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CAMBRIDGE SOCIETY FOR THE APPLICATION OF  
RESEARCH

## 'Green Plants, and even Greener Buildings'

The new Interpretation Centre at the University's Botanic Garden

Professor John Parker

Director, University Botanic Garden, University of Cambridge

Monday 17<sup>th</sup> February, 2003: 7.30 p.m. - 9.00 p.m.

*The Wolfson Lecture Theatre, Churchill College, Cambridge*

(Note: transposed with Prof Martin Sweeting's Lecture,  
which will now take place on 3<sup>rd</sup> March)

**Chair:** Dr A J Munro, former Master of Christ's College and

President of the Cambridge Philosophical Society

**Vote of Thanks:**

Dr David Fyfe, CEO of Cambridge Display Technologies and member  
of CSAR Council

### About the Speaker:

Professor Parker studied at 'the Other Place', where they awarded him a first in botany and then a D.Phil in plant chromosome studies. He then became a Lecturer and later a Reader in Genetics, Queen Mary College, London for several years, before accepting a Chair in Botany and also the Head of Department at the University of Reading.

He became the Director of the University's Botanic Garden in 1996 and simultaneously Professor of Plant Cytogenetics at the University; positions which he holds today!

He is also Curator of the University Herbarium, Cambridge and a Professorial Fellow at St. Catharines College.

### Organising Secretary's Notes:

Professor Parker gives a very good lecture about anything botanical! He also gives a very good tour of his Botanic Garden (as those who joined the Autumn Colours tour a while ago will recall.

I imagine he delivers just a good a talk about his new building; by the way, they're looking for sponsors, so I shall pass a hat round at the end of the lecture!

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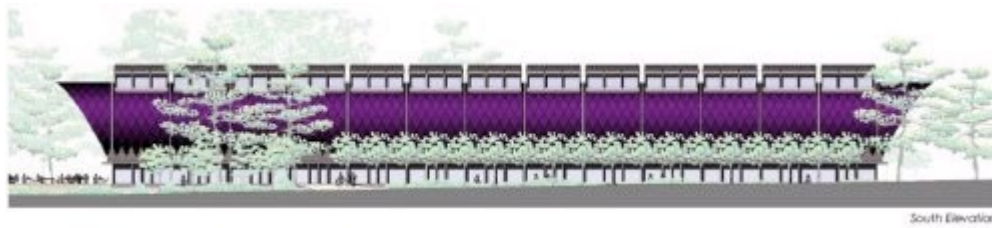
*The CSAR Council is chosen to represent leading scientists and technologies from academe and industry*

**Richard Freeman**

*CSAR Organising Secretary*

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## About the lecture:



## What is the new Interpretation Centre?

The Botanic Garden proposes to build a new Education and Interpretation Centre for the benefit of its increasing numbers of visitors. Its core objective is to encourage and inspire public interaction with the plant kingdom. Three key messages inform all current activity in horticulture and outreach at the Garden and have been the inspiration behind the concept, design, content and programming of the new Centre:

- that the diversity of the plant kingdom is the basis of all life on earth;
- that plants are beautiful and exciting organisms;
- that humankind must learn to use the earth's limited and fragile resources responsibly and sustainably.

The long-term survival of the planet depends on humankind minimising negative exploitation of its domain and instead developing a working partnership with the natural world. We believe the new Centre can play a unique and vital role in fostering this partnership through promoting and facilitating the understanding and enjoyment of the plant kingdom

## What's in the new Centre?

An ambitious and beautiful building, the new Education and Interpretation Centre will:

- Be the home of a dynamic and interactive exhibition called Plant Lab (working title) where visitors can gain all the guidance, information and inspiration they need to explore the plant kingdom through the living plant collections and landscapes of the Garden.
- Be a showcase for rarely-seen University collections such as Darwin's botanical specimens from the Galapagos through a state-of-the-art temporary exhibitions gallery
- Be a place of teaching and debate: a fully-accessible education facility including classrooms, lunch room, and outdoor workspaces will allow extension and diversification of the thriving Schools Service and adult Education Programme
- Be a hub for horticultural excellence and environmental debate through provision of a lecture theatre, seminar room and break-out space for professional development courses, conferences and a programme of public talks and lectures organised by the very active Friends organisation



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## Why is it a green building?

The Garden with its wonderful collections and beautiful landscapes is managed on a sustainable regime, and the new Centre must also practice what we preach. The design brief therefore specified that the Centre must be a landmark 'green' building that will itself contribute to the urgent search for sustainable solutions in our lives.

Particular solutions include:

- **Photovoltaic electricity generation:** Just like the leaves of a plant, the building will collect and convert the sun's energy, this time through photovoltaic cells rather than chlorophyll. It is estimated that this solar collection will meet all the building's annual electrical demand.
- **Thermal performance:** The thermal performance of the building envelope and glazing will exceed the new building regulations standards by some 20%. UK sheep's wool is the predominant insulation material.
- **Biomass heating:** The building will be heated with a boiler burning chipped willow, a CO2 neutral fuel source.
- **Rainwater recycling:** Rainwater will be collected from the roof, stored under ground in a rhizome-like structure, and used to flush the WCs and for dishwashing. The system will provide 80% of the projected annual water use.
- **Natural ventilation and lighting:** The building has a long and relatively narrow shape. This will achieve natural cross ventilation through a system of pores similar to the stoma of a leaf, and will allow natural lighting across the whole width of the structure.
- **Materials:** The building will be made largely of wood and glass. Glass walls will support a superb lamella wooden roof, a carbon-neutral material.

## Who's designed the new Centre?

The Design Team, led by London firm Edward Cullinan Architects, were appointed in September 2001 through competitive interview and delivered detailed outline proposals in April 2002.

The Design Team are:

**Client:** University of Cambridge for the Botanic Garden

**Architect and Lead Consultant:** [Edward Cullinan](#)

**Service Engineers:** [Max Fordham LLP](#)

**Structural Engineers:** [Buro Happold](#)

**Construction Cost Consultants:** [Gardiner & Theobald](#)