

SECOND PHASE OF THE DARWIN CENTRE – ARCHITECTURAL CONCEPT

1. VISUALISING THE COLLECTION

Expressing a unique and appropriate architectural concept

The design of the second phase of the Darwin Centre project is characterised by a compelling and strong architectural concept in order to contain and represent vast entomological and botanical collections housed within the Natural History Museum.

The Cocoon

The solution to resolving the various Client requirements and to clearly symbolise the world class collection of specimens is the 'Cocoon', an architectural translation which forms the inner protective envelope.

The scale of the Cocoon form is such that it cannot be seen in its entirety from any one position. This emphasizes its massive scale. The shape and size give the visitor a tangible understanding of the volume of the collections contained within.

The collections housed in the Natural History Museum are among the world's most extensive and treasured. In order to adequately preserve, maintain and represent this collection, a structure suitable in both its expression and physical construction was necessary. The Cocoon does this by creating an icon, which represents preservation, protection and nature. It is constructed of 300mm thick walls, with a defined geometric form based on mathematical equations. The surface finish is ivory-coloured polished plaster, resembling a silk cocoon, in which a series of expansion joints wrap around, resembling silk threads.

2. RESPECTING THE SITE

Respecting the existing architectural heritage

The second phase of the Darwin Centre is intended to manage the difference in scale, architectural approach and to create a physical link between the original landmark Alfred Waterhouse Museum building and the more contemporary addition of the first phase of the Darwin Centre. It also serves as a landmark building in its own right, the full height glass wall partially revealing the solid 3-dimensional form of the cocoon within.

Bridging past, present and future

The second phase of the Darwin Centre improves and transforms the existing buildings into something more than the sum of its parts. The new building links existing and new buildings into a dialogue forming a set of dynamic, spatial experiences, bridging the past, present and future for the museum.

The smooth curved form of the immense cocoon is an iconic feature of the new Darwin Centre building and the public atrium space is dramatic, tall and filled with daylight.

The second phase of the Darwin Centre completes the western portion of the Natural History Museum estate, linking the existing buildings and enhancing and clarifying the circulation patterns within the museum for both staff and visitors.

3. MAXIMIZING ACCESS FOR ALL

Public access to the scientific core of the second phase of the Darwin Centre takes the form of a visitor route up and through the cocoon, overlooking the science and collection areas without compromising the central activities of protection, preservation and research.

Passing through the Cocoon, the visitor enters a new space where the boundaries between the inner and outer worlds of scientific research are blurred.

The visitor can experience the Darwin Centre as a compelling and interactive learning space, observing the scientific and research activities without interrupting scientific work in progress.

FACTS FILE

Client	Natural History Museum
Address	Cromwell Road, London, SW7
Area	16,000 m ² arranged across 8 floors
Development Cost	£78M
Competition	1st prize in international architectural competition 2001
Construction Completion	August 2008
Opening to Visitors	September 2009
Construction period	110 weeks (main contract)
Architect	C. F. Møller Architects; lead designer, partner and architect Anna Maria Indrio
Main Contractor	HBG Ltd
Project Manager	Manly Development Services
Structural Engineer	Arup
Services Engineer	Fulcrum Consulting
Cost Consultant	Turner and Townsend
Fire Engineer	FEDRA Buro Happold
Approved Inspector	AIS
Access Consultant	David Bonnett Associates
Acoustic Consultant	Sandy Brown Associates
CDM Co-ordinator	TPS Schal

Construction

Cocoon dimensions	60 metres long, 28 metres high, and 12 metres wide.
Cocoon Form	Load bearing 3 dimensional concrete form.
Cocoon Construction	Reinforced steel rods supporting woven mesh with sprayed concrete.
Cocoon Finish	Ivory-coloured polished plaster on insulation.
Façade	Ceramic frit double glazed curtain walling system.
Façade steelwork	Full height single span steel columns.
Roof	3 layer ETFE roof with fritted pattern.
Atrium Flooring	Portland Limestone

Principal Sub Contractors

Curtain Walling	Permasteelisa
Cocoon structure	Shotcrete
Cocoon Finish	Armourcoat
Steelwork	Watson Steel
Concrete Frame	Getjar
ETFE Roofing	Covertex Sevice
MEP Systems	Imtech Meica
Glazed Screens	Optima
Lifts	Thyssen Krupp