## Residue harvesting methods

### Summary

This report reviewed literature regarding residue recovery, described and assessed the main methods in terms of their respective advantages and disadvantages and potential application in UK conditions. Case-study synopses for the methods and systems reviewed were presented, as well as methods and working norms for six countries (Sweden, Finland, Italy, France, USA and Canada).

### Conclusion and recommendations

<table>
<thead>
<tr>
<th>Method and description</th>
<th>Issues in UK conditions</th>
<th>Opportunities in UK conditions</th>
<th>Recommendation for further research</th>
</tr>
</thead>
</table>
| **Terrain Chipping**   | • Poor off-road capability  
• Little tolerance of residue contamination  
• Requires demountable storage bin lorry fleet  
• Requires market for loose chip | • Potential for non-commercial thinning and respaning? | • Other systems seem more favourable for residue recovery. |
| **Chipping at Roadside** | • Requires bin-lorry transport fleet and lorry mounted chippers  
• Requires market for loose chip  
• Hot system\(^1\) – need for close coordination | • Can use existing forwarder fleet  
• Technology well developed and transferable  
• Most likely to be adaptation of existing Scandinavian setups to UK if suitable forest chip markets develop | • Verification of typical UK site outputs |
| **Chipping at Terminal** | • Requires large contiguous forest blocks with sufficient continued harvesting output to support terminals  
• Requires bin-lorry transport fleet and terminal chippers  
• Requires off-road/on-road hybrid residue transporters  
• Requires market for loose chip | • Could be used for some of the larger forest blocks to supply their local communities | • As with chip at roadside |
| **Chipping at Mill** | • Needs capital investment for bundlers  
• Bundlers, timber lorries and mill infrastructure already present in some areas  
• Technology partially developed and still competitive – room to improve | • Adaptation of existing Scandinavian working for UK conditions  
• Verification of typical UK site outputs | |
| **Landing recovery of residues** | • Feasible with either chipping or bundling – dominant system and infrastructure must first be established | • Potential to improve cable working sites | • Residue nature likely to be different in UK sites compared to US or NZ  
• Working practices would need to be adapted and verified for UK conditions |

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\(^1\) hot systems requires synchronisation between one or more steps to maintain productivity e.g. chipping requiring waiting for bin lorries. Cool system organisation is such that work steps can be independent.

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References


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