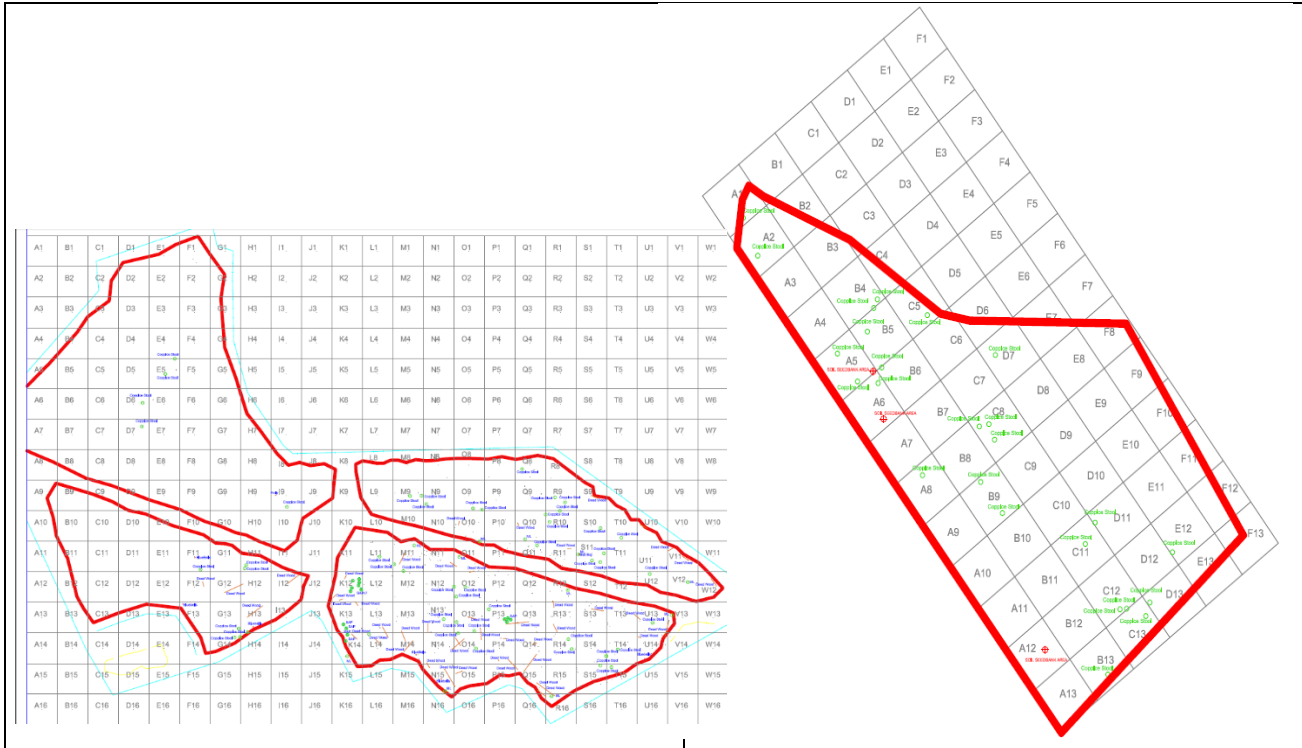


<b>Best practice example:</b>	<b>Donor and receptor cell feature identification</b>
<b>Project:</b>	<b>Ancient woodland feature translocation</b>
<b>Client:</b>	<b>Fusion/HS2</b>
<b>Location:</b>	<b>Calvert, Buckinghamshire</b>
<b>Timescales:</b>	<b>2019 – 2020 (Feasibility study)</b> <b>2020- 2021 (Translocation works)</b>
<b>Background</b>	
<ul style="list-style-type: none"> <li>A system was developed to identify where soils and woodland features originated from within the donor sites and where they were placed within the receptor site to assist with future monitoring and research.</li> </ul>	
<b>Importance of feature identification</b>	
<ul style="list-style-type: none"> <li>One of the Project deliverables was for the completed receptor site to replicate conditions at the donor sites as closely as possible, while recognising that recreation of ancient woodlands is not possible.</li> <li>There were three separate donor sites that provided source material for the translocation.</li> <li>Although they were in close geographical proximity, micro conditions at each site varied according to their relative orientation and topographical arrangement. It was noted that there were differences in (i) type and abundance of different tree/ ground cover species and (ii) presence/absence of seasonally wet ditches.</li> <li>It was therefore important to create a 'map' of each site so that features and soils at the receptor site could be traced back to their original donor site/ relative positions.</li> </ul>	
<b>Development and use of coherent identification system</b>	
<ul style="list-style-type: none"> <li>A cell ID feature identification system, based on grids, was developed by the Project engineer to identify specific 'cells' within each of the sites – see <b>Figures 1 &amp; 2</b>. This enabled the origins and destinations of soils and features to be easily traceable and ensured consistency of record keeping across all disciplines.</li> <li>The Ecological Clerk of Works (ECoW) used the system to record the origin of features identified for translocation (trees, coppice stools and areas of abundant Ancient Woodland Indicator (AWI) ground species) and their destination within the receptor site. See <b>Figure 3</b> below for an example record card.</li> <li>The system was used by the supervising soil scientists to record origins and conditions of Ancient woodland soils at both the donor and receptor areas – see <b>Figure 4</b>.</li> <li>The Surveying engineers used the system to take accurate GPS records of all translocated soils and features as identified by the soil scientists and ECoW's as they were removed and translocated.</li> </ul>	
<b>Benefits</b>	
<ul style="list-style-type: none"> <li>Regular arboricultural, NVC and soil monitoring of the receptor site will take place during the establishment phase, up to Year 50.</li> <li>By using the cell feature ID system, very detailed temporary works and As Built drawings were produced.</li> <li>Both drawings will provide an accurate reference point to allow meaningful comparisons to be made between ongoing survey outputs and the original conditions noted at the time of completion of works.</li> <li>In turn this will enable useful information to be made available to add to the body of literature concerning Ancient Woodland translocations.</li> </ul>	



**Figure 1:** Receptor site Cell ID system, showing recording of feature positioning as works progress

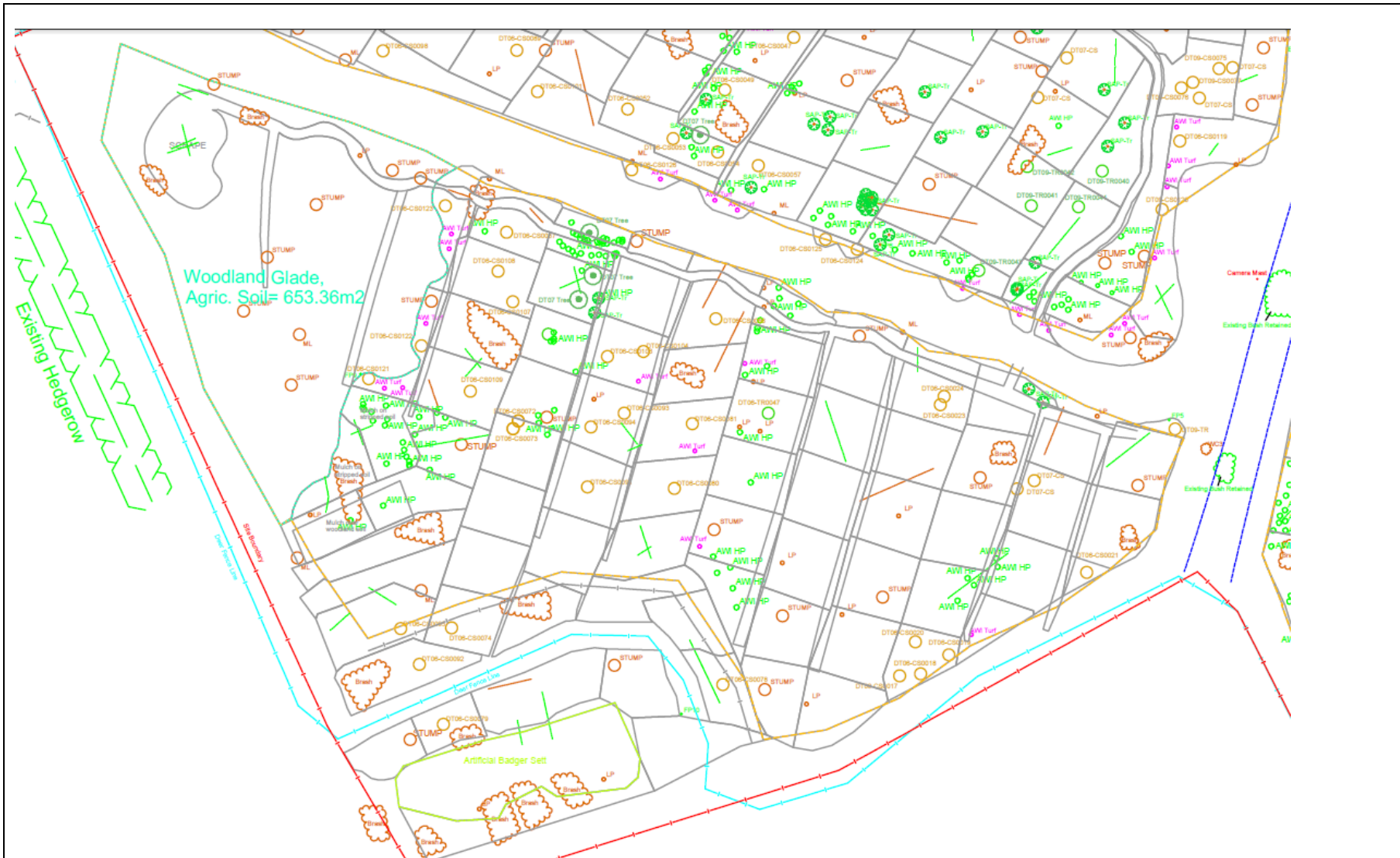
**Figure 2:** Donor Site Cell ID system showing features identified for translocation

ECoW Ancient Woodland Translocation Record Card - Donor Site									
Date: March 9, 2021 1:00 PM					Weather conditions: Cloud cover: 0 Precipitation: 1 Temperature: 10°C				
ECoW: Jordane Marsh									
Donor Site									
Donor cell number / grid reference:		DT06_D19, DT06_D20, DT06_D21							
Is the cell clear of ecological constraints:		Yes Details:							
Is the cell clear of all litter and waste:		Yes Details:							
Have all features been removed from the cell:		Yes Details:							
Is the cell ready to translocate from an ecological stance:		Yes Details: Blackthorn							
Features									
Features present in cell for translocation									
Tree	Coppice stool	Large deadwood	Dead branches and twigs	Saplings	AWI species	Fungi	Other		
	2		0		✓				
Coppice stool		Existing ID: New ID: DT06_CS0121		Translocated? Yes					
Coppice stool		Existing ID: New ID: DT06_CS0122		Translocated? Yes					
AWI Species		Number of features: 3 Approximate area (m²): 9		Translocated? Yes					
AWI Species		Species: Primrose, lords and ladies, wild strawberry.							
AWI Species		Condition: Further details:							

**Figure 3:** Excerpt from ECoW donor site record card showing features identified for translocation and other AWI species present within cell

Calvert - Soil Strip and Reinstatement Record Card 2											
Donor Site											
Cell	1	2	3	4	5	6	7	8	9	10	11
Donor grid ref / cell numbers	B33/B34	B32	B32/B33	B31/C31	B31 + 2 coppice stools	B30/B31 /C30/C31	B30/B30	B29/B30 /C29/C30	B29/B30	B28/C28	B27/B28 /C28
Receptor Site											
Receptor grid ref / cell numbers	A6/A7	D1/E11	A7	B5/C5	D1/E12	E8	B4/B5 /C4/C5	D8/D9 /E8/E9	B5	V13/V14 /W13	D8/E8
Is the site dry enough for donor soils											
Yes											
Moisture Ball Thread											
Have topsoil moisture, ball & thread tests been passed	0-15cm	N	N	N	0-50mm is wet and plastic						
	15-23cm	Y	Y	Y	100-200mm is drier than surface						
	23+cm	N	N	N	wet, plastic, slowly permeable						
Were subsoils raked or subsoiled	No Subsoils remain too wet and plastic to consider subsoiling										
Evidence of severed drains	No Ditches/grips maintained where soil has fallen into them										
Have tree/coppice stool pits been prepared and trees placed on mounds	Yes Cell 3 - DT06-CS0059; Cell 5 - DT06-CS0060										
Has micro topography been created in subsoil surface	No										

**Figure 4:** Soil receptor site record card showing origin of donor Ancient Woodland soils and their position at the receptor site



**Figure 5:** Extract from As Built drawing showing spatial distribution of translocated trees, coppice stools, ground cover plants and deadwood in relation to other receptor site features –woodland rides, glades, ditches, artificial badger sett, deer fencing and existing hedgerows and other features.