

UNIVERSITY OF WORCESTER ARENA

WORCESTER

Status: Completed 2013
Client: University of Worcester
Operator: University of Worcester
Value: £12.0 million



The University of Worcester Arena has been developed as a new build 2000-seater indoor sports facility for the University. It is the home venue for the Worcester Wolves basketball team and provides support in performance analysis, fitness and nutrition advice to Worcestershire County Cricket Club, West Bromwich Albion FC, Aston Villa FC and Birmingham City FC. It is also the training base for GB Men's Wheelchair Basketball Team.

The arena accommodates a 60 x 36 m sports hall with three basketball courts to national standards, power weights/health and fitness studio, sports development room, flexible teaching spaces, offices and extensive changing facilities. A mezzanine includes VIP boxes, conference suites, viewing gallery, interview/media room and a bar/café with multi-use space for functions.

Since its opening, the facility has hosted an international wheelchair basketball tournament, with the National Championship Finals 2014 and the European Championships 2015 programmed in. The arena is also a venue for international and premier league netball matches.

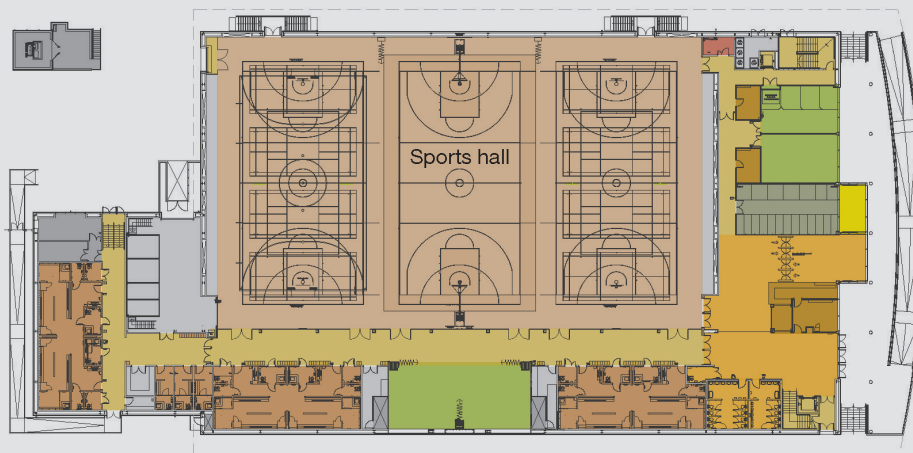


Sports hall with natural lighting

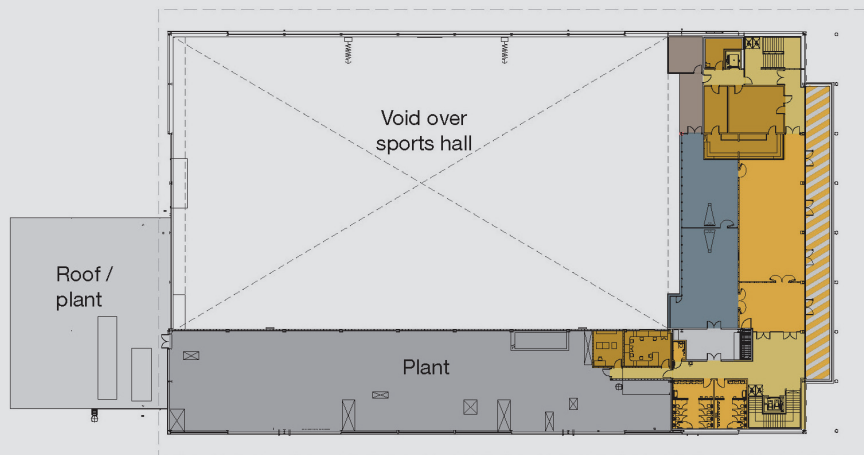


Sports hall during evening event

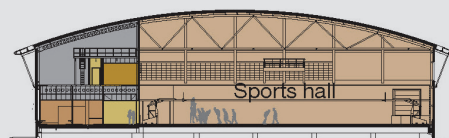
The University of Worcester Arena project demonstrates how a rationalised design can serve increased community involvement whilst meeting rigorous standards for competitive league sport at national level



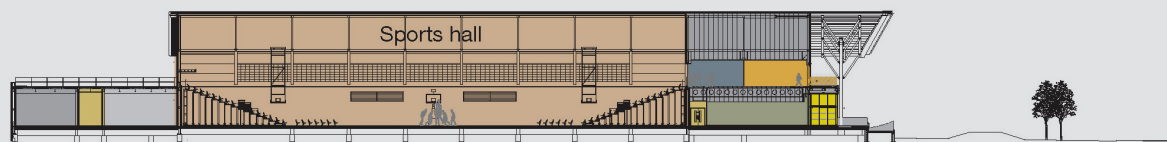
Ground floor plan



First floor plan



Cross Section



Long Section

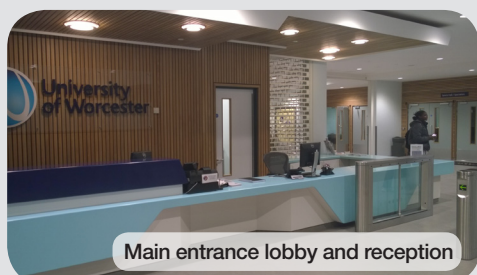
Key

- Entrance
- Circulation
- Foyer / cafe / public toilets
- Staff areas / reception / prep
- Sports hall
- Changing
- Flexible teaching space
- Power weights
- VIP area
- Media
- First aid
- Stores
- Plant / service void

Design

To alleviate flood risk from the River Severn, the main sports areas and sub-station have been raised approximately 2m above ground level and a flood bund created around the more vulnerable sections of the perimeter.

Level access to the sports hall is achieved with the use of ramps, and the mezzanine is accessed via a stair and lift.



Main entrance lobby and reception

By using of a long-span frame enclosed by insulated cladding panels for the entire facility, it was possible to provide a cost effective solution for the large volume arena.

The plan effectively locates the changing facilities (group, accessible and officials), together with flexible teaching and wheelchair storage spaces, in a linear block extending most of buildings' length. These spaces are all accessed off a generous circulation spine adjacent to the main hall.

Relaxing the standard of the court surface to just below *International Basketball Standard* enabled it to better meet the needs of community users, disabled people and teaching staff who regularly use the facility for badminton, boccia and goalball.

Spectator seating is provided to one end of the hall with the viewing gallery, boxes, café/bar, teaching and media areas in the mezzanine above. Plant rooms, scissor lift and TV gantry are located at the opposite end of the hall at first floor level, conveniently away from the main footflow.

Accessible Design

Key features include:

- Vertical access lift
- Automatic opening entrance doors
- Dedicated accessible toilets
- Dedicated accessible changing facilities
- Dedicated wheelchair storage
- Appropriate circulation provision for wheelchair users
- Adjacent disabled parking

Schedule of Areas

Gross Site Area	8,340 m ²
Building Footprint Area	4,447 m ² (GEA)
Gross Internal Floor Area	5,978 m ² (GIFA)
Circulation Area (% GIFA including foyer and reception)	14.8 %

General Accommodation / Standards

Sports Hall	60.7 x 36.6 m sports hall with 9.1 m clear height, natural lighting, glare control and retractable seating with 2000 capacity. It accommodates three full-size basketball (National standard) and netball (International standard) courts. The end courts also have line markings for badminton, and volleyball
Power Weights	12.9 x 6.1 m space with vinyl flooring on reinforced screed
VIP Boxes	Provision for up to 100 people, extendable into the café area, overall approximately 7.3 x 25 m
Flexible Teaching	Two spaces each 9.8 x 6.1 m
Changing	Three sets of flexible twin group changing rooms (with sliding partitions between), separate officials changing and comprehensive accessible changing. Locker provision located in adjacent circulation areas. Generally full-height ceramic wall tiles to showers with painted blockwork elsewhere, non-slip floor finish and suspended ceilings



Sports hall with retractable seating in stored position

General Description of Key Specifications and Materials

Frame	Steel frame
Cladding	Predominantly Microrib cladding panels with glazed curtain walling. Copper cladding to feature areas
Roofing	Proprietary profiled metal roofing system. Proprietary flat roofing system over generator area
Internal walls and partitions	Concrete blockwork and lightweight metal stud partition system. Sliding partitions between group changing rooms
Internal doors	Factory finish solid-core laminate-faced doorsets
Wall finishes	Painted blockwork generally. Ceramic tiling in shower areas
Floors	Specialist sprung-wooden sports hall flooring to National Basketball standards. Vinyl non-slip covering to wet areas
Lighting	Sports hall lighting provision up to 750 lux

Summary of Elemental Costs

	Element	Total Cost (£)	Cost (£) per m ²
1	Substructure	1,180,000	197
2	Superstructure	2,890,000	483
3	Finishes	580,000	97
4	Fittings and furnishings	980,000	164
5	Services	2,840,000	475
6	External works	1,420,000	238
7	Preliminaries (incl. contractor fees)	1,160,000	194
8	Contingencies	-	-
9	Professional fees, surveys and enabling works	830,000	139
	TOTAL CONTRACT SUM	11,880,000	1987

Notes:

- Costs stated are rounded and based on 3rd quarter 2013
- Costs stated exclude VAT
- Costs stated exclude fitout and equipment
- Costs do not include any land acquisition costs

Specific Items of Interest

Element	Approximate area (m ²)
Sports hall	2223
Changing spaces	506
Weights	79
Teaching spaces	296
VIP hospitality	172
Café/bar	331
Other areas	2371

“...The University Arena has both state-of-the-art facilities, and an exceptional standard of universal accessibility...”

Professor David Green
Vice Chancellor, University of Worcester

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

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

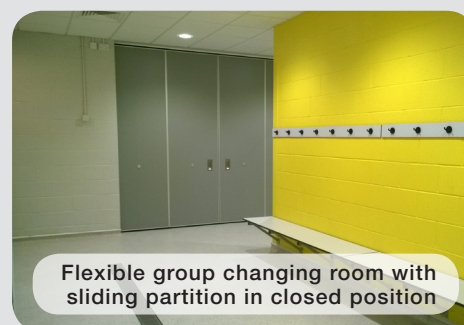
Environmental Sustainability

The building features measures designed to reduce its carbon footprint and minimise running costs. As a result, the building has a BREEAM rating of “Excellent”. Measures include:

- Heavily-insulated external envelope to limit heat loss from a large-volume space
- Photovoltaic cells
- Emphasis on natural ventilation, minimising the use of mechanical ventilation
- Building management system (BMS) to control and minimise energy use
- Low energy lighting with movement detection
- Solar shading
- Rainwater harvesting

Procurement / Programme

Designer	Roberts Limbrick Architects
Contractor	Willmott Dixon Construction
Tender	Competitive tender
Contract	NEC3 Option A
Duration	55 weeks from contractor mobilisation to practical completion



Photographs provided by QMP, Roberts Limbrick Architects and University of Worcester 2013