Why rejuvenate hedges?

- Less than half of UK hedges are in good condition (with few vertical gaps, a minimum height of 1m and width of 1.5m) partly due to over-frequent trimming with mechanised flails.
- Traditional rejuvenation methods such as hedge-laying and coppicing reduce gaps and stimulate growth from the base of hedgerows.
- Wildlife such as perennial plants, small mammals, farmland birds and some invertebrates benefit from dense hedges with few gaps.
- We developed and tested cheaper, modern alternative rejuvenation methods and traditional methods on five farms across southern England. Here are our results:

<table>
<thead>
<tr>
<th>Method</th>
<th>Cost (per 100m)</th>
<th>Timing (minutes per m)</th>
<th>Height (m)</th>
<th>Width (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Midland style hedge-laying</td>
<td>£1241</td>
<td>33:08</td>
<td>1.50</td>
<td>1.05</td>
</tr>
<tr>
<td>Conservation hedging</td>
<td>£664</td>
<td>12:08</td>
<td>1.40</td>
<td>1.55</td>
</tr>
<tr>
<td>Wildlife hedging</td>
<td>£413</td>
<td>0:53</td>
<td>2.05</td>
<td>3.40</td>
</tr>
<tr>
<td>Coppicing</td>
<td>£225 (exc. fencing)</td>
<td>1:33</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Circular saw</td>
<td>£645 (inc. fencing)</td>
<td>1:57</td>
<td>1.90</td>
<td>1.80</td>
</tr>
</tbody>
</table>

Average cost (£ per 100m of hedge including clearing up brash), timing (minutes per metre), height & width (in metres) of rejuvenated hedges across five sites in 2010.

Traditional Midland style hedge-laying

- Main stems were partially severed at the base, laid over and woven between stakes to form a stock proof barrier. Up to 50% of the woody volume (side branches) was cut and removed. Remaining branches were laid towards one side of the hedge.
- Hedge condition was improved by reducing gap size and increasing hedge density.
- Growth of new stems was stimulated from the cut stumps in the hedge bottom, as well as growth of the laid main stems.
- Berry provision was reduced compared with hedges that were not rejuvenated, but only over a short time scale (2-3 years following rejuvenation).
Wildlife hedging

• Each stem was partially cut with a chainsaw and a mechanical digger used to push the hedge over along its length. No woody volume was removed, and some stems were entirely severed when the hedge was pushed over.
• The average width was more than twice that of the traditional and conservation laid hedges.
• Three years after rejuvenation, wildlife hedging resulted in slightly less vigorous woody re-growth than traditional hedge-laying, but a greater density of woody material with smaller gaps in the hedge base.
• Immediately after rejuvenation there was more dead wood in the hedge (up to 40%) due to the severed stems.
• Berry provision was as good as from hedges that were not rejuvenated.

Conservation hedging

• Stems were cut at the base as for traditional Midland style hedge-laying. Less woody volume was removed. Remaining stems and branches were laid along both sides of the hedge. Stakes were used sparingly and no top binding was used.
• Three years after rejuvenation, hedge structure and rates of woody re-growth were as good as traditional hedge-laying in improving hedge condition.
• Berry provision for overwintering wildlife was slightly better than for traditional hedge-laying immediately following rejuvenation.

Re-shaping with a circular saw

• The hedge was re-shaped into a tall, box like shape by cutting the sides and top using a tractor mounted circular saw. The branches were cut cleanly, avoiding the damage caused by a flail.
• Resulted in vigorous growth in the hedgerow canopy, but did not stimulate basal woody growth or reduce gaps at the base.
• Three years after rejuvenation, berry provision was as good as from hedges that were not rejuvenated.

Coppicing

• Hedge stems were cut close to ground level with a chainsaw. The entire volume of the hedge was removed apart from 5cm high stools.
• Resulted in vigorous growth of woody stems and a dense woody structure at the base of the hedge three years after coppicing.
• Very few berries were produced even four years after coppicing.
• Fencing was needed at two of the five sites to prevent deer browsing the exposed re-growth from cut stools.