

DERBY ARENA

DERBY, DERBYSHIRE

Status: Completed 2014
Client: Derby City Council
Value: £28.9 million



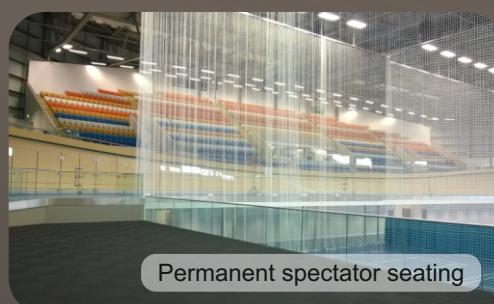
Derby Arena was developed to support wider participation in sport and motivate and inspire current and future generations. The Arena provides a range of sporting, cultural, economic and regeneration benefits that will have a considerable impact on the city and its residents.

The sporting facilities include a 250m indoor cycle track, a 12 court hall space predominately for badminton, basketball, netball, volleyball, futsal, 150 station gym, static bike studio, studios and meeting rooms.

The Arena has already hosted a Revolution Series cycling event, televised National Badminton League, British Middleweight Championship Boxing, Junior Table Tennis Championship, Taekwondo British Championship, concerts and media events.

The Arena was designed as an Iconic building creating a legacy of the London 2012 Olympic and Paralympic Games to provide a wide range of first class sporting facilities of local and regional significance which is capable of holding national events.

All areas are designed for multi-use, for users of all abilities to take part in new sport, physical activity opportunities and cultural events. The Derby Arena aims to increase sports participation, create healthier communities via programmes such as Livewell and The Movement, to improve the performance of the city's talented athletes, increase public confidence and stimulate economic regeneration of the city centre.

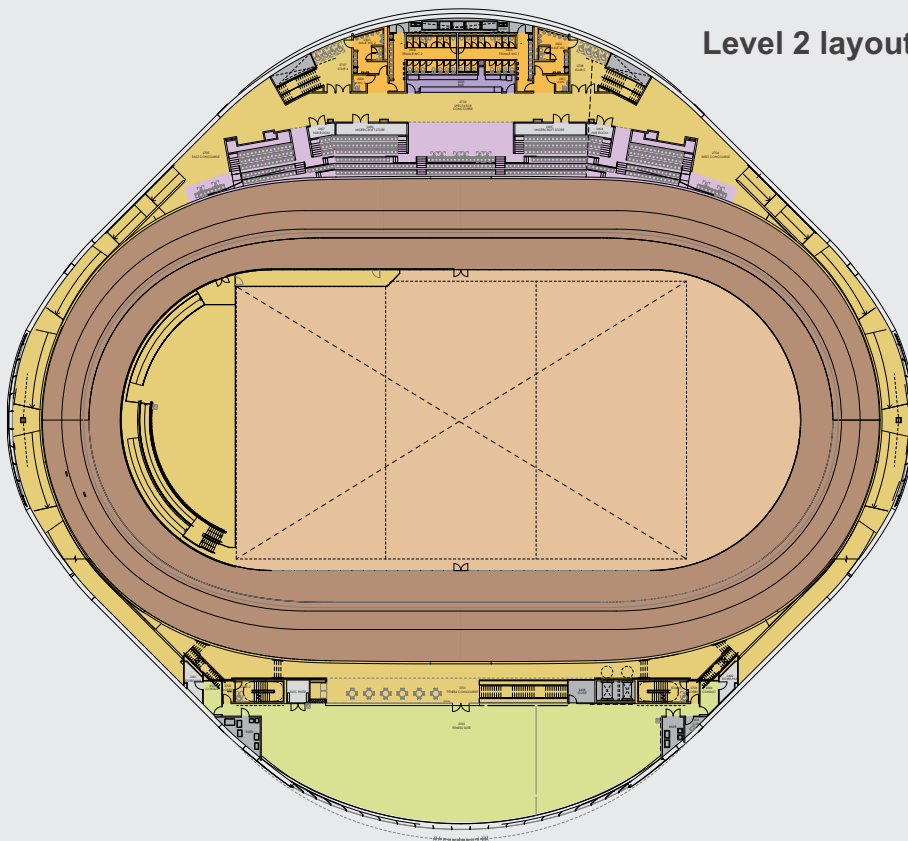


An Iconic facility, the Arena is equipped to deliver a wide range of community sports along with the flexibility to host events and concerts



Multi-sport infield area

Level 2 layout



Key

- Circulation
- Spectator toilets
- Spectator seating
- Bar
- Stores
- Cycle track
- Multi-sports area
- Fitness suite
- Plant / service void



Design

The Arena is a unique facility, combining an indoor cycle track with multi-use sports area for community, and an events staging capability all under one roof.

Built on the location of a former gas works, with a restricted site less than 100m wide and adjacent to Derby County FC, the works were executed in a manner to permit supporters to park at the football stadium both during and post construction.



Reception / Entrance

Raising the cycle track to the first floor level provides unimpeded access to the infield area, which allows the venue to be a general purpose arena which hosts events as well as providing for community sports.

The cantilevered cycle track gives the sense that it is floating, and meets the challenge of providing a fast competition track for professional riders whilst not being too unforgiving for novices - allowing it to become a key project driver towards increased participation in sport.

The fitness areas, changing space and spectator seating are configured in a tight wrap around the track, to keep the footprint as compact as possible.

The external façade is clad in long sheets of aluminium panel in gold, silver and bronze that reflects sporting success and subtly changes in natural light.

Accessible Design

Key features include:

- Automatic opening doors
- Level access from adjacent accessible parking
- Dedicated accessible toilets, changing and showers
- Changing place accommodation
- Ramps and lifts to all areas including the cycle track

Schedule of Areas

Gross Site Area	5.28 hectares
Building Footprint Area	8,616 m ² (GEA)
Gross Internal Floor Area (all floors)	14,570 m ² (GIFA)
Circulation Area (% GIFA incl foyer and reception)	17 %

General Accommodation / Standards

Sports Area	12 badminton courts, 3 basketball, 3 netball, 3 volleyball, 3 futsal courts, table tennis, fencing and other sports on a sprung sports floor. This flexible space also supports exhibition matches, staged concerts and corporate events
Track	UCI accredited 250m indoor cycle track
Fitness Suite	150 station gym with two consultation rooms
Studios	Two connected studios with sliding screen and sprung floor accommodating dance, martial arts, etc. Convertible for corporate meetings of up to 180 clients
Meeting Rooms	Two connected rooms; linked to adjacent studios for breakout sessions
Cycle Studio	31 state-of-the-art cycles with wi-fi links to screens
Changing	Dedicated changing rooms for gym members. Four interchangeable group changing rooms. Four changing rooms for officials or artistes with a flexible green room. Accessible changing room. Locker provision within all changing rooms. Full height ceramic wall tiles to all areas and non-slip floor finishes
Seating	1,000 seats on portable bleacher units. 1,200 loose linkable seats. 1,500 and 120 VIP fixed seats on upper levels. Standing room concourse encircling track. Standing for up to 3,500 people. Temporary protective floor to sports area
Catering	Fully fitted kitchen providing up to 300 meals. Extra temporary catering option within sports area



A typical changing space

General Description of Key Specifications and Materials

Frame	Steel frame
Cladding	Predominantly aluminium panels with high level glazed "eye" feature to fitness suite and weights area. Glazed curtain walling to entrance area
Roofing	Standing seam aluminium panels
Internal walls and partitions	Blockwork and metal stud partitions, glazed partitions and screens
Internal doors	Factory finished solid core laminate-faced door sets
Wall finishes	Plastered, with ceramic tiles to wet areas
Floors	Vinyl sprung sports floor, specialist timber cycle track, sprung wooden floors to fitness areas, vinyl & ceramic tiles to wet/changing spaces, carpet and tiles elsewhere, exposed concrete to spectator seating
Lighting	Sports hall and studio/fitness lighting provision up to 500 lux, cycle track lighting provision up to 600 lux

Summary of Elemental Costs

	Element	Total Cost (£)	Cost (£) /m ²
1	Substructure	2,147,000	147
2	Superstructure	9,266,000	636
3	Finishes	1,034,000	71
4	Fittings and Furnishings	1,407,000	96
5	Services	7,021,000	482
6	External Works	3,362,000	231
7	Preliminaries	3,140,000	216
8	Contingencies	181,000	12
9	Design Fees	1,355,000	93
Total Contract Sum		28,913,000	1,984

Notes:

- Costs are rounded and are based on 2nd quarter 2012
- Costs exclude vat
- Costs exclude fit out and equipment
- Costs do not include any land acquisition costs

Specific Items of Interest

Element	Approximate Area
Infield Multi-sports Area	2,088m ²
Fitness Suite	650m ²
Changing Space	1,320m ²
UCI Cycle Track	250m long
Seating	1,000 seats on portable bleacher units, 1,200 loose linkable seats, 1,500 and 120 VIP fixed seats
Foyer/Reception	750m ²

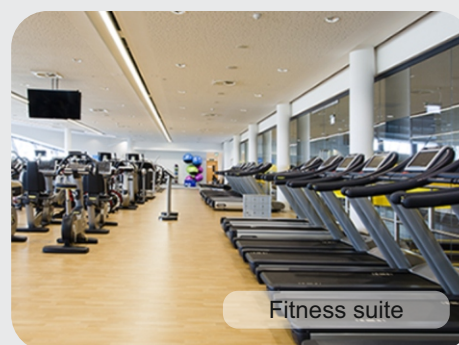
Environmental Sustainability

The building features measures designed to reduce its carbon footprint and minimise running costs. As a result, the building achieves a BREEAM rating of "Very good". Measures include:

- Heating stratification for varying uses
- Low energy lighting with presence detectors
- Building Management System
- Minimal window area with solar shading
- Excellent air permeability

Procurement / Programme

Designer	FaulknerBrowns Architects
Contractor	Bowmer & Kirkland
Tender	Competitive
Contract	NEC3 Option A
Duration	100 weeks



“It's just brilliant ... it's just nice to come to another World Class Velodrome.”

Bradley Wiggins KBE

Photographs provided by QMP 2015

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