Table S1. Phenotypic descriptors collected for each oak, used to evaluate the decline type and severity. Data collected were immitted in the online tool "Phenotypic index measures for oak decline severity" (https://jasenfinch.shinyapps.io/decliner/).

Location: _____

				Tree				
	Parameter	**Description**	**Measuring**	**1**	**2**	**…**		
Size	Diameter at breast height	Trunk diameter at a height of 1.3 m	m					
	Crown radius	Crown radius measured as the average of the radius measured at the 4 cardinal points	m (measured with hypsometer at height of 1.3 m)					
	Total height	Total height of the tree	m (measured with hypsometer)					
	Lower crown height	Height of the lowest live crown from the ground	m (measured with hypsometer)					
	Timber height	Trunk height until where no main stem could be distinguished	m (measured with hypsometer)					
Canopy	Missing crown	Percentage of missing crown	% (visually estimated between 0 and 100% in 5% interval ranges)					
	Crown transparency	Absolute crown transparency	% (visually estimated between 0 and 100% in 5% interval ranges)					
	Crown contact	Percentage of crown in contact with other adjacent trees crowns	% (visually estimated between 0 and 100% in 5% interval ranges)					
	Crown mildew	Presence of mildew on the foliage (e.g. powdery mildew)	0 = none; 1 = rare, only a few leaves affected; 2 = infrequent, less than 5% of leaves affected; 3 = common, 4 = abundant, most leaves affected					
	Branch epicormics	Presence of epicormics on branches	0 = none; 1 = rare; 2 = sparse, one or two main branches; 3 = common, plus main branches; 4 = abundant, majority of main branches					
	Fruiting bodies	Presence of fungal fruiting bodies (any species)	P= present; A= absent					
	Dieback location	Main crown dieback location	0 = none; 1 = tree top only; 2 = central parts of the crown; 3 = top and central part of the crown; 4 = bottom and centre of the crown; 5 = branches at the base of the crown; 6 = throughout the crown					
	Dieback type	Type of crown dieback	0 = none; 1 = leaf loss only, with lateral branches partially or completely bare; 2 = decay limited to relatively thin branches; 3 = several large branches involved; 4 = main stem involved in the upper part of the canopy; 5 = limited to twigs					
	Insect defoliation	Presence of leaf damage caused by herbivorous insects	0 = none; 1 = rare, only a few leaves affected; 2 = infrequently less than 5% of leaves affected; 3 = common, many leaves affected; 4 = abundant, most leaves affected					
	Insect defoliation type	Type insect defoliation	Pin = holes/holes; Chin = chewing; None= none; Both =both					
	Pruning/lost branches	Presence of prunded/lost branches	P= present; A= absent					
	Canopy closure	Presence of adjacent tree canopy in contact with canopy observed at the 4 cardinal points	P= present; A= absent					
	Social class	Social class	1 = dominant; 2 = codominant ; 3 = subdominant; 4 = suppressed					

Trunk	Active bleeds	Number of active stem bleeds in the 3 m section from the base of the tree. (Liquid running)	Frequency					
	Active bleed length	Average of active bleed length in the 3 m section from the base of the tree.	mm					
	Black staining	Number of black stains in the 3 m section from the base of the tree. (Inactive cancers)	Frequency					
	Black staining length	Average of black staining length in the 3 m section from the base of the tree.	mm					
	Calloused wound	Number of calloused wounds in the 3 m section from the base of the tree. (Not active bleeds)	Frequency					
	Calloused wound length	Average of calloused wound length length in the 3 m section from the base of the tree	mm					
	Stem epicormics	Epicormic growth on the main stem	0 = none; 1 = rare; 2 = sparse (11-50); 3 = common (51-100); 4 = abundant (stem totally obscured by suckers)					
	Dead stem tissue	Perform the " tap test" on the trunk at a height of 1.3 m, at the 4 cardinal points and check whether the sound indicates solid wood or not to determine if death tissue is present	P= present; A= absent					
	Stem fruiting bodies	Presence of fungal fruiting bodies on the stem. Any species	P= present; A= absent					
	Ground level fruiting bodies	Presence of fungal fruiting bodies on the ground. Any species	P= present; A= absent					
	Oval shaped exit holes	Presence of oval shaped exit holes	P= present; A= absent					
	Circular exit holes	Presence of circular exit holes	P= present; A= absent					
	Agrilus exit holes	*Agrilus* exit holes *biguttatus* from the base of the tree up to 2 m high (D-shaped)	P= present; A= absent					