

Wild Ennerdale – Ecological Monitoring Methodology Review – June 2006

Scale	What are we monitoring	Method	Nature	Coverage	What we have now	What we need	How achieved
Broad Scale	Broad changes in vegetation	Aerial Photos	Non predicted	Whole Valley	Aerial photos	Additional aerial	Low priority
	Changes in vegetation structure	NVC Survey	Broad, coarse	Comprehensive	NVC Survey	photos from RAF,	investigation /requests
	Large Scale natural processes	Old photos, surveys Fixed point photos Weather station	scale Not subtle Events	Representative of wide spread fixed	FC has some sold aerial photos and fixed point photos FC have some fixed point photos as part of Stewardship Plan Weather station will be installed 2006 FC Forest Design plans and archive data	EN, LDNPA, FOLD Additional old fixed point photos which can be replicated Additional fixed point photos to fill in the gaps, herdus, the side, bridges, the ridge	to possible holders of old aerial photos Amateur photographer employed in next 6 months to do work as paid volunteer working with GB. Produce standard data sheet for fixed point photo collection
Medium Scale	Changes in vegetation condition	SSSI habitat management Fixed point photos	Less predictable change in vegetation quality extent	Targeted at SSSI Plus other sites yet to be identified	EN Monitoring file for SSSI's Some data on EN Website NT have biological surveys for the side	Copy data to be held by partnership Identify other sites and gather data from these	Request data from NT and EN Lower priority think about other sites, review in 6 months
	Changes in WQ	Sample and analysis	Less predictable	Lake outfall, River Liza	No data	More data	Approach UU and EA to determine what sampling they do and data they have RELU project? may add new data
Detailed Scale	Transformation of forests and woodlands	FCIN45	Predictable	Sample plots	No data	Complete data set	FC to let contract to gather data 2006 to 2007 using EN funding
	Species recording, birds,	Standard bird survey transects	Unpredictable	Dipper , red grouse and ring ouzel	Baseline report from 2005	Further survey of 3 species mentioned under coverage	Discuss with Peter Ulrich costs for different levels of work and chooses one which provides best value for money
	Species recording rare plants	Population count	Unpredictable	Scrubby cinquefoil in hind cove	Data from 1980 and 1998ish	Another survey but low priority	EN will complete on regular basis
	Species recording rare char, salmon and trout	Population count	Unpredictable	Lake and spawning watercourses	EA have produced a number of reportsAlso possibly CEH	Gather together existing reportsEA to continue monitoring	Request information from CEH and EAConfirm with EA that they are continuing with monitoring
	Species recording otter?	Survey for signs	Unpredictable	Lake and River	?? Cumbria survey includes R Ehen. Unwritten FC survey 2005 of R Liza - no signs found	Continued annual survey for signs	Not high priority but could be achieved by biannual type survey or fixed camera

Wild Ennerdale – Ecological Monitoring Methodology Review – June 2006

Scale	What are we monitoring	Method	Nature	Coverage	What we have now	What we need	How achieved
Detailed Scale (continued)	Species recording deer	Signs, cull figures and population count	Unpredictable	Whole Valley	FC records	Continuing recording by FC Summary produced specifically for Ennerdale	FC to continue recording
	Detailed small scale changes	Fixed quadrat NVC Vegetation height/structure Domin (plant coverage index) Photographs of quadrats	Predictable response in vegetation and plants to a change in natural regeneration	Cattle Montane Lakeside Upper valley woods The side enclosure Iron crag enclosure	No Data	Baseline vegetation surveys at sites where we know changes are likely to occur	Contract 2006/7 using EN funding Simon & Rachel to produce contract specification and pass to Gareth to let and supervise contract.
	Cattle behaviours & grazing impact	GPS Collars NVC survey	Non predicted	Silver cove enclosure	No data	Data collection	Collar to be fitted summer 2006 Data downloaded monthly by FC at least initially Six monthly discussion with Richard to gather data on behaviour