

Reading International Solidarity Centre, Edible Roof Garden

Green Space of the Month

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Reading International Solidarity Centre turned a leaky roof into an amazing edible roof garden and educational resource for teaching practical skills and raising awareness of the global links between social, economic and environmental issues. Using innovative design based on 'Permaculture' principals, the roof garden – made entirely from recycled or sustainably produced materials – is home to 140 fascinating plants, each of which tells a story about the diversity of climates and cultures around the world and their fragile interdependence.



Historic Roots

Reading is a relatively wealthy town on the banks of the River Thames in Berkshire, Southern England. The town has strong historical links to the Quaker faith. Well known Quaker companies like Huntley and Palmer, biscuit manufacturers, helped to build the place. The Quaker community also played an important role in the campaign to abolish slavery and in the Central Club on London Street you can see a mural depicting local Black history.

Although situated in the heart of a very green and pleasant county, Reading town centre is very much a built up area, lacking in green space.

Reading International Solidarity Centre, at 35-39 London Street, is keeping up the local tradition of campaigning for international justice, whilst addressing environmental issues by creating a highly original garden project – up on the roof!

The 'Gardens of Berkshire' (the Yellow Book of the National Gardens Scheme) describes the RISC entry as a "small town centre roof garden developed to demonstrate sustainability and our dependence on plants" and points out that it is featured in Britain in Bloom's "most innovative garden" category for 2003. The garden is open to the public on certain days of the year, with tours by arrangement. It is accessible by an outside staircase, which may present an obstacle for people with mobility difficulties.

RISC is part of an educational charity called World Education Berkshire, registered as a Company with Charitable aims. The trustees give strategic guidance to the organisation and the collective, which is responsible for the day to day running of the

centre and its many, wonderful projects, is structured as a collective, ie the ten employees are all equal and each has their own areas of responsibility. RISC worker and building co-ordinator Martin Mikhail is quite an expert on local history and explained about the background to the centre and its incredible, edible roof garden:

Originating in Ascot, from 1983 to '87 the Charity had been based in Slough and working on a range of projects across the county, run from a double-decker bus. The RISC centre was established in 1987 originally in smaller, rented premises in Reading. The current building on London Street was purchased 'for a song' in a poor state of repair nine and a half years ago and formally opened in 1996.

Contemporary flavour

The Centre is home to eight different organisations including BME groups such as the Southern Ethiopian Peoples' Action Group and Reading Refugee Support Group, as well as the well known One World Week, a 'virtual organisation' known as the Aid Workers' Network, and various others.

The building houses a large and well stocked Fair Trade shop and the Global Café serving international cuisine made from organic, locally produced and fair traded ingredients. It also generates an income from the hire of conference facilities to appropriate public and private sector organisations and individuals, on a sliding scale including subsidised rates for community groups.

However, there was a problem. The old building had a leaky flat roof at the rear and its occupants had been using buckets to catch drips for five years. It was not properly insulated, so it was difficult and expensive to heat. In addition, there had been complaints from the neighbours about the noise from events. RISC staff calculated that they needed £12k to repair the roof, making it warm, waterproof and sound proof. But it is always hard to raise funds for roof appeals. Martin, who worked on the roof garden project in the early stages of its development, told me how the idea for the roof garden emerged organically from the collective vision of the charity.



Food for Thought

Thinking behind the garden is based on Permaculture principles – you can learn more about this approach to sustainable development by following the link from the RISC web site. A central principle in Permaculture states that “the problem is the solution”. RISC cunningly turned the threat of a leaking roof into an opportunity to develop an exciting, innovative and inspirational project which would stand a far better chance of attracting funding.

First they agreed they would need triple glazed domes on the roof, to allow light into the building below without allowing sound to escape. Then they began thinking of ways to further sound-proof and insulate the structure. They looked at green roofs or living roofs as they are sometimes called, which were quite unusual then but more buildings have them now. Green roofs are often just grass or wildflower meadow, but sometimes are sown with succulent plants like sedum (see the example of the London Wildfowl and Wetland Centre, Green Space of the Month -) Living roofs have a number of advantages in that they increase biodiversity, they have high thermal mass which helps to insulate buildings and they are especially good for managing water run off, or indeed for harvesting rainwater for use as an on-site resource (more on this below.)

Next the group realised that there was little point in having all this cutting edge technology and fascinating plant life up here and not making full use of it as a resource to meet RISC's aims. They had the idea of 'stacking functions' – another Permaculture principle – to make this into an edible roof garden as an educational resource. Since part of the purpose of World Education Berkshire and RISC is to raise awareness of global food issues, ideas began to shoot up for plants which could be grown to illustrate the issues and help people to make the links. For example, there were plans to plant an olive tree, not just for decorative purposes but because it teaches us about the necessity of oil production in Palestine. A hardy variety of banana, the Japanese mountain variety, would stand for fair trade, and so on. The project became known as the Growing our Futures project and the resulting garden now actually produces organic vegetables, salads and herbs for use in the Global Café downstairs, tackling the issue of food miles as well as being an award winning visitor attraction and model project.

Weighty matters

There were concerns as to whether the structure would be able to support the weight of all these features, so Martin organised a surveyor to do a feasibility study. Once plans were drawn up and approved, Jessica Witchell, an erstwhile member of the RISC collective, applied for funding from the Community Fund, SEED, the lottery's environment fund, the Environment Agency and the Environment Trust for Berkshire (via landfill tax). Jess has since left to have a baby, but not before writing an interesting article about this project for Permaculture magazine, in which she points out that "Food is an excellent medium to explore how our lives are inextricably linked to other people around the world."

The construction of the garden is itself a lesson in sustainability, putting into practice the waste reduction hierarchy – reduce, reuse, recycle and rot.

Paving for the garden path is made of local, reclaimed stone and features corner stones, salvaged from other parts of the building, which had originally been brought from France 800 years ago as ballast in ships, and had then been carved into columns and gargoyles belonging to Reading Abbey. We know this from the stone masons' inscriptions on their bases. When the Abbey was demolished by Henry VIII its raw materials were reused by local builders. The Abbey remains can still be seen nearby, next to historic Reading Gaol. This is one reason why the garden has become part of the Reading Heritage Trail.

The garden also uses sustainable materials for the benches and decking, which are made from green oak, produced by an enlightened Berkshire timber merchant and his mobile saw mill, as it is not economical to drag fallen oak from the woods to process it in the workshop.

Topsoil for growing plants is supported in raised beds made using hazel hurdles, but not in the traditional hazel-only style, which is once more becoming popular in Britain. These innovative structures use hazel poles woven through a metal frame to give added strength and contain the roof top plots. Compost for the raised beds is made on site using biodegradable waste from the kitchen of the Global Café below.

Because it can get very dry up here in the summer, plants are tended by an automatic micro-watering system run on solar power from roof top photo-voltaic panels with a wind turbine for top up during cloudy days. Batteries for storing the renewable energy are kept in a green house, and water, collected from all the sloping roof surfaces at higher levels of the building, is stored in two large tanks concealed in a light-well in the centre of the building. In the winter, excess water can be diverted to flush the downstairs loos. As with all the elements of this marvellous garden, the watering system is also an educational resource linking to issues in water resource management both here in Reading and globally. A leaflet explaining more about the system is available from RISC.



Designing for cultural relevance and educational value

A wide range of potential stakeholders were consulted during the design stage, including ethnic minority groups along with other community groups, schools, artists and environmental organisations. Jess writes that “ The garden also provided a great opportunity to twin with partner groups in the ‘South’ (often referred to as ‘developing’ or ‘third world’ countries)” including Nepal, Cuba, the Philippines and Zimbabwe. In the latest twinning initiative, Dave Richards, RISC’s graphic designer and education worker is currently planning a visit to Barbados in the Spring, to explore possibilities for a twinning with the country of origin one side of his family.

With the help of Paul Barney Landscapes, culturally significant plants were selected to relate to some of the groups using the garden, and twinned with it. The Growing our Futures project is a multidimensional garden, planted with trees large and small,

climbers, shrubs, herbaceous plants, ground cover and root crops, just like the layers of a natural forest, and every plant is edible, medicinal or has some practical use.

Around 140 plants are featured in the roof garden: plants such as Turkish Rocket, a peppery salad plant, Chilean myrtle which bears delicious 'ugni' berries and maize, the staple of food crop of much of Latin America and Africa, which is so closely linked to the current debate about genetic modification of plant life. These plants, which come from all around the world, can teach us so much, not just about biodiversity but also about different cultures and how they have contributed to our knowledge of plant lore.

For instance, I learned that Japanese Horseradish, also known as 'wasabi' – the green condiment served with sushi – is thought to be a good herbal remedy for fish poisoning!

Even a plant as familiar as the humble potato has an extraordinary story: domesticated by Incas in the Andes mountains over 7,000 years ago, where some 3,000 varieties were cultivated, and brought to Ireland in 1588 where it became the staple crop, until 1845 when potato blight brought about famine, the worst disaster to hit Europe since the Black Death of 1348. An information sheet available from RISC can tell you in greater depth how the story of the potato teaches us to appreciate the importance of biodiversity.

If you are unable to visit the roof garden, it is worth a visit to the RISC web site. There is a very useful list of species to be found, giving details of the plants' Latin name, common name and family, together with a database giving details of plant uses, and a gallery of photos of the garden under construction and in leaf. This would be a useful resource for anyone thinking of growing a cultural garden, designing an educational resource or developing a Permaculture project.

Volunteers and visitors from near and far

It took 300 volunteers over 2 years to renovate the roof. This included 4 lots of 15 international work camp students per year for two years, plus 90 individuals. Trusted prisoners from the local gaol also helped to build the garden, whilst improving their skills ready for life on the outside.

A number of volunteers are involved on an ongoing basis to maintain the garden. Steve Jones is the Garden Project Worker and he works with the volunteer co-ordinator to organise monthly maintenance sessions around seasonal themes such as seed swapping, pruning, composting, planting out seedlings, harvesting, seed collection and herbal remedies.

Steve joined the RISC collective in 2002, but actually his connections with the organisation go as far back as 1985 when he became the bus driver of the education bus and education worker focussing on issues such as hunger in Africa and trade and debt. Steve has a degree in development and is a trained business studies and economics teacher. He has gone on to specialise in sustainable development and environmental issues after having worked at the Centre for Alternative Technology for 7 years as well as acting as membership secretary for the Permaculture Association. Steve has lived and travelled extensively in Africa, India and North

America, and is now based in North Wales. He studied Permaculture in Zimbabwe, where people live closer to the land than in Britain. Whereas for people in Britain, sustainable development can seem rather abstract, Steve highlighted the fact that for subsistence farmers, techniques such as Permaculture are vital.



Spreading the message further

The RISC collective work with local schools, community groups and through links with other countries to help people 'make the links' about sustainable development.

The roof garden has inspired two schools to want to develop gardens of their own. In Woking and Bracknell, school children have discovered a renewed interest in gardening and wish to renovate their wildlife garden. In Caversham, High Down school has a walled garden which is not in use. Steve is planning to work with 'less academically inclined children' to create a Permaculture garden, as a medium for learning practical skills.

Steve told me that RISC is looking for ways to take the inspiration of the roof garden out into the community. "For me, it's only a stepping stone to getting people involved in sustainable development," he explained.

I did not know before that coffee is the second most traded product in the world, next to oil, and yet all the producer countries are desperately in debt due to unfair trade agreements. What's more, coffee is a shade crop which grows best under the canopy of the rain forest, and as we all know, rain forest is one of our most precious environments globally. Yet profit-driven farming methods are clear-felling forest, causing environmental devastation. This is why it is so important for us all to start thinking about switching to fair trade products. Coffee is just one example. On the RISC web site you can find information about other cash crops such as tea, cocoa, cotton and tobacco.

Steve uses these plant stories when he works with groups to help them increase their awareness of sustainable development issues and to assist people in gaining skills which will have a real impact in the struggle to build a fairer world. He tries to tailor sessions to suit the specific needs and level of interest of the group he works with. For instance, volunteers at the monthly maintenance sessions may simply wish to learn basic skills like seed collecting. On the other hand, the edible roof garden has hosted two visits from groups of organic farmers from Uganda, and Steve has been

able to help the farmers to improve their growing practices and to increase their awareness of global economic and social issues.

The edible roof garden is a remarkable green space in that it involves ethnic communities from all around the world. It is fascinating to learn about the links between cultures, as embodied in the many plants we grow and trade internationally. But the garden has really achieved its aim when we grasp the necessity to do more than contemplate these global issues. This garden teaches us all to take responsibility for playing our own part in achieving sustainable development.

Reference:

RISC Assessment: Growing from the Roof Up by Jessica Witchell in Permaculture magazine no 35 Spring 2003 pp3-7

Resources:

<http://www.risc.org.uk/>