

# National Parks and Wildlife Service

## *Conservation Objectives Series*

### Charleville Wood SAC 000571



An Roinn Tithíochta,  
Rialtais Áitiúil agus Oidhreacht  
Department of Housing,  
Local Government and Heritage

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## Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

### Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

## Qualifying Interests

*\* indicates a priority habitat under the Habitats Directive*

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000571 Charleville Wood SAC

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1016 Desmoulin's Whorl Snail *Vertigo moulinsiana*

91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)\*

## Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: [www.npws.ie/Publications](http://www.npws.ie/Publications)

### NPWS Documents

Year :	2008
Title :	National survey of native woodlands 2003-2008
Author :	Perrin, P.M.; Martin, J.; Barron, S.; O'Neill, F.H.; McNutt, K.E.; Delaney, A.
Series :	Unpublished report to NPWS
Year :	2010
Title :	A provisional inventory of ancient and long-established woodland in Ireland
Author :	Perrin, P.M.; Daly, O.H.
Series :	Irish Wildlife Manuals, No. 46
Year :	2011
Title :	Monitoring and condition assessment of populations of <i>Vertigo geyeri</i> , <i>Vertigo angustior</i> and <i>Vertigo moulinsiana</i> in Ireland
Author :	Moorkens, E.; Killeen, I.
Series :	Irish Wildlife Manuals, No. 55
Year :	2012
Title :	The beetles of decaying wood in Ireland. A provisional annotated checklist of saproxylic Coleoptera
Author :	Alexander, K.N.A.; Anderson, R.
Series :	Irish Wildlife Manuals, No. 65
Year :	2013
Title :	Results of a monitoring survey of old sessile oak woods and alluvial forests
Author :	O'Neill, F.H.; Barron, S.J.
Series :	Irish Wildlife Manuals, No. 71
Year :	2019
Title :	Monitoring of sites and habitat for three Annex II species of whorl snail ( <i>Vertigo</i> )
Author :	Long, M.P.; Brophy, J.T.
Series :	Irish Wildlife Manuals, No. 104
Year :	2019
Title :	Monitoring of sites and habitat for three Annex II species of whorl snail ( <i>Vertigo</i> ). Appendix VI <i>Vertigo moulinsiana</i> site reports
Author :	Brophy, J.T.; Long, M.P.
Series :	Irish Wildlife Manuals, No. 104
Year :	in prep.
Title :	The monitoring and assessment of four EU Habitats Directive Annex I woodland habitats
Author :	Daly, O.H.; O'Neill, F.H.; Barron, S.J.
Series :	Irish Wildlife Manuals

### Other References

Year :	1988
Title :	<i>Mycetobia obscura</i> Mamaev (Diptera: Anisopodidae), a species new to Ireland and a first record for the British Isles
Author :	Ashe, P.
Series :	Bulletin of the Irish Biogeographical Society, 11: 2-5

**Year :** 2002  
**Title :** Reversing the habitat fragmentation of British woodlands  
**Author :** Peterken, G.  
**Series :** WWF-UK, London

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**Year :** 2016  
**Title :** Irish Vegetation Classification: Technical Progress Report No. 2  
**Author :** Perrin, P.  
**Series :** Report submitted to National Biodiversity Data Centre

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## Spatial data sources

**Year :** Revision 2010

**Title :** National Survey of Native Woodlands 2003-2008. Version 1

**GIS Operations :** QIs selected; clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising

**Used For :** 91E0 (map 2)

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**Year :** 2021

**Title :** NPWS rare and threatened species database

**GIS Operations :** Dataset created from spatial references in database records. Expert opinion used as necessary to resolve any issues arising

**Used For :** 1016 (map 3)

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## Conservation Objectives for : Charleville Wood SAC [000571]

### 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)\*

To restore the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)\* in Charleville Wood SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes. See map 2 for surveyed woodland area	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* is present within Charleville Wood SAC. The habitat is present around Charleville Lake, and occurs in mosaic with other native woodland types. As part of the National Survey of Native Woodlands (NSNW), the sub-site Charleville South (NSNW site code 574) was surveyed by Perrin et al. (2008); its conservation assessment score was ranked as first in Co. Offaly and 15th nationally. Map 2 shows the minimum area of alluvial forests within the SAC, which is estimated to be 16.9ha (Perrin et al., 2008). It is important to note that further unsurveyed areas may be present within the SAC
Habitat distribution	Occurrence	No decline, subject to natural processes. The surveyed woodland location is shown on map 2	Distribution based on Perrin et al. (2008). It is important to note that further unsurveyed areas may be present within the SAC
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size	The target areas for individual woodlands aim to reduce habitat fragmentation and benefit those species requiring 'deep' woodland conditions (Peterken, 2002). In some cases, topographical constraints may restrict expansion. The ecological requirements of Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ), as outlined in the conservation objective for the species in this volume, also needs to be considered here
Woodland structure: cover and height	Percentage; metres; centimetres	Total canopy cover at least 30%; median canopy height at least 7m; native shrub layer cover 10-75%; native herb/dwarf shrub layer cover at least 20% and height at least 20cm; bryophyte cover at least 4%	The target aims for a diverse structure with a canopy containing mature trees, shrub layer with semi-mature trees and shrubs, and well-developed field layer (herbs, graminoids and dwarf shrubs) and ground layer (bryophytes). Assessment criteria are described in Daly et al. (in prep.) and O'Neill and Barron (2013)
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types	Described in Perrin et al. (2008). See also the Irish Vegetation Classification (Perrin, 2016; <a href="http://www.biodiversityireland.ie/projects/ivc-classification-explorer">www.biodiversityireland.ie/projects/ivc-classification-explorer</a> )
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes of target species for 91E0* woodlands and other native tree species occur in adequate proportions to ensure survival of woodland canopy	The target species for 91E0* are alder ( <i>Alnus glutinosa</i> ), ash ( <i>Fraxinus excelsior</i> ) and willows ( <i>Salix</i> spp.). Assessment criteria are described in Daly et al. (in prep.) and O'Neill and Barron (2013)
Hydrological regime: flooding depth/height of water table	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation	Periodic flooding is essential to maintain alluvial woodlands along river and lake floodplains, but not for woodland around springs/seepage areas. The water level of Charleville Lake, and hence the degree of inundation of the alluvial forests habitat, is controlled by a sluice (Long and Brophy, 2019)



Woodland structure: dead wood	Number per hectare	At least 19 stems/ha of dead wood of at least 20cm diameter	Dead wood is a valuable resource and an integral part of a healthy, functioning woodland ecosystem. Dead wood comprises old senescent trees, standing dead trees, fallen dead wood (including large branches) and rotten stumps of any tree species. Assessment criteria are described in Daly et al. (in prep.) and O'Neill and Barron (2013)
Woodland structure: veteran trees	Number per hectare	No decline	Veteran trees are important habitats for bryophytes, lichens, saproxylic organisms and some bird species. Their retention is important to ensure continuity of habitats/niches and propagule sources
Woodland structure: indicators of local distinctiveness	Occurrence; population size	No decline in distribution and, in the case of red listed and other rare or localised species, population size	Includes ancient or long-established woodlands (see Perrin and Daly, 2010), archaeological and geological features as well as red listed and other rare or localised species. Much of Charleville South (NSNW site code 574) has been identified as Ancient Woodland (Perrin and Daly, 2010). The woodland is relatively undisturbed. Natural transitions occur between the alluvial forests habitat, the lakeshore and other native woodland habitats (NPWS internal files). Rare invertebrates have also been recorded from Charleville Wood (Alexander and Anderson, 2012; NPWS internal files), most notably <i>Mycetobia obscura</i> (Ashe, 1988), and numerous scarce or rare old growth species of saproxylic beetle (Alexander and Anderson, 2012). See also the conservation objective for Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ), which is found in the fringing vegetation around Charleville Lake and, unusually, in the alluvial forests habitat to the east of the lake (Long and Brophy, 2019)
Woodland structure: indicators of overgrazing	Occurrence	All five indicators of overgrazing absent	There are five indicators of overgrazing within 91E0*: topiary effect on shrubs and young trees, browse line on mature trees, abundant dung, severe recent bark stripping, and trampling (Daly et al., in prep.). Browsing by deer was noted at Charleville South (NSNW site code 574) by Perrin et al. (2008)
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover at least 90% of canopy; target species cover at least 50% of canopy	The target species for 91E0* are alder ( <i>Alnus glutinosa</i> ), ash ( <i>Fraxinus excelsior</i> ) and willows ( <i>Salix</i> spp.) (Daly et al., in prep.; O'Neill and Barron, 2013)
Vegetation composition: typical species	Occurrence	At least 1 target species for 91E0* woodlands present; at least 6 positive indicator species for 91E0* woodlands present	A variety of typical native species should be present, depending on woodland type. The target species for 91E0* are alder ( <i>Alnus glutinosa</i> ), ash ( <i>Fraxinus excelsior</i> ) and willows ( <i>Salix</i> spp.). Positive indicator species for 91E0* are listed in Daly et al. (in prep.) and O'Neill and Barron (2013)
Vegetation composition: negative indicator species	Occurrence	Negative indicator species cover not greater than 10%; regeneration of negative indicator species absent	Negative indicator species (i.e. any non-native species, including herbaceous species) should be absent or under control. In general, the following are the most common non-native invasive species in 91E0* woodlands: sycamore ( <i>Acer pseudoplatanus</i> ), beech ( <i>Fagus sylvatica</i> ) and horse-chestnut ( <i>Aesculus hippocastanum</i> ) (Daly et al., in prep.)
Vegetation composition: problematic native species	Percentage	Cover of common nettle ( <i>Urtica dioica</i> ) less than 75%	Common nettle ( <i>Urtica dioica</i> ) is a positive indicator species for 91E0* but, in some cases, it may become excessively dominant. Increased light and nutrient enrichment are factors which favour proliferation of common nettle (Daly et al., in prep.)

## Conservation Objectives for : Charleville Wood SAC [000571]

### 1016 Desmoulin's Whorl Snail *Vertigo moulinsiana*

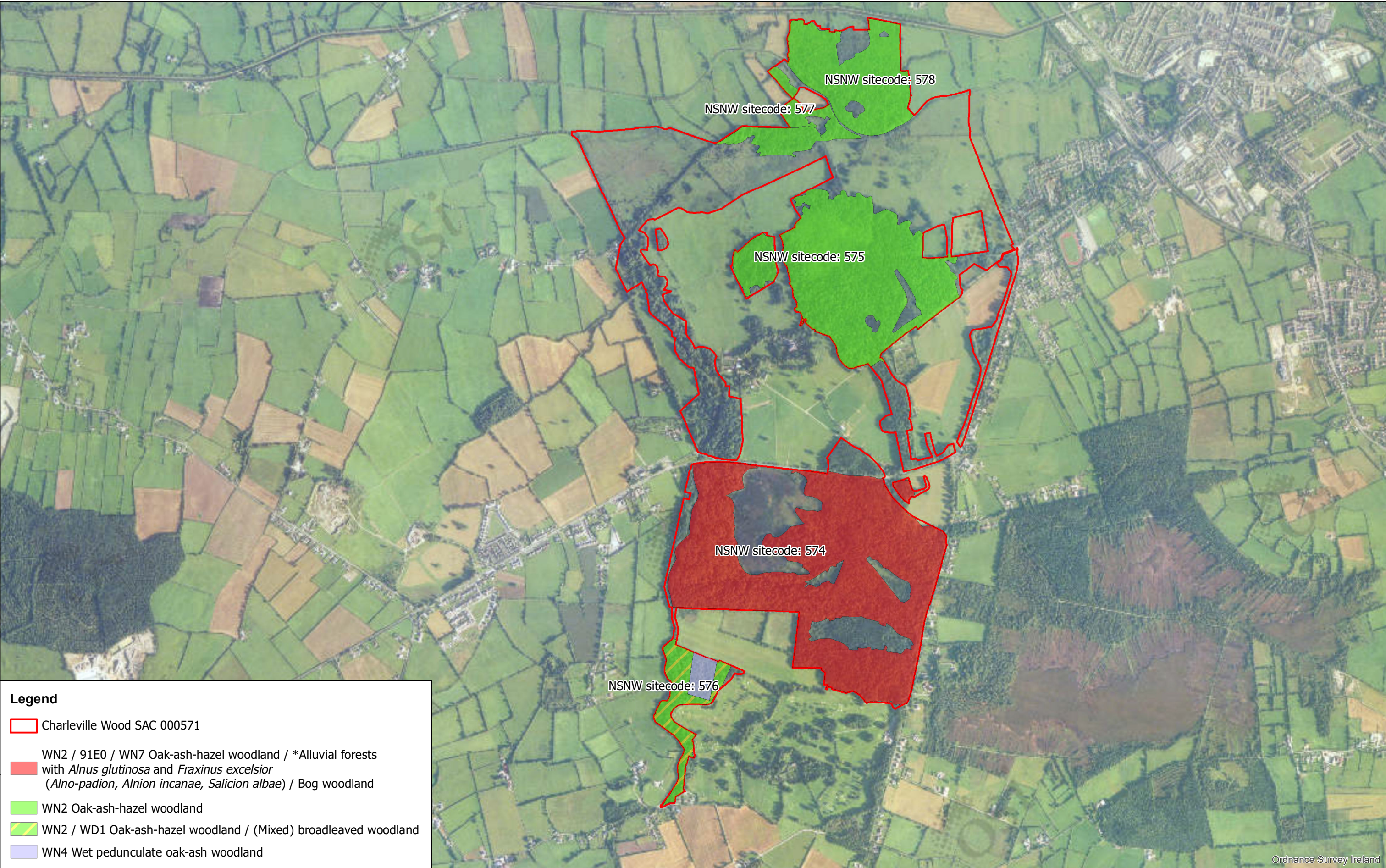
**To maintain the favourable conservation condition of Desmoulin's Whorl Snail (*Vertigo moulinsiana*) in Charleville Wood SAC, which is defined by the following list of attributes and targets:**

Attribute	Measure	Target	Notes
Distribution	Number of occupied 1km squares	No decline, subject to natural processes. There is one known site for this species in the SAC within N3122. See map 3	There is one known site in Charleville Wood SAC (000571) for Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ) which is found on the margins of Charleville Lake within the 1km grid square N3122. See details for the site Charleville Lake (site code VmCAM11) in Moorkens and Killeen (2011), Long and Brophy (2019) and Brophy and Long (2019)
Occurrence in suitable habitat	Percentage of positive records in a representative number of samples	No decline, subject to natural processes. A baseline figure of 50% positive samples is set	This attribute should be assessed following the methodology in Long and Brophy (2019) taking a representative number of samples in suitable habitat across the site. See also Brophy and Long (2019)
Density within habitat	Number of adults per sample	No decline, subject to natural processes; at least 67% of samples should have more than 20 individuals	This attribute should be assessed following the methodology in Long and Brophy (2019) taking a representative number of samples in suitable habitat across the site. At least 67% of samples should have more than 20 Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ) individuals. See also Brophy and Long (2019)
Habitat area	Hectares	Area of suitable habitat stable or increasing, subject to natural processes; no less than 5ha of at least sub-optimal habitat	The main area of habitat that supports Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ) within this SAC is the swamp habitat fringing Charleville Lake which is dominated by large sedges ( <i>Carex</i> spp.), narrow-leaved bulrush ( <i>Typha angustifolia</i> ) and common reed ( <i>Phragmites australis</i> ). Another sub-site is in an area of wet woodland with sedges ( <i>Carex</i> spp.) to the east of the lake. At least 5ha of habitat should be in at least sub-optimal condition. Optimal and sub-optimal habitat is defined in Moorkens and Killeen (2011) and given in Long and Brophy (2019) and Brophy and Long (2019)
Tree canopy extent	Percentage cover	Tree canopy cover around lake stable at current levels, subject to natural processes	Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> ) occurs at the terrestrial/open water transition in this SAC. This habitat could become unsuitable should tree cover increase causing critical areas to dry out. Tree cover should not be allowed to increase into the lake margins (this attribute should be considered in conjunction with those listed in the conservation objective for 91E0* in this volume)
Habitat quality: water levels	Hydrological regime	Maintain at current levels, subject to natural processes	In this SAC, the lake is controlled by a sluice/weir and this should be maintained to ensure that water levels are kept as close as possible to current levels









**Legend**

Charleville Wood SAC 000571

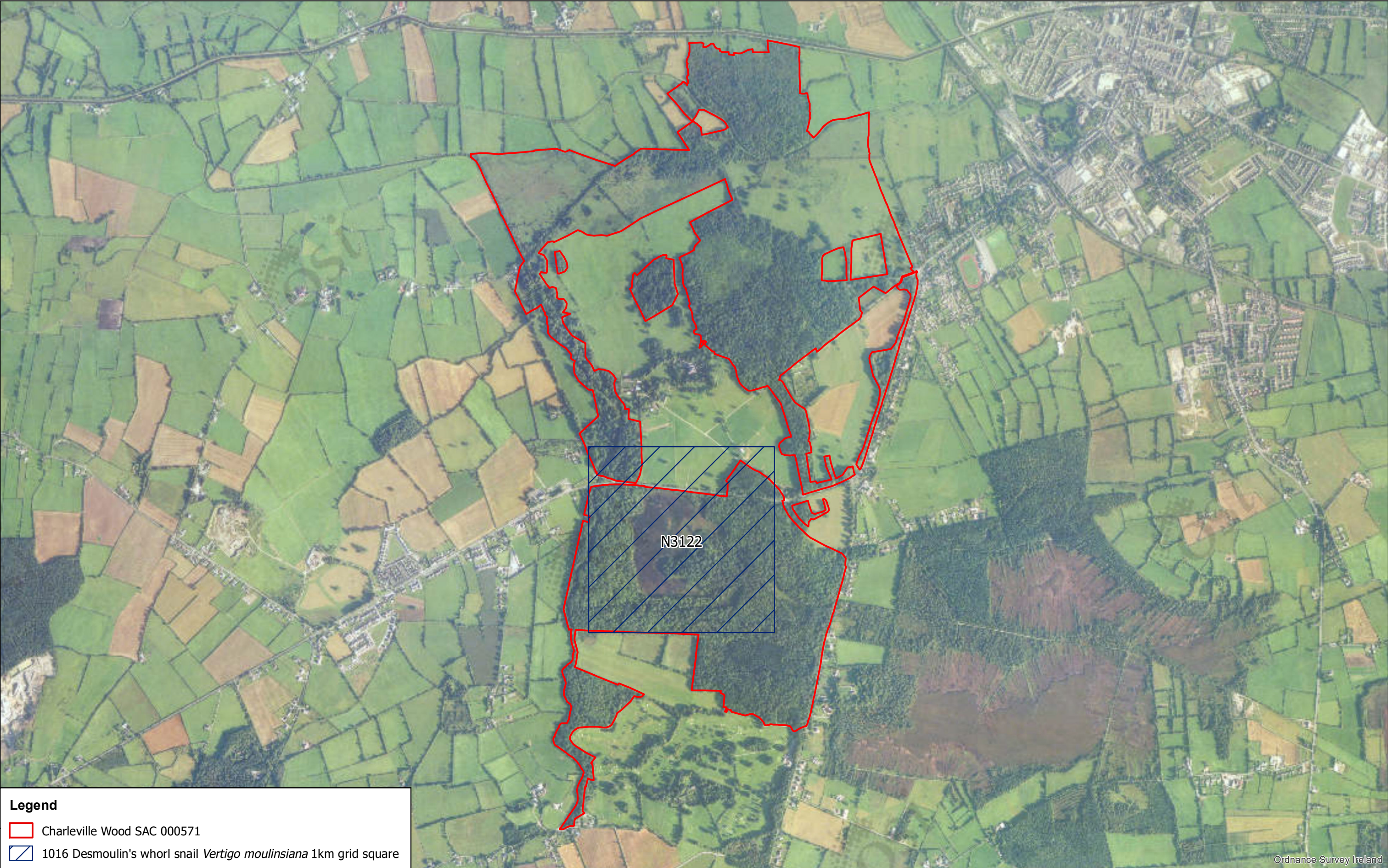
WN2 / 91E0 / WN7 Oak-ash-hazel woodland / \*Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-padion*, *Alnion incanae*, *Salicion albae*) / Bog woodland

WN2 Oak-ash-hazel woodland

WN2 / WD1 Oak-ash-hazel woodland / (Mixed) broadleaved woodland

WN4 Wet pedunculate oak-ash woodland





**Legend**

Charleville Wood SAC 000571

1016 Desmoulin's whorl snail *Vertigo moulinsiana* 1km grid square