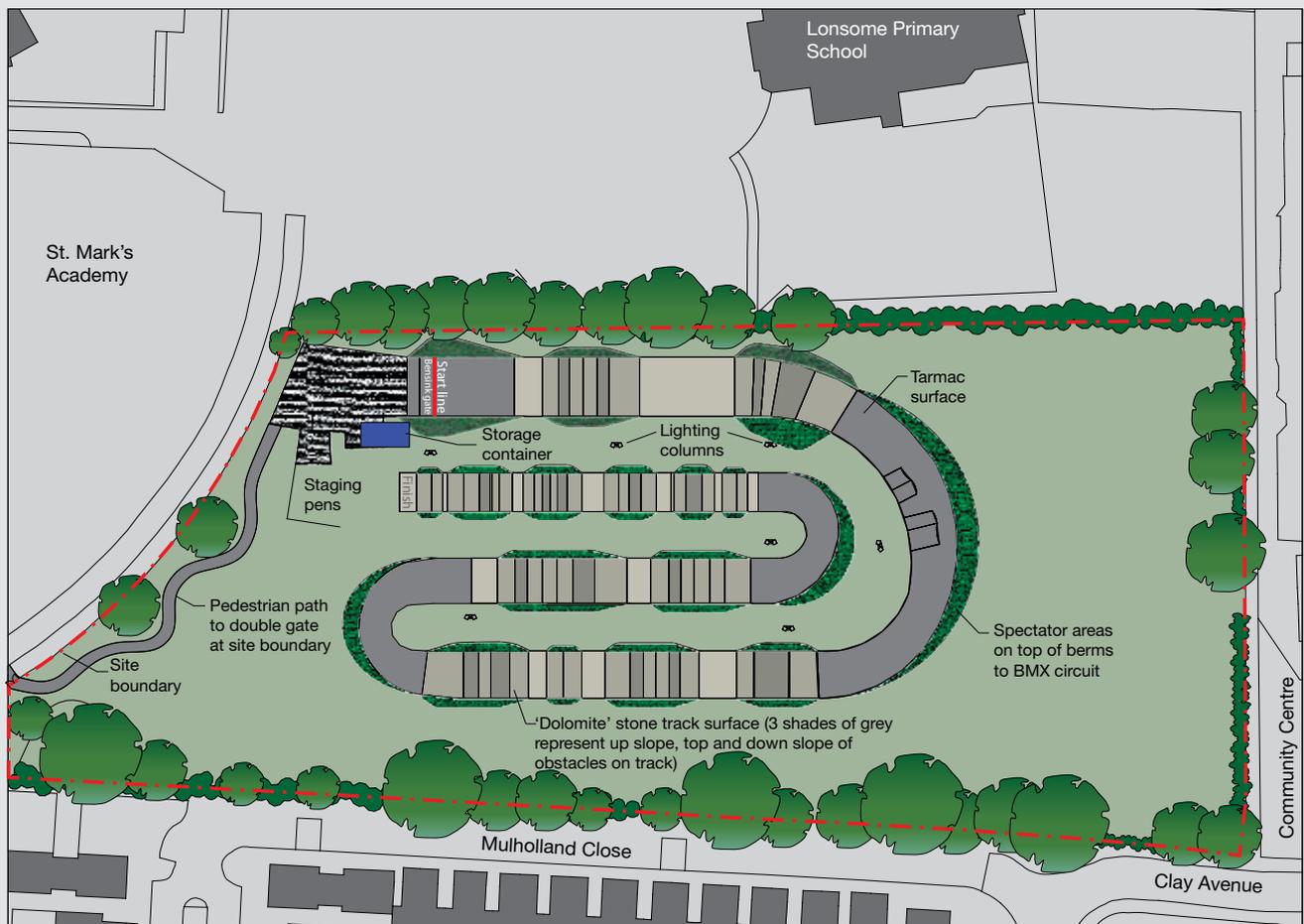


Bensink start gate in operation



Start hill, with shipping container in background

Site plan showing as-built track layout and lighting column locations





During construction



The completed track during the Southern National Championships in June 2012

## General Description of Works

A contamination survey found some areas that needed remediation. The topsoil was stripped and, where uncontaminated, set aside for reuse. About 6,000 m<sup>3</sup> of inert clay-based sub-soil was then brought in and shaped into the configuration of the track.

A 100 mm layer of MOT Type 1 stone was then placed onto the track followed by a 75 mm layer of crushed dolomite limestone, which was watered.

The start hill and berms are surfaced with 60 mm-thick dense macadam. The Bensink start gate installed in the start hill includes eight starting pens.

The artificial lighting provision comprises seven 8 m-high adjustable columns fitted with a total of 18 luminaires. These provide 200 lux maintained horizontal illuminance. The columns are located within the track circuit.

The measured track length is 340 m and meets current British Cycling BMX dimensional regulations for a regional facility.

## Schedule of Areas

Total site	15,000 m <sup>2</sup>
New BMX track including spectator areas on top of berms	5,512 m <sup>2</sup>

## General Accommodation

BMX track	'U within a U' configuration with 340 m length to current British Cycling BMX dimensional regulations for a regional standard facility. Includes starting pens for eight competitors
Officials	4 no. 3 x 3 m areas inside the track
Spectators	Accommodated along berms
Storage	1 no. shipping container for compressor and bike storage



Finished facility during competitive use

## General Description of Key Specifications and Materials

Drainage	80 mm-diameter perforated plastic pipes in trenches filled with clean shingle (French drains) inside and outside track circuit. Drainage connected into a new soakaway
Geotextile membrane	Woven polypropylene sheet
Track base	Imported clay based sub-soil (clay core of track)
Stone sub-base	MOT Type 1 grade recycled material installed at 100 mm depth onto the clay core of the track
Macadam (start hill and berms)	Two layers comprising 30 mm thickness of 20 mm grade dense macadam topped with 30 mm thickness of 6 mm grade dense macadam
Kerbs	150 x 50 mm precast concrete units on either side of the start hill
Fencing	1.2 m-high wooden post and rail 1.0 m outside track circuit and at top of the start hill
Track surface	Dolomite stone dust
Lighting	7 no. adjustable lighting columns, 8 m high with a galvanised finish 18 no. Philips MVP 507 luminaires fitted with 1kW lamps

## Summary of Elemental Costs

	Element	Total cost (£)	Cost (£) per m <sup>2</sup>
1	Track base works consisting of preparatory work/excavations, topsoil strip and geotextile placement, importation of clay-based sub-soil, shaping of track, stone, track topping layer, drainage, macadam (berms and start hill only)	74,500	13.52
2	Fencing	9,200	1.67
3	Lighting columns	46,250	8.39
4	Steel container and base	7,000	1.27
5	Bensink start gate and electronics	17,000	3.08
6	New electric and water supplies to site with two water supply points	7,850	1.42
7	Landscaping and reinstatement	5,000	0.91
8	Preliminaries	8,000	1.45
9	Consultant and investigation/survey fees	24,200	4.39
<b>TOTAL CONTRACT SUM</b>		<b>199,000</b>	<b>36.10</b>

### Notes:

- Costs stated are based on first quarter 2012
- Costs stated exclude VAT
- The tender documents advised the tenderers that the client's budget for the works was £125,000. The client obtained additional funds for the floodlighting from the London Borough of Merton Section 106 agreement
- At the start of the project, a reserve of £7,000 was set aside for contingencies
- Caution should be taken when using any sets of figures, and professional advice should be sought regarding current market rates.

“... We are delighted with the new BMX track which is used by the local schools, community and BMX clubs. More importantly, a local Merton BMX club has already been established and is starting to grow...”

London Borough of Merton

[Click here for 'User Guide'](#)

[Click here for current 'Design and Cost Guidance'](#)

## Environmental Sustainability

The existing topsoil was stripped back and set aside for re-use on site

## Procurement / Programme

Tender	Six tenderers, taken from a list supplied by British Cycling
Contract	JCT Design and Build 2005
Duration	Four weeks for tender period with a 14-week contract period to practical completion

## Specific Items of Interest

Lighting columns	7 no. adjustable lighting columns, 8 m high with a galvanised finish
On-site storage	A shipping container was installed for compressor and bike storage
Track features	A Bensink start gate for eight competitors was installed in the start hill



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