



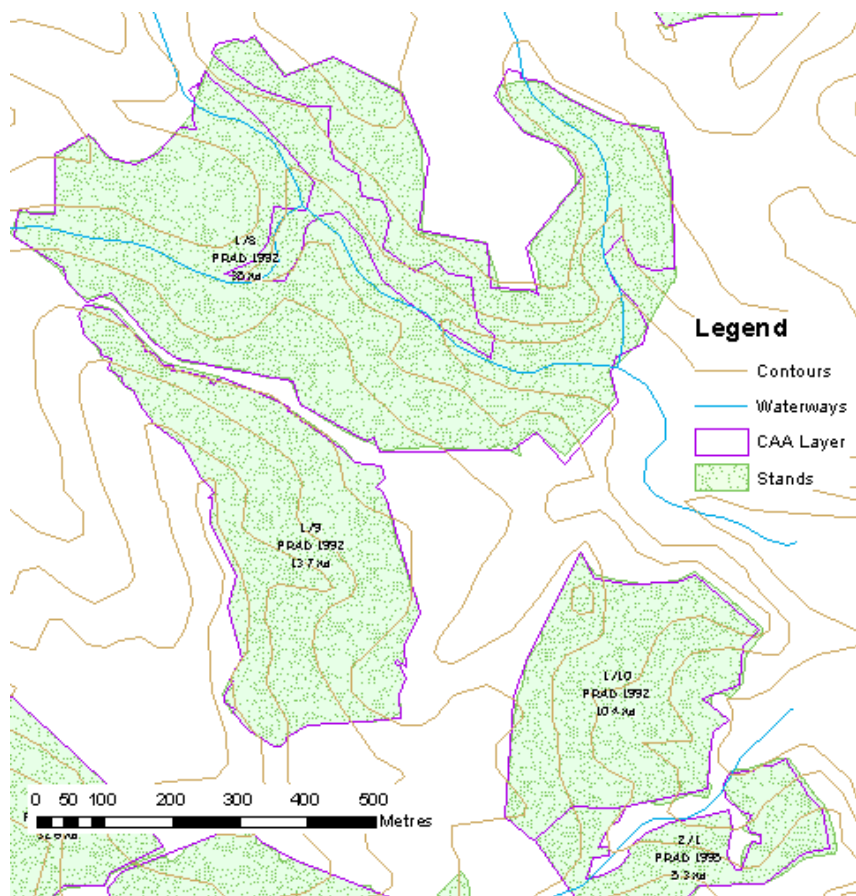
## ETS Support within GeoMaster

GeoMaster provides support for the New Zealand Emissions Trading Scheme (ETS) by recording how much of your forest overlaps areas registered as Post 1989 carbon accounting areas (CAAs) and areas classified as Pre 1990 forest land.



The ETS support works within GeoMaster at a patch level. A patch being a single piece of land within GeoMaster with a constant land use and treatment history. A patch is the smallest unit of land recognised by GeoMaster and falls into three land classes: non-productive, planted and plantable bare land. A stand can be made up of several patches.

Land deemed to be Pre 1990 does not change over time (unless deforested and liabilities met). Similarly with Post 1989, once forest is registered in the ETS the CAA boundaries do not generally change. NSA however does change with time due to remapping or in response to operational or natural events. More often than not the NSA is not a perfect match to CAA or Pre 1990 layers due to different mapping rules and a stand or even a patch may contain both Pre 1990 and Post 1989 forest land and.



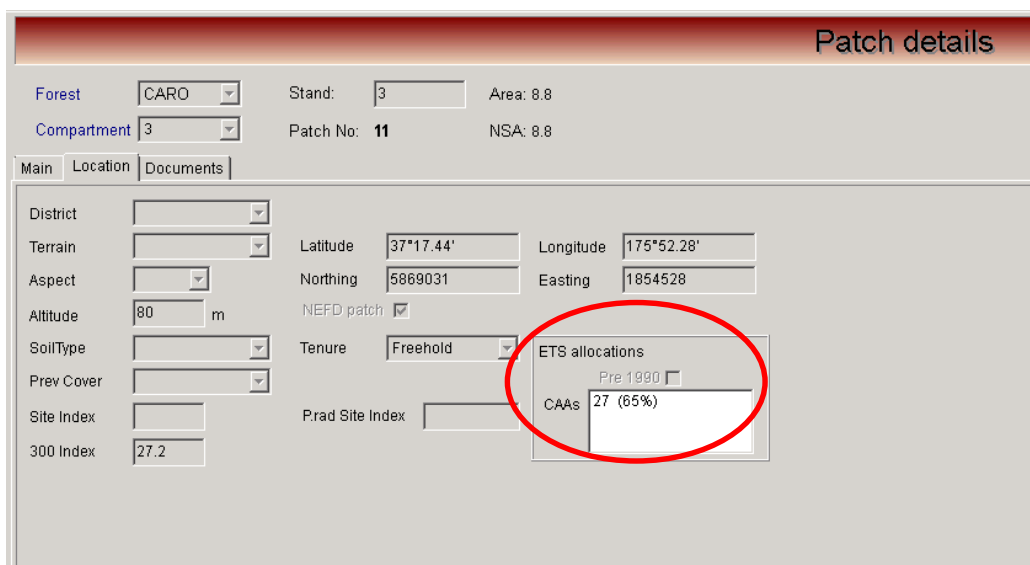
*Difference between NSA (Stands) and CAA Layers*

For this reason in GeoMaster ETS areas are not assigned to patches in their entirety. Rather CAA and Pre 1990 layers are recorded separately in a static layer which GeoMaster has access to.

On a periodic basis CAA and Pre 1990 layers can be overlaid with patch and harvest setting layers and intersecting patches and settings are updated in GeoMaster with the areas of overlap of those features.

GeoMaster records ETS information at three levels:

1. **SNAP SHOT:** On each ETS update (CAA or Pre 1990) from GIS a snapshot of total NSA within each is recorded. Snapshots are retained so that changes in NSA over time can be traced and reported.
2. **PATCH:** CAA numbers and the area of intersection for both CAAs and Pre 1990 is recorded against patches (picture below).
3. **HARVEST SETTINGS:** CAA numbers and the area of intersection for both CAAs and Pre 1990 are recorded against harvest settings. More significantly, the area and years of intended depletion can be reported by CAA to provide a timeline of expected area depletion.



ETS Areas recorded for each Patch

Viewing the ETS data in GeoMaster can be via a number of ways: using the query tool or via the CAA, stand or custom reporting functions.

CARO(1) Chinemuri/1		Stand Report				17/4/2013 Page 1							
Forest	Carolina Farms	User Codes		Plan Units	Crop	P.RAD	1992 Rbtn 1						
Compartment	(1) Chinemuri	User1		PU 1	Age		21						
Stand	(1) Takaretu	User2		PU 2	Site Index		- m						
Block		User3		PU 3	300 Index		23.5						
District Council		User4		PU 4	Latest SPH		226 (10/10)						
		Altitude	80 m		Current MTH		- m						
		Latitude	37°14.56'	Longitude	Total Area		15.1 Ha						
		Nbrthing	5874313	Easting	Stocked Area		15.1 Ha						
					Harvest Date								
Patches	Area	NSA	Active	Seedlot	Soil Type	Terrain	Plan Unit	Croptype	GIS key				
11	15.1	15.1	[1/90- *]						GM0001082				
<b>Crop Details</b>													
		Crop Codes				Last Full Inventory			Current				
Species Planted	Seedlot	1	2	3	4	GF	Init SPH	Date	SPH	BA	MTH	PrHt	DOS
P.RAD	6/1992						1111	10/2010	226	32.6	25.7	4.4	

Stand Report from GeoMaster which includes CAA Numbers and Area

GeoMaster cloud services provision by Interpine provides a solution to these problems with just a simple monthly fee structure. If you would more information on this please contact us via info@interpine.co.nz