



A natural success

A-one+ Integrated Highway Services and Highways England won the Most Innovative Highway Authority Project/Scheme of the Year award at last month's Highways Magazine Excellence Awards. Here, Roger Wantling, Yorkshire's service delivery team leader at Highways England talks in more detail about the Area 12 Biomass Harvesting scheme



What is the trial?

Since January our contractors have been felling trees at four locations throughout the Yorkshire region – junction 3 of the M180, junction 35 of the M62, junction 7 of the M621 and Redhouse on the A1 (M).

Tree felling at the four locations, which were picked because of their size, and age of tree stock, began on 2 February and the trees, which would have been cut down as part of our routine maintenance, were extracted to the verges where they were separated into firewood and timber for chipping. A 'whole tree chipper' was used to feed chip in to wagons; 59 wagon loads in total.

One of the key concerns was making sure the appropriate traffic management was put in place. Each site had different requirements and other design considerations, including ecological walkovers, had to be undertaken at each site to identify site constraints, appropriate methods of working and on-site supervision requirements. This identified that an exclusion zone was needed at junction 35 of the M62 due to badger activity.

The firewood and woodchip is currently being stored and dried prior to sale. The woodchip will be sold to Sembcorp Power Station in Teesside, and the firewood will be sold to local suppliers near their yard in Market Weighton.

Why did you decide to carry it out?

The aim of the trial was to create a more resilient natural environment that supports society in the context of climate change by converting low grade timber into wood chip to provide sustainable, low carbon fuel for heat production through its maintenance activities.

We have produced 1,657 tonnes of biomass, generating a value between £20,085 and £24,720 as part of the seven-month trial.

The trial was a success in terms of the woodland plot being thinned, with 1,441 tonnes of woodchip being harvested and 216 tonnes of firewood extracted from site to be sold on the open market.

The biomass trial was successfully completed to time and budget through innovative construction techniques and collaborative working.

Prior to this trial no biomass had been extracted from our woodlands to produce renewable energy and we now have a more open and attractive woodland with enhanced contribution to carbon storage, opening up watercourses, improving ecological condition and bank stability as a whole.

What are the benefits of the scheme?

In the short to medium term there would be thousands of tonnes of biomass available in the largest and most accessible plots nationally. Obviously as time goes on extracting biomass would get steadily more difficult unless we restocked the woodlands with timber to ensure long-term viability.

The economics of thinning and harvesting are becoming much more attractive for owners and viable for contractors. This trial has also contributed to the Humberhead Levels Nature Improvement Area project which is an example of working in partnership with adjacent landowners and leads to larger biomass yields.

Biomass is a growing market for all wood products, driven by government subsidies. The local small to medium scale biomass heat market (firewood, woodchip and pellets) is one which will grow in significance and provide an important market for the timber coming out of England's undermanaged woodland resource.

This trial has demonstrated that biomass can be successfully harvested from our soft estate, and in sufficient quantities to employ a specialist biomass contractor. Careful selection of which plots to harvest is crucial; timber yield, access, topography and plant security must be considered alongside early contractor involvement for specialist advice.

The initial criteria used for woodland assessment for plots larger than one hectare has been successful and will be considered in any expansion of the project. ➔

