

GREEN ETHOS

From the day Henry Reily-Collins could talk, he would tell anyone who would listen that he was going to be an inventor. He spent the best part of his childhood being the leader of the Jedi gang who built the best bases and tree houses in the woods. Even at this early age, he was aware that the structures had to be well-built and strong enough to withstand attacks from rival gangs.

"I have always had an affinity with architecture. The older the better, as they tend to be easier to play games in or climb on! Fascinated by old churches and cathedral structures, I have since recognised, by looking at crystallographic structures under the microscope, how many of the structural techniques that we use to build these mammoth buildings are also seen in nature", Henry explained.

Henry's family has been in business in Oxfordshire since 1940. The name Hallidays is synonymous with Hallidays Fine Antiques, based in Dorchester-on-Thames; a family business owned by Edward and Binnie Reily-Collins (Henry's parents) along with Hallidays UK Ltd that manufactures bespoke panelled rooms which they design, hand-make and install throughout Europe and America. Hallidays Developments, the latest addition to the family business, specialises in the sympathetic restoration of period properties, incorporating a wealth of original features alongside innovative technology, while keeping an environmentally friendly ethos & outlook. Henry's sister, Melanie Reily-Collins elaborated:

"Our aim is to combine history with technology, art with science. In dealing with period properties, we feel that we reach right into the core of recycling – taking old buildings and breathing new life and purpose into them. We approach housing projects with a different attitude, putting the building and its surroundings first and deriving the finished product from what it has to offer us - uncovering its past as we go, capturing its originality and incorporating these historical elements into the final design. Wherever possible, we recycle and reuse period materials that were either present in the original building, or can be found locally – such as reclaimed beams, tiles and flagstones."

With an enquiring mind inherited from his father, and his mother's exacting standards, Henry has been at the forefront of the Hallidays Development's Green Ethos. Henry won the prestigious Worshipful Company of Ferroners' (Ironmongers) prize at The University of Manchester in 2007, attained his Masters degree with Honours in a five year course of Material Science and Engineering, and has now designed a £3 million renovation project; Dandridge's Mill in East Hanney, praised by the Low Carbon Trust and Energy Saving Trust for innovative, eco-friendly design. All this and he's only 23.

Henry Reily-Collins' prize-winning research for assessing crack damage to nuclear reactor vessels,

potentially saving thousands of lives and money, was taken over by his university, so his inventive mind looked around for the next project, and latched onto using new state of the art, low carbon technology to convert an old silk mill into sustainable luxury apartments. Adapting centuries-old technology, he is using an Archimedean Hydro Screw to generate power from the flowing mill race. The screw will generate 4KW of electricity which will be distributed to the apartments. This is all neatly designed to be backed up in the summer months when the flows are lower, by a solar PV array installed on the roof. Lurking under the mill stream's water surface, collector loops for a Water source Heat-pump are laid low on the river bed so they can't be seen, but are designed to provide 100% of the under-floor heating, on-demand hot water, and "another little carbon free bonus", according to Henry, "in summer time the system will provide under-floor cooling to lower the temperature to around 17°, taking the edge off hotter days." Step inside, and a sophisticated lighting system starts up. Henry is using light bulbs that will last thirty years before they need changing and consume a mere 7W in comparison to your every day power hungry 50W halogen. Tackling advanced lighting technology that has been ignored so far, Henry has again been praised for pursuing where others have given up to really benefit from the low energy, high power LED technology available today (see page 54 article on WILA lighting).

Henry does nothing by halves. Looking over the specs for energy saving in new buildings, he decided what they asked for was too low, and has gone for 25% above the regulations on insulation. Rainwater (of course) is channelled into the river to be turned into electricity, and the system he has installed will allow every householder to key into a home page of their own home, neatly displaying their individual energy consumption for all utilities, against what has been produced by the renewable sources. "The savings will happen in front of their eyes, people need to see and feel how effective these technologies can be if we are ever going to get away from this oil crisis."

With his mobile phone playing 'we're off to see the Wizard, the wonderful wizard of Oz' – Henry firmly believes in harnessing wonders and liberating energy.

Dandridge's Mill is a conversion of an historic silk mill into four 3-4 bedroom, exclusive, low energy, high spec, and spacious residences due for completion in mid-September 2008. For further details please contact: Pink & Black on 01865 515919 or info@pinkandblackproperty.com