

<b>Best practice example:</b>	<b>Placement of fallen deadwood</b>
<b>Project:</b>	<b>Ancient woodland feature translocation</b>
<b>Client:</b>	<b>Fusion/HS2</b>
<b>Location:</b>	<b>Calvert, Buckinghamshire</b>
<b>Timescales:</b>	<b>2019 – 2020 (Feasibility study)</b> <b>2020- 2021 (Translocation works)</b>
<b>Background</b>	
<p>(i) Translocation of the existing deadwood was supplemented by the felling of live trees to create a new generation of 'green' deadwood.</p> <p>(ii) This was supplemented by a layer of leaf litter/ small chipped brush to protect the soils during establishment.</p>	
<b>Importance of deadwood habitats</b>	
<p>Deadwood habitats are a critical component of a healthy woodland ecosystem, which should comprise deadwood of varying stages of decomposition to provide a range of functions:</p> <ul style="list-style-type: none"> <li>• Dead stumps often provide shelter so are colonised by small pockets of woodland floral species;</li> <li>• Fallen deadwood pieces, log piles and brush provides valuable habitat for colonisation by species such as reptiles, hedgehogs and invertebrates;</li> <li>• Decomposing deadwood on the woodland floor provides mycorrhizal fungi material and woodland soil micro-fauna essential for tree and soil health.</li> </ul>	
<b>Deadwood features placed at the receptor site</b>	
<ul style="list-style-type: none"> <li>• 65 No. pieces of fallen deadwood, taken from existing large deadwood tree limbs and existing fallen deadwood from the woodland floor, were placed as fallen deadwood at the receptor site. These specimens are in various stages of decomposition and, being full of beetle larvae and other invertebrates and fungi, will provide vital functions as the new woodland establishes.</li> <li>• The existing deadwood was supplemented by placement of material sourced from felled live trees or 'greenwood'. This will provide the next generation of decomposing deadwood, to replace the existing deadwood as it completes its decomposition cycle. The following greenwood features were placed: <ul style="list-style-type: none"> <li>○ 81 No. stumps/ over-sized rootballs placed as fully or semi-planted stools or placed above ground as habitat features. One particularly large stump was placed on its side to recreate a tree having fallen, with an excavation dug at its base which now collects water on a semi-permanent basis. The stump was laid with the trunk of the tree facing on a south west axis, to resemble a windblown fall from the prevailing winds.</li> <li>○ 117 No. large pieces placed as fallen deadwood pieces. Holes and slices were deliberately cut into some of these features which will speed up the process of decomposition, as well as creating habitats for small woodland floor mammal and plant species.</li> <li>○ 81 No. log piles. These smaller sections will decompose more quickly and also provide shelter, particularly for reptiles and snakes.</li> <li>○ 75 No. brush piles created from arisings from tree crowning out. This creates the ideal habitat to act as refuge for small animals as well as providing shelter from winds for colonising flora to germinate.</li> </ul> </li> <li>• The features were distributed throughout the receptor site, in a naturalistic way, aiming to keep a balance of features within each of the four woodland interior sections and placed in a way that would provide the potential for rapid colonisation by plant and fungal species, as well as use by mammals and birds.</li> </ul>	

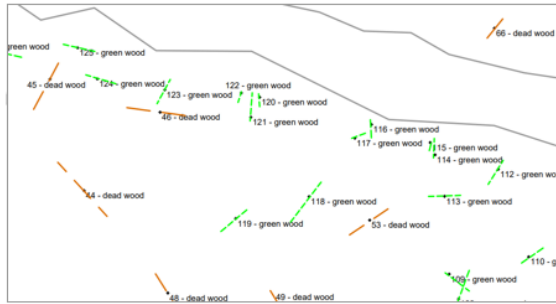
## Baseline data

In order to accurately record the spatial arrangement of translocated features, RSK commissioned their surveying team to carry out drone surveys of the completed receptor site. This data has been used to quantify the amount of deadwood that has been placed in the receptor site as shown by the excerpts from the as built survey below:

### Deadwood/greenwood pieces

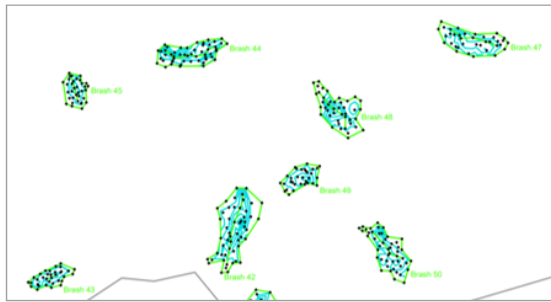
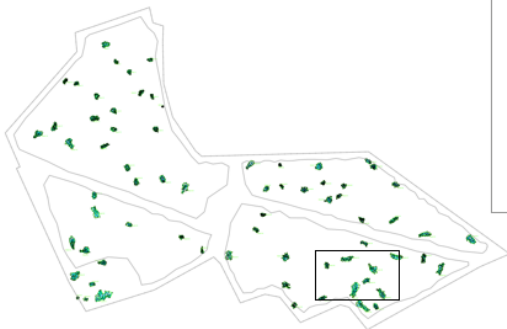
Deadwood 16.14m<sup>3</sup>

Greenwood 29.03m<sup>3</sup>



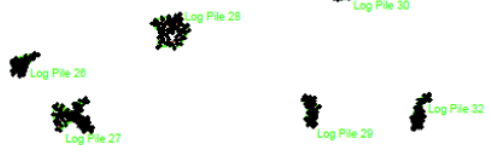
### Brash piles

102.45m<sup>3</sup>



### Log piles

16.317m<sup>3</sup>



## Benefits

- Having accurate information about the spatial distribution and quantity of deadwood placed in the receptor site will enable comparisons to be made with survey results from future surveys. This will enable information to be gathered about the rate of decomposition of these features which will make a useful contribution to the body of literature available on ancient woodland translocations.
- Taking periodic measurements of the deadwood will help to determine when deadwood features are in need of 'topping up'; since introduced deadwood will need to be of specific types and from local areas, this will assist in sourcing suitable material and planning for introduction at a suitable time.



**Above left:** Large existing deadwood pieces with stump and standing monolith in background



**Above right:** Tree which has been felled, veteranized and placed with shallow excavation at base of rootball to mimic tree falling as result of storm



**Above left:** Mixture of fallen deadwood pieces and log piles with brash pile and monolith centre background



**Above right:** Deadwood placed to mimic tree collapsing in advanced state of decay



**Left & right**  
Deadwood features provide shelter for emerging Ancient Woodland Indicator (AWI) species





**Left & right:** Existing deadwood in various stages of decomposition



**Left & right:** Greenwood which will become the next generation of deadwood