European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)

Fourth Report by the United Kingdom under Article 17

on the implementation of the Directive
from January 2013 to December 2018

Conservation status assessment for the species:

S1528 - Marsh saxifrage (*Saxifraga hirculus*)

UNITED KINGDOM

IMPORTANT NOTE - PLEASE READ

- The information in this document represents the UK Report on the conservation status of this species, submitted to the European Commission as part of the 2019 UK Reporting under Article 17 of the EU Habitats Directive.
- It is based on supporting information provided by the geographically-relevant Statutory Nature Conservation Bodies, which is documented separately.
- The 2019 Article 17 UK Approach document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- The reporting fields and options used are aligned to those set out in the European Commission guidance.
- Maps showing the distribution and range of the species are included (where available).
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the UK assessments. Further underpinning explanatory notes are available in the related country-level reports.
- Some of the reporting fields have been left blank because either: (i) there was insufficient information to complete the field; (ii) completion of the field was not obligatory; and/or (iii) the field was not relevant to this species (section 12 Natura 2000 coverage for Annex II species).
- The UK-level reporting information for all habitats and species is also available in spreadsheet format.

Visit the JNCC website, https://jncc.gov.uk/article17, for further information on UK Article 17 reporting.

Report on the main results of the surveillance under Article 11 for Annex II, IV and V species (Annex B)

NATIONAL LEVEL

1. General information

1.1 Member State	**UK**
1.2 Species code	**1528**
1.3 Species scientific name	**Saxifraga hirculus**
1.4 Alternative species scientific name	
1.5 Common name (in national language)	Marsh saxifrage

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2010-2018
2.3 Distribution map	Yes
2.4 Distribution map Method used	Complete survey or a statistically robust estimate
2.5 Additional maps	No

3. Information related to Annex V Species (Art. 14)

3.1 Is the species taken in the wild/exploited?	No	
3.2 Which of the measures in Art. 14 have been taken?	a) regulations regarding access to property	No
	b) temporary or local prohibition of the taking of specimens in the wild and exploitation	No
	c) regulation of the periods and/or methods of taking specimens	No
	d) application of hunting and fishing rules which take account of the conservation of such populations	No
	e) establishment of a system of licences for taking specimens or of quotas	No
	f) regulation of the purchase, sale, offering for sale, keeping for sale or transport for sale of specimens	No
	g) breeding in captivity of animal species as well as artificial propagation of plant species	No
	h) other measures	No

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3.3 Hunting bag or quantity taken in the wild for Mammals and Acipenseridae (Fish)

a) Unit

b) Statistics/ quantity taken	Provide statistics/quantity per hunting season or per year (where season is not used) over the reporting period					
	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
Min. (raw, ie. not rounded)						
Max. (raw, ie. not rounded)						
Unknown	No	No	No	No	No	No

3.4. Hunting bag or quantity taken in the wild Method used

3.5. Additional information

BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs

Atlantic (ATL)

4.2 Sources of information

England
TAYLOR, I 1987 A Survey of Nationally Rare Plant Species in North-West England. An unpublished report to the Nature Conservancy Council
HALLAM, C.J., KELLY, P., SYDES, C. and TAYLOR, I2005 Effects of Grazing on Flower Production and Fruit Survival in a Rare Plant Species, Marsh Saxifrage, Saxifraga hirculus, in Upland Britain. An unpublished typescript.
VITTOZA, P., WYSSA, T. & GOBATB, J-M., 2006 Ecological conditions for Saxifraga hirculus in Central Europe: A better understanding for a good protection Biological Conservation 131: 594-608
ROBERTS, F.J. 2010 Marsh Saxifrage, Saxifraga hirculus: Status of English Sites in 2009 - an unpublished report for Natural England
O'REILLY, J 2016 Monitoring Survey of Saxifraga hirculus (Marsh Saxifrage) in Yorkshire Dales National Park - an unpublished report to the Yorkshire Dales National Park Authority
O'REILLY, J 2018 Saxifraga hirculus (Marsh Saxifrage) Population Monitoring 2017 - an unpublished report to Natural England
O'REILLY, J 2018 Saxifraga hirculus (Marsh Saxifrage) Population Monitoring and Ecological Investigations at Moor House NNR - an unpublished report to Natural England
Scotland
BSBI Distribution Database
Commissioned research - unpublished report. Genetic work by A. Finger, Royal Botanic Garden Edinburgh 2017 (field work in 2016).
Communications of the species promoted by Plantlife Scotland. Source Plantlife Scotland.

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N.Ireland
Beesley, S. (2006). County Antrim Scarce, Rare and Extinct Vascular Plant Register. Ulster Museum. Belfast.
Hackney, P. 1992 Flora of the North-east of Ireland. Third Edition. Institute of Irish Studies, the Queen's University of Belfast.
KELLY, P. 1999. Survey of the historic localities of Saxifraga hirculus. Report to English Nature.
Muldoon, C.S., Waldren, S. & Lynn, D. (2015) Monitoring recommendations for Marsh Saxifrage (Saxifraga hirculus L.) in the Republic of Ireland. Irish Wildlife Manuals, No. 88. National Parks and Wildlife Service, Department of the Arts, Heritage and the Gaeltacht, Ireland.
NIEA. Unpublished surveys and reports. Various years
PRESTON. C. D., PEARMAN, D.A. & DINES, T.D. 2002. New Atlas of the British and Irish Flora. Oxford University Press Joint Nature Conservation Council 2010. UK priority species pages - Version 2 Saxifraga hirculus version 2

5. Range

5.1 Surface area (km²)	1846	
5.2 Short-term trend Period	2007-2018	
5.3 Short-term trend Direction	Stable (0)	
5.4 Short-term trend Magnitude	a) Minimum	b) Maximum
5.5 Short-term trend Method used	Complete survey or a statistically robust estimate	
5.6 Long-term trend Period		
5.7 Long-term trend Direction		
5.8 Long-term trend Magnitude	a) Minimum	b) Maximum
5.9 Long-term trend Method used		
5.10 Favourable reference range	a) Area (km²)	1300
	b) Operator	
	c) Unknown	
	d) Method	The FRR is the same as in 2013. The value is considered to be large enough to support a viable population and no lower than the range estimate when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document.
5.11 Change and reason for change in surface area of range	Improved knowledge/more accurate data	
	The change is mainly due to:	Improved knowledge/more accurate data
5.12 Additional information	The surveying of remote upland areas in Scotland has resulted in the addition of two new geographically distinct sites. Consequently, the increase in range is considered as a result of improved knowledge and therefore the short-term trend is set as 'stable'.	

6. Population

6.1 Year or period	2005-2018

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6.2 Population size (in reporting unit)	a) Unit	number of individuals (i)
	b) Minimum	
	c) Maximum	
	d) Best single value	772464
6.3 Type of estimate	Best estimate	
6.4 Additional population size (using population unit other than reporting unit)	a) Unit	number of localities (localities)
	b) Minimum	
	c) Maximum	
	d) Best single value	26
6.5 Type of estimate	Best estimate	
6.6 Population size Method used	Complete survey or a statistically robust estimate	
6.7 Short-term trend Period	2005-2018	
6.8 Short-term trend Direction	Stable (0)	
6.9 Short-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.10 Short-term trend Method used	Based mainly on extrapolation from a limited amount of data	
6.11 Long-term trend Period		
6.12 Long-term trend Direction		
6.13 Long-term trend Magnitude	a) Minimum	
	b) Maximum	
	c) Confidence interval	
6.14 Long-term trend Method used		
6.15 Favourable reference population (using the unit in 6.2 or 6.4)	a) Population size	18 with unit number of localities (localities)
	b) Operator	
	c) Unknown	
	d) Method	The FRP is the same as in 2013. The value is considered to be large enough to support a viable population and no less than when the Habitats Directive came into force in the UK. For further information see the 2019 Article 17 UK Approach document.
6.16 Change and reason for change in population size	Improved knowledge/more accurate data Use of different method	
	The change is mainly due to:	Improved knowledge/more accurate data
6.17 Additional information	The UK population estimate of individuals is a composite of both ramets (772,377) and genotypes (87). It has not been possible to use a common unit due to differences in survey method across the UK.	

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7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat	a) Are area and quality of occupied habitat sufficient (for long-term survival)?	Yes
	b) Is there a sufficiently large area of unoccupied habitat of suitable quality (for long-term survival)?	
7.2 Sufficiency of area and quality of occupied habitat Method used	Complete survey or a statistically robust estimate	
7.3 Short-term trend Period	2005-2018	
7.4 Short-term trend Direction	Stable (0)	
7.5 Short-term trend Method used	Complete survey or a statistically robust estimate	
7.6 Long-term trend Period		
7.7 Long-term trend Direction		
7.8 Long-term trend Method used		
7.9 Additional information		

8. Main pressures and threats

8.1 Characterisation of pressures/threats

Pressure	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Intensive grazing or overgrazing by livestock (A09)	H
Extensive grazing or undergrazing by livestock (A10)	M
Drainage (K02)	M

Threat	Ranking
Abandonment of grassland management (e.g. cessation of grazing or mowing) (A06)	H
Intensive grazing or overgrazing by livestock (A09)	H

8.2 Sources of information

8.3 Additional information

9. Conservation measures

9.1 Status of measures	a) Are measures needed?	Yes
	b) Indicate the status of measures	Measures identified and taken
9.2 Main purpose of the measures taken	Maintain the current range, population and/or habitat for the species	
9.3 Location of the measures taken	Only inside Natura 2000	
9.4 Response to the measures	Medium-term results (within the next two reporting periods, 2019-2030)	

9.5 List of main conservation measures

Maintain existing extensive agricultural practices and agricultural landscape features (CA03)
Reinstate appropriate agricultural practices to address abandonment, including mowing, grazing, burning or equivalent measures (CA04)
Adapt mowing, grazing and other equivalent agricultural activities (CA05)
Stop mowing, grazing and other equivalent agricultural activities (CA06)
Manage drainage and irrigation operations and infrastructures in agriculture (CA15)

9.6 Additional information

10. Future prospects

10.1 Future prospects of parameters

a) Range	Good
b) Population	Good
c) Habitat of the species	Good

10.2 Additional information

Future trend of Range is Overall stable; Future trend of Population is Overall stable; and Future trend of Habitat for the species is Overall stable. For further information on how future trends inform the Future prospects conclusion see the 2019 Article 17 UK Approach document.

11. Conclusions

11.1. Range	Favourable (FV)
11.2. Population	Favourable (FV)
11.3. Habitat for the species	Favourable (FV)
11.4. Future prospects	Favourable (FV)
11.5 Overall assessment of Conservation Status	Favourable (FV)
11.6 Overall trend in Conservation Status	Stable (=)

11.7 Change and reasons for change in conservation status and conservation status trend

a) Overall assessment of conservation status

No change

The change is mainly due to:

b) Overall trend in conservation status

No change

The change is mainly due to:

11.8 Additional information

Conclusion on Range reached because: (i) the short-term trend direction in Range surface area is stable; and (ii) the current Range surface area is not less than the Favourable Reference Range.

Conclusion on Population reached because: (i) the short-term trend direction in Population size is stable; and (ii) the current Population size is not less than the Favourable Reference Population.

Conclusion on Habitat for the species reached because: (i) the area of occupied and unoccupied habitat is sufficiently large and (ii) the habitat quality is suitable

for the long-term survival of the species; and (iii) the short-term trend in area of habitat is increasing.

Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Population are good; and (iii) the Future prospects for Habitat for the species are good.

Overall assessment of Conservation Status is Favourable because all of the conclusions are Favourable.

Overall trend in Conservation Status is based on the combination of the short-term trends for Range – stable, Population – stable, and Habitat for the species – increasing.

Overall assessment of Conservation Status has not changed since 2013.

Overall trend in Conservation Status has not changed since 2013.

12. Natura 2000 (pSCIs, SCIs and SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network (on the biogeographical/marine level including all sites where the species is present)	a) Unit	number of individuals (i)
	b) Minimum	
	c) Maximum	
	d) Best single value	771748
12.2 Type of estimate		Best estimate
12.3 Population size inside the network Method used		Complete survey or a statistically robust estimate
12.4 Short-term trend of population size within the network Direction		Stable (0)
12.5 Short-term trend of population size within the network Method used		Complete survey or a statistically robust estimate
12.6 Additional information		

13. Complementary information

13.1 Justification of % thresholds for trends	
13.2 Trans-boundary assessment	
13.3 Other relevant Information	

Distribution Map

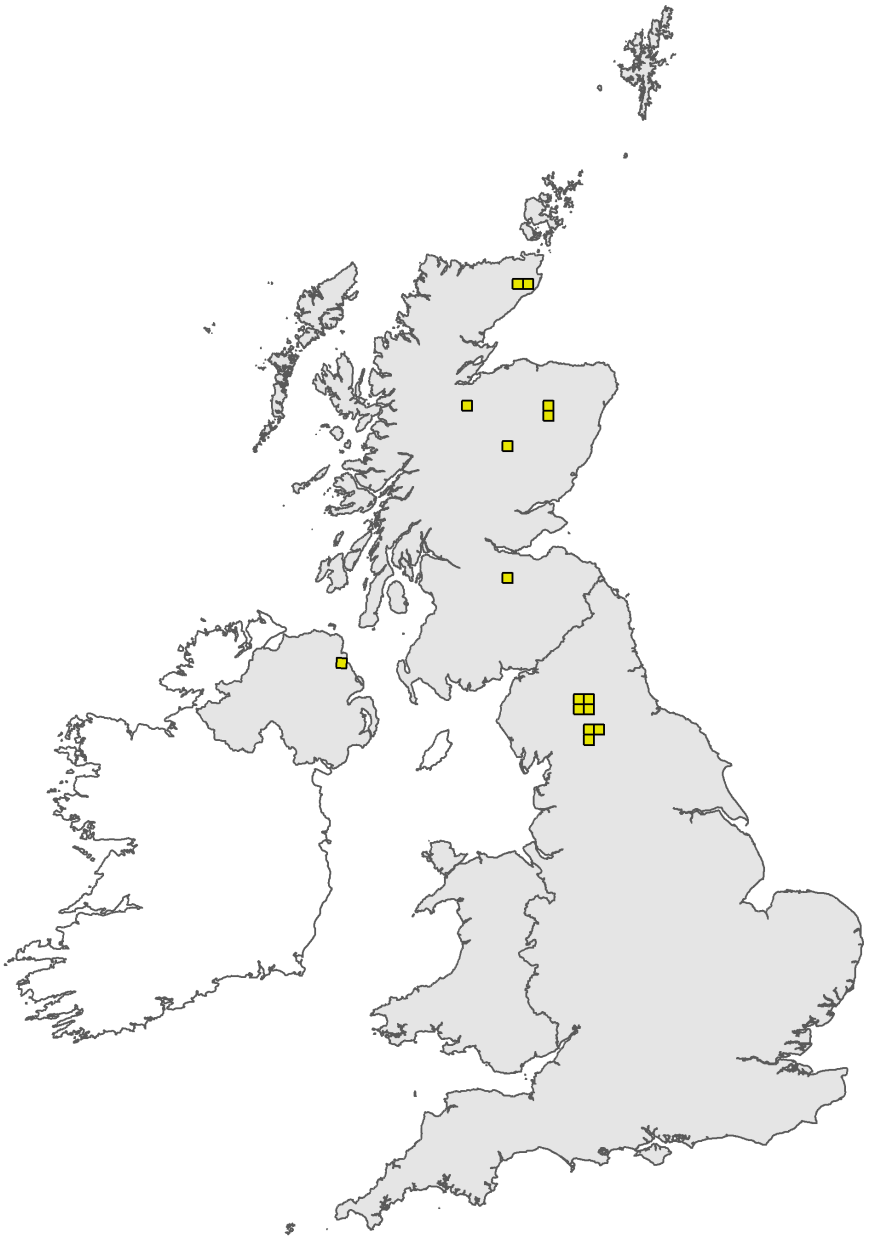

Figure 1: UK distribution map for S1528 - Marsh saxifrage (*Saxifraga hirculus*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The 10km grid square distribution map is based on available species records within the current reporting period. For further details see the 2019 Article 17 UK Approach document.

Range Map

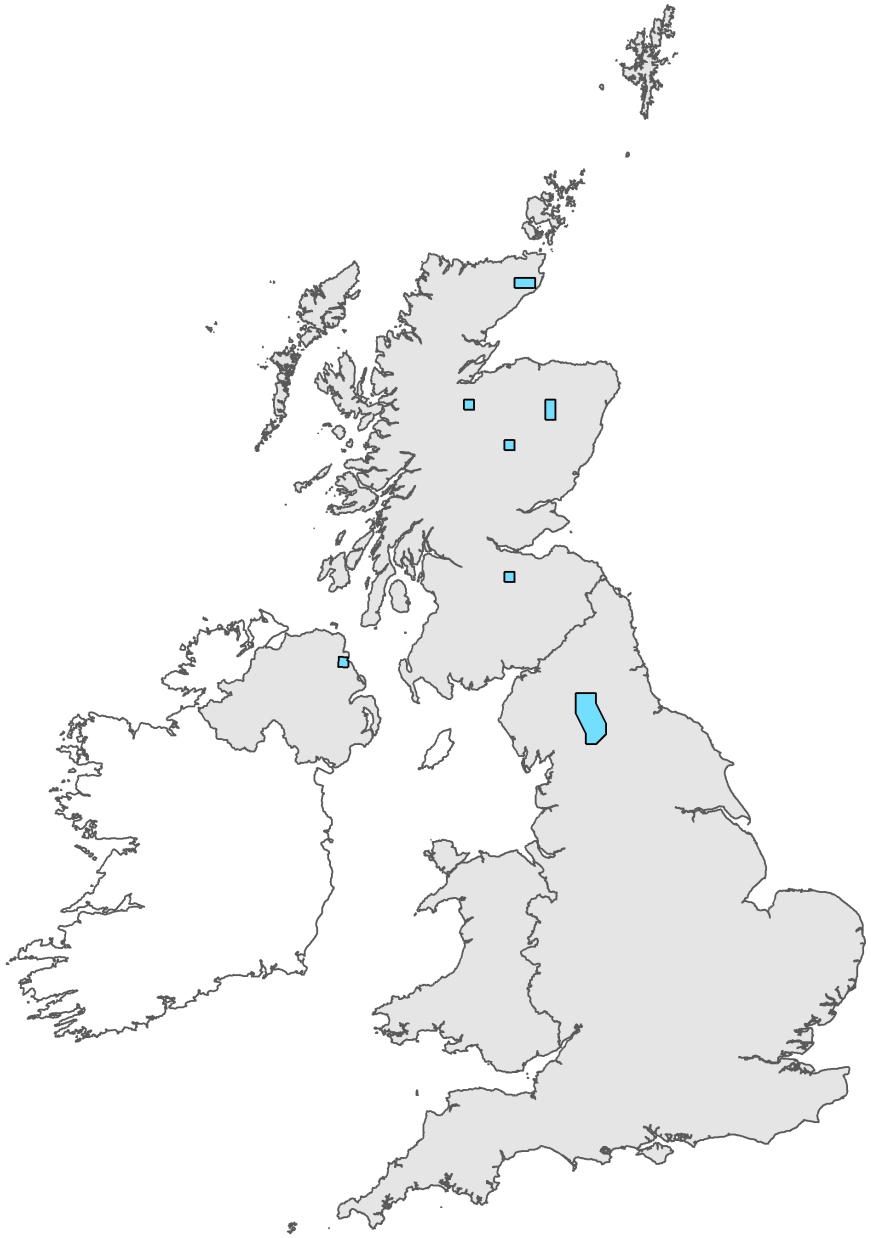

Figure 2: UK range map for S1528 - Marsh saxifrage (*Saxifraga hirculus*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority.

The range map has been produced by applying a bespoke range mapping tool for Article 17 reporting (produced by JNCC) to the 10km grid square distribution map presented in Figure 1. The alpha value for this species was 20km. For further details see the 2019 Article 17 UK Approach document.