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- Expert help and extensive facilities - at no cost!

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Competition of Ideas

The UK Ministry of Defence (MOD) has launched a *Competition of Ideas*, 'COI'. With an initial budget of £10M per annum, COI aims to inspire the best innovators from across Britain to bid for a contract to develop their ideas further to help meet key defence challenges.

The MOD is interested in ideas from any UK supplier, industrial or academic, regardless of size, background or previous defence-related activity.

The COI website at www.ideas.mod.uk provides detailed information, the terms and conditions, and explains how to respond. To be considered in the first review of proposals, the MOD must receive submissions by 31 January 2007.

Network Group for Composites in Construction (NGCC)

NGCC Co-ordinator Sue Halliwell explains what the NGCC is, and what it's doing

(You can read Sue's [full NGCC article](#) on the NCN website)

The NGCC represents composites in the UK construction industry. Its membership covers all sectors of the industry, and activities include: dissemination of information and news; forums for collaboration and networking; and providing a central focus for those needing support within the industry.

Publications and events

NGCC publishes expert-reviewed Technical Sheets in the key areas of durability, recycling, repair, and predicting durability. These 4-6 page documents are available for members to download and use with their customers.

A quarterly newsletter is also published, showcasing members' products, technology advancements and research projects. This is available via free registration online at www.ngcc.org.uk

NGCC events for 2007 include:

- FRPs in conservation and restoration; 19 January; Portcullis House, London
- FRPs in architecture; February (date and venue to be confirmed)
- AGM (at ACIC 07 conference); 2 - 4 April; University of Bath
- FRP footbridges; 20 June; IStructE, London



Representing composites in construction in KTNs

NGCC represents composites in the construction industry within the UK government funded Knowledge Transfer Networks (KTNs), in particular the National Composites Network (NCN), Materials UK (MatUK) and the KTN for the Modern Built Environment.

Member organisations

NGCC membership covers all sectors of the construction and composite communities, including architects, engineers, specifiers, material suppliers, manufacturers, end-users, asset owners and academia.

Further information

For more information please visit the NGCC website at www.ngcc.org.uk - alternatively, e-mail ngcc@netcomposites.com

NCN case reviews show technical advantages and economic benefits

Case reviews highlighting opportunities from broader application of composite materials are now available from the NCN.

Case reviews complement the NCN's range of case studies, which illustrates how NCN technical support has enabled companies to solve problems and innovate using composites.

Taking potential applications within key industries, case reviews look at the technical advantages and projected economic benefits of using composites instead of, or in addition to, traditional materials.



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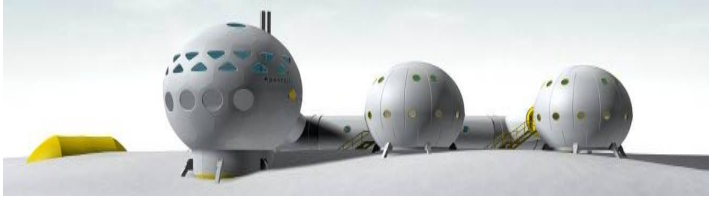
Two such case reviews have been produced by David Kendall of White Young Green Consulting Ltd:

- Fibre reinforced polymer composite bridges
- Fibre reinforced polymer composite buildings

. . . these are now available [on the NCN website](#).

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AVD Windcheetah develops advanced carbon fibre chassis

NCN technical support has enabled a British bike manufacturer to establish the viability of manufacturing a chassis from carbon fibre composite materials.

AVD Windcheetah Ltd designs, develops and manufactures the Windcheetah recumbent cycle here in the UK (this was originally designed by Mike Burrows, the designer behind the superbike that helped Chris Boardman win Olympic gold in 1992).

They currently manufacture three models, and top of the range cycle is the 'Hypersport'. The chassis for this lightweight version is currently manufactured from carbon fibre tubes and aluminum castings; it also incorporates numerous technically advanced features.

In the world of recumbent cycles, the Windcheetah is widely acknowledged as the best of its type and the company has received a Millennium product award, and a Windcheetah is currently on display at the Museum of Modern Art in New York.

Robert Dixon, company Managing Director, wished to explore the possibility of manufacturing the chassis as a single-piece moulding. To evaluate this, Robert turned to Composite Engineering, a design consultancy specialising in the design and development of advanced composite structures, for advice.



The Windcheetah 'Hypersport'

Cost-effective advanced carbon fibre chassis moulding technology

Composite Engineering helped secure support for an NCN *Technology Audit* followed by a *Feasibility Study*.

The company worked alongside AVD to develop the chassis design to allow it to be produced from carbon fibre composites as efficiently as possible and to enable volume production at relatively low cost.

A 3D CAD concept chassis was developed empirically from carbon fibre composites, and various manufacturing technologies were investigated, along with costings to assess design and manufacturing iterations.

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As part of the *Feasibility Study*, a final report was presented to Robert illustrating that a chassis produced from advanced carbon fibre materials, together with the chosen manufacturing route, presented not only a technologically exciting development but also a commercially-sound proposition.

The project is now working towards bringing this ground-breaking recumbent cycle chassis to market. To achieve this goal, Composites Engineering is working alongside Robert to enable the development of this new Windcheetah model.

Contact information

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JSAE Exhibition & Congress: an opportunity to promote your business in Japan

The Japan Society of Automotive Engineers (JSAE) *Automotive Engineering Exposition 2007* will take place in the Pacifico Exhibition Hall, Yokohama, 23 - 25 May. Sponsored by JSAE, this exhibition is held concurrently with the JSAE Annual Congress. This is the leading automotive engineering show in Asia and the main showcase for automotive technologies in this major market.

Participation in JSAE for UK companies is an opportunity to develop business interests, meet key management and technical decision makers, gain market intelligence on Japanese automotive developments, and demonstrate commitment to the Japanese market.

The British Embassy, together with the DTI and UKTI, are organising an exhibition stand at JSAE. The stand will be 'UK@JSAE', and the main theme 'Advanced Technologies for a Low Carbon Future'. If your company would like to take advantage of this please see [full details and application form](#) on the NCN website.

Material properties needed?

In the [Materials Innovation and Growth Team report](#), the importance of access to reliable, validated materials property and life cycle data was highlighted.

In preparation for a DTI workshop to discuss the detailed requirements, a short web-based survey of industry need is being conducted alongside an initial review of available data sources by the National Physical Laboratory (NPL).

If validated materials property data is important to you please enter your requirements on the [survey form](#).

Future events

- 2006 -

Workshop on energy materials - Defining R&D Priorities 24th November 2006, DTI Conference Centre, 1 Victoria Street, London

This is a key event for the recently formed *Energy Materials Working Group*. It will be of particular interest to those from R&D in the energy materials field; materials producers and suppliers; energy producers and users; strategy and technology managers; representatives of funding agencies; and policy makers. Further information at www.matuk.co.uk/energy.htm

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Inspection and Quality of Composites
30 November 2006, Delcam, Birmingham

Organised jointly by Delcam and the NCN, this half-day, cross-sectoral workshop will assess the current status of inspection techniques and associated technologies and implications for companies throughout the manufacturing supply-chain. For details of this free workshop see the [Delcam's website](#), or contact Hannah Stokes at Delcam UK: tel 0121 683 1041, e-mail xvhgs@delcam.com

Structural Ceramics Network meeting
14 December 2006, Rolls-Royce, Derby

Guest speaker at the 6th meeting of the EPSRC Structural Ceramics Network (SCERN) will be Professor Tony Evans of the University of California Santa Barbara. Open to all, there is no charge to attend. Contact Lynn Boniface l.boniface@surrey.ac.uk to book your place. Also see <http://portal.surrey.ac.uk/scern/meetings/>

- 2007 -

Annual Conference of the Northwest Composites Centre
17 January 2007, Manchester

The conference will feature reviews of long- and short-term research into composites and related topics. Full details soon on the Northwest Composites Centre's website at www.futurecomposites.org.uk

FRP materials in conservation and restoration
19 January 2007, Portcullis House, London

This NGCC event, organised in conjunction with the Parliamentary Estates group, will highlight challenges facing conservation and restoration projects and explore how FRP materials might meet requirements and provide cost-effective solutions. Registration details available shortly on the NGCC website at www.ngcc.org.uk

ACIC 07 - 3rd International Conference on Advanced Composites in Construction
2 - 4 April 2007, University of Bath

The aim of this conference is to encourage the presentation of new concepts, techniques and case studies, which will lead to greater exploitation of advanced polymer composites and FRP materials for the civil engineering infrastructure rehabilitation and renewal. Further information on the [conference web pages](#).

Deformation and Fracture of Composites (DFC9)
11-13 April 2007, Sheffield University

The conference focuses on research and development in the area of deformation, damage and fracture phenomena in polymer-based composite materials. Further information, including conference themes, is available at www.sheffield.ac.uk/materials/conferences/dfc9/index.html

Stretching the Endurance Boundary of Composite Materials: Pushing the Performance Limit of Composite Structures
23 - 28 September 2007, Island of Madeira, Portugal

This conference is for those interested in the development of modelling methods applied to predicting the atomistic, microscopic and macroscopic response of composite materials under stress and in hostile environments. The event focuses on the structural and functional properties of engineering composites and the sustainable high performance of components and structures.

Full details on the [conference website](#).

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FREE technical support from NCN

Your company can benefit from free tech support in any aspect of composite materials, design, manufacture or use. The NCN provides -

- Direct access to technologies, facilities and expertise
- FREE information and advice
- FREE consultancy/problem-solving services

All you have to do is contact the NCN Helpdesk: tel 01223 894 662 or e-mail info@ncn-uk.co.uk

As well as providing information, the Helpdesk sets up one-to-one consultations with experts and organises direct practical assistance through NCN's *Information*, *Diagnostics* and *Solutions* range of in-depth tech support services, summarised in a [printable leaflet](#) on the NCN website (www.ncn-uk.co.uk).

Registered NCN Members get in-depth information . . . and much more

Visitors to the NCN website will find a growing range of information, with the most in-depth items only available to Registered NCN Members.

NCN Membership is free of charge and helps you get the best out of NCN information and tech support.

Information on the NCN website at www.ncn-uk.co.uk now includes:

- News and forthcoming events
- NCN resources and technical supports services
- Working groups and trade missions
- Industry and technology roadmaps
- Case studies and guides to best practice
- Training and technology provider directories

NCN Membership also allows the NCN to distribute important information and news of key developments directly to Members.

When you become a Registered NCN Member, you'll become a member of the *Materials Knowledge Transfer Network* as well. This too is entirely free of charge and gives you, via its website, access to even more information on composites, as well as information on other materials.

[Register for Membership of the NCN](#) visit the [Materials Knowledge Transfer Network website](#)

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For information on any aspect of the National Composites Network please contact the NCN Helpdesk. Tel: 01223 894 662. Email: info@ncn-uk.co.uk Fax: 01223 891 284. Website: www.ncn-uk.co.uk

