EDUCATE is built on a Consortium of seven European academic partners:
- University of Nottingham, Department of Architecture and Built Environment (UK)
- Architectural Association School of Architecture, Environment & Energy Studies Programme (UK)
- Université catholique de Louvain, Architecture et Climat, Faculté LOCI (Belgium)
- Technische Universität München, Fakultät für Architektur (Germany)
- Università di Roma La Sapienza, Dipartimento DATA, Facoltà di Architettura (Italy)
- Seminario de Arquitectura y Medioambiente, SAMA S.C. (Spain)
- Budapesti Műszaki és Gazdaságtudományi Egyetem (Hungary)

EDUCATE is supported by:

The EDUCATE Prize was organized by the EDUCATE Consortium under the coordination of the Technische Universität München. This EDUCATE Prize publication was prepared in April 2012 by Juliane Wolf, Paula Cadima and Simos Yannas, Architectural Association School of Architecture, Environment & Energy Studies Programme (UK).
EDUCATE is a three-year project that started in June 2009 with support from the European Commission's Energy Agency for Competitiveness and Innovation (EACI) under its Intelligent Energy Europe Programme. The mission of EDUCATE is to promote the integration of sustainability and energy efficiency in the education of architects and the practice of architecture, disseminating know-how and examples of best practice in environmental design and facilitating the harmonisation of qualification prescriptions across Europe.

Objectives of EDUCATE are:
- to define and test a curriculum bridging current divides between sustainability-related technical information and the design studio
- to develop an intelligent portal on sustainable environmental design and energy efficiency in architecture that facilitates such integration in higher education and supports continuing professional development for building practitioners
- in concert with Chambers of Architects, to harmonise architectural curricula and standardise qualification requirements in Europe, enhancing the establishment of a comparable, compatible and coherent European Higher Education Area - one of the objectives of the Bologna process - and clarifying the level of awareness, knowledge, understanding and skill in sustainable environmental design and energy efficiency expected of graduates qualifying as architects in Europe
- to promote and disseminate environmental know-how and examples of best practice amongst students, educators, building professionals and the public at large, fostering change of behaviour and expectations towards the integration of sustainable design and energy efficiency in building practices

EDUCATE is supported in Europe by Chambers of Architects in participating countries (United Kingdom, Belgium, Germany, Italy, Spain, Hungary), networks and associations of educators and practitioners, international architectural firms and energy agencies. Specifically, EDUCATE has received the formal support of the following market players:

Chambers of Architects (Subcontractors)
- RIBA - Royal Institute of British Architects (United Kingdom)
- CNOA - Conseil National de l’Ordre des Architectes de Belgique (Belgium)
- Bayerische Architektenkammer (Germany)
- Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori di Roma e Provincia (Italy)
- Consejo Superior de Colegios de Arquitectos de España (Spain)
- Magyar Építész Kamara (Hungary)

Architects / Building Professionals
- Peter Clegg - Feilden Clegg Bradley Studios (London, UK)
- Edward Cullinan - Edward Cullinan Architects (London, UK)
- Alistair Guthrie - ARUP (London, UK)
- Ken Shuttleworth - MAKE Architects (London, UK)
- Mario Cucinella - MCA Architects (Bologna, Italy)
- MEDIOMUNDO Arquitectos (Sevilla, Spain)
The EDUCATE Prize was launched in July 2011 to celebrate outstanding student work that creatively investigates and reflects on the various dimensions of sustainability in architecture and urban design. The Prize also aimed to reward original and innovative ideas and pedagogical methods promoting sustainable principles and practices in curricula of higher education.

The Prize encompassed three Categories:

**Category I - Undergraduate Student Design Projects** (Years of study 1-3)
For design projects developed at the first level of higher education (e.g. first, second and third year of the architectural curriculum toward a Bachelor degree). Entries were required to relate to the field of architecture, urban design and/or building renovation.

**Category II - Graduate/Postgraduate Student Design Projects** (Years of study 4-6)
For design projects developed at the second and third levels of higher education (e.g. fourth, fifth and sixth year of the architectural curriculum toward Diploma or Masters degree). Entries were required to relate to the field of architecture, urban design and/or planning or building renovation.

**Category III - Open Student Work**
For all types of student work other than design projects, including essays, video and artwork dealing with themes of sustainability in architecture, urban design and/or planning or building renovation in an original and innovative way.

The deadline for submission of entries for the EDUCATE Prize was the 9th December 2011. Awards ranged from € 200 to € 1,000 for each of the three prize categories. Academic members of staff from Faculties, Schools and Departments of Architecture (or related discipline) of any country worldwide were eligible to register their course or design unit for the EDUCATE Prize and select for submission one student work per Category. Academics registering for the Prize were given access to the EDUCATE Knowledge Base, an online platform created to disseminate information and knowledge of sustainability in architecture and urban design.

122 academics registered for the EDUCATE Prize representing 64 Universities worldwide (of which 48 from Europe, 6 from North America, 5 from Asia, 2 from South America, 2 from Australia and 1 from Africa) and 387 new users (tutors and students) were given free access to the EDUCATE Knowledge Base. 86 entries were received under the three categories of the EDUCATE Prize. These came from 42 different Universities (34 in Europe, 2 in the United States, 2 in Chile, 1 in Canada, 1 in Bangladesh, 1 in Singapore, and 1 in Malaysia). The assessment process was coordinated by the Bavarian Chamber of Architects (Germany) and involved an independent Jury from members of European professional institutions and well known international architects. The jury reviewed the technical and theoretical contents of submissions, pedagogical methods, teaching and learning processes supporting design development, the capacity for critical reflection and awareness of sustainable mandates demonstrated by the author(s) of the entries. The Award Ceremony and exhibition was held in Rome (Italy) on the 23rd February 2012 in the context of a Symposium on Education for Sustainability.

This publication presents brief descriptions and a selection of images from the 8 design projects and 3 other pieces of student work that were awarded prizes or honorary mentions under the three categories. A list of all submitted entries is appended together with a brief introduction to the EDUCATE Prize in other languages.

For more information, see www.educate-sustainability.eu/prize
EDUCATE Exhibition and Award Ceremony, photo of exhibition (above) by Viola Albino
The EDUCATE Prize Jury convened on the 27-28th of January 2012 at the Bavarian Chamber of Architects, House of Architecture in Munich, Germany.

The jury was composed as follows:

**Members of Chambers of Architects with voting rights**
- Richard Hawkes, RIBA - Royal Institute of British Architects (United Kingdom)
- Richard Delviesmaison, Conseil National de l’Ordre des Architectes de Belgique (Belgium)
- Oliver Heiss (Chair), Bayerische Architektenkammer (Germany)
- Patrizia Colletta, Ordine degli Architetti, Pianificatori, Paesaggisti e Conservatori di Roma e Provincia (Italy)
- Eduardo Roig, Consejo Superior de Colegios de Arquitectos de Espana (Spain)
- Attila Ertsey, Magyar Epitesz Kamara (Hungary)

**International Architects contributing to the assessment**
- Peter Clegg, Feilden Clegg Bradley Studios (United Kingdom)
- Mario Cucinella, MCA Architects (Italy)
- Bill Gething, Bill Gething: Sustainability + Architecture (United Kingdom)
- Oliver Voitl (Deputy Chair) Bayerische Architektenkammer (Germany)

**Organizing Committee**
- Barbara Hausmann, Laboratory for Integrated Design, Prof. Dietrich Fink, Technische Universität München (Germany)
- Hana Riemer, Department of Building Climatology and Building Service, Prof. Dr.-Ing. Dr. h.c. Gerhard Hausladen, Technische Universität München (Germany)
PRIZES

Category I

1st Prize (ex-aequo):

Project Title: The Concrete Orchard & Copra Production Facility
Student: Jacob Szikora
Tutored by: Gabriel Tang
University: Sheffield Hallam University, United Kingdom

Project Title: Hanging Hive
Student: Farhad Malek
Tutored by: Gladys Masey, Clare Wrigley and Charlie Smith
University: Liverpool John Moores University, United Kingdom

Honorary Mentions:

Project Title: The Mother
Student: James Eyres
Tutored by: Elena Marco and Paul Kirby
University: University of the West of England, United Kingdom

Project Title: RAWlab
Student: Francis Hunt
Tutored by: Maria Kessler
University: Oxford Brookes University, United Kingdom

Project Title: SOsMALIA
Students: Iván Hernández Acosta, Mónica Sánchez Rivero, Raquel Jara Sánchez Zarzuela, Aníbal Jiménez Fernández
Tutored by: Lino Alvarez-Reguillo
University: University of Seville, Spain

Category II

1st Prize:

Project Title: The Ark: Continuous Productive Urban Landscape Market
Student: Stavros Zachariades
Tutored by: Alex Wright
University: University of Bath, United Kingdom

2nd Prize:

Project Title: PLA::LIVE Project
Student: Andrew Edwards
Tutored by: Maria Kessler
University: Oxford Brookes University, United Kingdom
Category II continued:

3rd Prize:
Project Title: Sustain Up-Building India
Tutored by: Antonio García Martínez
University: University of Seville, Spain

No Honorary Mentions

Category III:

1st Prize (ex-aequo):
Project Title: Landscape Interpretations / Ecological Explorations
Students: Jacob Rathbone, Melody Blundy, Rosie O’Neill, Matthew Beaumont, Jessica Wallis
Tutored by: Nicole Porter
University: University of Nottingham, United Kingdom
Project Title: Low Cost Alternative Sustainable Systems
Students: David Toyans, Liliana Alvarez, Julie Coleman, Gamaliel Aguilar, Hayedeh Daneshman, Ioanna Magiati, Hannah Lee, Allyn Pollancic, Benny Yeh, Bhavna Handa, Tadeh Hakopian, Robert Higa, Adrian Magrina, Chris Kourafas, Chris Young, Caleb Wong, Dimitrios Tolios, Brandon Ro, Amanda Goldberg, Kate Redman, Marcus Richeson, Amy Marino, Erica Christie
Tutored by: Pablo La Roche
University: California State Polytechnic University Pomona, United States of America
Project Title: The passive cooling system from tradition to innovation: wind Towers
Student: Golnaz Ighany
Tutored by: Maria Luisa Germana’
University: University of Palermo, Italy
Project Title: MovieSTAR (Sustainable Thinking in Architecture)
Students: David Edward, Elliott Denham, Neeraj Chandi
Tutored by: Sergio Altomonte and Peter Rutherford
University: University of Nottingham, United Kingdom

No Honorary Mentions
Project Title: **The Concrete Orchard & Copra Production Facility**
Student: **Jacob Szikora**
Tutored by: **Gabriel Tang**
University: **Sheffield Hallam University, United Kingdom**

**Project Description:**

In this Orchard and Copra Production Facility coconut palms are being cultivated and processed. Resulting products such as food items from the coconut fruit or furniture items from the coconut tree are being sold on site. Workshops showcase a multitude of coconut plant applications.

“The discovery of coconut fibre as an alternative growing medium during a research visit to a local city farm has led to the further investigation of promoting the coconut palm to becoming useful in a myriad of ways - reintroducing “Nose to Tail” consumption in a single vegetative crop.”

**Jury Comments:**

This project deals with the issue of food supply in urban centres. Situated in the culturally diverse and historically rich Sharrow District of Sheffield the project tackles issues of food production and consumption. A research visit to a local city farm led to the choice of coconut fibre as alternative growing medium with multiple uses in everyday life.

The proposed project provides a platform for growth in the form of a greenhouse structure entirely wrapped in ETFE. The aim is to produce, process, package and sell the produce entirely on site. The ETFE admits sunlight and allows a panoramic view. Ground source heat pumps are suggested to maintain the warm temperatures required. A biodigestion system should eliminate the need for waste disposal. The concept aims to extend beyond the limits of the site by encouraging those without gardens to grow wherever space permits.
GOOD TREE, BAD SITUATION
The Coconut tree is an extremely versatile tree. All parts - nut, tree fruits and leaf - provide a variety of uses and have been used for centuries to provide food, tools and even shelter. Today however, the increase in wasteful processing of the Coconut tree means it has quickly become unprofitable and a lack of investment into new ways of using the tree has left the trade markets saturated leading to overproduction. As a knock on effect, the tree which used to provide good income to some of the poorest countries on earth is now being grown at a net loss.

AIR MILES
Copra products are one of the biggest imported products in the world due to the relatively small amount of countries which are able to produce it. In 2007 the UK was the 7th biggest importer of copra products importing over 3.5 million metric tonnes which equates to more than 28,000 planes a year.

Sources: NGF (Next Generation Food) statistics
http://Surreyfarmersmarket.com
GROUND FLOOR PLAN
scale 1:100
1 - market space
2 - store
3 - wash area
4 - Coir packaging and distribution space
5 - drying space
**Roof/Guttering detail**

1. Texlon® cushion
   - 2.94 W/m²K 1.9 F0/Btu/h Ft²
   - Outer skin, 95% clear to allow maximum daylight
   - Inner skin, Effe skin chemical UV filter
2. Steel valley gutter
3. Steel section
4. Metal plate fixing
5. 200mm x 100mm timber column
6. Steel bracing rod

**Planting detail**

1. Growing media
2. Root permeable filter
3. Drainage and capillary layer
4. Protective layer
5. Steel casing, insulation and waterproof membrane
6. Drainage pipes

**Floor to Cladding detail**

1. 100mm concrete floor
2. Reinforced concrete deck
3. Primary beam, chamfered to avoid cladding
4. Steel cladding rail
5. 150x75 softwood timber batten
6. 3mm Corten steel cladding 800mm x 1200mm panels with 150mm overlaps with welded seams

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**Day Market**

Underneath the steel canopy, open air markets stalls are in place for farmers and allotment growers to showcase local produce making the most of a busy street corner. Daylight penetrates through the cotton mass enriching the space and illuminating the internal street towards the city curve.

**Night Market**

As night falls, the market becomes a source of entertainment, hanging bulbs in coconut shells create a welcoming glow away from the unpredictable Yorkshire climate.
Heating studies are used to calculate the amount of extra heat needed and to determine when it is applied. A BMS means that the trees will be under constant surveillance removing the risk of frost killing trees and maximising nut yield.

During the coldest of winter months when pressures on heating reach a maximum a storage bank of dried coconut shells can be used as a biofuel for a small bio gas boiler in the plant room.

A biodigestion system eliminates the need for waste disposal by using organic matter such as dead leaves and rotten fruit and vegetable to create methane gas. This can then be used to fuel hot water supplies.

Ground source heat pumps will be used to maintain warm conditions in the working quarters, linked to an underfloor heating system to minimise heating output.

A vertical loop system will be put in place around 45 metres deep where the ground stays warm. Vertical loops are placed at 6 metre intervals and are buried with the pile foundations and are ideal on such a small site.

Gestalt graphic printed on ETFE manipulates daylight for the workshops, maximising daylight and northlight and blocking out direct sunlight to avoid overheating.

Texlon cushions with maximum transparency (95% across entire spectrum) ETFE provides a low U-value, reducing heat loss and maximising growing rates.

Regular watering of the coconuts will be done from mist sprays attached to the ceiling rafters also maintaining a high humidity for the trees. There is no need for pesticides to be administered as the trees are growing within a controlled environment.

Within the Corten canopy a series of service ducts are used to distribute electricity and heat from the plant room in the main building to the growing space and the market.

Once water has been used it will be dumped into the digestion tank to aid in the anaerobic process. A biogas system eliminates the need for waste disposal by using organic matter such as dead leaves and rotten fruit and vegetable to create methane gas. This can then be used to fuel hot water supplies.

Although costly, the systems proposed, once put in place should allow the facility to minimise its impact on the site; it uses free heat from the ground, burns home grown biofuel, digests its own waste and re-uses waste heat.

During the coldest of winter months when pressures on heating reach a maximum a storage bank of dried coconut shells can be used as a biofuel for a small bio gas boiler in the plant room.

The ‘javanica’ tree maximises its yield at 28°C, if it is exposed to frost for longer than a few hours it will have a dramatic impact on the quality of the fruits and the number of nuts each tree will produce.
Honey bees can only enter & exit through these slits because when they exit they tend to keep that height until they get to their foraging area. To avoid a clash between bees & people, these exits are 2 stories higher than street level. This also allows people to watch the bees when they go in & out as shown.

In the summer PV panels act as sunshading devices, creating the ideal condition to spend time in the roof garden.

Every room in the building benefits from natural light because of windows & doors & the depth of rooms is only 2m.

Materials & Resources

Materials are sourced from within a 10 mile radius, to reduce the embodied energy & different types of pollution in the material.

Reclaimed rail sleepers for primary, secondary structure & cladding. The dimensions are 125x250x2600mm. Little work is needed to construct elements & they are treated to last longer.

Sandstone excavated from the site itself is used for the construction of the stone walls with soft mortar. This is to allow easy recycling of the stone after the life span of the building.

The volume of stone excavated matches the amount needed for the construction of the stone walls (with mortar).

Mortar & concrete are supplied by Spotmix UK ltd because their product contains recycled materials.

Rigid cavity insulation materialised from polystyrene packaging.

Double glazed glass doors & windows filled with argon.

Reception’s lamp is compact fluorescent because it is warmer compared to the rest of the building which are warm white LEDs.

Sand & gravel filter the rainwater. Sunpipe takes light into water tank. Rainwater flows from Hope St & pavement into water tank.

Fine mesh allows air flow but is impervious to everything else. Fly bin is used in the mix of concrete to lower the cement content.

Electricity generation with building’s annual energy consumption 64861 kWh 64861 kWh / 1000m² netto area = 648.61 kWh/m²

Surface area of 10 silicon crystalline PV panels = 420 m²

420 m² x (336 kWh/a per panel) = 140080 kWh/a total electricity generated by PV panels

All electricity generated is fed straight into the grid, & drawn whenever electricity is needed in the building.

This is more efficient than having tanks of biogas, it also avoids hydrogen & acid fumes which are harmful to people & honey bees.

All equipment & appliances are electric & energy efficient. No other type of energy is consumed in the building because the generated electricity satisfies all the demand in the building & provides a minimal surplus of 15 kWh/a.

Materials & Resources

Honey bees can only enter & exit through these slits because when they exit they tend to keep that height until they get to their foraging area. To avoid a clash between bees & people, these exits are 2 stories higher than street level. This also allows people to watch the bees when they go in & out as shown.
Project Title: **Hanging Hive**  
Student: **Farhad Malek**  
Tutored by: **Gladys Masey, Clare Wrigley and Charlie Smith**  
University: **Liverpool John Moores University, United Kingdom**

**Project Description:**

“Although honey bees are tiny, what they do has a great impact on humans. We depend on honey bees for pollination (1/3 of our food is pollinated by honey bees). Recently the world has been experiencing a “honey bee holocaust”. No single cause has yet been found, but scientists are sure that the destruction of foraging areas, use of pesticides, viruses, diseases, and mites are contributory factors. This project is a building to promote sustainable and holistic urban beekeeping. Raising awareness through demonstrations in the building is the primary focus of the design. The building will inform people and provide them with the knowledge they need to start beekeeping in their own back gardens.”

**Jury Comments:**

In this project the student has created a building dedicated to bees. The structure is situated in a conservation area adjacent to Liverpool Cathedral and is well integrated into the site. The project’s quality derives from its ecological and didactic vision, proposals for energy production and the management of solar energy.
Double height flexible room for lectures & other types of educational gatherings, which can accommodate up to 21 people at any one time. This room is on the first floor connected to the cafe.

From the cafe honey bees can be seen busy foraging on the vegetated atrium roof.

Honey bees come up through the 1/2 metre cavity from the atrium for foraging.

entrance to the building from Hope St

View of Cathedral & the Park from the threshold (ground floor reception)

View of Cathedral & park from the building

Fresh air taken in from the park as opposed to Hope St side

Abstract diagrams inspired by flowers on the site (below), & from natural honey bee hives.

Form of the building is interpreted from the abstract diagrams.

South Elevation 1:125

Context & Site Section

Ground Floor plan 1:125

First Floor plan 1:125

North Elevation 1:125

Ground Floor plan 1:125

View overlooking the hives & with a visual connection to the cathedral.
Site's Brief History

The chosen site, St James’s Garden, is a conservation area adjacent to Liverpool Cathedral.

It has played a central role in Liverpool’s history, having been successively a quarry, public walk, cemetery and public garden.

The proposed redevelopment will complement the existing site, keeping its dignity and history alive.

Setback of the ramp shelters the building from strong prevailing winds.

Five large trees keep the building cool in the summer, but in the winter the loss of their canopy lets the building benefit from the sun’s warmth.

Many sources suggest that, dappled sunlight, minimal wind is the ideal location for honey bees in the summer. In the winter this location is the sunniest area in the park according to sunpath analysis.
CATEGORY I - Honorary Mention (1of3)

Project Title: The Mother
Student: James Eyres
Tutored by: Elena Marco and Paul Kirby
University: University of the West of England, United Kingdom

Project Description:
The “Mother” sits on the edge of the city centre of Bath in an area steeped in history and tradition. The proposal is for a scheme that aims to inject the process of food production combined with entertainment and enjoyment of the city. This was as a result of realising the high demand for allotments in and around Bath, for which there is a three year waiting list. The “Mother” aims to create an environment that is central yet enclosed, to provide an area for the community to maintain and enjoy the produce as if being in one’s own garden whilst being immersed in a thriving ecosystem. The central spine, inspired by the tapas streets of Granada and Barcelona, aims to entice the visitor in bridging the gap between the city centre to provide an exhibition of food.

Jury Comments:
The theme of the student project was “The Regeneration Catalyst” that was aimed at the creation of an Arts-in-Education project on the Corn Market site of the city of Bath. The building provides for multiple uses related to food and can be used throughout the day. It is a well integrated architectural solution as the final image is harmonized within its environment and well treated.
### HEATING DEMAND (ENTIRE BUILDING)

<table>
<thead>
<tr>
<th>Surface</th>
<th>AU W/K</th>
<th>Area A (m²)</th>
<th>U Value (W/m²K)</th>
<th>AU W/K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Floor</td>
<td></td>
<td>720.40</td>
<td>0.30</td>
<td>216.14</td>
</tr>
<tr>
<td>Roof</td>
<td></td>
<td>1780.60</td>
<td>0.23</td>
<td>409.84</td>
</tr>
<tr>
<td>Walls</td>
<td></td>
<td>3134.00</td>
<td>0.26</td>
<td>814.84</td>
</tr>
<tr>
<td>Glazing</td>
<td></td>
<td>445.80</td>
<td>1.60</td>
<td>713.20</td>
</tr>
<tr>
<td>Doors</td>
<td></td>
<td>37.00</td>
<td>2.20</td>
<td>81.40</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>240.94</td>
</tr>
</tbody>
</table>

Ventilation conductance: $C_v = NV/3(m^3/h)$

**F1cu**

**F2cu**

**Heating demand**

**Total heating demand with 20% ventilation loss assumption**

<table>
<thead>
<tr>
<th>Area</th>
<th>kW</th>
<th>kW</th>
<th>kW</th>
<th>kW</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>533.33</td>
<td>51.89</td>
<td>7,08</td>
<td>69,34</td>
<td>124,29</td>
</tr>
<tr>
<td>B</td>
<td>0.98</td>
<td>0.99</td>
<td>58.96</td>
<td>58.96</td>
<td></td>
</tr>
</tbody>
</table>

### OCCUPANCY PATTERNS

- **9:00-10:00** Breakfast and Lunch Café
- **12:00-22:00** Lunch restaurant and café
- **5:00-10:00** Auditorium
- **9:00-22:00** Library and juice bar
- **9:00-12:00** and **17:00-20:00** Play school
- **9:00-12:00** and **17:00-21:00** Cookery school
- **9:00-17:00** Gardening

**Maximum demand:** 9:00-12:00 and 17:00-21:00

However, during summer maximum heat demand will be the DHW load.

### BOILER SIZING

<table>
<thead>
<tr>
<th>Component</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underfloor heating load</td>
<td>51.89</td>
</tr>
<tr>
<td>Radiator load</td>
<td>7.08</td>
</tr>
<tr>
<td>Total heat load with plant pre heat factor to allow for admittance of structure</td>
<td>69.34</td>
</tr>
<tr>
<td>AHU Load</td>
<td>20.30</td>
</tr>
<tr>
<td>Domestic hot water load</td>
<td>34.56</td>
</tr>
<tr>
<td>Boiler load</td>
<td>124.29</td>
</tr>
</tbody>
</table>

Suggested plant arrangement is two boilers for heating load at 50kW each and separate DHW boiler of 35kW.
The green canopies incorporate green climbers to provide a fruitful and scented vertical wall to make the most of the southerly light. The climbers are watered by harvested water through the integrated irrigation system. Produce can be collected either via ladders or by abseiling down the side of the building. It is expected that this would be performed by the energy manager on site who is expected to be in control of maintaining the gardens and the AD plant. However, if health and safety inductions are provided it may be possible to open up the activity to the rest of the community making the collection of the produce a fun and exciting activity in itself.

**English Ivy** is a versatile plant that stays green all year round, ensuring plush green appearance of the canopies through the seasons.

**Honeysuckle** - A colourful richly scented climber that can tolerate a wide range of conditions throughout the seasons.

**Pole Beans**

**Vine Tomatoes**

**Solar Water Heating**

Solar water panels will be positioned south facing at a 35 degree angle. Ecotect has shown that shading from the Hilton does not reach as far as the central spine meaning the panels should get undisturbed solar exposure annually. Water is heated and carried through the service walls at each service block and then exposed with insulation in the atrium and down to the plant room in the vaults. It is then recirculated from there.
Project Title: **RAWlab**  
Student: **Francis Hunt**  
Tutored by: **Maria Kessler**  
University: **Oxford Brookes University, United Kingdom**

**Project Description:**

“The United Nations Framework Convention on Climate Change (UNFCCC) has set up the RAWLab organisation to research ways towards making construction more sustainable. The FragileLab will therefore research modification, material testing and construction in plain view of the people of London.”

**Jury Comments:**

This proposal underlines the social aspect of architecture and is complimented by the jury for its visionary point of view. The building is meant to be devoted to the research of new processes and procedures for sustainable construction and the proposals explore how the construction of the building itself will be achieved and maintained by salvaging and recycling materials.

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The construction site is the heart of the scheme. The scaffolding wall and crane rigs on the roof of the workshop allow researchers to extend construction upwards, permitting anything from a suspended living pod to a miniature skyscraper.

Circulation is achieved in the front end of the workshops, a frame based area that is open to the elements. The structure clearly continues upwards, suggesting the possibility of further expansion and change.
Project Title: **SOsMALIA**

Students: Iván Hernández Acosta, Mónica Sánchez Rivero, Raquel Jara Sánchez Zarzuela, Aníbal Jiménez Fernández

Tutored by: Lino Alvarez-Reguillo

University: University of Seville, Spain

Project Description:
These dwellings for doctors and patient’s family members demonstrate self-construction techniques to be copied by local family clans.

Jury Comments:
The authors were complimented on their ability to use environmental design techniques that have developed over many centuries and are well understood. The architectural proposal identifies with its setting and can be realised with local labour. The building form is suited to the climatic conditions of the desert and the layout presents a social model which is specific and relevant to the region.
**CATEGORY II - 1st PRIZE**

**Project Title:** The Ark: Continuous Productive Urban Landscape Market  
**Student:** Stavros Zachariades  
**Tutored by:** Alex Wright  
**University:** University of Bath, United Kingdom

**Project Description:**
“The Ark is to be an intensively used urban landscape comprising a market, community hall and processing facility. The key functions are supported by a network of community-focused facilities encouraging the use of the site by all the residents of the Stapleton Road area. The Ark’s design champions environmental, economic and cultural sustainability.”

**Jury Comments:**
The ARK project has organized the architecture to form a strong street life along the North-West edge of the site. The ground floor is tall and fitting for the proposed purpose as a market place. The site has been largely allocated to the allotments oriented North-South. The building programme has been well resolved. The scheme appears to serve the immediate community and its context. The public space is dynamic and well conceived. The project integrates a wide variety of functions. The scale and articulation of the forms relate well to the context. The project involves the integration of a variety of innovative renewable energy and resource conservation technologies. Technology has been well integrated into the architecture. The sectional arrangement is logical and well presented.
Proposed site plan

- Proposed site plan
- Indicative building layout plan showing Stapleton road high street
- Water retention ponds
- Marketplace
- Community mess hall
- Community market
- Stapleton road high street
- Sports centre, recycling
- CPUL
- Produce packing unit
- Community
- Freshman space
- Community
- allotment space
- Forest garden growing techniques
- CPUL main growing garden
- Hard surface and drainage system
- Stapleton road shared surface
- Assembled landscape proposal
- Community playground garden and learning areas
- Gravity fed hydroponic greenhouse set up
- Moveable timber louvred screens for solar shading
- Greenhouses, food production
- Dining balcony
- Community mess hall
Building form considerations

Greenhouses Strawberry Growing

Produce packing unit

Heat/light/ventilation during a summer day
Heat/light/ventilation during a winter day
Heat/light/ventilation during a summer night
Heat/light/ventilation during a winter night
Thermal mass

Water harvesting and reuse

Views to CPUL
Automated operable windows for ventilation
Gravity fed hydroponics system (common use, strawberries, bell peppers)
Plastic mesh shades, internally mounted for easy installation and access according to plant requirements
Steel grille, with water drainage, excess water recycled and collected
Phase change concrete wall panels, internally mounted supporting walls, allow additional thermal mass
Stapleton road, square, extended market spill out space

Section B-B through community mess hall and greenhouses

Sunday at the market
CATEGORY II - 2nd PRIZE

Project Title: PLA:/LIVE Project
Student: Andrew Edwards
Tutored by: Maria Kessler
University: Oxford Brookes University, United Kingdom

Project Description:

The story of this project begins when a number of allotment holders (of allotment ‘PLA’) approached a group of students to seek support in addressing their needs for a range of new facilities in order to raise the profile of their community and create a greater sense of pride in all that it means to grow food within the city.

The project sought to enhance the communal space for over 70 individual allotment holders. The detailed brief was derived from a collaborative process, working with allotment holders to prioritise their needs and aspirations. The most urgent need identified was for a composting toilet, which was designed, constructed and is now successfully in use; built using reclaimed and locally sourced materials. This intervention was a catalyst around which support and enthusiasm was generated to pursue a more ambitious range of amenities which were identified as a priority:

- A communal covered space with BBQ, enclosed cooking area, seating and deck
- Rainwater harvesting to maximise the water collected for crops
- A dragonfly pond and other features which promote wildlife and biodiversity
- Secure storage for tools and equipment
- Greenhouse / enclosed growing area to increase the productive growing season
- A series of accessible growing areas for young / disabled to learn how to cultivate vegetables.

All these items were reliant on using the renewable resources available on site; primarily rain, wind and sun.

Jury Comments:

The project is rewarded for its communal and pedagogic approach based on learning by doing.
solar PV for lighting at night

reclaimed timber rafters

bird boxes

straw bale walls

compost shoot

reclaimed timber deck

rammed car tyre foundations

composter

catalyst design and construction of a compost toilet

Community build + low impact design

Involves transfer of knowledge on techniques as diverse as:

- timber framing
- charred wood cladding
- rammed earth
- green roof construction
- rammed tyre foundations
A student live project which used participatory design tools to develop facilities for an allotment community which included the design and construction of a compost toilet and design for communal spaces, cooling and growing facilities, greenhouses, biodiverse roofs, rainwater harvesting and storage; all constructed from waste materials utilising green technology and passive design strategies.
**CATEGORY II - 3rd PRIZE**

**Project Title:** Sustain Up-Building India  
**Students:** Alejandro Pacheco Diéguez, Dacil Lorente Snowdon, Diego Peña Jurado, Virginia Ruiz Campos, Nieves Sánchez Alfonso, Rafael Ramírez Álvarez de Lara, Niccoló Navarro Di Meo, Pedro Trujillo Fernandez, Manuel Gómez Pérez, Manuel Valenzuela Salamanca  
**Tutored by:** Antonio Garcia Martinez  
**University:** University of Seville, Spain

**Project Description:**
The brief aims to encourage reflection on building systems from social, economic and environmental perspectives. Since this is an advanced course, the student is considered ready to move beyond conventional construction processes and initiate the development of new proposals. Thus, there is the goal of achieving competencies related to building systems eco-design. The work presented is a building design that tries to minimize its negative environmental impact. We have used Life Cycle Analysis (LCA) to evaluate design alternatives and environmental impact in relation to conventional building systems.

**Jury comments:**
The project uses passive design and local materials and has provisions for rainwater collection and organic waste recycling. The design of the dwelling units is based on an analysis of local housing characteristics in terms of size and cultural and social customs. Housing modules are designed for family units of 5-6 members, providing the opportunity of combining several units, according to the circumstances of each family. Ground floor spaces are dedicated to animals and crops cultivation. Outdoor spaces are designed for social gathering.
A Life Cycle Analysis is a technique to assess environmental impacts associated with all the stages of a building and product’s life from cradle to grave. In our case the LCA is structured in two systems: production-construction and occupation of the building. We compared the results with the impacts of a conventional occidental house.

**IMPACTS SYSTEM 1 (PRODUCTION-CONSTRUCTION):**

- Concrete, Mortar and Plaster
- Glass
- Metals
- Fossil Oils Materials

**IMPACTS SYSTEM 2 (OCCUPATION OF THE BUILDING):**

- Acidification Potential (kg SO2 Eq)
- Climate Change (kg CO2 Eq*10)
- Eutrophication Potential (kg NOx Eq)
- Freshwater ecotoxicity (kg 1,4 DCB Eq*100)
- Human Toxicity (kg 1,4 DCB Eq)
- Photochemical Oxidation (kg formed ozone)
- Resources (kg antimony Eq)
- Stratospheric Ozone Depletion (kg CFC 11 Eq)
- Terrestrial Exotoxicity (kg 1,4 DCB Eq)
- Total Embodied energy (MJ*1000)

**NATURAL RESOURCES**

- Water
- Wood
- Stones and Loose Materials
- Fired Clay Products

**PROJECT**

- Our Proposal
- Conventional Occidental Dwelling

**NATURAL RESOURCES**

A bamboo second skin to protect from sun radiation.

Dwellings uplifted from the ground

Cross-ventilation

Prevent from isolation
Housing modules are designed for family units of 5-6 members, considering the possibility of combining several units, according to the circumstances of each family.

Divisions/relations:
- dwelling-dwelling
- dwelling-exterior
- dwelling-community space

Constructive logic:
- Plywood structure
- Compressed earth blocks
- Stabilised earth walls
- Exterior platforms
We started with exploring the site to generate ideas and concepts.

We joined the first ones together, solving any issues as we went.

Here is a detail of the beginning point we need to make it small.

SOURCE TO SEA
The installation is born from one precise point upstream and gradually splays outwards wider and wider until it terminates at its widest span downriver. This imitates the swelling body of water as it gathers mass en route from source to sea.

REFRACTION OF LIGHT
As we constructed our installation bright sunshine suddenly introduced itself and in doing so, established a further concept; the refraction of light through water. The way in which the individual fibres diverge from a single point can be compared to light refracting through a prism.

BOUNDARY & BORDER
As the strands criss-cross the water they divide the river into separate fragments. This is representative of how humans impose boundaries and borders on the land to create definitive places, however, just as the river flows on underneath the installation, nature continues on obliviously and naïve to human influences.

FLOW OF TIME & HISTORY
The river’s slow transient meander is evocative of the steady ever-flowing passage of time, acting as a metaphor and witness to the happenings of its surroundings.
Project Title: **Landscape Interpretations / Ecological Explorations**
Students: Jacob Rathbone, Melody Blundy, Rosie O’Neill, Matthew Beaumont, Jessica Wallis
Tutored by: Nicole Porter
University: University of Nottingham, United Kingdom

**Project Description:**
“What does it mean to design sustainably in the Peak District National Park (UK), a unique place which is simultaneously a sensitive ecosystem, a valued picturesque landscape, a unique historic industrial artefact, a home for thousands of local residents and a tourist destination for millions more? In the ‘landscape interpretations / ecological explorations’ project, 2nd and 3rd year architecture students explored this question by creating on-site artworks which addressed the complex cultural, economic and social qualities of the Peak landscape.”

“This introductory 4 week project involved: a short series of in-studio exercises and research; a site visit to the Peak where students working in groups of five had two hours to locate, create and record their own landscape installation pieces (artworks); and a follow up week to reflect, extend and re-present their on-site work as a studio presentation. The brief was intentionally non-prescriptive to allow groups to develop their own specific themes and concepts. Use of a range of media and methods was encouraged.”

**Jury Comment:**
The project’s environmental symbolism gives value to the site enhancing the countryside which is only rarely seen as such.
The goal was testing the P+Dzn house in its ability to naturally ventilate both floors using the prevailing winds from the south-west. Using the stack effect tried to maximize the natural airflow within the house by adjusting the window openings where required. The methodology for testing and proofing the different window configurations included Wind Tunnel testing of physical models, along with Autodesk Ecotect virtual simulation models. Both wind tunnel and simulation testing allowed for fine-tuning the window configurations for better airflow through both floors.
Project Title: Low Cost Alternative Sustainable Systems
Students: David Toyans, Liliana Alvarez, Julie Coleman, Gamaliel Aguilar, Hayedeh Daneshman, Ioanna Magiati, Hannah Lee, Allyn Pollancic, Benny Yeh, Bhavna Handa, Tadeh Hakopian, Robert Higa, Adrian Magrina, Chris Kourafas, Chris Young, Caleb Wong, Dimitrios Tolios, Brandon Ro, Amanda Goldberg, Kate Redman, Marcus Richeson, Amy Marino, Erica Christie
Tutored by: Pablo La Roche
University: California State Polytechnic University Pomona, USA

Project Description:
The path to sustainable architecture does not have to be the same everywhere in the world, and varies as a function of social, cultural, economic and environmental differences. If HVAC systems are not very common in a community, it should be easier to implement other low energy comfort achieving options –instead of cheap inefficient products- and develop alternative paths to the established energy intensive systems common in developed countries. Thus, this course is about developing alternative low cost passive and active systems that can be used to improve building performance, while contributing to develop a contemporary architecture that maintains traditional values and is respectful of its environment. We have collaborated with NGOs or agencies such as Corazon or CalEarth, that are doing work in disadvantaged communities inside the United States or less developed countries to make the course as meaningful as possible. The objective is to develop real solutions to real problems. Students conduct an in depth exploration of one of several course topics, developing a project that tests an idea in a specific area through the design, construction and testing of building components or systems that could be used in buildings to help them achieve carbon neutrality.

Jury Comments:
This pedagogical approach provides an interesting way for understanding the mechanics of alternative, low energy controls focusing on solving specific problems.
Project Title: The passive cooling system from tradition to innovation: wind Towers

Student: Golnaz Ighany
Tutored by: Maria Luisa Germana
University: University of Palermo, Italy

Project Description:
The work presented summarizes PhD Research exploring the potential of passive cooling systems and natural ventilation with special attention on wind towers. The study was focused on traditional passive cooling strategies used in Middle East and Mediterranean areas.

“The solutions of traditional architecture can offer, even today, concrete answers to some of the energetic and construction challenges, without the need of large energy consumption, but of a better utilisation of natural resources. Through the use of examples from the past, it is possible to produce a new sustainable and bio-climatic architecture synthesising ancient rules and modern technologies.

The wind tower is a typical element of Middle East architecture. It allows for multidirectional collection and extraction of winds capturing air from the outside and lowering internal temperatures by utilising the mass of the structure.”

Jury Comments:
A methodology is presented which is logical, clear and easy to understand, leading a possible user through steps that start with analysing traditional systems, through to contemporary case studies aiming to derive technology, principles and criteria for passive cooling design.
A society is not defined by what it creates, but what it refuses to destroy.

Conservationist John Sawhill

If the human population was shrunk to 100 people whilst maintaining the same rations...

The need for greater acceptance, equality and education are fundamental in creating a socially sustainable future.

- 6 people would own 59 per cent of the Globe's wealth
- 8 would be homosexual
- 16 would be unable to read and write
- 14 would suffer from malnutrition
- 1 would have a college education

Ecological House Designs can be creative and interesting

Roof plants absorb CO₂

Tradition + Innovation = Evolution

Hanley Wood Architecture Magazine

Adaptation of Existing Building

80% of homes that will be standing in 2050 have already been built, so they play a significant role in Climate Change Targets. 25 million homes will need to be upgraded in the next 38 years.

Proportion of energy in buildings used inefficiently is 30%.
CATEGORY III - 1st PRIZE (4of4 ex aequo)

Project Title: MovieSTAR (Sustainable Thinking in Architecture)
Students: David Edward, Elliott Denham, Neeraj Chandi
Tutored by: Sergio Altomonte and Peter Rutherford
University: University of Nottingham, United Kingdom

Project Description:
The MovieSTAR (Sustainable Thinking in Architecture) project has been set for 1st year students of the Bachelor of Architecture (undergraduate degree) as their very first project to explore and reflect on the sustainability agenda in all its complex environmental, social and economic dimensions and apply it to the way in which architects design the built environment. Its intended aims were for students to:

- Show awareness of the principles and practices of sustainability that inform architectural and urban design;
- Provide an understanding of how environmental, social and economic issues influence the design process;
- Reflect on the design decisions that respond to the needs of occupants, programme and climate.

Sustainable development has to concurrently embrace many different aspects of human activity, which include economic, social, ethical and aesthetic values in addition to the environmental issues surrounding energy consumption, management of resources and reduction of CO$_2$ emissions. To promote sustainability in the design of the built environment, it is essential that technical principles and environmental targets are embraced within a creative design process, which is a prerogative of the architectural profession. Gaining this awareness is crucial especially at the initial stages of education in disciplines of the built environment.

Jury Comment:
This delightful presentation deals with a complex series of global social, political and cultural issues in a powerful, elegant and engaging graphic style. The technical competence of the authors should also be recognized. Numerous statistics and quotations are neatly combined to tell a compelling story.
LIST OF ALL SUBMITTED ENTRIES

CATEGORY I:
- Adri van den Brink, Wageningen University, Source the Sink
- Aimilios Michael, Frederick University of Cyprus, A Mosaic of Social Interactions
- Alberto Torres Galan, University of Seville, Emergency Bamboo Houses
- Antonio Bano, University of Alcala' de Henares, EFSE
- Charlie Smith, Liverpool John Moores University, Orchidmania (The Darwin Quest)
- Gladys Masey, Claire Wrigley and Charlie Smith, Liverpool John Moores University, Hanging Hive
- Diego Jimenez, University of Malaga, Connecting bars
- Elena Marco, University of the West of England, The Mother
- Gabriel Tang, Sheffield Hallam University, The Concrete Orchard & Copra Production Facility
- Guillermo Guzman Dumont, DABE Nottingham, The Autonomous Coexistence Studio
- Inge Vestergaard, Aarhus School of Architecture, Growing Gables
- Joanna Crotch, Mackintosh School of Architecture, Arthouse
- Jorge Lobiano, University of Santiago, Fog Catcher and Shading Device
- Juan Gonzalez Mariscal, University of Seville, Sculptor’s house
- Juana Sanchez, University of Malaga, Urban Topography
- Keith Bothwell, Kent School of Architecture, Artscape
- Lino Alvarez-Reguillo, University of Seville, SOsMALIA
- Lorina Nicolaou, Frederick University of Cyprus, Cultivating Culture
- Luis Gonzalez de Boado, SAMA Sevilla, A place - A fold - A home
- Maria Kessler, Oxford Brookes University, RAWlab
- Milagrosa Borrall Jimenez, SAMA Sevilla, Industrial Utopia
- Nurakmal Goh, National University of Malaysia, Sustainable Housing - Toward Sustainable Community
- Nuria Nebot, Architecture School of Malaga, Regeneration VS Demolition
- Ruth Vega, University of Alcala’ de Henares, Studying in Green
- Sajal Chowdhury, Chittagong University of Engineering & Technology Bangladesh, Campus Cafeteria: Stay Together
- Sarah Stevens, Oxford Brookes University, The Embassy of Reality
- Sergio Altomonte, University of Nottingham, Landscape Interpretations / Ecological Explorations
- Sophie Trachte, UCL Louvain, Library in Brussels using a sustainable architectural approach

CATEGORY II:
- Adri van den Brink, Wageningen University, Climate Proof Design
- Alberto Alarcon, Alcala University, Packed Shadows_The Pilgrim’s Shelter
- Alex Wright, University of Bath, The Ark: Continuous Productive Urban Landscape Market
- Almudena Fuster, University of Alcala’ de Henares, WINDZIP
- Angel Verdasco, Alcala University, Sunflower3D_New ceramic skin
- Antonio Bano, University of Alcala’ de Henares, Incensed Bowl
- Antonio Herrero Elordi, University of Seville, Architecture into Sustainable Architecture
- Antonio Martinez, University of Seville, Sustain-Up Building India
- Claude Demers, Laval University, SHED: Systeme Hybride d’Experimenatation et de Diffusion
- Elena Marco, University of the West of England, A Moment’s Grace
- Eugenio Morello, Polytechnic of Milan, BUCALETTO: An urban design study in a post earthquake temporary district
- Ezequiel Uson, Polytechnic University of Cataluna - School of Architecture, Sustainable Housing in San Jose, Costa Rica
- Fernando Vilaplana Villajos, University of Seville, Empathy
- Filipa Roseta, Technical University of Lisbon, [-E+CO2] - Habitat | A Window for the Community
- Hana Riemer, TUM Munich, Healing Community
• Hanspeter Buergi, Lucerne University of Applied Sciences and Arts, ThermoSpace
• Inge Vestergaard, Aarhus School of Architecture, Turkish Delight
• Ivan Jimenez, University of Santiago, MEND - Modular Ensemble for Natural Disasters
• Joerg Rekittke, National University of Singapore, PASIG JEEPS
• John Brennan, Edinburgh School of Architecture and Landscape Architecture, Culture Box
• Jorge Mancilla, University of Santiago, Recovering the river as social link
• Jose Maria Ordeig, University of Navarre, Escape to the City
• Josep Adell-Argiles, Polytechnic of Madrid, The B&W House Follows the Sun
• Juana Sanchez, University of Malaga, The Water Flow
• Luz Fernandez Valderrama, SAMA Sevilla, Tomate, wifi, botijo. Social housing web
• Maria Federica Ottone, University of Camerino, Sustainable grafts in the diffuse city
• Maria Kessler, Oxford Brookes University, PLA:/LIVE Project
• Maria Lopez de Asian Alberich, SAMA Sevilla, Alto Patache Refuge
• Marios Phocas, University of Cyprus, Compact Green Architecture
• Massimo Perriccioli, University of Camerino,
  Life Architecture_ New dynamic model and operation strategy
• Maureen Trebilcock, University of Bio-Bio Chile, Interstitial Housing Complex
• Michael Richards, Kent School of Architecture, Geo-scape: Environmental Interface
• Monica Morales, University of Alcala’de Heneras, Dynamic dome
• Monica Rossi, University of Camerino, E3A_ Ecosustainability and Energy Efficiency in Architecture
• Nurakmal Goh, National University of Malaysia,
  Green Student Center (as a Rejuvenation of Ac Hoc Planning Campus)
• Pablo La Roche, California State Polytechnic University, Carbon Neutral Design Studio
• Rafael Casado Martirez, University of Seville, Gentropy
• Rodrigo Aguilar Perez, University of Santiago, Sustainable Floodable Park
• Ruth Vega, University of Alcala’de Heneras, Cardboard Wagon
• Sara Horvath, BME Budapest University, Small house - Great idea
• Saverio Mecca, University of Florence,
  Analysis and development of a modular system of vegetative cover for flat roofs
• Sergio Altomonte, University of Nottingham, Sustainable Urban Regeneration
• Simos Yannas, Architectural Association, Urban Living Environments

CATEGORY III:
• Adri van den Brink, Wageningen University, Waterways to Climate adaptation
• Antonio Martinez, University of Seville, Architecture in Context
• Fernando Vilaplana Villajos, University of Seville, Empathy
• Giovanna Martellato, ISPRA Italy, Mobility and Transports in Urban Areas
• Hana Riemer, TUM Munich, Optimising the High-Rise Facade
• Luz Fernandez Valderrama, SAMA Sevilla, Botijo, Arbol, Reciclaje
• Maria Lopez de Asian Alberich ,SAMA Sevilla, Kimy’s Tale
• Maria Luisa Germana, University of Palermo,
  The Passive Cooling System from Tradition to Innovation: wind Towers
• Mary Rogerio, Miami University, A Hands On Approach: Eliminating Thermal Bridging
• Pablo La Roche, California State Polytechnic University, Low Cost Alternative Sustainable Systems
• Paola Sassi, Oxford Brookes University, Low Carbon Housing Refurbishment Incentives Scheme
• Sajal Chowdhury, Chittagong University of Engineering & Technology Bangladesh
  Future Architecture from Abstract Art
• Sergio Altomonte, University of Nottingham, MovieSTAR (Sustainable Thinking in Architecture)
• Simos Yannas, Architectural Association, The Galerias of Toural in Santiago de Compostela, Spain
• Tina Unruh, Lucerne University of Applied Sciences and Arts, Sustainable Interpretation
SUMMARY

ENGLISH
EDUCATE is a three-year project on environmental design in university curricula and architectural training in Europe. The project started in June 2009 with support from the European Commission's Energy Agency for Competitiveness and Innovation (EACI) under the Intelligent Energy Europe Programme. The mission of EDUCATE is to promote the integration of sustainability and energy efficiency in the education of architects and in the practice of architecture, disseminating know-how and examples of best practice in environmental design and facilitating the harmonisation of qualification prescriptions across Europe.

The EDUCATE project involves teams from seven European academic partners:

- University of Nottingham (Coordinator) - Department of Architecture and Built Environment (UK)
- Architectural Association School of Architecture - Environment & Energy Studies Programme (UK)
- Catholic University of Louvain - Architecture et Climat, LOCI Faculty (Belgium)
- Technical University of Munich - Faculty of Architecture (Germany)
- University of Rome La Sapienza - Department DATA, Faculty of Architecture (Italy)
- Seminar of Architecture and Environment - SAMA S.C. (Spain)
- Budapest University of Technology and Economics - Faculty of Architecture (Hungary)

This publication presents students' projects that were awarded prizes and honorary mentions in the EDUCATE Prize that was launched in July 2011 to celebrate outstanding student work on the various dimensions of sustainability in architecture and urban design. The awards were offered under three categories: for undergraduate design projects (Years of study 1-3); for graduate and postgraduate design projects (Years of study 4-6); and for non-design student work such as essays, video, artwork at any year of study. The deadline for submission was the 9th December 2011. 86 entries were received under the three categories of the EDUCATE Prize. These came from 42 different Universities (34 in Europe, 2 in the United States, 2 in Chile, 1 in Canada, 1 in Bangladesh, 1 in Singapore, and 1 in Malaysia). The assessment of entries was coordinated by the Bavarian Chamber of Architects (Germany) and involved an independent Jury from members of European professional institutions and well known international architects. The Award Ceremony and exhibition was held in Rome (Italy) on the 23rd February 2012 in the context of a Symposium on Education for Sustainability.

For more information, see www.educate-sustainability.eu/prize
**FRANÇAIS**


Sept partenaires académiques européens participent au projet EDUCATE :

- Université de Nottingham (Coordinateur) - Department of Architecture and Built Environment (Royaume-Uni)
- Architectural Association School of Architecture - Environment & Energy Studies Programme (Royaume-Uni)
- Université catholique de Louvain - Architecture et Climat, Faculté LOCI (Belgique)
- Université Technique de Munich - Faculté d'Architecture (Allemagne)
- Université de Rome La Sapienza - Département DATA, Faculté d'Architecture (Italie)
- Séminaire de Architecture et Environnement - SAMA S.C. (Espagne)
- Université de Technologie et d’Economie de Budapest - Faculté d’Architecture (Hongrie)

Cette publication présente les projets d’étudiants qui ont été primés et qui ont obtenu une mention honorifique au prix EDUCATE. Ce prix a été lancé en juillet 2011 pour mettre en valeur le travail remarquable des étudiants sur les différentes approches de la durabilité en architecture et en design urbain. La remise des prix s’est faite suivant trois catégories : les projets de conception de premier cycle (années de l’étude 1-3) ; les projets de conception deuxième et troisième cycles (années de l’étude 4-6), et les travaux d’étudiant autres qu’un projet de conception comme des essais, vidéo, œuvres d’art réalisés au cours d’une année d’étude. La date limite pour la soumission était le 9 décembre 2011. 86 candidatures ont été reçues dans les trois catégories confondues. Ceux-ci provenaient de 42 universités différentes (34 en Europe, 2 aux Etats-Unis, 2 au Chili, 1 au Canada, 1 au Bangladesh, 1 à Singapour, et 1 en Malaisie). L’évaluation des projets soumis a été coordonnée par la Chambre des Architectes de Bavière (Allemagne) et a impliqué un jury indépendant composé de membres des institutions européennes de professionnels et d’architectes internationaux reconnus. La remise des prix et l’exposition des projets primés ont eu lieu à Rome (Italie) le 23 février 2012 dans le cadre d’un Symposium sur l’Education pour la Durabilité.

Pour plus d’information, www.educate-sustainability.eu/prize
DEUTSCH


Das EDUCATE Team besteht aus sieben Akademischen Partnern:

- Universität von Nottingham - Department of Architecture and Built Environment (Projektleitung, UK)
- Architectural Association School of Architecture - Environment & Energy Studies Programme (UK)
- Katholische Universität von Louvain - Architecture et Climat, Fakultät LOC (Belgien)
- Technische Universität München - Fakultät der Architektur (Deutschland)
- Universität von Rome La Sapienza – Fachgebiet DATA, Fakultät der Architektur (Italien)
- Seminar der Architecture und Umwelt - SAMA S.C. (Spanien)
- Technische und Ökonomische Universität Budapest - Fakultät der Architektur (Ungarn)


Mehr Informationen unter: www.educate-sustainability.eu/prize
ITALIANO


Il progetto EDUCATE coinvolge sette partner accademici Europei:

- Università di Nottingham (Coordinatore) - Department of Architecture and Built Environment (Regno Unito)
- Architectural Association School of Architecture - Environment & Energy Studies Programme (Regno Unito)
- Università Cattolica di Lovanio - Architecture et Climat, Facolta’ LOCI (Belgio)
- Università Tecnica di Monaco - Facolta’ di Architettura (Germania)
- Università di Roma La Sapienza - Dipartimento DATA, Facolta’ di Architettura (Italia)
- Seminario di Architettura ed Ambiente - SAMÀ S.C. (Spagna)
- Università di Tecnologia ed Economia di Budapest - Facolta’ di Architettura (Ungheria)

Questa pubblicazione presenta i progetti premiati, o che hanno ricevuto una menzione d’onore, nell’ambito del concorso EDUCATE Prize, lanciato nel Luglio 2011 per celebrare l’eccellenza nei lavori degli studenti sulle molteplici dimensioni della sostenibilità in architettura e nel progetto urbano. I premi sono stati distribuiti sulla base di tre categorie: progetti sviluppati nell’ambito di corsi di laurea triennale (dal 1° al 3° anno di studio); progetti sviluppati nell’ambito di corsi di laurea magistrale, master di I e II livello e corsi di specializzazione (dal 4° al 6° anno di studio); lavori non progettuali, inclusi brevi saggi, video, lavori artistici, sviluppati a qualsiasi livello del percorso formativo. Il termine ultimo per la presentazione dei lavori è stato fissato al 9 Dicembre 2011. 86 proposte sono state ricevute nelle tre categorie dell’EDUCATE Prize provenienti da 42 diverse Università (34 dall’Europa, 2 dagli Stati Uniti, 2 dal Cile, 1 dal Canada, 1 dal Bangladesh, 1 da Singapore e 1 dalla Malesia). Il processo di valutazione è stato coordinato dall’Ordine degli Architetti della Bavaria (Germania) ed ha coinvolto una giuria indipendente composta da rappresentanti di ordini professionali europei e da architetti di fama internazionale. La cerimonia di premiazione e la mostra dei lavori si è svolta a Roma (Italia) il 23 Febbraio 2012 nell’ambito di un Simposio sul tema della Educazione alla Sostenibilità.

Per maggiori informazioni, visitate il sito www.educate-sustainability.eu/prize
ESPANOL

EDUCATE es un proyecto de tres años de duración sobre diseño medioambiental en la enseñanza universitaria y la formación arquitectónica en Europa. El proyecto se inició en junio 2009, financiado por la Comisión Europea, Energy Agency for Competitiveness and Innovation (EACI) en el marco del Programa Intelligent Energy Europe. EDUCATE tiene por misión derribar las barreras pedagógicas para la integración de la sostenibilidad y la eficiencia energética en el programa curricular universitario y en la práctica de la arquitectura, diseminar conocimientos prácticos y ejemplos de una mejor práctica en diseño medioambiental y proponer una armonización de los requisitos para obtener la titulación de arquitecto en toda Europa.

El proyecto EDUCATE está constituido por un consorcio de siete socios europeos:

- Universidad de Nottingham (Coordinador) - Department of Architecture and Built Environment (Reino Unido)
- Architectural Association School of Architecture - Environment & Energy Studies Programme (Reino Unido)
- Universidad católica de Lovaina - Arquitecture et Climat, Facultad LOCI (Bélgica)
- Universidad Técnica de Munich - Facultad de Arquitectura (Alemania)
- Universidad de Roma La Sapienza - Departamento DATA, Facultad de Arquitectura (Italia)
- Seminario de Arquitectura y Medioambiente - SAMA S.C. (España)
- Universidad de Tecnología y Economía de Budapest - Facultad de Arquitectura ( Hungría)

Esta publicación presenta los proyectos de estudiantes galardonados con premios y menciones honoríficas en el EDUCATE Prize que fue convocado en julio de 2011 con el objetivo de premiar los trabajos destacados de estudiantes en las diversas dimensiones de la sostenibilidad en la arquitectura y el urbanismo. Los premios se organizaron en tres categorías: proyectos de diseño arquitectónico para estudiantes de pregrado (1er- 3er curso); proyectos de diseño arquitectónico para estudiantes de grado y posgrado (4er- 6er curso); y cualquier trabajo académico que no fuese un proyecto de diseño como por ejemplo documentos escritos, videos, trabajos gráficos o artísticos accesible para todos los cursos. La fecha límite para la entrega de propuestas fue el 9 de diciembre de 2011. Se recibieron un total de 86 propuestas entre las tres categorías del EDUCATE Prize provenientes de 42 Universidades (34 en Europa, 2 en Estados Unidos, 2 en Chile, 1 en Canadá, 1 en Bangladesh, 1 en Singapur y 1 en Malasia). El Colegio de Arquitectos de Baviera (Alemania) coordinó el proceso de evaluación de las propuestas en el que participó un jurado independiente compuesto por miembros de las instituciones europeas profesionales y reputados arquitectos internacionales. La ceremonia de entrega de premios y exposición de éstos se celebró en Roma (Italia) el 23 de febrero de 2012 en el marco de un Simposio sobre Educación para la Sostenibilidad.

Para más información, visite www.educate-sustainability.eu/prize
MAGYAR

A három éves EDUCATE projekt (Környezettudatos tervezési szemlélet az európai egyetemi oktatásban és az építészetmérnöki továbbképzésben) 2009 júniusában indult az Európai Bizottság Versenyképesség és Innováció Végrehajtó Ügynökségének (Energy Agency for Competitiveness and Innovation, röv.: EACI) Intelligens Energia Európa programjának támogatásával. A projekt célja, hogy elősegítsse a fenntarthatóság és energiahatékonyság alapelveinek a felsőoktatásba és az építészeti gyakorlatba integrálódását és széles körben terjessze a felhálmozott tudást és megvalósult mintáépületek példáját valamint elősegítsze az építészmérnöki jogosultságok európai harmonizációját.

A projekt résztvevői hét európai építész egyetem oktatói:

- Nottinghami Egyetem Építészet és Épített Környezet Tanszéke (Projekt koordinátor, Egyesült Királyság)
- Londoni Építész Iskola (Egyesült Királyság)
- Louvainai Katolikus Egyetem (Belgium)
- Müncheni Műszaki Egyetem (Németország)
- Római Sapienza Egyetem (Olaszország)
- Építészet és Környezet Szeminárium Sevilla (Spanyolország)
- Budapesti Műszaki és Gazdaságtudományi Egyetem, Építészmérnöki Kar (Magyarország)


További információ, a projekt angol nyelvű honlapján: www.educate-sustainability.eu
中国的

EDUCATE 始于 2009 年 6 月，是一项旨在欧洲的大学课程中以及建筑专业培训领域内推广环境设计理念的研究课题。它由欧盟委员会能源署（European Commission）资助，力图在欧洲智能能源计划（Intelligent Energy Europe Programme）的框架下激励欧洲创新委员会（EACI）所倡导的竞争力与创新力。在欧洲，EDUCATE 致力于在建筑教育与建筑实践中将可持续发展理念与能源高效利用相结合，普及实践知识，宣传优秀环境设计工程实例，以及促进统一的欧洲环境认证。

EDUCATE 项目团队现包含七所欧洲学术机构：

- 英国诺丁汉大学，建筑与建造环境学院（项目负责人方）
- 英国 AA 建筑学院，环境与能源研究组
- 比利时天主教鲁汶大学，建筑与环境系，LOCI 学院
- 德国慕尼黑工业大学，建筑学院
- 意大利罗马大学，建筑学院，DATA
- 西班牙建筑与环境研讨会，SAMA S.C.
- 匈牙利布达佩斯技术与经济大学，建筑学院

在 2011 年 7 月，EDUCATE 特设立奖金来表彰从不同维度诠释建筑与城市可持续发展的杰出学生作品，而所有获奖及获得荣誉提名的学生作品均呈于本书之中。该项奖金的评选基于三个不同类别，即：本科设计方案（1 到 3 年级）；研究生设计方案（4 到 6 年级）；以及来自任何年级的非设计类学生作品，如论文，影片，艺术创作等。参评方案的提交截止日期为 2011 年 12 月 9 日，而 EDUCATE 收到了来自三个不同类别的总共 86 个参评方案。这些方案来自 42 所不同高校，这其中包括 34 所欧洲大学，2 所美国大学，2 所智利大学，1 所加拿大学，1 所孟加拉大学，1 所新加坡大学，以及 1 所马来西亚大学。作品评选工作由德国巴伐利亚建筑师协会（Bavarian Chamber of Architects）主持，并由一个由多所欧洲专业机构与国际知名建筑师所组成的独立评审会具体操作。颁奖典礼与相关展览携手可持续发展教育研讨会，已于 2012 年 2 月 23 日在意大利罗马隆重举办。

更多的信息请查询网站 www.educate-sustainability.eu/prize