

Wiston Estate

Bringing the woodlands back into production.

Chanctonbury Ring, planted in 1760 by 16 year-old Charles Goring on the site of an Iron Age Hill Fort and Roman Temple, was once a tall, proud circle of beech trees straddling the South Downs on the southern edge of the Wiston Estate. On a clear day, it could once be seen from most corners of West Sussex. The hurricane of October 1987 sent the trees to meet their planter. Suffering like so many other private estates in Southern England, Wiston lost 30% of its standing hardwood and its timber income. Replanted compartments were left; the forestry department downgraded and estate maintenance energies were focused elsewhere.

Today, Wiston Estate is still owned and maintained by the Goring family. The current custodians Harry and Pip Goring and it is their direct involvement that drives the management of the estate. Replanted in 1989, the Ring clings to the scarp face (a designated Environmentally Sensitive Area). It overlooks the centrepiece of the estate, Wiston House, which is surrounded by 6000 acres of land, including 1200 acres of woodlands, in-hand farms, over one hundred houses (most of which are let) and the A and B roads and public footpaths that criss-cross the estate.

Wilton Park, a conference-organising entity of the Foreign & Commonwealth Office, leases Wiston House from Wiston Estate. Here, members of government host high-level conferences on topics such as energy security in Europe and forests and climate change. Wilton Park is the partner in a plan suggested by Wiston Estate's Foreman, Toby Askew. If successful, the plan will help generate an income to kick start the process of bringing the estate's 1200 acres of

woodlands back into commercial management and help reduce a Government department's carbon footprint.

Estate Manager William Trinick began working at Wiston in 2001. In 2002, he hired Toby Askew. They inherited under-managed woodland compartments and a forestry yard whose equipment consisted of a John Deere 2650 tractor with forwarding trailer and FMB crane. The one advantage of inheriting a run-down forestry department is that there is a lot of fuel to work with. Toby says, "I was keen to start the business of bringing the woods back into commercial management. Of our 1200 acres, 30% are conifer plantations. Some are over-thinned compartments from the 1960s and some are post-1987 virgin plantings. Large volumes of [under-managed] first-thinnings are worth nothing on the open market, but could be worth a lot to the estate as chip. 70% of the woodland is mixed-broadleaf. The oak was over-stocked, which after some thinning out, has left a large supply of underwood and over-mature sweet chestnut and hazel coppice. Again, low quality wood, which is hard to sell."

Forestry work did not start immediately. For two years Toby worked alongside two existing colleagues (a semi-retired forester and a carpenter also nearing retirement age) on a rolling programme of property and general estate maintenance, including digging drainage ditches and harvesting crops. "What forestry we did was janitorial, keeping the rides open and maintaining the trees on the sides of the roads, perhaps a bit of topping." As members of his team retired, William employed a full-time builder to take over property maintenance, leav-



Replanted in 1989, Toby Askew thinks it will take about 200 years for the Chanctonbury Ring to grow back to its pre-October 1987 glory.

ing Toby time to think about the woodlands.

Toby joined the West Dean Estate near Chichester in 1988, where a woodfuel boiler had been in use since 1983. He learned traditional lowland private estate forestry management (establishment through to clearfelling) and attained his C&G in Forestry and Silviculture. He then moved into a foreman's role on an estate near Petworth, where he learned (among other things) how to liaise with 'vested interests' in boundary disputes and the importance of budgetary issues on a private estate. "I knew (from my time at West Dean) that an estate plantation could supply enough wood to power a biomass boiler. The only way that I could begin to justify working in the forest was to convince William that if we could find a market to supply with wood, then it was worth cutting."

Toby suggested that the woodland might supply enough fuel to power a wood boiler, possibly at Wiston House. William presented the project to Wilton Park in May 2004. Toby says, "We organised a tour of West Dean's boiler room to show them how it could work."

Tim Willows, Wilton Park's Finance Director, thought that the project made very good business sense. "This type of project appealed to many people in differ-

ent ways. Working hard to manage our business activities in a sustainable way is very clearly aligned to the core work of Wilton Park. One of our conference themes specifically focuses on sustainable development and climate change."

The project took shape over the next three years. William explains, "Both parties wanted to approach this project in a measured way. I was keen to ensure the estate woodlands were comfortably able to produce sufficient woodchip in the long term and to rely on an objective assessment of this rather than a hunch. There are examples of projects elsewhere that have not been properly researched which have experienced major problems."

Wiston Estate commissioned an independent forestry advisor to survey the woodland compartments. The survey confirmed that the woodlands could indeed supply the 400 green tonnes needed per year to fuel the boiler, as well as giving valuable advice for future sustainable forestry management.

Forest Research confirmed the survey for Wilton Park, giving additional advice on the system and the heat requirements of Wiston House. Toby organised outings to the Woodland Centre at Flimwell and a wood fuel seminar at Hatton Hall, each of them bringing home that woodfuel was cheaper than



(Left) The Valtra 8150 140hp tractor tows the Heizohack HM 8 400 PTO powered trailer mounted chipper. It has 8 knives and a 400 mm aperture. The chipper was bought for £22,000 + VAT and delivered in June 2007. (Right) Toby Askew stands by the chip store. A trench has been dug below the store so that the chipper can feed chip straight into the store.

the price Wilton Park paid for the 55,000 litres of oil Wiston House consumed each year.

Tim continues, "Due to delegated financial authorities we needed approval from the Foreign & Commonwealth Office (FCO) that we had done all of the necessary planning to ensure the project's success. The FCO has actively supported us (including financial support) and we have had good support from DEFRA."

Using a dual-fuel strategy (current systems remain in place as a back-up), the FCO and Wilton Park both approved the funding for a KWB 150 kilowatt woodfuel boiler in October 2006.

Tim says, "This dual-fuel strategy reduced the potential risks of the project. The boiler has been running successfully since 20 July 2007. Getting early buy-in from both sides was key to making this happen. Wiston Estate saw clear benefits in bringing the under-used woodlands into economic life, based on a stable demand for woodchip. Wilton Park recognised that it was one of the impacts we could make to help reduce carbon emissions. As a government entity, it is good to demonstrate that positive action can be taken. In its wider context, this project is a very visible sign that small organisations can make a lasting impact by embracing this technology and sustainable approach." During the next five years, Wilton Park will evaluate the benefits of moving fully to biomass heating based on their own experience.

Although in its early days, this project has already had an impact on the estate's forestry. As winter approaches, consumption will be far larger than the total 30 tonnes

that the estate team have chipped once a month to fill the 60 tonne capacity chip store. Toby estimates that they will soon be chipping up to once a fortnight and says, "We have had to buy a Heizohack HM 8 400 chipper to make this project work."

William continues, "The production of 400 tonnes of woodchip per year at Wiston opens the door to more constructive woodland management generally. It provides a secure market for our woodfuel and on the back of this we will be able to produce woodchip for boilers elsewhere locally. It also opens up other possibilities. As compartments are thinned, some material will go for chip, some for firewood and hopefully some for sawlogs. The thinning of good quality oak on the estate happens alongside this."

"Our whole approach is sustainable management in the long term. We will not be removing more volume than the woods can stand, but in thinning them out they will benefit both in terms of future growth and biodiversity."

The estate will still employ a forestry contractor for thinnings, haulage and extraction on larger compartments. After Toby's annual tree assessment they will still employ a tree surgeon to climb, to reduce the crowns at Wiston House and to remove overhangs on the roads and footpaths. Toby is taking the maintenance of smaller compartments (up to 3 acres) in-house.

William's team (the youngest that the estate has seen for fifty years) is still needed elsewhere on the estate as work (property maintenance) and the seasons dictate (currently grain drying). Toby estimates that another 600 green tonnes could be



Peter Keen, full-time property maintenance member of Wiston Estates's staff sits with Toby Askew on large oak butts (920 hoppus foot in total). The stack of smaller timber behind (40 to 50 tonnes' worth) is part of the 500 tonnes of poles already stacked around the estate and ready to be chipped. Toby will either sell the large oak timbers to a local mill or he will hire a sawmill, plank it up and put it in the shed to dry, with a view to selling it to some local furniture restorers.

sustainably extracted if they had the staff. It would take most of the year and utilise the machinery now in the yard including a Fransgård 4000 winch, FAE mulcher, GreenMech Chipmaster 150 (soon to be sold) and a Valtra 8150 140hp tractor. Other options such as hiring out the chipper (with tractor and operator) to local woodland owners may also justify expanding the team.

As the heating systems for the 107 estate cottages come up for renewal in the years to come, some of the larger houses could provide additional markets for chip. Toby says, "I know it will take years to get the woodland back into shape, but the process is starting now. I would hope we could have a bigger in-house team, up to two gangs' worth. A guaranteed workforce could be cost effective in the long run as 75% of these woods are commercially viable. By bringing

them back in continuous sustainable management, Harry Goring can be proud of his woods and in return they will bring the estate an income."

After replanting in 1989, Chanctonbury Ring was fenced off and left. Toby points out the birch regeneration and the tree tubes that need removing. "To return it to what it was will take 200 years. I would love to get in there with a chainsaw and get it back on track." Surprisingly, with so many interest groups involved (Natural England, English Heritage and the South Downs Joint Committee) initial consultations have gone well. If anyone can restore the Ring to its former glory, managing it in such a way that improves its appearance in the long term, the team at Wiston Estate can.

Carolyn Locher



(Left) "This plantation had a huge amount of underwood, hardwood and over mature coppice." Toby marked the woodland and hired a contractor to come in and remove the underwood and coppice the hazel. This is what is left. In five years Toby thinks this plantation will be very special. It is all natural regeneration or plantation that was heavily cut during the war. There is oak, ash and a small bit of field maple. Having open up the canopy they should all grow well. Toby asked the contractor to leave the mature hawthorn for the conservation aspect. (Right) This is what the already-cut compartment 14 used to look like. Toby will leave the good trees and take out the rest. They then have something to put through the chipper, leaving the rest to grow and add value. "We have 500 acres of this kind of woodland and many are not wind firm."