

**FIRE PARADOX – GFMC Prescribed Burning Demonstration Network Inventory Sheet**

Prescribed Burning Demonstration Sites - Site Description and Objectives -		Local Site Name:
Country: <i>UK</i>	Region: <i>Scotland</i>	Location: <i>Abernethy Forest RSPB Nature Reserve, near Aviemore, Scottish Highlands</i>
Unit No./Admin. Unit: <i>Highland</i>	Owner: <i>Royal Society for the Protection of Birds</i>	Site area (ha): <i>13 000</i>
UTM zone:	UTM (x): <i>Longitude: 3°39'W</i>	Map / Aerial photo : <input checked="" type="radio"/> <del>Yes (Please attach)</del> <input type="radio"/> No
	UTM (y): <i>Latitude: 57°11'N</i>	
First established: <i>1988</i>	Area(s) burnt (ha): <i>Experiments: 2.1ha, management: c5ha/yr</i>	Fire return interval (or time since last burn, or next burn planned): <i>Varies: &gt;100yrs in forest, 20-50 years outside forest.</i>
Number of plots (in case of an array of sub-plots for experimental repetitions, particular site differences or high number of operationally burned sites): <i>Four experiments: (i) (2000-2001) 20 plots; (ii) (2002) 10; (iii) (2002-3) 30; (iv) (2007-9) 20.</i>		
Special remarks: <i>Experimental fire work (above) and two types of fire management: grouse moor management, and burning for pine regeneration (latter based on results of experiment (i))</i>		
<b>Purpose of Treatment:</b>		
Specific Treatment Objectives: <i>Experiments (i) and (ii): improved Scots Pine seedling establishment; experiment (iii): improved Capercaillie (Tetrao urogallus) habitat; experiment (iv): improved Scots Pine seedling establishment combined with improved Black Grouse (Tetrao tetrix) habitat.</i>		Objectives reached? <input type="radio"/> Yes <input type="radio"/> No Specify: <i>Efficacy of fire for pine seedling establishment supported by experiments (i) and (ii); effects on grouse (Tetrao) habitat still to be confirmed though evidence of increase use by Capercaillie (Tetrao urogallus).</i>
<b>Desired burn conditions to reach objectives (optional or if necessary as general prerequisite)</b>		
Wind speed (m/s):	Wind direction:	
Relative humidity (%):	Soil moisture:	
Air temperature (°C):	Burn period (time of year): <i>1 October to 30 April (legal constraint).</i>	
What problems do occur? <i>Lack of sufficient dry days in winter is main problem with using fire as management tool on a large scale.</i>		
<b>Site description</b>		



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Vegetation type (main species): <i>Forest: Scots Pine; open ground: Heather (Calluna vulgaris)</i>		Annual mean precipitation (mm/a): <i>800mm</i>	Mean precipitation during time of burn (mm): <i>2-5 dry days usually needed before burning possible</i>	
Fuel load (target fuel) (t ha <sup>-1</sup> ):		Annual mean temperature (°C): <i>2.3°C</i>	Mean temperature during time of burn (°C): <i>Has varied from 4-22°C during experimental fires</i>	
Fuel description: <i>Live Heather (Calluna vulgaris) forms main fuel in forest and on open ground</i>				
Topography: <i>Variable</i>	Slope (%): <i>Variable</i>	Aspect: <i>Variable</i>	Altitude (m a.s.l.): <i>250-450m</i>	Soil conditions: <i>Usually, shallow peat</i>
Other:				



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Burn team specifications		
Parties involved: <i>Desmond Dugan (manager, Forest Lodge section) and Bob Moncrieff (manager, Craigmore section) act as burn bosses, with usually 4-6 other members of staff</i>		Specific expertise or training: <input type="radio"/> Yes <input checked="" type="radio"/> No Please specify: <i>DD: prescribed burning course, Talahasee, Florida; DD&amp;BM, and two other members of staff: many years experience of traditional heather burning. All involved: site specific one-day fire training.</i>
Documentation of demonstration site		
Management plan: <input type="radio"/> <b>Detailed management plan</b> <input type="radio"/> Simple management plan <input type="radio"/> none	Burn protocol: <input type="radio"/> <b>Yes</b> <input type="radio"/> No	Monitoring of <input type="radio"/> <b>Weather data</b> <input type="radio"/> Fuel accumulation <input type="radio"/> <b>Fire behaviour</b> <input type="radio"/> Smoke
Presentations:  <i>Further information available. Introductory information at relating to linked PhD project of Mark Hancock can be found at <a href="http://www.geos.ed.ac.uk/homes/s0348612/">http://www.geos.ed.ac.uk/homes/s0348612/</a></i>		
Photos/ videos:		
Publications:  <i>Hancock, M. H., Summers, R., Amphlett, A., Dugan, D. (2004) Disturbing the ancient pinewood with cows and fire: suitable tools for conservation managers? In: University of the Highlands and Islands Conference Proceedings: Terrestrial Environmental Change in the Highlands and Islands: from Mountain Summits to Coasts. UHI, Inverness.</i>  <i>Hancock, M. H., Egan, S., Summers, R., Cowie, N., Amphlett, A., Rao, S., Hamilton, A. (2005) The effect of experimental prescribed fire on the establishment of Scots pine <i>Pinus sylvestris</i> seedlings on heather <i>Calluna vulgaris</i> moorland. <i>Forest Ecology and Management</i> <b>212</b>: 199-213</i>		