

## DESIGN DIRECTIONS: PROJECTS 2005/06

### 24 HOUR LIVING

#### Background

We are rapidly becoming a truly 24-hour society, and as a result the pressures and habits of modern living constantly offer up new challenges and opportunities to the way we live our lives. Day-to-day activities, which have previously been constrained by the traditional working week and '9 to 5' mentality, are becoming more and more fluid and unimpeded: you can pop down to your local Tesco store at 3 in the morning; you can order films on demand from the comfort of your armchair; alcoholic consumption patterns may soon change as the government considers 24-hour licensing; you can visit 'Casualty Plus' to receive immediate medical advice & treatment 365 days of the year; you can watch 'EastEnders' on your MP4 as you travel on the tube to work - in fact you may not be going to work at all, as wireless technology now allows communication globally at any time and any place.

The list of 24-hour activities is endless. The formulaic archetype and previously accepted paradigm of 'work, rest & play' has been totally blown apart, resulting in radical changes in social behaviour which constantly exposes a diversity of new and exciting design challenges.

#### Brief - to design a product and/or service to suit a 24-hour lifestyle

This brief is open to all design disciplines, and the RSA is looking for a diverse range of solutions: a product, transportation, interior, fashion, service, multimedia, graphic or architectural solution – the choice is yours.

**(1)** Your first task is to create an engaging scenario, which maps out the relevant section of a 24-hour period of time. Create a storyboard, which clearly illustrates the key activities carried out either by a group or by an individual and highlight an insight or potential problem that can be addressed by a design solution.

Consider subjects such as domestic living, travel, social behaviour, time management, family values, stress, eating patterns, changing use of media etc that are, or could be, affected by 24-hour living patterns. Use appropriate research techniques to underpin your argument and then explain your particular insight by clearly writing down your 'big idea' in no more than 100 words.

**(2)** The second and main task is to find a design solution, which clearly addresses the problem or insight that you have uncovered.

#### Aims

- Uncover an insight through appropriate research methodologies
- Illustrate the insight with a single visual scenario board
- Translate your insight into a well thought through design proposition
- Clearly express that idea to the judging panel through your design boards

#### Guidelines

Your entry should deliver the following:

**24-hour scenario board (x 1)** You should illustrate your chosen 24-hour scenario in a single visual board, for example using a cartoon strip, photographic diary or mood/theme board techniques. This single A3 board should also contain your 'Big Idea' text (max. 100 words, sans serif

14pt) expressing your idea development from research to final designs, to help position your proposal and allow the jury to quickly understand your motivation

**Design solution boards (x 3 max.)** Visualise your design solution on no more than 3xA3 boards. Remember the judging panel must immediately understand design propositions. To support your argument, additional research can be evident on your design solution sheets i.e. photographs, interviews, questionnaires, desk research etc

### **Submission details**

Entries must comply with the following:

- A3 boards (max. 4) showing design development and final designs – see Guidelines
  - The Big Idea’ – a short, typewritten text (max. 100 words, sans serif, 14pt) expressing your idea development from research to final designs, to help position your proposal and allow the jury to quickly understand your motivation
  - any models or mock-ups should be submitted as photographs or print-outs mounted on A3 board (this can be in addition to the 4 design boards) – do not submit 3D work at this stage
  - one sketchbook only, related to the brief
  - all work (except sketchbooks) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging
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## **CAMPAIGNING BY DESIGN**

exploring ways to engage key audiences with issues of Climate Change and Global Warming

### **Context**

Climate change is no longer an environmental threat, but a reality. The arctic icecap and permafrost are melting, and people around the world are being hit by an increasingly disturbing number of lethal storms and floods, forest fires and fatal heat waves.

The stark fact is that the world today is the warmest that it has been for a millennium or more, and it is warming up faster than ever before. Three of the hottest days ever recorded have occurred in the last seven years alone.

This change, according to climatologists, is entirely due to what they term ‘human activity’. One of the primary causes of the global warming is the burning of fossil fuels, which releases billions of tonnes of carbon dioxide into the atmosphere each year. If the resulting ‘greenhouse effect’ – the trapping of radiation and manmade greenhouse gases in the earth’s lower atmosphere – continues at its current rate, we will increase the earth’s temperature by around 2 to 5 degrees. While that might not sound like much, such a change would be disastrous for the planet and everyone living on it. Global warming like that would put the earth’s temperature at double pre-industrial levels, and some warming is definitely going to happen: the exact degree will be determined by cycles involving melting ice, the oceans, water vapour, clouds and changes to vegetation.

Several other unpredictable changes are taking place as a result of global warming: some rivers are overflowing due to melting glaciers and rain, while others are evaporating altogether; some crops are growing faster, while others are being decimated by disease and drought; in some areas, water resources are disappearing so fast there is a danger it might spark physical conflict; coral reefs are being disturbed, reducing biodiversity and causing irreparable damage to a natural eco-system and

most of the species that live there can't migrate fast enough in response to the change in their environments and so many are dying.

As the oceans expand and the ice on land melts, sea levels are being markedly raised. Most worrying of all is the prospect that we could cause the irreversible melting of the Greenland ice sheet: an event that would cause a sea level rise of 6 metres, and would flood land occupied by billions of people.

At the Earth Summit in 1992, a gathering of the world's leaders met and pledged to stop climate change. The first move was made five years later, with the formation of the Kyoto Protocol in 1997. This will come into force this year, bringing with it modest reductions in emissions from industrialised nations. However, critics of Kyoto say that this is not nearly enough, and that developing nations will also have to join. Some observers, including the US administration, say that delaying taking action is justifiable because of scientific uncertainty about the pace of climate change. Despite warnings that they are underestimating the dangers, both the US and Australia have reneged on Kyoto.

*According to the IPCC (Intergovernmental Panel on Climate Change), the world needs to become more efficient about its energy use, and quickly. This means developing renewable non-carbon fuels, and developing 'clean' cars, using such fuel as hydrogen cells. There are other methods of sourcing clean energy currently under consideration, including an idea to 'mega-engineer' the planet with huge mirrors to reflect the rays of the sun, seeding the ocean with iron to grow algal blooms, and even a plan to bury greenhouse gasses below the sea.*

## **The Challenge**

### **Background**

Like many of the projects in Design Directions, *Campaigning by Design* seeks to encourage student designers to explore and occupy new territories for design and to view it as a process than can create connections, change attitudes and effect change rather than solely resulting in a physical end product. Designers have the ability to visualise and give life to radical ideas and solutions but too often they are invited to provide merely a 'quick fix', or short term solution; rarely do they have the opportunity to tackle a real need in depth. This brief offers a challenge and an opportunity to do just that.

Whilst there is a growing acceptance of the potential impact of human-generated climate change there has been limited action either at policy or individual level where the issue has still not 'seized the agenda'. There are potentially many new ways to improve and enliven the debate around this issue and to mobilise attention using an approach that is inclusive, de-mystified, relevant and engaging.

### **The Brief**

This project is not necessarily about devising a conventional advertising campaign, although this may be an element of a response.

Your response could possibly make innovative use of:  
new technology/new media/mobile technology;

it may be a short piece of film or animation;

It may be that your response is not primarily visual but a piece of written work – that is up to you (although if you opt for a written submission you should provide illustrations to demonstrate your response).

Whatever route you decide upon, we want engagement from across the disciplines:

- film/animation

- graphics or exhibition design;
- interior or product design;
- interactive media design;
- design management;
- new technology;

It is the approach and quality of thought that a design education provides that will trigger the truly creative, 'left-field' response to this project – using design thinking to help build connections and interaction. Whatever your approach, you need to provide a convincing and persuasive argument. This project is about the powerful and succinct communication of ideas.

You are asked to present proposals that you consider would both generate debate and highlight/communicate the issues of global warming and climate change to key audiences that would lead to positive action. For instance, how do you engage politicians and opinion formers seemingly unconvinced of the implications and, similarly, the media? How do you communicate it to a general public? In short, how does this environmental issue get translated into an important and pressing political issue?

You should examine and research the scientific information and arguments in this area – this is where the facts and evidence around the issue lies; also look at the counter claims so you have the full picture. You should also examine why the key messages related to this issue fail to have sufficient impact – is it lack of knowledge and understanding, denial or an unwillingness to make personal lifestyle changes?

How you approach this brief is up to you and do not let it necessarily be dictated by your usual working discipline. The important thing is to seize the opportunity offered here, whatever your discipline and to explore the three-dimensional, lateral elements inherent in this brief without the constraints of one that is more linear and prescriptive.

### Submission details

1. **A statement of creative strategy** – to accompany all types of project  
This is your big idea. It is essential and should be done whether you are proposing a 'product' or something more conceptual. It should be no more than 500 words
2. **Evidence of research** – including information about who you consulted and how this led to your strategy and proposal – this can be in sketchbook form and be a mix of visuals and words
3. **Realisation** – this is how your proposal tackles the issue and can be presented in the form most appropriate to your chosen solution. For example the options might be:
  - 6 A3 boards
  - a running demo on a CD-ROM or other digital medium. The resulting designs/products should be entirely self contained (that is, should be self playing and, if necessary, self-decompressing without special software). Consider that your presentation will not necessarily be shown on a machine the same as that on which it was created. Your work will be shown to the jury on an Apple all-white ibook or a PC; specify on which your disc should be used clearly on the disc. Application software should be Macromedia Director (or popular alternative), and should be able to be viewed using Flash Player, Shockwave Player, Quicktime 4 or 5, or Adobe Acrobat
  - Video (VHS) or DVD

### Designing the Future

The RSA's Design Directions scheme aims to encourage the development of appropriately skilled and capable designers that are equipped to respond to the changing world. For this reason we try to ensure that our projects demonstrate a contribution to economic, social, ethical and environmental sustainability. All students are asked to consider these elements when developing their solutions. For example, do proposed solutions take account of diminishing natural resources

and climate change? Do they encourage behaviours and lifestyles that reduce waste of all kinds? Do they contribute to the inclusion of all members of society? Do they take account of the need to be accessible? Designers have an important role to play in achieving these aims so students are asked to take account of these issues in responding to any Design Directions project.

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## CERAMIC FUTURES

This project aims to encourage the exploration of the potential of ceramic material by students of all disciplines

### Background

Ceramics has a diverse and rich heritage, claiming both the oldest recorded products created by humans and a contemporary industry that is vigorous and competitive. The UK ceramic industry is reliant for the retention of its position in world markets upon the development of quality products based upon appropriate design style, advanced manufacturing techniques, superior materials ingenuity and a high degree of craft skills and know how. The properties of ceramic<sup>1</sup> have led to the manufacture of a wide range of products and applications from the obvious tiles and tableware, sanitary ware and garden products, to the less apparent achieved using technical high spec ceramics in architectural applications, for instance.

### Brief

The following two options offer opportunities for designers across the disciplines as well as for those concerned solely with ceramics. The first is an exciting opportunity to engage with the material in order to explore entirely new product possibilities. The second encourages the exploration of bone china as a ceramic medium (your chosen option should be clearly stated on your submission, both on each RSA label alongside the project number and on the front of your boards).

**Option 1 – No boundaries:** Traditionally few designers from, for instance, fashion and the high technology industries engage with what are regarded as craft materials. This brief encourages student designers from *any* design discipline (e.g. architecture, engineering, product, fashion, graphics, interiors) to explore new product possibilities for ceramic materials. You are asked to imagine that the material has just been discovered and you are exploiting its potential as viewed from your own discipline. Ceramic materials might enhance your own field or you may wish to enter the world of ceramic production with solutions informed by your own discipline. These might include the transfer of techniques and material qualities from your own field into that of ceramics.

### OR

**Option 2 – The maker and industry:** Bone china was developed in England in the 19<sup>th</sup> century as a result of trying to produce porcelain emulating products from the Far East and continental Europe. The clay body consists of 50% bone ash which gives it its translucency and hard, durable characteristics.

The UK industry today is synonymous with the finest bone china product and is still held in the highest esteem as the prestige material for ceramic products.

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<sup>1</sup> \*Properties of ceramic material include: Wear Resistance and Hardness; Anti Corrosion or rust protection; Thermal Barrier; Electrical Conductivity; Catalyst; Decorative effect; Biocompatibility; Vibration and Noise Reduction; Reflector; Superconductivity and Ionic Conductivity; Translucency; Organic; High tensile strength; Chemically Inert; Elasticity in forming

Those with an intimate knowledge of the craft of ceramics are invited to think like a designer whilst practising as a maker to create, develop and illustrate new forms and (or) surface decoration using bone china as the medium. Use your creative skills and individual aesthetic to experiment and create the new. We would encourage makers to discard preconceptions of industrially produced ceramics: perhaps now, more than ever, industry is far less conventional than you might think.

You may use whatever forming techniques best suited to demonstrate your proposals. However you may find slipcasting to be the most sympathetic method of forming your final design.

PLEASE NOTE: Items created for the gallery environment and without the potential to be used or adapted for production will not be considered.

You are encouraged to consult the following website for further information on ceramic production: [www.designerstoolkit.co.uk](http://www.designerstoolkit.co.uk) password: cobden

### **Market**

Some new products fulfil a need – others create their own market. State where you think the market lies for your ‘product’. Your ideas maybe about function alternatively they may be simply objects of desire and beauty.

### **Aim**

To encourage the exploration and exploitation of the applications and aesthetic of ceramic material

### **Submission details**

Entries must comply with the following:

- A3 boards (max. 4) showing visual research material, design development and final designs (including a drawing or photograph of final product, where applicable)
- a short typewritten statement (max. 400 words, sans serif, 14pt) expressing idea development from research to final designs, to help communicate your proposal
- maximum of one sketchbook only, related to the brief
- all work (except the sketch book) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit and in the interest of the safety of the handlers. It will also ensure that your work can be displayed for judging
- DO NOT SEND ceramic sample(s); shortlisted candidates will be asked to bring these to interview

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## DESIGN FOR DEBATE: INTELLIGENT INFRASTRUCTURE SYSTEMS

Exploring a role for design as a medium for public debate

### Context

When technology is developing as rapidly as it is now, reflection and criticism are particularly important. We need to consider alternative visions to those put forward by industry. Design, being accessible, contemporary and part of popular culture, is perfectly positioned to perform this role. It is a mediator between consumer and corporation.

In order to achieve this, however, some significant shifts need to occur. We need to develop a parallel design activity that questions and challenges industrial agendas.

Design that asks carefully crafted questions and makes us think, is just as difficult and just as important as design that solves problems or finds answers. There is a place for a form of design that questions the cultural, social and ethical implications of emerging technologies. It can help us to define the most desirable futures and avoid the least desirable.

### Brief

Each year this brief focuses on the social, cultural and ethical impact of a different technology. **This year the project will focus on the infrastructure employed in the movement of goods and people and on alternatives to mass movement. It will look at the future of transportation systems and the applications of information technologies and infrastructure to them.**

### The task

You are asked to use design as a medium to draw attention to the social, cultural and ethical implications of the application of Intelligent Infrastructure Systems to the mass-transportation of people, goods and animals.

Intelligent Infrastructure Systems are aware of their environment, are responsive and adaptive, and collect and transmit information to and from intelligent nodes.

### The brief has two options:

Option 1: Hopes (in an ideal world)

Option 2: Fears (a cautionary tale)

Whichever you choose it should be presented in a way that will stimulate debate and discussion.

### Issues to keep in mind:

- Do we have a right to travel when we please?
- Is there such a thing as responsible travel?
- If so, what is it and who decides?
- How do we balance individual rights with social responsibility?
- What if we could travel less but faster?
- Can we reduce the need to move people, animals and goods around?
- How do we monitor traffic flow while safeguarding individual privacy?
- What alternatives are there to transporting people, animals, and goods -- nomadic communities, telematic communities, isolated communities, self-sufficiency?

Remember, this brief is not about predicting the future, but exploring *different* futures -- both good and bad -- so that they can be discussed before they happen and the public can ask for the future it

wants.

### **Audience**

The target audience is the public, designers, industry researchers and policy makers.

### **Aims**

- To provide an opportunity for students to explore a different role for design -- as a provocation for public debate.
- To enable students to familiarise themselves with issues surrounding state of the art technology

### **Guidelines**

Stay clear of science fiction. Base your proposals on technologies already under development. Develop social fictions rather than science fictions.

### **Submission details**

Research: In no more than 400 words, present an illustrated summary of the research you have done into the hopes *or* fears for the area you have chosen to explore.

Hypothesis: a short scene setter backed up by factual evidence. This could be in the form of an *Imagine if...* or *what if...* statement or question

Product proposal: maximum of 4 A3 boards plus one sketchbook. Bear in mind the purpose of the proposal is to stimulate debate on a specific issue or implication, so the style of the presentation should reflect this (eg advertising campaign, manifesto, company catalogue, newspaper article, etc)

All work (except the sketch book) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interest of students to ensure the safety of their work whilst in storage and transit and in the interest of the safety of the handlers. It will also ensure that your work can be displayed for judging.

### **References**

<http://www.transportresearch.org.uk/transcripts.htm>

[http://www.ecoplan.org/wtpp/wt\\_index.htm](http://www.ecoplan.org/wtpp/wt_index.htm)

<http://www.culturewars.org.uk/2003-02/mobility.htm>

<http://www.speedlimit.org.uk/drivingroads.html>

<http://web.mit.edu/its/pressclips.html>

<http://news.bbc.co.uk/1/hi/health/3603439.stm#map>

[http://www.dft.gov.uk/stellent/groups/dft\\_about/documents/divisionhomepage/031259.hcsp](http://www.dft.gov.uk/stellent/groups/dft_about/documents/divisionhomepage/031259.hcsp)

[http://www.dft.gov.uk/stellent/groups/dft\\_rdsafety/documents/page/dft\\_rdsafety\\_508107.hcsp](http://www.dft.gov.uk/stellent/groups/dft_rdsafety/documents/page/dft_rdsafety_508107.hcsp)

### **Designing the Future**

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## DESIGNING FOR EMERGENCIES

Secondary uses for tin-plated steel/aluminium food containers

### Introduction

Natural disaster strikes. People and their communities suddenly become highly vulnerable. The usual modes of infrastructure, communications, and supply chains collapse. Resources are scarce or non-existent. Aid agencies respond by coordinating relief, the priorities being the saving and preserving of life, disease prevention, shelter, and ensuring the distribution of clean water and food.

In the recent Asian earthquake and tsunami, the death toll would have been far worse had it not been for the ability to deliver food in near indestructible containers produced by the canned food industry. One phenomenon that didn't happen was the spike in deaths from disease and starvation. Canned foods, in containers that weathered the initial disaster as well as packages delivered during the two weeks afterwards, played a major role in averting this feared secondary disaster. The can has been the aid agencies delivery package of choice, given its sturdiness, reliability and versatility. Cans have also been popular with many government agencies and relief groups because they can absorb the impact of being dropped from above or being jostled in the back of trucks. They don't need to be refrigerated, they can be collected and stored and should they get wet, this is no problem.

### The Design Challenge

Any aid response must strengthen the ability of the local communities to deal with the situation and to assist in their longer-term recovery. Your design challenge is to further extend the already proven role and value of metal food containers in disaster situations by developing new designs that could offer more than purely the containment of food.

Metal containers, either tin-plated steel or aluminium, are ideal as they are:

- easy to manufacture and distribute
- cost effective in high production volumes
- durable, able to withstand harsh handling conditions
- can be stored in ambient conditions and have a long shelf-life
- can take printed instructions
- made from recyclable material

**and**

- they can be simple to open

Your designs should acknowledge and exploit the properties and strengths of the material.

However, metal food containers have a greater, unrealised potential that could, if re-designed, allow for multi-purpose use. Your challenge is to develop new concepts for metal food containers – appropriate to the scenarios encountered in natural disasters – that would have secondary use value to people in these devastated communities. For example, although used primarily as a food containers/delivery packages, they could then be used as utensils, storage or tools. These are just examples – your research should lead you to develop other possibilities.

### Submission details

WE LIKE TO ENCOURAGE, WHERE POSSIBLE, MULTIDISCIPLINARY TEAM ENTRIES FROM A COMBINATION OF DESIGN AND OTHER RELEVANT AREAS (E.G. HEALTHCARE, ENGINEERING, VISUAL COMMUNICATION, PACKAGING, AND PRODUCTION TECHNOLOGIES). WHILE WE REALISE THE INHERENT DIFFICULTIES OF MULTI-DISCIPLINARY ENTRIES, INDIVIDUAL ENTRIES ARE WELCOME BUT CONSULTATIONS WITH

## REPRESENTATIVES OF OTHER RELEVANT DISCIPLINES SHOULD BE SOUGHT WHERE POSSIBLE.

You may respond to this challenge taking any approach, as long as you have clearly identified the problem through your research. The needs of all the users in the process must be clearly understood and the sources of your research and consultations should be clearly stated.

Your flat work submission must include a single A4 typed sheet of no more than 500 words, outlining your proposal, how you identified it, and what your design delivers for the end users.

You should also include:

1. research showing how you have developed an understanding of the disaster scenario and the requirements of the end users and communities, who you have consulted, how this was done, and how it helped you understand the relevant design issues,
2. evidence of your research and understanding of the suitability of the properties of the material and production technologies for the conditions and uses envisaged,
3. evidence of working or consultation with other disciplines as part of your research and concept development,
4. how your proposed design would be used in each of its primary, secondary, and possibly tertiary uses through visualisations and scenarios of use, which illustrate how its features respond to the demanding conditions, addressing such issues as, e.g., ease of opening, ergonomics, limited or no access to tools, temporary existence, etc.,
5. documentation of how your concept has been evaluated and how this improves on existing solutions.

The flatwork should be submitted on lightweight card (max 5 boards, size A3) and accompanied by no more than 3 sketchbooks/reports.

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## **DESIGN FOR PATIENT SAFETY**

The Perfect Patient Room: Re-thinking ward environments as a key area of patient care and safety

Five years ago a report<sup>2</sup> from an expert group, led by Sir Liam Donaldson, Chief Medical Officer, proposed the introduction of a new national system for identifying patient safety incidents, that would act to reduce risk and prevent similar events occurring in future. The government accepted all the report's proposals and recommendations, leading to the formation of the National Patient

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<sup>2</sup> Department of Health Expert Group, Chairman Chief Medical Officer, *An Organisation with a Memory – Report of an expert group on learning from adverse events in the NHS*, Department of Health 2000 [www.dh.gov.uk](http://www.dh.gov.uk) See additional resource page for full link.

Safety Agency in 2001 (NPSA) [www.npsa.nhs.uk](http://www.npsa.nhs.uk). This project is a collaboration between the RSA with the NPSA encouraging students to explore how design-led strategies can have a positive impact on the delivery of an efficient health service that places the safety and fast recovery of its patients at the centre of its operation.

## Overview

The development of strategies for patient safety and the reduction in medical errors are two of the key issues in the delivery of healthcare systems. Mistakes – results of human error or systemic failure – can lead to unnecessary harm and suffering caused to patients and even, at worst, the tragic loss of life. Preliminary research carried out in England indicates that as many as 10% of all patients treated by hospitals experience some kind of safety incident. Six per cent of these result in permanent impairment and eight per cent in fatality. As many as 50% of the latter are believed to be avoidable; that is an estimated 34,000 preventable deaths annually.<sup>3</sup> Moreover, the knock-on effects on staff working in the healthcare system, not to mention the financial cost, further increases the need to improve all aspects of patient safety.

Many errors result when the role of the user is not taken into account in the design of tasks and systems and when the designer does not understand the system within which new or old objects are placed. An over reliance on memory, a lack of standardisation or the lack of availability of information can lead to situations in which mistakes are more likely to happen. For instance if the purposes of a system or process are not properly understood or clearly communicated to the user then this could lead to a breakdown in the system, resulting in what could be a life threatening error. The fact that there are an overwhelming number of machines used in hospitals with perhaps too few people being familiar with their use could lead to drugs being wrongly administered. Other examples range from surgery at the wrong site to infection control and medication dispensing errors – the scope for mistakes to occur is wide.

## A role for design?

Having insights into the ways that people live and work is at the centre of what designers do – whether they are designing a product, service or an environment – knowing the user is key.

Design is a process that can create connections and effect change. Designers have the ability to visualise and give life to radical ideas and solutions. It is therefore clear that these skills could have a valuable and vital role in identifying and improving patient safety in a variety of contexts. Patient safety issues receive high media attention for example healthcare acquired infection, surgical mistakes and fatalities as a result of major clinical errors. These are all highly important issues and extra consideration of seemingly routine or mundane factors can have a positive impact in the delivery of a safe and efficient health service.

The potential of a design-led approach to help prevent medical accidents across the NHS was explored in a study<sup>4</sup> commissioned jointly by the Department of Health and the Design Council and carried out by a team of researchers from the Universities of Cambridge and Surrey and the Royal College of Art. This study should form part of your background reading for this project.

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<sup>3</sup> C. Vincent, G. Neale, M. Woloshynowych, *Adverse Events in British Hospitals: Preliminary Retrospective Record Review*, BMJ 2001 322: 517-9

<sup>4</sup> Universities of Cambridge and Surrey, Royal College of Art, *Design for Patient Safety*, Department of Health, Design Council, 2003. See additional resource page for further information and web link.

## **The Challenge**

### **Background**

There is a major programme of investment and reform taking place in the NHS to re-design care around the patient and to address the structures and processes that prevent this from happening. Central to this is the biggest new hospital building programme in the history of the NHS, allowing the design of an infrastructure that focuses on high quality patient care and allows for the development of patient environments that aid safe and secure recovery and rehabilitation.

Good design can optimise the best ways of treating and caring for patients and hospital wards have an important role in this. Hospital ward environments, through their traditional layout and design, often reduce patient comfort and dignity, clinical efficiency and, importantly, the safety of the patients. For example, it is often the case that the nursing observation station will be located at the far end of the ward, reducing clear observation of patients on the ward. Usually hand washing facilities for use by nurses and other clinical staff are also located at either end of a ward making it awkward and time consuming to hand-wash after every patient contact.

Patients themselves can be close together, not allowing for any degree of privacy and making the administration of medication and other bedside treatments difficult and therefore prone to error. The lack of privacy means that patient visiting times have to be limited to take account of other patients when in fact, in a different environment, the presence of family and friends could have a positive impact on the recovery rate of the patient as well as easing pressure on medical staff as they can assist with social support etc.

Part of this huge rebuilding programme is a minimum government recommendation of 50% single room occupancy, more en-suite facilities and more 'sympathetic' environments that emphasise dignity, privacy and well being. There are other considerations to factor into this also. For instance, a growing body of evidence on positive distractions as an aid to recovery such as direct sunlight, views of nature, social interaction and art work; infection control and the benefit of single rooms; research that suggests the hospital bed is the least safe place for recovery (risk of bed sore, reduced circulation, boredom etc); the reduction of patient stress when noise and other interference is reduced. There is a huge amount to consider in re-thinking this area and a danger that the needs of the key users: the patient and the care providers might become overshadowed when in fact they sit squarely in the centre of this challenge.

### **Brief**

You are asked to challenge the traditional paradigm of the ward environment and to examine how things could be planned differently. How could all the elements that give rise to difficulty and discomfort (and that can compromise safety and well-being) to both patient and care provider be addressed by a radical re-think of how patient accommodation is arranged? How could more innovative ward design – based on the principle of single rooms (this is what the NPSA recommends to Trusts) – improve the way the care environment operates and enhance patient security? How could their design address many of the issues but still be flexible enough to cope with changing patient expectations, new treatments and medical advances in the years ahead?

You are asked to start with a clean slate: a ward environment for a new hospital which is based on single patient rooms, not a re-design of an existing hospital ward, where the safety, dignity and recovery of the patient and the ability of staff to facilitate this are central.

### **Submission details**

Entries must comply with the following:

- A3 presentation boards (max 5) showing an outline of your approach with one board as a developed plan of the scheme
- A short typewritten report (max 400 words, sans serif, 14pt) expressing idea development from research to final designs, to help communicate your proposal.
- A further typewritten list of bullet points (sans serif, 14pt) detailing the principal benefits of your design
- One sketchbook only containing drawings and ideas illustrating the development of your design
- All work (except sketchbooks) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal wood or Perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging.
- A CD containing images of your presentation boards (not sketchbook).

### **Designing the Future**

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## **DESIGNING OUT WASTE IN SPECIFIC ENVIRONMENTS**

### **The Context**

As an organisation the RSA has an agenda that informs all its work. This agenda – or manifesto – has five key strands (go to <http://www.rsa.org.uk/projects/index.asp> to find out more), one of which promotes the need for society to develop mutually reinforcing policies, products, technologies, behaviours and lifestyle that reduce waste of all kinds. The RSA sees an important role for design and design strategies to be used to reduce waste and help achieve this ideal.

### **Ideal or necessity?**

There is an ever increasing demand for raw materials, resulting in devastating effects on the world's natural resources and its supplies of non-renewable energy. Landfill sites, the usual repositories of the bulk of our waste, are becoming scarce, leading to the need to transport waste over long distances – with additional economic and environmental cost. These sites can also be responsible for the release of carbon dioxide as well as methane formed by the action of bacteria on biodegradable waste under anaerobic conditions, which contributes to global warming. Equally, incineration and even badly planned recycling or reuse schemes can cause problems of their own.

Indeed, it can be argued that processes and products should be designed for overall resource-efficiency, within a broad, informed context of disposal options, including the minimisation of the waste generated. Waste reduction therefore has environmental and economical benefits, both to society as a whole and to business.

### **Waste reduction**

To help overcome these problems it is necessary to minimise waste at source as well as during consumption/disposal. There is also a need to consider the systematic prevention or reduction in the use of raw materials, water and energy, and the re-use and recycling of waste.

This project offers students from *all* disciplines – from graphic and fashion design, to design management, product and interior design – the opportunity to research and analyse these concerns and to apply their skills and knowledge of the design process to suggest strategies for meaningful intervention and solution. Collaborations with students from other disciplines e.g. business studies, cultural studies, psychology, engineering are encouraged. You are advised to read the brief carefully before you begin developing your ideas.

### **The Brief**

With rising population densities, expanding levels of consumption and pressure on local authority budgets, keeping the environment free of discarded rubbish is a perpetual challenge. From abandoned cars to unwanted packaging the range of detritus is almost infinite. The effects of abandoned waste can vary from simple negative visual impact, to profound health and safety issues. At an extreme level, they can contribute to urban decay, falling property prices, depressed communities and reduced investment.

It is also notable that waste problems are not static, new forms and new challenges are constantly arising. Current examples include: the rapid increase in fast food outlets with attendant litter problems, the increased and costly discarding of chewing gum in city streets, the detritus associated with large public events, the arrival of free tabloid newspapers, the serious problem of fly-tipping, the used computer mountain, the particular problems associated with tourism and the removal of litter bins in many public spaces on security grounds.

In the UK, local authorities are duty bound to address the problem and provide the necessary resources for cleaning up. Yet it is clear that this cannot be entirely successful without the active support of the wider community and in the long term, reducing our growing waste mountains. The problem is bi-polar given that if less waste is produced or discarded in a sustainable way, there would be less need to clean up, with a consequent cost saving for the wider community. In this scenario the individual citizen and the professional designer both have much to offer in alleviating some of the current barriers to effective waste reduction or removal, by environmentally sensitive means.

### **What are we asking you to do?**

Design is a process that can create connections, change attitudes and effect change and designers have the ability to visualise and give life to radical ideas and solutions. Too often, though, designers are invited to provide merely a 'quick fix', or short term solution, rarely do they have the opportunity to tackle a real need in depth, to step back and adopt a broader 'systems' or holistic approach, change attitudes or to engage the wider public as part of the solution. This project offers you this opportunity and invites you to address a particularly challenging aspect of public hygiene and to develop a sustainable solution or strategy, setting your design proposal in a wider social, environmental or cultural context.

### **Location**

The problem of discarded waste can vary enormously according to geographical location. In cities it can be highly visible and intrusive, in rural areas it is often hidden from view but can be harmful to wildlife and in rivers, lakes and by the sea the problem is frequently highly mobile. You are therefore asked to identify a specific environment for your project from the following:

- a. **Urban**
- b. **Rural**
- c. **Water – lakes, rivers and the sea**
- d. **London specific**

Your choice should provide a significant context for your proposal – please state your option clearly on your entry

### **Different ways of designing**

Participants can be from **any** discipline and may work singly or as multi-disciplinary teams. The important thing is not to let conventional practice hamper creative thinking. Your design work can address a variety of issues associated with environmental hygiene and may involve:

- encouraging a personal responsibility for the cleanliness of the environment – bearing in mind that there will be a more positive response from some members of the community than others. What might encourage the majority of people, of all ages, to take a personal responsibility? How will you communicate this?
- designing out waste – How might discarded waste be reduced by strategic design at the pre-production stage?
- changing attitudes to waste – what would raise environmental awareness and help change the often care-less attitudes that can exist?
- developing new methods of waste reduction, recycling or reusing – which stages of the design, production and consumption process might be most appropriate for this? .
- involving different community groups or individuals in the discarded waste disposal process. e.g. the elderly, children and the socially disadvantaged. – How might we encourage a new enthusiasm for what has traditionally been seen as a chore or someone else's responsibility?
- Involving business and public institutions in different ways as part of the clean up - also schools, hospitals, councils, churches etc. – How might such institutions derive new benefits from this?

### **The submission**

It may be that your response is not primarily visual but a piece of written work – that is up to you. Either way, you need to provide a convincing and persuasive argument. Remember that your entry, as well as being the vehicle by which your work will be judged, may also form part of an exhibition. For both, the communication of ideas powerfully and succinctly is absolutely vital; even if you opt for a written submission you should provide illustrations to demonstrate your response.

How you approach this is up to you; the important thing is to seize the opportunity offered here, whatever your discipline and to explore the two-, three- or even four-dimensional (i.e. time-based), lateral opportunities inherent in this brief without the constraints of one that is more linear and prescriptive.

The varied forms your design proposal might take reflect the breadth of the brief – you should submit work under the following headings:

### **The Design Proposal**

This is a *statement of creative strategy* – to accompany all types of project. This is your big idea. It is essential that it should be no more than one side of A4 and should state the approach you have taken to the brief and why.

### **Evidence of research**

This should include any information about who or what sources you consulted and how this led to your strategy and proposal – this can be in sketchbook form and be a mix of visuals and words.

### **Realisation**

This is how your proposal tackles the issue and can be presented in the form most appropriate to your chosen solution. For example the options might be:

- 6 A3 boards
- a running demo on a CD-ROM or other digital medium. The resulting designs/products should be entirely self-contained (that is, should be self playing and, if necessary, self-decompressing without special software). Consider that your presentation will not necessarily be displayed on hardware identical to your own. Your work will be shown to the jury on an Apple all-white ibook or a PC so indicate clearly on your disc which system is appropriate. Application software should be Macromedia Director (or popular alternative), and should be capable of being viewed using Flash Player, Shockwave Player, Quicktime 4 or 5, or Adobe Acrobat.
- Video (VHS) or DVD

### **Designing the Future**

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## **FASHION**

English Romantics

### **Background**

“English romantics is a look acknowledged worldwide, quintessentially English, going back to Edwardian country living, a softly feminine romanticism, reminiscent of Deborah Turbeville's grainy, atmospheric photos and the gentle but enigmatic work of Sarah Moon”

Colin McDowell, Sunday Times Style Magazine. 27 March 2005

Last season you found the most exquisite vintage garment, pretty, beautifully cut and utterly romantic and it inspired you to base your entire Spring / Summer collection on it. Your collection sold so well that you realise that you must continue using this lucky garment as inspiration for your next collection.

However you have been commissioned to design, for Winter 2006, a fashion range for an important accessory retailer, so your collection must also include design accessories to complement your garments.

## **Brief**

Your brief is to research this inspirational romantic garment, choosing it for its cut, wonderful fabric or beautiful colour then design and draw one garment from this Summer collection. This is the garment that sold so well and on which you are basing your Winter collection. The collection is for either men or women and will consist of 4 outfits and must include design accessories.

## **Guidelines**

The jury will be looking for work that answers the brief, together with clear and precise presentation sheets with instant impact.

The brief is about taking a researched garment and using it to inspire innovative new designs and then developing the ideas to design the next collection based on the 'best sellers'.

Two sheets of work to be submitted on A2 light weight card.

One sketchbook relating to the project and containing first thoughts and original work.

## **Market**

The market you are designing for should be international, directional and cutting edge.

## **Aims**

- to show you are an excellent and creative designer through your forward thinking collection of extremely beautiful, wearable and innovative garments
- to show your ability to research a project and use the findings constructively
- to show your awareness of cloth manufacturers' products by choosing fabric suitable for your collection
- to present the finished boards cleanly, clearly and professionally

## **Submission details**

Entries must comply with the following:

- two sheets of work, each to be submitted on A2 lightweight card
- one sketchbook relating to the project and containing first thought and original work
- the style and quality should be of a professional standard, with clear illustrations, not elaborately packaged; your designs and fabric swatches should be the most important items on the page
- work should be submitted in a format and scale that shows the items to their best advantage

### Sheet 1 – Ideas Board

- this ideas board should show drawings or photos of the original vintage garment with details of why it was chosen, fabric swatches and preliminary rough drawings in colour for the one Spring / Summer design and the 4 outfits for Winter 2006 together with idea development for the design accessories, photos of toile ideas in progress, fabric sourcing information including price, name and country of origin of the fabric supplier

### Sheet 2 – Presentation Board

- this board should say everything about your collection and express every point you wish to present and must include the inspirational garment, clearly illustrated drawings of the one Summer outfit and a line up of the 4 designs plus the design accessories for the Winter collection which are based on the Summer collection, all in colour, plus fabric swatches, back views, design details and written descriptions of the garments
- all work should be secured properly and easy to handle
- if you are short listed for interview you will be expected to bring a toile or garment with you; do not submit it at the first stage

- all work (except sketch books) should be submitted on lightweight card and everything should carry an RSA label on the back: do not submit work in plastic sleeves or other folders, or on foam, metal, wood or Perspex board, or in boxes: these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure it can be displayed for judging.

### **Designing the Future**

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## **FASHION INTERIORS**

### **Background**

New materials, technological advances and innovative attitudes have resulted in the breaking down of the 'edges' between fashion and furnishing textiles, resulting in a synthesis of the better and more exciting elements of both areas. To reflect this, the new project has been renamed 'Fashion Interiors'. The jury therefore welcomes submissions from all forward thinking students interested in fabric innovation through fabrication and imagery.

You should focus on the living space creating an overall concept/look appropriate to the lifestyle and environment. Place an emphasis upon curtains, hangings and upholstery, with additional consideration of accessories such as cushions, rugs, throws, lampshades etc. It is important to remember that the scale of fabrics should reflect the space and purpose for their end product.

### **Brief**

#### **Option 1: Off the beaten track**

##### **INFLUENCES**

The power of the elements, global warming and the fragile nature of the world ecology are all issues which both inspire and inform this theme. Stirred by conscience and recent world events, consumers are increasingly looking for 'inner wealth' through a rediscovered concern for nature in the great outdoors. From the 'beautiful chaos' of a walk in the woods to vast panoramas. The calm of long horizons of sky, sand, mountains and oceans. The fragile geometry of ice crystals and snowflakes, delicate tracery florals, intricate spider's webs abstracted through fractals, frozen in time? Botanical drawings and photograms (a photographic print made without a camera by placing objects on a light-sensitive surface and exposing them to light) with a new twist, perhaps reinvented, leaving the trappings of naturalism behind through the use of new technologies?

##### **COLOUR**

From tiny pebbles and stones on a beach to the vast ice chasms of the inner earth and arid spectacles of deserts and canyons at twilight and sunrise, a sense of harmony and delicate aesthetic

balance reflect the choice of colour. Sophisticated and shadowy shades display a timeless, diffused sense of stillness and silence.

## **Option 2: Tropical fusions**

### **INFLUENCES**

This theme takes its energy and inspiration from the rainforest, where forces of nature are continually morphing exotic flora and fauna mysteriously into new species and fusions. This is further influenced by biological phenomena, related to climatic conditions, man made and otherwise, resulting in flowering, breeding and migration patterns previously unknown to mankind. The theme need not be geographically confined and can encompass 'fusions and morphing' of many cultures. Colourful Bedouin caravans can still drift through rainforests with kingfishers, butterflies and exotic animals existing in a virtual world. Tropical can still be exotic and sensual. Conversational imagery such as Cuba, Havana, Brazil, exotic fruits, birds, animals, lagoons etc. are both acceptable and to be encouraged but must transcend the cliché.

### **COLOUR**

This is a brighter and more dynamic palette inspired by Electrical storms and tropical heat waves, after the rain brights, iridescent reptiles slithering through shimmering sands. It is not crude but tempered by the natural harmony of prismatic jungle mists with shots of unexpected accents through the 'clearings'.

### **Market**

Unlimited spending power, well informed, fashion-forward consumers, who have an appreciation and concern for both traditional and non-traditional imagery, technique and décor. Above all being increasingly aware of sustainability and ecological issues.

### **Aims**

- to produce an exciting and innovative fabric collection consisting of core products and related accessories for a domestic interior or public space (if your collection is for a public space, please state what sort of place or business)
- to demonstrate understanding of target market lifestyle
- to research and experiment using innovative combinations of techniques, media and colour
- to demonstrate the use of drawing through initial research and finished designs
- to demonstrate consideration of scale, layout and colour
- to demonstrate an awareness of sustainability issues through process and research

### **Guidelines**

The jury will be looking for original concepts and ideas with finished designs relating well to the target market. The brief is about innovation and emphasis will be placed upon good design development of an idea. You should choose a particular room within a domestic setting or public space, focusing upon core products such as curtains, upholstery and so on, with a consideration of how they will work alongside other accessories/products such as cushions, wall coverings, floor coverings and lighting. Only original drawings and colour studies should be used, although these can be supplemented with original photographs and computer aided design. Large drawings and designs can be folded/butted to comply with size submission specifications but must still conform to the limit of 4 A2 (A3 where possible) boards. It is important to convey the end use of designs effectively through a room visualisation/illustration.

Please note that eligibility for the **Eddie Squires Bursary for Outstanding Contemporary**

**Printed Furnishing Fabric Design** will be based upon the demonstration of good freehand drawing skills being used throughout research and design development. You can include photographs of original drawings on any of your boards where appropriate; these need not be finished drawings, but could also be drawn notes/ideas. Evidence of the consistent and abundant use of drawing within the sketchbook will be a distinct advantage for consideration of this award.

### **Submission details**

Entries must comply with the following:

- evidence that you have considered issues of sustainability throughout your project would be advantageous
- A2 boards (A3 where possible) (max. 4 and no double or hinged boards) showing design development and research together with final designs (these must show an indication of repeat)
- include one storyboard of the chosen theme illustrating the colour palette and inspiration. You should clearly indicate the range of colours used through colour gamuts/chips on this storyboard
- state clearly whether the designs are for print, weave, embroidery, knit or mixed media
- printed and/or woven/knitted fabric samples indicating details of materials, construction and production method. Printed fabric designs can be shown as paperwork; method of printing, number of colours and type of fabric must be indicated. Woven and knitted fabric samples should be attached to sheets with full details of the yarn used, construction and method of production; woven fabrics may be shaft or Jacquard, knitted fabrics should be machine-knitted. Embroidered fabrics may be machine or hand embroidered; samples should be attached to sheets and state type of base cloth
- visualisation/illustration of concept showing all core products within the selected space
- all work must show clear evidence that drawing/visual studies have been used throughout the project
- a short typewritten report (max. 400 words, sans serif, 14pt) showing evidence of site-specific research, explaining concept and its development and suitability to the intended consumer market
- one sketchbook only, related to the brief, showing development of initial ideas and including original artwork in preference to all magazine cuttings and photocopies
- all work (except the sketchbook) should be submitted on A2 lightweight card (A3 where possible) and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging

### **Designing the Future**

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## FURNITURE FOR REAL ENVIRONMENTS

### Introduction

The options offered within this project provide a range of opportunities for developing innovative, design-led solutions for a variety of challenging environments or situations. 4 briefs have been developed that address real and current challenges in the areas of schools, homes and working on the move. All 4 briefs specifically seek a product solution within an environment rather than an interior design solution. All the briefs require significant research into the real needs of the environments for which you are being to provide solutions.

In addition to the awards on offer, it is the intention of the sponsor to make available, where possible, exhibiting opportunities and also to create the opportunity for the manufacture of winning entr(ies).

### Briefs

There are 4 options. Please select one, making clear your chosen option on your entry.

#### Option 1

##### User-friendly school toilet facilities

#### Background

Good quality toilet facilities and free access to them are important to the health of young people. Avoiding emptying the bladder or bowels, or not being allowed to do so through fear of using the facilities provided, can lead to serious health problems. However, many children and young people avoid using the toilets at school for a variety of reasons and the nature of the environment makes them difficult to supervise. Some may choose not to use them as they are dirty and malodorous; for others it can be because they are the setting for a range of anti-social and criminal behaviour: from vandalism and bullying to drug abuse and under-age sex (see [www.bog-standard.org](http://www.bog-standard.org) for current reports).

#### Brief

The abuse and misuse of toilet facilities in schools have long presented challenges to school authorities. Students are asked to provide a design-led solution that would address the issue of abuse and misuse of this specific environment. Ideally, this should be an adaptable, generic solution in the form of a modular unit that could be utilised in secondary schools but could be scaled down for primary school use. Depending on the appropriateness of the design and its commercial viability, it may also be adaptable for use in public environments.

#### Audience

Your proposals should be led from insight into the needs of the users and the potential problems that the specific environment might present.

#### Aims

- Demonstrate that you understand the challenges of this environment
- Show that you can creatively translate those insights into an innovative solution
- The design must be able to be manufactured. Take into consideration commercial issues such as volume, production method, tooling costs

#### Option 2

##### Contemporary pupil workstation

Education has advanced significantly over the last 50 years but the environments in which pupils are taught have changed very little during that time. Currently the large percentage of furniture provided for schools and academies within this country needs attention; in response to this initiatives such as Building Schools of the Future (see [www.bsf.gov.uk](http://www.bsf.gov.uk), The Design Council [www.designcouncil.org](http://www.designcouncil.org), and Partnerships for Schools [www.p4s.org.uk/](http://www.p4s.org.uk/)) are the focal point for the government's new developments.

You are asked to provide design proposals for a pupil workstation. This workstation can be in a form of your choice e.g. a contemporary desk and chair as individual items, or a combined unit but it must take into consideration proposed teaching methods to be employed in the future. It is in part due to restrictions on education budgets that the same products have been continually specified in the past so new product design proposals must be commercially viable as well as meeting contemporary educational needs.

### **Audience**

Your proposals should be research led, based on the needs of the users, the way they work, the proposed teaching methods and the design/function of environments that they will inhabit in the future.

### **Aims**

- Demonstrate that you understand the challenges of this environment
- Show that you can creatively translate those insights into an innovative solution
- The design must be able to be manufactured. Take into consideration commercial issues such as volume, production method, tooling costs

## **Option 3**

### **Home Storage**

Many homes and apartments have a very limited amount of space, which can make creating storage for a homeworking/study area very difficult. You are asked to provide design proposals for a storage area and/or a home office area, which makes innovative use of ceiling and/or wall space. Your proposals can be to suit any type or style of home – from a small flat or starter home to a loft-living space. The solution could/should be in the form of an 'of the peg' unit that could be purchased, in volume by, for instance, those developing new or existing properties for sale

### **Audience**

Your proposals should be targeted on home working, occasional remote workers and students. Your solution(s) needs to consider the way they work, the design/function of the environment and at all times being aware of the restricted budget for production associated with this highly competitive market.

### **Aims**

- Demonstrate that you understand the challenges of this environment
- Show that you can creatively translate those insights into an innovative solution
- The design must be able to be manufactured. Take into consideration commercial issues such as volume, production method, tooling costs

## **Option 4**

### **Nomadic Working**

Huge developments in technology and communications in recent years have facilitated not just remote working from home but, increasingly, 'working on the move'. A range of public

environments e.g. hotel public spaces, motorway service stations, airports etc are now form regular settings for people's daily business activities with meetings often arranged in these places as they are mutually convenient in travel and time terms.

Clearly, working in areas or spaces designed usually for infrequent, casual use would not be suitable for a business meeting requiring appropriate seating, table space, space for technology, papers etc. You are therefore asked to design an appropriate work-space facility for a public area which could be booked by people wishing to meet for a business meeting.

You should take into account the ergonomics of this situation and the potential use of wireless technology. This technology should be integrated into the furniture with the ability to supply power, e-connectivity and a form of work surface is also preferable.

### **Audience**

Your proposals should be research led, based on the requirements of business people who use these environments, their method of working, the limitations and frustrations they experience. Look at how they integrate with the current environments they use and how those environments may change in the future.

### **Aims**

- Demonstrate that you understand the challenges of this environment
- Show that you can creatively translate those insights into an innovative solution
- The design must be able to be manufactured. Take into consideration commercial issues such as volume, production method, tooling costs

### **Submission details (for all options)**

Entries must comply with the following:

- A3 boards (max. 4) showing visual research material, design development and final designs (including a drawing or photograph of final product, where applicable)
- a short typewritten statement (max. 400 words, sans serif, 14pt) expressing idea development from research to final designs, to help communicate your proposal
- maximum of one sketchbook only, related to the brief
- all work (except the sketch book) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit and in the interest of the safety of the handlers. It will also ensure that your work can be displayed for judging
- Do not submit any models or mock-ups; shortlisted candidates will be asked to bring these to interview

### **Designing the Future**

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## HORIZON SCANNING

Visualising the future

### Background

*Horizon scanning is defined as the systematic examination of potential threats, opportunities and likely future developments, including (but not restricted to) those at the margins of current thinking and planning. Horizon scanning may explore novel and unexpected issues as well as persistent problems or trends - definition of Chief Scientific Adviser's Committee, September 2004*

The Horizon Scanning Centre ([www.foresight.gov.uk/HORIZON\\_SCANNING\\_CENTRE](http://www.foresight.gov.uk/HORIZON_SCANNING_CENTRE)) was opened in 2004 as a centre of best practice, designed to provide assistance to government departments carrying out or wishing to start horizon scanning projects. The Centre supports these projects by providing advice and coaching and in some cases participating directly in them.

This year the Centre is also conducting two of its own major strategic scanning projects one of which is Delta Scan, the objectives of which, importantly, are to inform the Government's strategy for public engagement with science and also to help identify, as early as possible, areas where potential health, safety, environmental, social, ethical and regulatory issues may arise. It is the Delta Scan project that forms the basis of this Design Directions project.

### Why design?

Design is a process that can create connections, change attitudes and effect change and designers have the ability to visualise and give life to radical thoughts and ideas. This project asks young designers to use their creative skills and their ability to visualise challenging concepts in order to interpret some of the preliminary ideas of the Delta Scan project that have only just emerged: ten themes of enormous breadth and possibility. We have selected four for the purposes of this project. They are as follows:

- **THE MATHEMATICAL WORLD**

The ability to process, manipulate, and ultimately understand patterns in enormous amounts of data will allow decoding of previously mysterious processes in everything from biological to social systems. Scientists are finding out that at the core of many biological phenomena—reproduction, growth, repair and others—are computational processes that can be de-coded and simulated. Using techniques of combinatorial science to uncover such patterns—whether these are physical, biological or social—will likely occupy an increasing share of computing cycles in the next 50 years. Such massive computation will also make simulation widespread: it will be used not only to help make decisions about large complex scientific and social problems but also to help individuals make everyday decisions in their daily lives.

- **SENSORY AWARENESS**

We are moving from a data-rich into a sensory-rich environment. As tiny cheap sensors become embedded into everyday places and objects – blending physical and data environments – increasing demands will be placed on our visual, auditory, and other sensory abilities. Information previously encoded as text and numbers will be displayed in richer sensory formats – as graphics, pictures, patterns, sounds, smells, and tactile experiences.

This enriched sensory environment will coincide with major breakthroughs in our understanding of the brain – in how we process sensory information and connect various sensory functions. Humans will become much more sophisticated in their ability to understand, create and manage sensory information and the ability to perform such tasks will become key to success.

- **EXTENDED SELF**

In the next fifty years, we will be faced with broad opportunities to remake our minds and bodies in profoundly different ways. Advances in biotechnology, brain science, information

technology and robotics will result in an array of techniques to dramatically alter, enhance and extend the mental and physical characteristics that nature has dealt us.

Wielding these tools on ourselves, humans will begin to define a variety of different 'transhumanist' paths – that is, ways of being and living that extend beyond what we today consider natural for our species. In the very long term, following these paths could someday lead to an evolutionary leap for humanity.

- **THE KNOWING WORLD**

In the next ten years, physical objects, places and even human beings themselves will increasingly become embedded with computational devices that can sense, understand and act upon their environment. They will be able to react to contextual clues about the physical, social and even emotional state of people and things in their surroundings. Using agile networks for wireless communications, groups of smart objects will co-operate, often on an ad hoc basis, to augment human decision making and, increasingly, to make decisions for us. Over time, these systems will begin to take on human characteristics, increasingly intelligent and able to interpret our needs, desires and emotions. However, scientists disagree about the nature of such intelligence as well as the implications for human society. Some believe that aware machines will not be able to effectively emulate human intelligence. Others believe that the next fifty years will witness the emergence of machines with supra-human intelligence.

### **Brief**

The purpose of this brief is to encourage students to consider the broad implications of the themes above by using them as a technological 'lens' through which to examine and explore the potential human consequences they may have.

You may wish to concentrate on one of the ideas offered below in order to define your own 'human' theme or you may wish to consider them to trigger your own ideas:

### **Immortality**

- this could look at health and healthcare from a broad perspective: what are the hopes and possibilities; what are the risks and threats?
- Personalised medicine
- New lifestyle drugs
- it might simply be about extending life for as long as possible

### **Births, deaths and marriages**

- you might want to explore these, or other, deeply human rituals through the lens of each of the four themes and consider how the different scientific and technological possibilities of each of them might alter or affect how we perceive and understand these rituals

### **Other human 'milestones'**

- starting school
- first job
- retirement
- moving house

How might the experience of these key transitional moments in life be altered when viewed through the technological lens offered by the four Delta Scan themes?

### **Any other that is of interest to you**

You should visualise and communicate them in a way that will raise questions, challenge current thinking, explore the threats, opportunities and potential implications for society – it is not necessarily about presenting solutions or predicting the future. Ultimately it is about providing a

glimpse of how these different technological trends might impact on our future everyday existence and finding ways to communicate these emerging ideas to a public – whose relationship with science and technology is often disconnected (at best), suspicious (at worst) – in such a way that they will be engaged (and thus better informed) rather than alienated and afraid.

The full list of the ten themes can be found under *Additional Information* on the web page for this project.

### **Submission Details**

- **RESEARCH:** In no more than 400 words, present an illustrated summary of the research you have done into the human ‘theme’ you have chosen to explore
  - **HYPOTHESIS:** a short scene setter backed up by factual evidence. This could be in the form of an *Imagine if...* or *what if...* statement or question
  - **VISUALISATION:** maximum of 4 A3 boards plus one sketchbook. Bear in mind the purpose of the proposal is to communicate risks and opportunities of emerging ideas in science and technology so the style of the presentation should reflect this
  - All work (except the sketch book) should be submitted on A3 lightweight card and everything should carry an RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit and in the interest of the safety of the handlers. It will also ensure that your work can be displayed for judging
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## **INCLUSIVE WORLDS**

### **A message from the Jury**

The Inclusive World brief is all about making lives more enjoyable and fulfilling through products, services and environments that really understand our needs and aspirations, and work for the broadest range of people.

Why is this important? First, the world is growing older. By 2020 half the UK adult population will be over 50 years of age. This radical and irreversible demographic shift is having a huge impact on society and will affect us all personally. In effect, we can all expect to be less able at some time in our lives.

Second, disabled people are demanding equality and the right to participate in the mainstream of society, and these demands are increasingly supported by legislation. It is no longer acceptable to exclude older or disabled people by thoughtless design, and in the future inclusivity will be seen as an essential element of good design.

Third, inclusive design is better design for everybody. A recent large-scale study for Microsoft demonstrated that accessibility features in operating systems benefit not just the people they were originally designed for, but at least 57% of the whole population. This research helped Microsoft recognise just how important inclusive design is. The figures speak for themselves. Currently 20% of the population are children, 15% are of pensionable age, 10% are disabled and 10% are left-handed. Products and services that do not work for children, pensioners, disabled or left-handed people exclude over half of the population. And that is without counting people who are temporarily incapacitated through injury, illness, pregnancy or simply having to cope with small children, luggage or the protective clothing that some occupations require.

Inclusive design is not design for special needs, nor is it medical design for specific groups of sufferers. Its goal is to improve the quality of mainstream design so as to include the largest number

of users. This approach is known in Europe as 'Design for All', and in the USA as 'Universal Design', but the end goal is the same: social inclusion.

Inclusive design should not be seen as worthy-but-dull. It must be fun. It must offer pleasure and enjoyment to users of all ages and abilities. It must support our rich and varied lifestyles, make us smile, and above all, improve our quality of life. In the first year of this brief the jury was encouraged by the range of submissions. In the second year the number of entries was impressive and standards were raised. In the third year, we expect to be delighted, amused, challenged and enlightened by a combination of insight, innovation, empathy and joie de vivre.

### **The Challenges:**

Select one of the following areas and submit designs that have taken into account the greatest number of potential users.

#### **Challenge 1**

*How can we make domestic and public environments more inclusive?*

Many people find public places intimidating and difficult to access, navigate and understand. Clear signage, public seating, automatic doors and other people-friendly elements help people understand, navigate and enjoy complex environments. That sort of good design is increasingly expected and demanded, but what the jury is looking for here is something special that places inclusivity at the heart of design thinking. Innovative new ideas that go beyond the details and really bring people together for a shared experience, or that rethink the domestic environment. The challenge is not to put right what is wrong, but to bring fresh, exciting, fun ideas into familiar environments, that make them truly inclusive.

For this challenge you can consider any kind of public space or domestic environment – hospitals, schools, doctors' surgeries, parks, public gardens, visitor attractions, museums, galleries, clubs, restaurants, houses, sheltered accommodation.

For example, your submission might propose:

- Concepts that help everyone understand and navigate complex environments like transport interchanges by taking advantage of new and emerging technologies in ways that are truly human-centred.
- Ideas to revitalise public parks in urban areas, making them usable and attractive for children and adults of all ages.
- Scenarios of how smart and assistive technologies can 'future proof' homes and help people live more independent lives.

#### **Challenge 2**

*How can access to information limit exclusion?*

Modern technologies offer many benefits, but are too often implemented in ways that exclude large numbers of people whose needs and capabilities are not considered in the design process. As a result, we are continually creating problems that then have to be put right. The qwertyop keyboard was designed to slow down typists because manual typewriters were prone to jammed keys. A hundred years later we are all held back by an inappropriate keyboard layout for the digital age. The challenge here is to step into the future and demonstrate how a better understanding of older and disabled users can ensure that new technologies bring benefits to everybody.

As computer and information interfaces move away from the conventional screen / keyboard / touch-screen to become part of the everyday fabric of life, what will they look like, how will they function, and how will they improve our lives?

For example, your submission might propose:

- Designs for improved public telephones, ATMs, ticket machines, information points, etc., or for displays in public buildings or environments
- Personal products that help people with memory loss or those working under pressure
- Ways to encourage all ethnic groups, and all ages and abilities, to use museums interactively to understand more about their past
- Designs that make public information more accessible, such as official forms, legal documents, legislation, etc.

### **Challenge 3**

*How can smart wearables change lives?*

As textiles become more clever and responsive, and products and environments become smarter through the integration of new technologies, there is an exciting opportunity to develop wearable products that can change people's lives in remarkable ways. How can such developments benefit not only older people and young disabled people but also give us all greater control over our health and wellbeing?

How can we provide information, on the move, which is accessible, usable, applicable and contextual?

For example, your submission might propose:

- Clothing with embedded technology for mainstream and special needs markets
- Soft products that harness advances in textiles
- Personal health status monitoring for athletes, or people living with specific health conditions such as diabetes, high blood pressure, or for people who want to stay fit, and healthy.
- Designs that encourage and facilitate participation in the arts and other cultural activities.

### **Challenge 4**

*How can the design of products and the environment make life more fun?*

Products that are intuitive to use or that stimulate our senses in a pleasurable way add to our quality of life. How can we improve the enjoyment of everyday pursuits like shopping work and travel? How can we bring a spark of pleasure and excitement to activities that either bring people together, or that some people find depressingly difficult?

For example, your submission might propose:

- A sensual shower or bathing environment
- Multi-sensory, interactive public buildings, environments and products
- Services that link different groups of people, and help support and sustain existing communities or encourage new ones
- Ways to engage a wider section of the community with the visual and performing arts.

### **Challenge 5**

*How can we make things better?*

People are living longer, work patterns are changing under the impact of new technologies and disabled people are demanding integration in mainstream society. Rapid social and technological change gives us the opportunity to rethink products and services that are not responsive to people's real needs and capabilities.

The challenge is to rethink or redesign an existing product or service in response to identified user needs in ways that make it more inclusive and accessible.

For example, your submission might propose:

- Before and after scenarios of how your design improves on existing products/interfaces or offers new possibilities in terms of function or usability

- Storyboards showing how your design will be pleasurable to use, own, wear or interact with, and how it will enhance the user's quality of life
- Using new technologies to allow visitors to museums to relate past events to life in the present world
- Suggestions for changes to systems to allow people in rural communities to feel less isolated

### **Information and resources**

To find out more about inclusive design visit the RSA's 'Inclusive Design Resource' at [www.theRSA.org/inclusivedesign](http://www.theRSA.org/inclusivedesign). This dedicated website tool makes key information on inclusive design readily available to students, tutors, design professionals and design managers. It contains contextual information and inspirational design concepts. The sections that deal with strategies, tools and methods assist in the development and implementation of design solutions that put people at the centre of the process. We urge you to try the site and let us know how you think it can be improved/changed/added to.

### **Submission details for all challenges**

We welcome multidisciplinary team entries from a combination of design and relevant areas such as sociology, physiotherapy, medicine, nursing, ergonomics, human factors, or computing. We realise the inherent difficulties of this option so individual entries are welcome but consultations with representatives of other disciplines must be made and documented.

Users are central to the project solution and must be involved, ideally throughout the process and from the early research stages. You may approach this challenge from any angle so long as you have identified the problem from research and this is stated clearly in your submission.

To facilitate the judging of this project, entries must be submitted as flat work and in digital format. Flat work should be sent to Brooks Transport in Halstead, Essex, digital submissions to the RSA in London (see Schedule).

Your flat work submission must include a single A4 overview sheet stating the design issue, how you identified it, and what your design delivers for the end user.

You should also include:

1. Research showing which users you consulted, how this was done and how it helped you understand the issues
2. Evidence of working with other disciplines as part of your research and development – e.g. for materials or technology research, or a clinician in the case of medical conditions
3. A set of working principles of inclusive design that you have employed strategically in developing your ideas and how the results enhance life quality
4. Visualisations and scenarios of use, which illustrate ergonomic and human factors, technologies, market/lifestyle/styling considerations, and materials used
5. Documentation of how your concept has been evaluated by users, and how they benefit
6. Some consideration of manufacturing issues, including materials, processes and costs, and final price point

The flat work should be submitted on lightweight card (max. 5 boards, size A3) and accompanied by no more than 3 sketchbooks/reports, and must be sent to Brooks Transport in Halstead, Essex (see Schedule).

Your digital submission should include:

1. A short summary report detailing briefly:
  - the problem you addressed
  - your consultation with users and how this influenced the project

- details of your collaboration/consultation with other disciplines
  - a description of the final design and how the intended users benefit
2. Images (max 3) of the final design
  3. Images of two development boards

The digital submission should be presented on CD in one of the following formats: PDF, PowerPoint, or as a folder containing JPEG/Word files, and must be sent separately from your flatwork to the RSA in London (see Schedule).

**It is essential that you visit the web page for this project** (please see address in left-hand margin) **for:**

- additional information and research support (including and how to request a free copy of the *Inclusive Worlds How to...* booklet which accompanies this project and the link to the RSA's Inclusive Design Resource, mentioned above)
- details of awards
- details of judging panel
- entry form
- guidelines and conditions for entry for Tutors and Candidates

### **Designing the Future**

The RSA's Design Directions scheme aims to encourage the development of appropriately skilled and capable designers that are equipped to respond to the changing world. For this reason we try to ensure that our projects demonstrate a contribution to economic, social, ethical and environmental sustainability. All students are asked to consider these elements when developing their solutions. For example, do proposed solutions take account of diminishing natural resources and climate change? Do they encourage behaviours and lifestyles that reduce waste of all kinds? Do they contribute to the inclusion of all members of society? Do they take account of the need to be accessible? Designers have an important role to play in achieving these aims so students are asked to take account of these issues in responding to any Design Directions project.

### **Finally, a note for all students considering taking part in the Inclusive Worlds project!**

Next year Finland will co-ordinate the European Design for All e-Accessibility Network ([www.edean.org](http://www.edean.org)) and the members of the Finnish Network are keen to organise a variety of activities and events to mark this. A key aim is to organise an exhibition which will coincide with an international *Design for All* meeting in Finland in late September 2006 at the University of Lapland in Rovaniemi (from September 2005 you can keep updated on developments at [www.stakes.fi/DfA-Suomi/](http://www.stakes.fi/DfA-Suomi/)). Short-listed students will have an opportunity for their *Design Directions* entry to be displayed in this exhibition. There is Europe-wide involvement in this initiative and this is therefore an exciting opportunity for your work to gain extensive exposure.

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## **OPTIMISING RELIEF SUPPLY MATERIALS IN DISASTER AREAS**

### **Background**

One of the earth's greatest threats in the 21st Century is an environmental one. Natural disasters, such as floods and earthquakes, often hit areas where there are limited resources, restricted accessibility and often considerable poverty. The devastating effects of natural disasters on these kinds of communities have been most recently highlighted by the Asian Tsunami for instance but there are many areas of the world where people are forced to live as refugees for a range of reasons.

Ensuring the immediate supply of food/medicines/water is a key priority in responding to these situations. Supplies have to be delivered quickly and efficiently and this can often be difficult due to remote locations, bad weather and limited transportation available. Maximising the capability of these emergency supplies is vital and materials (and their packaging) are often sent in large quantities. To get an idea of the volume of supplies required in a disaster area, to date, 30,000 metric tonnes have been delivered to the areas affected by the Tsunami and 10,000 tonnes are required every month to maintain basic needs.

Along with these immediate 'basic' materials, additional supplies have to be considered to ensure that the rebuilding of people's lives can start. These commodities can range from educational tools to repair parts and shelter and are needed to ensure continued sustainability in the medium term after a disaster.

### **Brief**

Central to this brief is identifying real needs; do not necessarily think of the immediate obvious ones which should be attended to by the Emergency organisations – think about the detail of the 'day to day' requirements of refugees trying to rebuild their lives. You can research this via the internet; there are many clues given in reports/news stories as to these more latent needs that occur in disaster areas. Remember to consider that the environment for natural disasters changes depending where they occur and the time of year. Aim to understand the 'need' and strive to create imaginative and innovative design-led solutions that make full use of the limited resources that are available in a devastated area.

### **1: Lightweight materials and economics**

Examine the whole process /system/operation of supplying and delivering relief supplies in a disaster scenario from the perspective of 'lightweight economics' and lightweight materials, i.e. from the shipping container, to transportable lightweight modules containing easily handle-able size loads, to individual modular containers. Think also in terms of volume, pack-ability, load-carrying, and handling throughout the transit of goods. Think of total packaging re-use of all materials and containers from the shipping/air container onwards.

### **2: Packaging materials use and re-use**

Corrugated card is one of the traditional packaging materials used for humanitarian supplies but its potential for secondary use is limited. What could new packaging materials bring to disaster scenarios? Can you find a match between the humanitarian needs on the ground and new opportunities from e.g. plastics/wood/coated materials? What could these bring in terms of lightness, durability, insulation, hygiene, weather-, moisture- and vermin-resistance, and the other properties demanded in a disaster scenario? Ensuring that all parts of the packaging can be used and reused to meet needs is important. Ultimately this will drive down and minimise any issues that waste packaging creates in what can often be in ecologically sensitive zones.

### **3: Visual information in disaster scenarios**

The potential for the flat external surfaces of food and emergency supplies to contain visual information to help the communication of ideas and information across cultural boundaries is under-exploited at present. For example, is there an opportunity to develop packaging containing cross-cultural graphics showing exemplars from other situations that might help in this particular situation: e.g. literacy, social capability building, local technology skills and techniques etc? What about healthcare and hygiene? How could simple solutions improve safety in this area (eg soap containment; continued education around hand washing etc)?

### **4: Open category**

Any other identified packaging-related response

### **Guidelines**

Briefs 1 to 4 above can be tackled individually or in combination. Explore and identify the following:

- the range and extent of humanitarian needs following a natural disaster
- the nature of audience(s) you will address: generic needs, cultural and ethnic considerations, age and gender issues; traditional crafts and technology skills
- the qualities and properties that any packaging materials will need to possess
- issues of pack-ability, volume and weight, sustainability, ecological acceptability, use and re-use
- new materials with properties that could be applied in disaster scenarios
- design innovation that fits the need

### **Submission Deliverables**

Entries must comply with the following:

- A3 boards (max. 4) showing design development and final designs; one board must show all elevations of the product to provide an understanding of the assembly
- A short, typewritten text (max. 400 words, sans serif, 14pt) expressing your idea development from research to final designs, to help position your proposal
- A further typewritten list of bullet points (sans serif, 14pt) detailing the principal benefits of the proposal
- Any models or mock-ups should be submitted as photographs or printouts mounted on A3 board (this can be in addition to the 4 design boards) – do not submit 3D work at this stage
- One sketchbook only, related to the brief
- Students short listed for interview will be asked to prepare a 15 minute presentation outlining their proposal and will be expected to bring along 3 dimensional material to support their presentation
- All work (except the sketchbook) should be submitted on A3 lightweight card and everything should carry the RSA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or Perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging.

### **Designing the Future**

The RSA's Design Directions scheme aims to encourage the development of appropriately skilled and capable designers that are equipped to respond to the changing world. For this reason we try to ensure that our projects demonstrate a contribution to economic, social, ethical and environmental sustainability. All students are asked to consider these elements when developing their solutions. For example, do proposed solutions take account of diminishing natural resources and climate change? Do they encourage behaviours and lifestyles that reduce waste of all kinds? Do they contribute to the inclusion of all members of society? Do they take account of the need to be accessible? Designers have an important role to play in achieving these aims so students are asked to take account of these issues in responding to any Design Directions project.

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**POSTAGE STAMPS**

## **Background: Special Stamp Programme**

Royal Mail's Special Stamp programme is developed with regard to a number of criteria that include the following:

- to commemorate important anniversaries
- to commemorate events of national importance, as well as significant contemporary UK successes on the international stage
- to reflect the contribution of the UK to world affairs in the broadest range of activities, from the arts and humanities to science and technology
- to explore 'the British way of life', celebrating the diversity of cultures and interests within the UK
- to contribute to the cultural life of the UK through the patronage of art and design, and thereby act as a showcase for the best of contemporary British creative talent.

The programme is also designed to include a variety of subjects, imagery and techniques, in order that the interests and tastes of different groups are catered for over the year's programme.

## **Brief**

For this year, it has been decided to offer two stamp subject options: one generic in its representation of the UK, the other celebrating a specific UK anniversary. The rationale behind this is to create a broad appeal across the 'imagemaking' disciplines and to encourage contributions from, for example, graphic designers, illustrators, photographers, typographers, painters and collaborative projects would also be welcomed. Both options offer opportunities to explore a range of ideas and issues including, for example, environmental and conservation issues. Remember, too, that the treatment and execution can be as innovative as you choose; aim to demonstrate a fresh approach.

## **Options**

### **1. Beside the Seaside**

The UK is an island nation and the coastline and activity beside the sea is part of the fabric of the British experience, both from a historical perspective for people today. You are asked to create a set of four stamps that represent or reflect Britain's *seaside*. The image you create should transfer to a small square of paper and engage, delight, reflect and appeal to as broad a range of people as possible. Bear in mind that although these stamps must hold together as a set, they will usually be seen as an individual stamp, and therefore will need to be just as powerful in isolation.

**or**

### **2. The Science Museum**

In 2007 the Science Museum will celebrate the 150<sup>th</sup> anniversary of its foundation. You are to imagine that the Royal Mail has decided to include this anniversary in its programme for that year and that you have been asked to create a set of four stamps that will illustrate the contemporary role of the Science Museum as a centre for the preservation of scientific heritage, education and entertainment. The image you create should transfer to a small square of paper and engage, delight, reflect and appeal to as broad a range of people as possible. Bear in mind that although these stamps must hold together as a set, they will usually be seen as an individual stamp, and therefore will need to be just as powerful in isolation. Your research for this should be entirely independent and must not involve direct contact with museum staff.

## **Market**

- a stamp is a receipt for a service and is available to anyone within the UK wishing to use the postal service
- this service covers the globe and therefore the stamp is an ambassador for the UK when travelling to overseas destinations
  - a new and younger generation of stamp collector

### **Aims**

- to produce an innovative response that challenges the brief
- to think beyond conventional treatments and styles – look at recent examples of innovation in stamp design
- to demonstrate originality of thought and approach based on sound research

### **Guidance**

When considering the design of a stamp, it is important to remember the following points:

- think on a small scale from the outset
- the Queen's head must appear top right or left facing towards the design and must be in a correct relationship with the overall stamp size (this is shown on the overlay films and the Queen's head print provided in the Student Pack (these are available to tutors – please see Postage Stamp web page). If using overlays, ensure they are easily lifted to reveal the original artwork)
- once research is complete and decisions have been made on approach, preliminary visuals should be reviewed at stamp size
- since a stamp on an envelope is evidence of the pre-payment for postage, and because the recipient is primarily interested in the content of the envelope, each stamp must convey an immediate message and value
- design should combine clarity with an interest in detail
- there should be clear visual definition between one stamp value and another to ensure there is no confusion at the post office counter or in the sorting office

### **Submission details**

Entries must comply with the following:

- an A3 board showing the four different values, ideally rendered four times larger than actual size
  - an A3 board showing reductions of the stamps at actual size
  - two A3 boards demonstrating the development of the thought process from the original research to final concept
  - one sketchbook only, related to the brief
  - a short, typewritten text (max. 50-100 words only, sans serif, 14pt) expressing your 'big idea', to help position your proposal
  - the price may appear anywhere provided it is legible; it should not appear over an intricately textured area
  - the design of each stamp should be such as to produce a consistent and cohesive range
  - all work, except sketchbook, should be submitted on A3 lightweight card and carry a SDA label on the back; do not submit work in plastic sleeves or on foam board, metal, wood or Perspex, or in boxes; these requirements are in the interests of students to ensure the safety of their work whilst in storage and transit, and to ensure that it can be displayed for judging.
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## RE-DESIGNING STATES OF MIND - BAN IT. DEAL WITH IT

### Context

#### Climate Change

Despite the fact that certain sections of the community are still arguing whether it exists or not, the majority of the population are worried about the future of the world due to the changes in the climate. In fact, in a recent poll, 82% of respondees wanted Tony Blair to make climate change a priority at the G8 summit ([www.g8.gov.uk](http://www.g8.gov.uk)). With this in mind, it is fair to say that it is a big concern. Yet, still, our lifestyles and patterns of behaviour do not reflect the level of concern. It is as if we expect the scientific community to come up with an invention that will 'save the day', literally. This, however, ignores a crucial factor in the issue – personal responsibility.

In his book, *In the Bubble, Designing in a complex world*, John Thackara mentions a newspaper cutting with the headline 'Life on the planet under threat'. This article then continues, 'The human race has only one or perhaps two generations to rescue itself'. "Now you'd think this would be a front-page story" writes Thackara "but the editor of *The Guardian* chose to run it on page 13 under 'International News'..."

(Paul Brown, 'Life on the Planet under threat: Influential Body says last chances must be seized', *The Guardian* (UK), January 9, 2003)

This brief is concerned with design not just as a problem solving exercise, but design as a catalyst for 'managing change' and, in particular, managing changes in behaviour that feed and develop personal responsibility. Simple poster 'campaign' solutions are not appropriate responses to this project.

### The Challenge

Big Change – In order for behaviour change to make a difference, large, not small steps need to be taken.

For example, a single jumbo jet, flying from London to Miami and back every day, releases the climate-change equivalent of 520,000 tonnes of carbon dioxide a year. This means, one daily connection between Britain and Florida (and we assume there are many) costs the equivalent annual output of three giant wind farms. The government is having enough resistance to just one of these wind farms on the edge of the Lake District. At the same time, the government envisages a rise in British aircraft passengers from 180 million to 476 million over the next 25 years.

It's not a good looking situation. Governments, scientists, engineers, environmentalists, the general public all have roles and responsibilities to address this situation. What role can Design take? What are our responsibilities? These are not new questions. To date, we have modified our own behaviour as designers, becoming aware of the effects our work has on the environment, even designing objects and ideas to improve the situation. This brief asks you to take a further jump and design a 'Big Change Initiative.'

We want you to ban an activity that contributes to the issues of climate change, for example, leisure related European short haul flights, urban SUVs, mobile phones, fridges or electric lighting. Develop your idea for how we might respond to this ban. How might we still enjoy the benefits of European travel, urban mobility, international communication, refrigerated food or lighting without harm to the environment? How can design then help with this ban?

### Brief

The target context for this project is innovative solutions for invisibles such as systems, services, behaviour and interfaces between people. Design is in a strong position to encourage innovation

through stimulating behaviour change, to promote new combinations that nurture trans-disciplinary thinking and actions – those very attitudes and capabilities currently needed by any young professional in the 21 Century – creativity, analytical and synthetic thinking and highly attuned communication skills.

We want you to design a 'Big Change Initiative.' You must first identify a behaviour that needs to change. Explain the problems associated with this behaviour, and how it is contributing to issues related to Climate Change. Then ban the behaviour. That behaviour can no longer happen. Analyse the consequences of this. Then, design a service that helps us engage, re-configure, manage and live with this ban, helping us deal with it. This must provide us with tools to manage the alternative behaviour that will inevitably happen. We are not looking for an engineering or technological solution to climate change – we are asking for social behaviour solutions.

### **Collaboration**

As part of your research during the project you should be connecting with other specialists whose own fields of activity are involved in aspects of the behaviour change context/innovation opportunity you identify. This should include sourcing relevant expertise and assistance – from staff and students – in other faculties of your own institution, or in other local universities.

### **Outcomes/submission details**

The delivery must be a written outline together with a visualisation of your service orientated business idea that manages the contradiction. This must include the communication, through any medium you see relevant, of the following:

1. Recognition of the behaviour to be banned, including the communication of scenarios around its existence, and thus the problems it poses
2. Evidence of exploration of the key issues, including collaboration with others
3. A 'value proposition' for the service – including who will benefit, how it is accessed and how it will be self sustaining

A service proposal, demonstrating how it would work including new scenarios of use: for visualisations in storyboard format you should use A3 lightweight boards (max 4). For submissions on CD (PC or MAC) or DVD please list clear details for loading and any other information that will enable the content to be easily viewed; please test your discs prior to submission and check that they are virus-free – any discs that cannot be opened will not be judged. Director and Flash applications should be saved as Projectors for the relevant platform (PC or MAC) and clearly labelled as such.

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## **SUSTAINABLE PACKAGING – DESIGNING OUT WASTE**

### **Introduction**

Ever growing levels of consumption as well as growing pressure on local authority budgets provide a constant challenge to keep the environment free of discarded rubbish and to reduce waste that eventually goes to landfill sites. The RSA, through many strands of its work, promotes the reduction of waste of all kinds and recognises the important role for design in helping to achieve this.

Within this general context, Local Authority Trading Standards Departments are responsible for enforcing the Packaging (Essential Requirements) Regulations 2003 – [P(ER)R] (you must consult the Regulations prior to commencing the project – these can be found under *Additional Information* on the project web page). Whilst not complying with the regulations is a criminal offence the wording of the legislation is open to misinterpretation and includes loose wording that does not help with

enforcement. The importance and implications of this legislation seems to be not widely recognised and so the aim of this project is to help highlight the importance of minimising packaging waste both to the designers of tomorrow and the enforcers of today (ie Trading Standards Officers).

Against this background however, packaging does fulfil some useful functions, including the physical protection of goods, point of sale display/promotion, storage, social ritual (for example present giving), and the provision of product information.

**Designers can take action through sustainable-led packaging design: intelligent design which focuses on reducing the environmental impact of packaging and improving efficiency.**

### **The Project**

You are asked to consider designs for the sales packaging of any retail consumer product of your choice (possibly selecting a product or product grouping that you consider to be particularly over-packaged), with the specific intention of minimising its environmental impact and fully meeting the requirements of P(ER)R. Whilst the choice is open concerning which product you select, you are advised to spend some time examining the various options.

Undertaking background research – in order to develop design-led solutions that represent both innovative and valid responses to the demands of the regulations – is an important part of the preparation for undertaking this project. You should ensure the following:

- that you explore your chosen product packaging within the wider context of existing market and products, patterns of use, production, distribution, sale, consumption, lifecycle and lifestyle
- a huge amount of research exists analysing the lifecycle of packaging and its contents; it is important to have an understanding of this ‘whole picture’ in order to develop solutions that are really innovative and address the issue in depth
- that your proposals are based on real environmental improvements that also increase awareness among the customer base rather than being superficial ‘green’ marketing
- that you are aware of the central role local authorities play in this whole area – not least the role of their Trading Standards Officers in enforcing the packaging regulations
- there are big challenges entailed in “closing the loop” on many products and packaging, and preventing their linear disposal in landfill or incinerators is a huge task. By using the materials that we manufacture again and again, lower demands can be placed upon primary resources and transportation and help to prevent the build up of waste. In this sense, closed loop manufacture is an ideal but recycling should always be to the highest quality possible. You may wish to explore this area as part of your research

Participants can be from **any** discipline and may work singly or as multi-disciplinary teams. The important thing is not to let conventional practice hamper creative thinking. You may wish to consider, among others, the following approaches to broaden your thinking:

- redesigning packaging so that material quantity, energy, production processes are reduced
- Giving the packaging another function so that it is retained
- Reusing the packaging e.g. some dishwasher containers that then require a plastic bag product only to top up
- Returnable packaging
- Bio degradable packaging

### **Guidelines**

You should explore as an initial starting point, one or more of the following sustainability principles, which are explained in more detail on the demi website ([www.demi.org.uk](http://www.demi.org.uk)):

- **Appropriateness** - choosing the right thing
- **Efficiency** - doing more with less
- **Equity** - fairness within and across all systems
- **Scale** - the right size from the right place involving the right people
- **Sufficiency** - how much is enough?
- **Systems** - connections between society and nature

### **Submission Details**

Your submission should detail the packaging design, packaging graphics/information and company logo. Presentation work should include:

- Context - a description of the design in relation to general purpose and design for sustainability principles. It should also demonstrate to the client the benefits of this packaging over traditional methods. An indication of the cost of producing X number of packs and how to dispose of them in an environmentally efficient way should also be included.
- Design communication in the form of isometric or orthographic projections, working drawings, exploded views
- Photographs of prototypes and models
- Materials and production specification
- Graphics specification and illustrations
- All work should be submitted on A3 lightweight card and carry an RSA label on the back.

### **Designing the Future**

The RSA's Design Directions scheme aims to encourage the development of appropriately skilled and capable designers that are equipped to respond to the changing world. For this reason we try to ensure that our projects demonstrate a contribution to economic, social, ethical and environmental sustainability. All students are asked to consider these elements when developing their solutions. For example, do proposed solutions take account of diminishing natural resources and climate change? Do they encourage behaviours and lifestyles that reduce waste of all kinds? Do they contribute to the inclusion of all members of society? Do they take account of the need to be accessible? Designers have an important role to play in achieving these aims so students are asked to take account of these issues in responding to any Design Directions project.

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