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PUPILS TAKE LEARNING TO THE (GREEN) ROOF

The UK's leading trade association for the landscape industry, the British Association of Landscape Industries, takes a look at the future of landscaping in schools

ST BARTHOLOMEW SCHOOL in Newbury has future proofed newly built school buildings by investing in a Green Roof.

The project began with the building contractor Willmott Dixon challenging a selection of Year 9 students at the school to investigate the possibility of having a Green Roof system on new buildings they were in the process of planning to build at the school. The Willmott Dixon Challenge involved the students researching design, installation, cost, maintenance and life span of a Green Roof. They were also asked to investigate if a Green Roof would improve the bio diversity of the school grounds and whether installing a Green Roof would have a positive effect on the environment. The students' findings were then presented to the Willmott Dixon senior managers and the Design and Construction team, and concluded with the team deciding on installing a Green Roof.

TYPES OF MATERIALS

St Bartholomew School's interest in installing a Green Roof and its dedication to involving the pupils in this process also involved a group of Year 8 pupils learning about the different

types of materials that can be used on a Green Roof. Green Roof expert Dr Alan Tarr, who recently spoke at BALI's Green Roof & Living Walls seminar in Sheffield, led a science experiment with the pupils testing Green Roof sedum varieties. The group created miniature scaled Green Roofs that were then planted in specially constructed wooden boxes in the school grounds, then over a series of months the pupils monitored growth rate of the sedum and incorporated this research into both their science lessons and the overall research put forward to the Willmott Dixon Challenge.

West Berkshire Council, in which the school is situated, worked closely with Willmott Dixon in the planning stages of the installation of the Green Roof and is using the scheme as a flagship project for other schools in the area.

RoofGreen UK subcontracting for RoofLine were brought in to construct the Green Roof. It was decided by the pupils to select six different varieties of sedum for planting trying to get as much variation as possible with regard to leaf colour, flower colour and plant height as to get maximum aesthetic as well as making the roof as bio diverse as possible, the total roof area covered by sedum was approximately

4,000m². BALI affiliate members Boughton Loam worked with RoofLine to supply 400 tonnes of specialist lightweight soil to go onto the roof, in which 68,000 plants were planted. 55 tonnes of gravel was also used on the roof to finish the edging detail.

Simon Hodley, Boughton Loam Ltd's business director explains the development of the soil "We were very pleased to have been selected to supply our specialist lightweight green roof soil for Roof Line Ltd's prestigious contract at St Bartholomew's School in Newbury. The growing substrate was developed with Bernard Courtney, to be free draining although still retaining enough moisture and nutrients to encourage a healthy growing environment. Bernard Courtney also stipulated that the substrate must be made predominately of recycled materials to adhere to the ethos of sustainability which Bernard and Roof Green Ltd promote.

"Boughton Loam Ltd supplied approximately 500 cubic metres of substrate in bulk bags. The Boughton substrate was made up of a blend of a sandy loam, green compost and lightweight aggregate. The material was supplied to the school site with very strict delivery controls to allow for as little disruption to the smooth



OUTDOOR LEARNING

running of the present school as possible."

Bernard Courtney, horticulture manager from RoofGreen UK, commented on the logistics of installing the Green Roof at St Bartholomew School: "It was a massive undertaking to get 400 tonnes of soil and 55 tonnes of gravel to roof level of a six storey building, moreover none of the roofs are flat and have a very intricate design with slopes of different angles ranging from 6 degrees to a maximum slope of 18 degrees. Special soil retention brackets had to be installed on the slopes to ensure maximum stabilisation of the soil.

"Planting was also a massive undertaking on this project, 68,000 plants in an area the size of a small football pitch which were spread over seven different roof areas. We were very satisfied with the outcome on what was a very prestigious project, our team felt proud to be a part of it."

"GREEN POINTS"

Councils in the United Kingdom must now attain a certain amount of "Green Points" in all their building and construction projects, as such Green Roofs have become a significant factor in this environmental drive by public bodies and schools have therefore become a major focus for Green Roof Installations. St Bartholomew School's



Pupils planting sedum

approach to installing Green Roof technology demonstrates a unique project in which pupils can learn about the benefits of a Green Roof as well as the technology involved and incorporate this into the curriculum at a number of age levels. The last few sedum plants which completed the Green Roof were put in place by a selection of Year 9 & 10 pupils. The students then took great delight

in (safely) viewing part of the roof along with Chairman of the Council Councillor Geoff Findlay, the schools headteacher and representatives from Willmott Dixon and RoofGreen UK.

With thanks to Bernhard Courtney Roofline, Simon Hedley of Boughton Loam and St Bartholomew

Twig education landscaping highlights the importance of play

W HETHER PHYSICAL,

social, cognitive or imaginative, play is essential to a child's development. Twig works with school staff, governors, parents and pupils to ensure that the spaces we create offer maximum benefit and stimulation in line with as broad a range of curriculum requirements as possible. While designs will be produced with firm curriculum aims at their heart, meeting requirements for literacy, numeracy, science, nutrition, music etc they will also incorporate elements of hidden curriculum through the placement of symbols, signs, information boards, partnership and team activities. You can be assured of a



professional and conscientious service by a company that cares about its customers. We are members of BALI (British Association of Landscape Industries), your guarantee of our excellent standards giving you extra peace of mind. We are covered by £5 million

public liability insurance, manage risk assessments and adhere to a strict health and safety policy. All our staff are CRB checked.

We cover the South East of England, the Home Counties, London and are based in Lamberhurst, Kent.

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