

2011 End of Season Status Report

This document sets out a summary of the status (distribution and extent) of infections on larch woodlands and other natural environment habitats by *Phytophthora ramorum* at the end of the winter 2011/12.

Weather Patterns 2011

The weather data shown in Annex 1 shows how the monthly averages of temperature and rainfall in 2011 have compared with the 30 year average (1971-2000).

In general, the temperatures were above average in the February to May period, with April in particular, having 3-4 °C above average temperatures. By contrast, the summer period (July to August) temperatures were slightly below average. The autumn and early winter (Sept to Nov) period proved to be mild with temperatures 1-3 °C above average. Frosts were rare during the end of 2011.

The rainfall was above average in February, but was followed by a dry spring in March and April across the UK with 50-75% less than average. During May there was clear split between the southern half of England which continued to have a below average rainfall, and northern England, N.Ireland and particularly Scotland, where rainfall was well above average. Scotland received 245% of its 30 year average rainfall for May. Scotland also experienced hurricane force winds on 23 May 2011 which caused wide scale discolouration of foliage along the west coast. The summer months were slightly wetter than average across the UK. During the autumn Wales and the southern half of England had a drier than average rainfall, while Scotland and N.Ireland remained above average throughout the autumn and early winter.

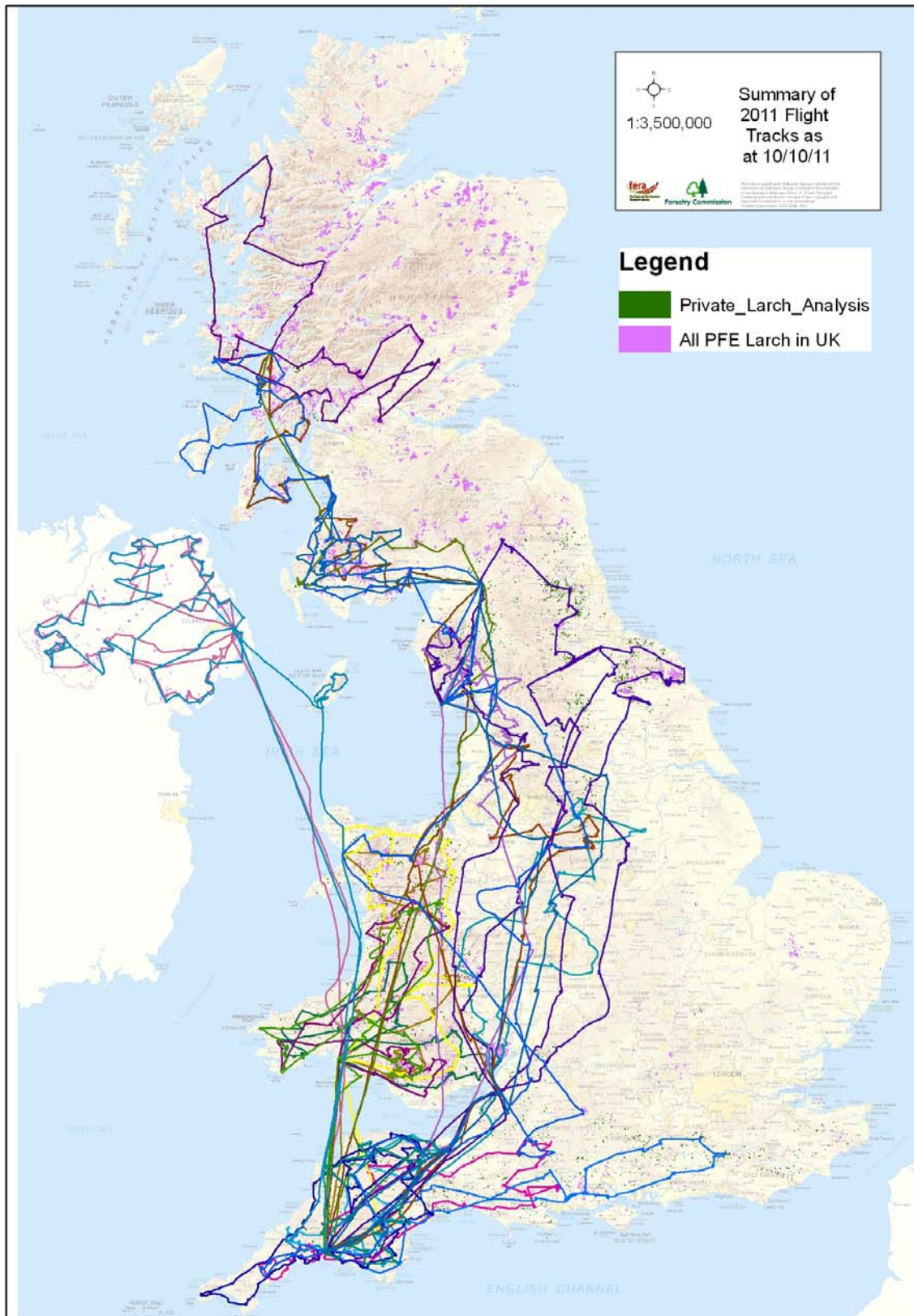
Overall these weather patterns will have been less favourable for the disease in Wales and southern England and more favourable in the northern UK.

Surveillance

In general, surveillance (aerial survey) activity has increased during 2011, with more extensive coverage of larch woodlands in northern England and western Scotland than during 2010. Aerial surveys commenced on 19 April 2011 in SW England, and continued throughout the summer until 14 October 2011. It is estimated that about 71,300 ha of larch woodland were assessed during these flights.

2011 End of Season Report – Phytophthora ramorum

The map below shows the tracks of all the surveillance flights undertaken in 2011.



2011 End of Season Report – Phytophthora ramorum

Disease Situation

The following tables summarise the number and extent of Larch woodland sites issued with Statutory Plant Health Notices over the last 2 years:

			Statutory Plant Health Notices		
			Number of Sites where SPHNs have been served	Total Felling Area within SPHNs (ha)	Total estimated Felling Volume ('000m ³ ob std)
ENGLAND	2010	FC	14	363.0	44
		Non FC	105	744.3	143
		Total	119	1,107.3	186
	2011	FC	13	118.5	15
		Non FC	117	334.5	66
		Total	130	453.0	81
	Total	FC	27	481.5	59
		Non FC	222	1,078.8	208
		Total	249	1,560.3	267

			Statutory Plant Health Notices		
			Number of Sites where SPHNs have been served	Total Felling Area within SPHNs (ha)	Total estimated Felling Volume ('000m ³ ob std)
WALES	2010	AGW	22	873.0	200
		Non AGW	2	3.6	1
		Total	24	876.6	201
	2011	AGW	15	471.0	104
		Non AGW	11	74.0	16
		Total	26	545.0	120
	Total	AGW	37	1,344.0	304
		Non AGW	13	77.6	17
		Total	50	1,421.6	321

2011 End of Season Report – Phytophthora ramorum

			Statutory Plant Health Notices		
			Number of Sites where SPHNs have been served	Total Felling Area within SPHNs (ha)	Total estimated Felling Volume ('000m ³ ob std)
SCOTLAND	2010	FC	0	0.0	0
		Non FC	1	1.6	<1
		Total	1	1.6	<1
	2011	FC	3	21.0	4
		Non FC	11	48.6	10
		Total	14	69.6	14
	Total	FC	3	21.0	4
		Non FC	12	50.2	10
		Total	15	71.2	14

			Statutory Plant Health Notices		
			Number of Sites where SPHNs have been served	Total Felling Area within SPHNs (ha)	Total estimated Felling Volume ('000m ³ ob std)
GREAT BRITAIN	2010	FC	36	1,236.0	244
		Non FC	108	749.5	144
		Total	144	1,985.5	387
	2011	FC	31	610.5	123
		Non FC	139	457.1	92
		Total	170	1,067.6	215
	Total	FC	67	1,846.5	367
		Non FC	247	1,206.6	235
		Total	314	3,053.1	602

2011 End of Season Report – Phytophthora ramorum

			Statutory Plant Health Notices		
			Number of Sites where SPHNs have been served	Total Felling Area within SPHNs (ha)	Total estimated Felling Volume ('000m ³ ob std)
N.IRELAND	2010	NI FS	6	301.0	59
		Non NI FS	3	6.0	1
		Total	9	307.0	60
	2011	NI FS	7	65.9	13
		Non NI FS	9	8.9	3
		Total	16	74.8	16
	Total	NI FS	13	366.9	72
		Non NI FS	12	14.9	4
		Total	25	381.8	76

Summary Description of Changes from 2010

England

Although there has been an increase in the number of sites issued with a SPHN in 2011, the land area requiring felling has dropped from 1,107 ha in 2010 to 435 ha in 2011.

This may suggest a decline in the spread of the disease but the area identified in 2010 is likely to have been the accumulation of a number of years of disease spread before first sites were observed at the end of the summer 2009. Only after further surveillance during 2012 will the impacts of control action in 2010 and 2011 become clearer.

When observing suspect sites from the air in 2011, the proportion of symptomatic trees has been considerably lower than 2010, with some sites identified from single trees or small groups of poor health. This does suggest that we are identifying infection earlier.

The “new” sites confirmed in the North West this year are likely to have been present prior to 2011, but have only just been picked up as a result of more intensive surveys in these areas during 2011.

2011 End of Season Report – *Phytophthora ramorum*

It is likely that the weather patterns experienced in England during 2011 have been less favourable for the disease, with drier than average periods in April-May and September-November, a time when sporulation levels are usually higher.

Wales

The land requiring felling has dropped from 873 ha in 2010 to 545ha in 2011 and, as in England, the proportion of symptomatic trees found on infected sites has been much lower than in 2010.

Scotland

The level of surveillance in Scotland has increased during 2011 but establishing a complete picture of the baseline of infection is likely to require further and more widespread survey in 2012. It is too early to predict potential spread but the consistently wet and windy conditions of 2011 are likely to have been conducive to spore dispersal.

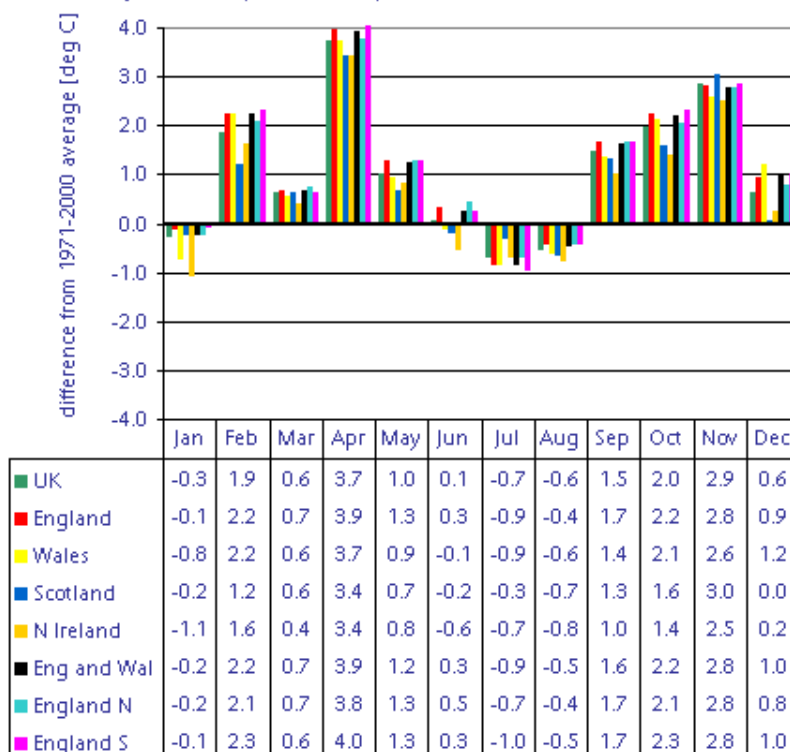
The potential impact of spore dispersal from the 23 May hurricane may yet declare itself during 2012.

The area of confirmed infection has increased from 1.6 ha in 2010 to 69.6 ha in 2011 although this is more likely to be due to more extensive surveillance this season rather than spread *per se*.

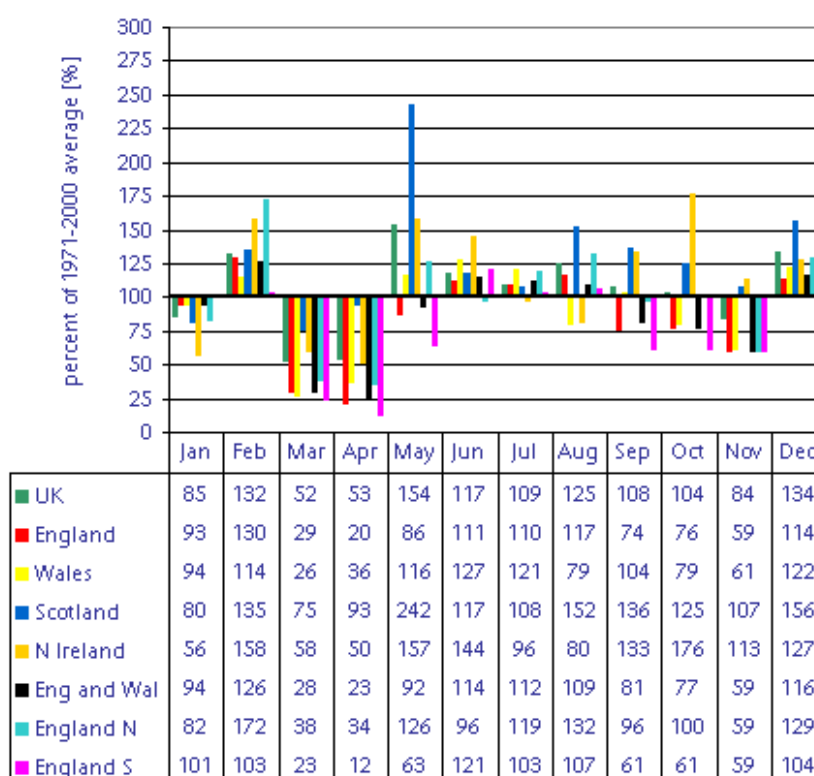
2011 End of Season Report – Phytophthora ramorum

Annex 1: 2011 Weather Data - comparison with 30 year averages

Mean temperatures (1971-2000) anomalies for 2011

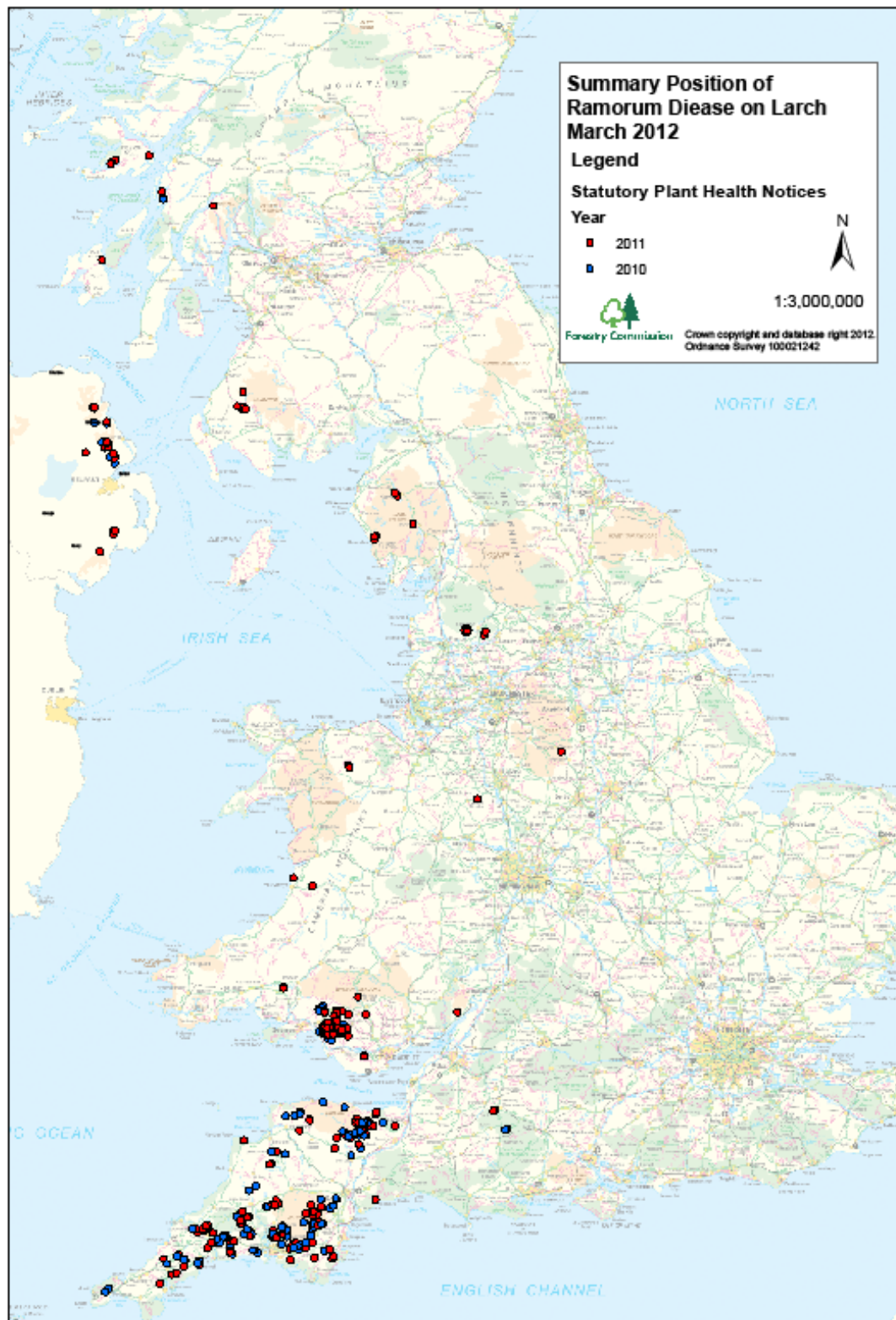


Rainfall (1971-2000) anomalies for 2011



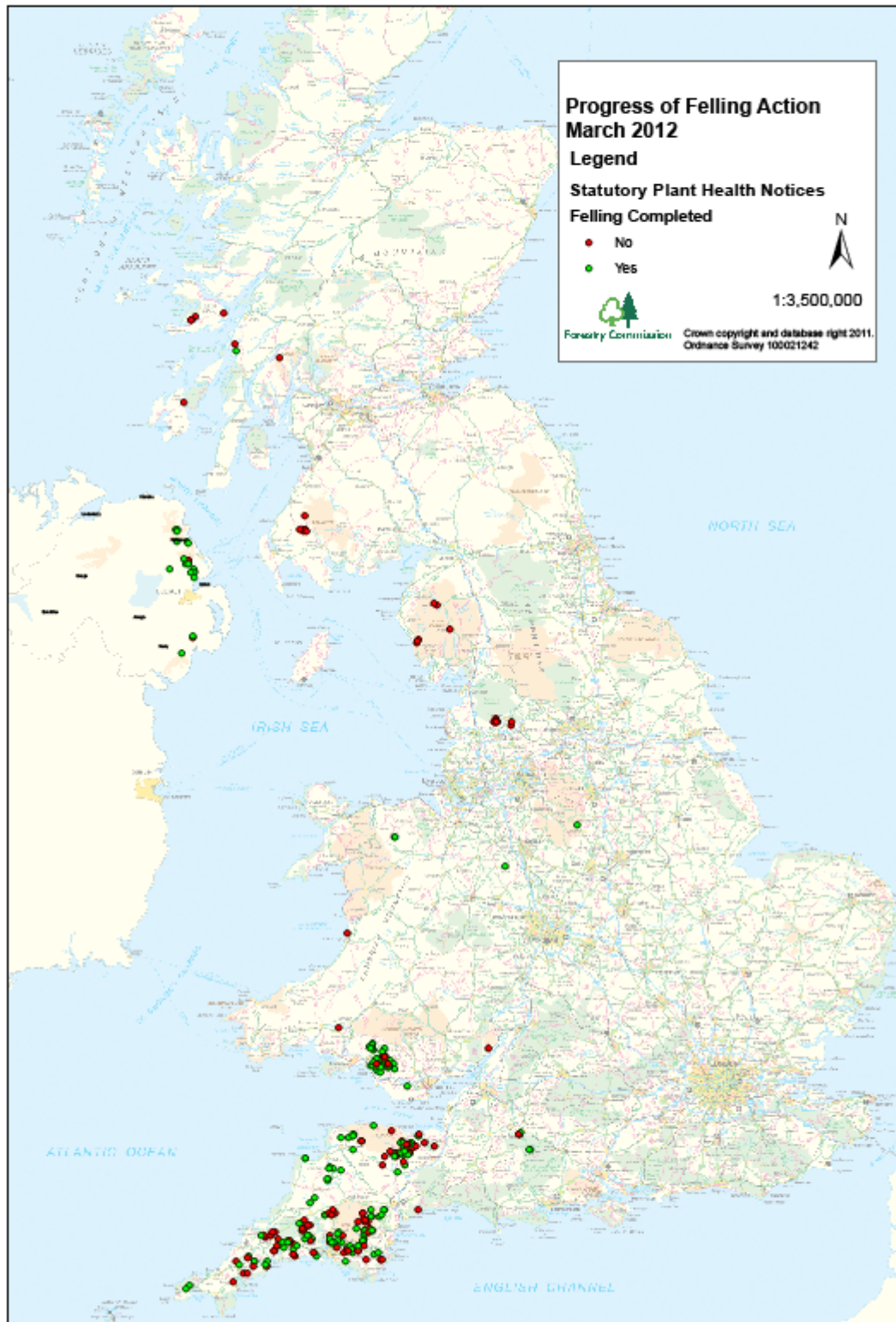
2011 End of Season Report – Phytophthora ramorum

Annex 2: Larch Woodland sites issued with SPHNs by Year



2011 End of Season Report – Phytophthora ramorum

Annex 3: Progress of Felling Larch Woodland SPHNs as at end of February 2012



2011 End of Season Report – Phytophthora ramorum

Annex 4: Distribution of positive infections on rhododendron and bilberry in the natural environment

This data set shows all sites where positive infections have been found in England and Wales **since 2003**. It also includes infections by *P.kernoviae* which are restricted to Cornwall and Devon.

