

## IBERS - GOGERDDAN BUILDING INFORMATION

### Project Description

The new IBERS building is to be a research facility to explore and ensure food, energy and water security in response to a changing climate. The building includes new Greenhouses, new laboratories and new single storey links to the existing buildings at a total area of circa 2000m<sup>2</sup>. The new building also houses a communal and social area to allow engagement with the public. The new development will be BREEAM excellent.

The work anticipated comprises:

- Demolition and general site clearance including retaining structures.
- Construction of a Glasshouse building which is to operate to PCL 1 (Plant Containment Level 1) / for the study of plants which will house conveyor and imaging equipment (provided by others).
- Construction of a two storey header building which will incorporate high quality laboratory and research facilities.
- Glazed link walkways/atrium.
- External works comprising landscaping, paving and hard standing and an 'academic square'

### BREEAM Rating and Score

The project will achieve a rating of BREEAM excellent.

The score that is currently being targeted for the scheme is 74.1% which is subject to an ongoing review by BREEAM assessors.

### Key Innovative and Low Impact Design Features

- Biomass boilers supplying large proportion of heating demands
- High specification building envelope
- Natural ventilation with automated louvres
- Daylight dimming

## Building Costs

Basic Building Costs £/m <sup>2</sup>	£1,205.82*
Services Costs £/m <sup>2</sup>	£840.88*
External Works £/m <sup>2</sup>	£317.29*
Gross Floor Area £/m <sup>2</sup>	£3,571.76

Note that the above costs marked with an asterix are exclusive of;

- Fixtures;
- Fittings and Finishes
- OH&P
- Preliminaries
- Design Development Contingencies

## Energy Values

Predicted electricity consumption (all except equipment)	32 kWh/m <sup>2</sup>
Predicted electricity consumption (equipment)	60 kWh/m <sup>2</sup>
Predicted fossil fuel consumption	10 kWh/m <sup>2</sup>
Predicted renewable energy consumption (Biomass)	18 kWh/m <sup>2</sup>
Predicted water use – m <sup>3</sup> /person/year	2.9 kWh/m <sup>2</sup>

## Functional Areas

Site Area – 4845 m<sup>2</sup> / 0.48 hectares  
 Grounds area – 2974 m<sup>2</sup> (building footprint excluded)  
 Academic Square – 456 m<sup>2</sup> – 15% of grounds area  
 Internal Usable Building area – 2400 m<sup>2</sup>  
 Community space – 299 m<sup>2</sup> – 12.5%

Ground Floor Circulation	296.2 m <sup>2</sup>	Storage	3.4 m <sup>2</sup>
First Floor Circulation	76 m <sup>2</sup>	Service Risers	23 m <sup>2</sup>
Glasshouse Circulation	138 m <sup>2</sup>		

<b><u>Ground Floor</u></b>		<b><u>First Floor</u></b>	
Cycle Store	18.7 m <sup>2</sup>	Laboratory	233 m <sup>2</sup>
Sequencing Lab	193 m <sup>2</sup>	Change Lobby	13.8 m <sup>2</sup>
Change Lobby	12.5 m <sup>2</sup>	Write Up Area	135 m <sup>2</sup>
Disabled WC	3.4 m <sup>2</sup>	Meeting Bridge	33 m <sup>2</sup>
Disabled Shower	5.3 m <sup>2</sup>	CAT 2 Lab	55 m <sup>2</sup>
Male WC	12.4 m <sup>2</sup>	Cold Room	5 m <sup>2</sup>
Female WC	11.5 m <sup>2</sup>	Dark Room	10 m <sup>2</sup>
Male Shower	4.5 m <sup>2</sup>	<b><u>TOTAL</u></b>	<b><u>484.8 m<sup>2</sup></u></b>
Female Shower	6.7 m <sup>2</sup>		
Biomass Boiler	43.4 m <sup>2</sup>	<b><u>Glasshouse</u></b>	
Biomass Fuel Store	36 m <sup>2</sup>	Glasshouse 1	105 m <sup>2</sup>
Sample Lab	19 m <sup>2</sup>	Glasshouse 2	105 m <sup>2</sup>
Autoclave	22 m <sup>2</sup>	Glasshouse 3	105 m <sup>2</sup>
Kardex	22 m <sup>2</sup>	Climate Change 1	26 m <sup>2</sup>
Freezer	25 m <sup>2</sup>	Climate Change 2	26 m <sup>2</sup>
		Climate Change 3	50 m <sup>2</sup>
		Imaging Suite	194 m <sup>2</sup>
		Imaging Operator	8 m <sup>2</sup>
<b><u>TOTAL</u></b>	<b><u>435.6 m<sup>2</sup></u></b>	<b><u>TOTAL</u></b>	<b><u>619 m<sup>2</sup></u></b>

## Steps Taken to Reduce Environmental Impact

Majority Dry Construction (excluding concrete frame)  
 Dependent on Contractor Initiatives (e.g. Considerate Contractor Scheme)

## Social or Economically Sustainable Measures

Further/ Higher Education Facility – leading to better education / great job prospect for student  
 University provides economic stimulus to the local economy of Aberystwyth.