Roadside tree planting — turning problems into opportunities

The Mersey Forest is the largest of the 12 Community Forests in England, covering an area of 360 square miles, and is a partnership of nine local authorities, the Countryside Commission and the Forestry Commission. The Community Forests are a central part of Government's plans for forestry expansion in England and they will provide a rich mosaic of wooded landscapes and land uses, nature areas and public open spaces in and around our towns and cities.

The Mersey Forest particularly aims to reverse the recent decline in the environment and landscape of the North West region. The ultimate aim over the project’s 30 year lifespan is to plant 8000 ha of new woodland, increase the amount of non-woodland habitat and provide a wide range of formal and informal recreation opportunities.

To date, over 1000 ha of new woodland has been planted — approximately 75 ha of this on motorways, with the eventual aim that over 100 ha of the new trees will be on the region’s transport corridors. This element of the project has been extremely successful to date and a five year planting plan has been achieved in just three years. Although much of the co-ordination work has been carried out by The Mersey Forest Team, the final decision to plant is always made by the Highways Agency who have been extremely supportive of the Community Forest programme.

Planning the project

Firstly, in developing the original Forest Plan (The Mersey Forest 1994), a detailed landscape plan was prepared, based on assessment of the character and condition of the project area. With a transport network of 520km of motorway and major trunk roads in the forest area, they clearly have an important impact on the landscape so it was important to target the transport network from the start in order to achieve landscape improvement. The Mersey Forest Plan took consideration of Highways Agency Policy on greening the road network.

Two approaches were taken on the motorway network, based on the landscape assessment, existing planting and the motorists’ view from the car. The strategies were:

1. To try to link roadside planting to existing woodland and areas of planned major increases in woodland cover, giving the road user an impression of driving within a forest. However, long stretches of solid planting would be monotonous so planting proposals were limited to 1.5 km stretches.

2. Retaining existing open views for car occupants to look out over the forest area.

Roadside planting, which is seen by millions of people each year, is important when trying to make a statement about an area. There are often embankments on which planting can take place, raising the level of the trees so that planting and the change to the landscape is noticed a lot more quickly than planting elsewhere, helping to bring alive the Forest vision from an early stage.

In a perfect world, providing this well wooded view of the Forest would be a straightforward task. However, there were a number of difficulties to overcome, falling roughly into two categories: technical and financial.

Dealing with technical problems

The Mersey Forest Team has to accept that, while the road network provides considerable opportunities for increasing tree cover, proposals cannot interfere with either the functionality of the roads or the safety of those using or working on them.

Over the last two years the team has worked closely with the Highways Agency to identify potential woodland sites which can contribute to the development of the Forest but which have no impact on road function. Working in partnership with the Highways Authority and the managing agent (Cheshire CC in 1997/8) it has been able to assess where the issues of drainage, lighting, signage, sight lines and other services restrict or rule out planting. The team has also been able to determine wayleaves and discuss issues such as access routes to roadside equipment and choice of species.

Choice of species needs to address issues such as the leaf size — for instance, trees with large leaves such as Horse Chestnut are not suitable for motorway planting as they can exacerbate slippery road conditions. Tree stability also needs to be taken into account.

Unfortunately, roadsides do not often present ideal growing conditions for trees. Embankments have been heavily compacted to increase stability, and may have little soil cover. It was found that heavy compaction can be relieved on flatter sites by ripping, normally to 45cm. As the trees grow on the site, the spreading root system acts to bind the soil together and increase the site stability. This is also the case on embankments where trees may be pit planted. Once the roots grow out from the pit, they will bind the soil.
All recent research has shown that planting smaller transplant material results in better establishment and growth – this is especially the case when effective vegetation control is carried out for the first three years. The specification developed for roadside planting in the Mersey Forest takes all this research into account.

Establishing the choice of species to plant has been an important consideration. For planting in the Mersey Forest the use of native species has been encouraged, but in places the use of conifers to provide year round colour and improve the visual amenity of the area has been specified. It is important to select trees which one is confident will grow in the conditions the site presents. This may mean that a robust mixture of trees, including a high percentage of pioneer species is selected in preference to a standard “native” list of species. Species such as field maple, hawthorn, birch, rowan, willow and, on the Keuper Marl Soils found in the area, ash, perform well. Shrub species are planted no closer than three metres to the hard shoulder and trees no closer than five metres.

The actual planting of the trees is carried out by experienced contractors in accordance with Chapter 8 of the Highway Manual and these regulations are rigorously enforced. To reduce lane closures, access is normally agreed with neighbouring landowners, reducing the overall cost of the project by up to 50% and, more importantly, improving safety as there is no need to go onto the road. In some cases, sites which could have been planted were omitted because lane closures were required.

While all service information is obtained prior to issuing contracts, it is important to verify the information on site. Normally this is done using a CAT scanner. However, fibre optic cables – increasingly laid on roadsides – do not register on the scanner. They must be mapped accurately to avoid expensive problems.

**Height of Rowan Transplants, Whips and Standards with weed control.**

The Whips and transplants rapidly catch up the Standard trees.

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**Funding the work**

In recent years, funding for enrichment or new planting on Highways Authority land has been under pressure. As well as technical support and advice, one of the key roles of the Mersey Forest Team has been to bring in additional funds – eg it had to show at an early stage how the planting and establishment of these new areas could be paid for.

The Forest Team has a great deal of experience in applying for funding and, when areas are suggested for planting, it advises on the likely levels of grant available. This enables the agreed sites to be put out to tender with a budget figure to work to. The Team subsequently co-ordinates the applications for funding, ensuring that all approvals are in place prior to work commencing and finally acts to collect all the funding into one account.

The Highways Authority thus have only to pay contractors from the one consolidated fund. It is often this sort of work which can makes the difference to the already busy HA manager and we try to make the whole process as straightforward as possible.

**A funding case study**

In 1997/8 Cheshire CC were the managing agents for horticultural work on the motorway network in Cheshire. As the Council is the lead local authority in The Mersey Forest, this offered an opportunity to look in detail at additional planting on motorways, and how it could be funded.

Three main areas of planting need were identified in The Mersey Forest Plan:

- Parts of the M53 through Ellesmere Port;
- A stretch of the M56 close to a major new power station at Runcorn;
- The M6-M56 junction (a great deal of planting was taking place on the M6 in the forest area as a result of improvement work on the Thelwall viaduct).

The planned additional planting amounted to over 15 ha. In order to carry out the planting, a range of funding was applied for. In all, seven different sources were accessed, creating funding of over £87000 which covers the cost of planting and maintaining the trees:

- Woodland Grant Scheme;
- European Regional Development Fund;
- Single Regeneration Budget;
- Highways Agency;
- Cheshire CC;
- Ellesmere Port Seedcorn Fund;
- Planning 106 Agreement Funding.

The 106 Agreement funding came from two large developments close to the motorway network where funding for landscape mitigation work was part of the planning agreements for the projects and we were able to use some of this funding to cover certain parts of the planting costs, where planting was seen to be screening the development.

The Woodland Grant Scheme is open to any landowner who is planting more than 0.25 ha; provided the planting is a minimum of 15m wide on average and that good silviculture practice is being used to establish and maintain the trees.

The ERDF, SRB and Seedcorn funds were all funds available for image enhancement of the particular area. These needed “matching” funds, ie money was only released once other private sector funding was in place – in this case, the matching funding came from the 106 agreements.

Funding from Cheshire CC and the Highways Authority was from their landscape enhancement budget and horticultural maintenance budgets respectively, with the level of other funding encouraging these organisations to contribute to this major programme of roadside planting.

Now that planting has been completed, the grants have been applied for and consolidated into one account for the Highways Authority to use. The Forest Team will continue to administer the fund and apply for any grant aid settlements due in the next five years.

**The future**

The success of highways planting in The Mersey Forest area has encouraged the team to extend its transport corridor targets and we hope to work closely with other local authorities in our region, as well as the Highways Agency, to achieve increased targets in the future.