



Management Measures for Widely Spread Species (WSS) in Northern Ireland Grey squirrel (*Sciurus carolinensis*)

As per Article 19 requirement of EU Regulation 1143/2014
*on the prevention and management of the introduction and spread of
invasive alien species*



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Grey squirrel <i>Sciurus carolinensis</i>	
Description	<p>Medium-sized tree squirrel (20-25cm long), bushy tail (15-20cm). Upper fur mainly grey with gingery-brown along the back, flanks, tail, limbs and feet; undersides white. Melanic forms occur. Also, erythristic forms with red-brown backs that can lead to confusion and misidentification with red squirrels (image right).</p> 
NI Status	<p>Abundant throughout Northern Ireland and is still expanding its range. Ongoing efforts, concentrated in red squirrel hotspots to limit its distribution and spread. Present in largely broad-leaved forest or parkland. Can use mature hedgerows and gardens. Known to be scarce in Co. Fermanagh, reason unknown, not caused by human intervention. For current distribution visit NBN Atlas Northern Ireland.</p> 
Pathways	<p>Introduced from USA to approximately 30 sites in England and Wales between 1876- and 1929, from Canada to 3 sites in Scotland between 1892 and 1920, and from England to 1 site in Ireland in 1911 and from there progressed throughout the island to its current range in both Ireland and Northern Ireland.</p>
Aim	<p>Control the current wild population, minimise expansion of the species range in N.I. and to eradicate in the wild where possible. Prevent establishment in new areas, especially areas that are the preserve of red squirrel populations.</p>
Objectives	<ol style="list-style-type: none"> 1. Contain and locally reduce the abundance of grey squirrels with control being carried out in high priority areas around red squirrel strongholds and their buffer zones. 2. Reduce the impacts on red squirrel populations and on sensitive woodland habitat and forestry services. 3. Focus control in selected areas to maintain priority red squirrel populations and prevent further population expansion. 4. Reduce distribution across N.I. by 50% by 2030. 5. Widespread restoration of native red squirrel populations.
Prevention	
Border and pathway actions	<ul style="list-style-type: none"> - Under the EU Invasive Alien Species Regulation 1143/2014 it is an offence to release or allow this species to escape into the environment. This includes the release of animals taken into captivity for welfare reasons.

	<ul style="list-style-type: none"> - Under the EU Invasive Alien Species Regulation it is also an offence to import into the EU, keep, breed, transport (to, from or within the EU; except to facilitate eradication), place on the market, use or exchange this species - unless there are specific exemptions or permits.
<p>Stakeholder communications</p>	<ul style="list-style-type: none"> - Raise awareness of the legal requirements above, impacts, management and risk of further spread amongst land managers, landowners, the general public and other stakeholders, including information sheets, posters, bin stickers etc. (issued by the Northern Ireland Environment Agency) and encourage reporting of sightings in new areas. - Encourage stakeholders involved in grey squirrel control to establish and maintain coordinated management partnerships at the landscape-scale. - Raise awareness of grant support schemes for targeted control of grey squirrels in areas where they are a threat to red squirrel populations (e.g. Environmental Challenge Competition and Environmental Farming Schemes). - Promote best practice in grey squirrel control. - Advice will be provided to wildlife animal sanctuaries/rescue centres that grey squirrels cannot be re-released. - Establishments holding zoological collections, including mobile zoos and animal encounter operators can keep and exhibit existing animals until the end of their natural lives, as long as they are kept securely and appropriate measures to prevent them from breeding are taken. - Euthanasia must be undertaken in an appropriate and humane manner according to the Welfare of Animals Act (Northern Ireland) 2011 https://www.legislation.gov.uk/nia/2011/16/contents
Early detection and rapid response	
<p>Surveillance</p>	<ul style="list-style-type: none"> - A new, dedicated surveillance mechanism is not necessary as a number of existing recording schemes allow reporting of this species: - In Northern Ireland species records are entered to CEDaR online recording via www2.habitas.org.uk/records/ISI or via the Invasive Species Ireland website - http://invasivespeciesireland.com/report-sighting/. Entering a record generates an email to the Northern Ireland Environment Agency (NIEA) Invasive Non-Native Species (INNS) Team. - The Botanical Society of the British Isles Map Scheme compiles comprehensive distribution maps for plants across the UK. - The Biological Records Centre (www.brc.ac.uk) collects presence records of all wildlife species in the UK through a network of voluntary recorders on iRecord online or by the iRecord app. The BRC provides the opportunity to download distribution data and visualise it as customisable maps, via the

	<p>National Biodiversity Network Atlas Northern Ireland (https://northernireland.nbnatlas.org/).</p> <ul style="list-style-type: none"> - Ongoing surveillance is undertaken to a varying extent by numerous statutory, non-statutory and voluntary organisations involved in red squirrel <i>Sciurus vulgaris</i> conservation, which includes the control of grey squirrels. - The overarching group is the UK Red Squirrel Steering Group (UKRSG). In addition, the UK Squirrel Accord is an organisation that consists of 32 leading woodland, timber industry and conservation organisations in the UK committed to the effective and targeted control of grey squirrels. - The Northern Ireland Squirrel Forum and other squirrel fora hold representatives from a wide range of stakeholders, including government, public bodies, wildlife trusts, conservation organisations, local voluntary squirrel groups, woodland managers, charities, private companies and private landowners. - Relevant Government agencies such as DfI Roads/Rivers, AFBI, Loughs Agency, Forest Service and Northern Ireland Environment Agency record the presence of invasive non-native species as a part of their work and will then initiate management measures for WSS on their own sites. - Non-Governmental Organisations (e.g. Rivers and Fishery Trusts and Boards, Wildlife Trusts, etc.) undertake surveys and report incidental sightings of invasive non-native species and will then initiate management measures for WSS on their own sites. - All N.I. Councils to also record and report presence of invasive non-native species on their estates and initiate management measures for WSS on their own sites.
Rapid response	<ul style="list-style-type: none"> - Response to sightings of grey squirrels in new areas, or re-emergence in previously occupied areas is dependent on the action of local organisations involved in grey squirrel control, e.g. local squirrel groups. - Although The LIFE funded Red Squirrels United project officially ended in October 2019, the legacy of the project has established an early warning system for Northern Ireland by the creation of many new volunteer groups across the country. As yet, there is no project lined up to follow on, but the new volunteer groups currently undertake the majority of the surveillance, rapid response and control work.
Long-term management	
<ul style="list-style-type: none"> - Grey squirrels are controlled to protect red squirrels and forestry - Support national squirrel fora and the UKRSG to promote the management of grey squirrels in existing and new ranges through encouragement of local and regional coordinated management at the landscape-scale to conserve red squirrels and to reduce damage to woodland. - Support the UKRSG which builds on national efforts by working across borders to provide a shared focus at N.I., G.B. and Ireland level. 	

- Support the UK Squirrel Accord, in their efforts towards control of grey squirrels.
- Numerous organisations have been involved in grey squirrel control including Wildlife Trusts, Country Parks, Forest Service, conservation organisations, private companies and private landowners and estates – encourage their continued involvement.
- A number of techniques are available for the removal of grey squirrels: cage-trapping and despatch (via cranial concussion, shooting, or lethal injection); spring traps; shooting (free ranging animals, drey poking and shooting, or shooting at bait stations). All methods are very labour-intensive and requires regular effort to keep a population in check. The use of Warfarin is no longer legal for squirrel control.
- Much grey squirrel control has been focussed on areas where it will directly benefit red squirrels, e.g. red squirrel reserves and buffer zones in Northern Ireland. Long-term management will continue to be undertaken, where funding allows, largely by volunteers and land managers, with support and coordination from the organisations involved.
- Guidance on the management of the grey squirrel is available on the Invasive Species Ireland website - <http://invasivespeciesireland.com/species-accounts/established/terrestrial/grey-squirrel>

Research

- Effective methods for the removal of grey squirrels are available.
- Current control practices may benefit from the development of a more coordinated and collaborative strategic approach at the landscape-scale and measurement of the impacts of intervention. This approach is planned by the NI Squirrel Forum – evaluation of impacts is ongoing, although the focus is on benefits to red squirrel conservation not solely grey squirrel control.
- Currently funded research (2017) into the development and delivery of oral contraceptive for grey squirrels might result in a complementary tool to culling.
- Further improvements to techniques for grey squirrel control in areas where red squirrels are present, to prevent any impacts on non-target species.
- More research/advice would be beneficial on use of automated despatch techniques that would facilitate potential control outside red squirrel and pine marten areas.



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