

Report under The Conservation of Habitats and
Species Regulations 2017 (as amended),
Regulation 9A

2019-2024

Conservation status assessment for the species:

S1355 - Otter

(*Lutra lutra*)

England



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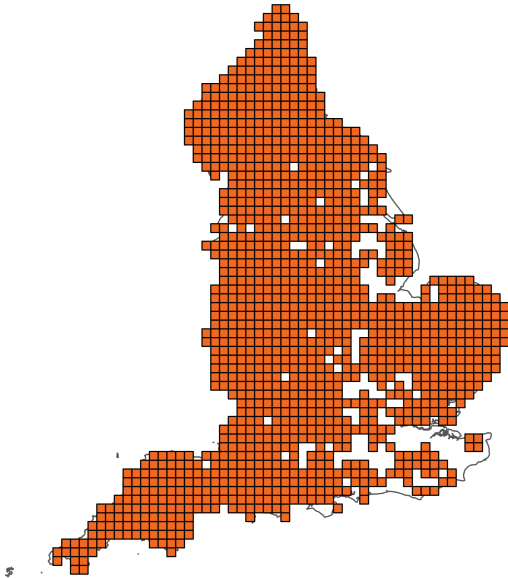
Important note - Please read

- The information in this document represents the England Report under The Conservation of Habitats and Species Regulations 2017 (as amended), Regulation 9A, for the period 2019-2024.
- It is based on supporting information provided by Natural England, which is documented separately.
- The Habitats Regulations reporting 2019-2024 Approach Document provides details on how this supporting information contributed to the UK Report and the fields that were completed for each parameter.
- Maps showing the distribution and range of the species are included.
- Explanatory notes (where provided) are included at the end. These provide additional audit trail information to that included within the assessments. Further underpinning explanatory notes are available in the related country 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 National Site Network coverage for Annex II species).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the [JNCC website](#).

Assessment Summary: Otter

Distribution Map



Range Map



Figure 1: England distribution and range map for S1355 - Otter (*Lutra lutra*). 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.

Table 1: Table summarising the conservation status for S1355 - Otter (*Lutra lutra*). Overall conservation status for species is based on assessments of range, population, habitat for the species, and future prospects.

Overall Conservation Status (see section 11)

Favourable (FV)

Breakdown of Overall Conservation Status

Range (see section 5)	Favourable (FV)
Population (see section 6)	Favourable (FV)
Habitat for the species (see section 7)	Favourable (FV)
Future prospects (see section 10)	Favourable (FV)

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National Level

1. General information

1.1 Country	England
1.2 Species code	S1355
1.3 Species scientific name	<i>Lutra lutra</i>
1.4 Alternative species scientific name	
1.5 Common name	Otter
Annex(es)	II, IV

2. Maps

2.1 Sensitive species	No
2.2 Year or period	1995-2024
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Complete survey or a statistically robust estimate

2.5 Additional information

The range map has been produced following the same methodology that was used in 2007 and 2013 whereby a 45km alpha hull value has been used for all species with a starting range unit of individual 10km squares. In 2018 range was taken from Mathews et al, whereby an alpha hull value of 20km was drawn around the presence records, which represented the best balance between the inclusion of unoccupied sites (i.e. where records are sparse but close enough for inclusion) and the exclusion of occupied areas due to gaps in the data (i.e. where records exist but are too isolated for inclusion). An additional 10km buffer was added to the final hull polygon to provide smoothing to the hull and to ensure that the hull covered the areas recorded rather than intersecting them. That process led to the production of much finer detailed maps being produced.

Additionally, for the 2026 Regulation 9A reporting round the distribution datasets reported for all features have been created using existing Natural England source data and additional datasets made available to Natural England for Regulation 9a reporting under Open Government (OGL) or Creative Commons (CC-BY) licence. The

reinterpretation of source data is a methodological change which has resulted in changes to mapped distribution and hence range for some features. In a few cases the available data is known to not reflect the full distribution of a feature. In order to attempt to overcome this issue, the date range for the collection of presence data for this species has been set at 1995-2024. Where apparent change is an artefact of the mapping approach, rather than real change in distribution it will be highlighted, and associated changes in range explained, in the assessment text.

3. Information related to Annex V Species

3.1 Is the species taken in the wild / exploited?

3.2 What measures have been taken?

a) Regulations regarding access to property

b) Temporary or local prohibition on the taking of specimens in the wild and exploitation

c) Regulation of the periods and/or methods of taking specimens

d) Application of hunting and fishing rules which take account of the conservation of such populations

e) Establishment of a system of licences for taking specimens or of quotas

f) Regulation of the purchase, sale, offering for sale, keeping for sale, or transport for sale of specimens

g) Breeding in captivity of animal species as well as artificial propagation of plant species

Other measures

Other measures description

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

a) Unit

Table 2: Quantity taken from the wild during the reporting period (see 3.3a for units). For species with defined hunting seasons, Season 1 refers to 2018/2019 (autumn 2018 to spring 2019), and Season 6 to 2023/2024. For species without hunting seasons, data are reported by calendar year: Year 1 is 2019, and Year 6 is 2024.

	Season/ year 1	Season/ year 2	Season/ year 3	Season/ year 4	Season/ year 5	Season/ year 6
b) Minimum	-	-	-	-	-	-
c) Maximum	-	-	-	-	-	-
d) Unknown	-	-	-	-	-	-

3.4: Hunting bag or quantity taken in the wild; Method used

3.5: Additional information

No additional information

Biogeographical Level

4. Biogeographical and marine regions

4.1 Biogeographical or marine region where the species occurs ATL

4.2 Sources of information

See section 14 References

5. Range

5.1 Surface area (km²) 129,062.88

5.2 Short-term trend; Period 2013-2024

5.3 Short-term trend; Direction Stable

5.4 Short-term trend; Magnitude

a) Estimated minimum

b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.5 Short-term trend; Method used	Based mainly on extrapolation from a limited amount of data
5.6 Long-term trend; Period	
5.7 Long-term trend; Direction	
5.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	
5.9 Long-term trend; Method used	
5.10 Favourable Reference Range (FRR)	
a) Area (km²)	125,672
b) Pre-defined increment	
c) Unknown	No
d) Method used	Model-based approach
e) Quality of information	low
5.11 Change and reason for change in surface area of range	
a) Change	Yes
b) Genuine change	Yes
c) Improved knowledge or more accurate data	Yes
d) Different method	Yes

e) No information

f) Other reason

g) Main reason Use of different method

5.12 Additional information

As explained in the species audit, under 5.5, although the change in range may include genuine change, there has been a change in the way the maps have been generated for this reporting round compared to the previous reporting round 2013-2018.

The FRR 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 the 2019 Article 17 UK Approach document.

6. Population

6.1 Year or period 1995-2024

6.2 Population size (in reporting unit)

a) Unit number of individuals

b) Minimum

c) Maximum

d) Best single value 2,900

6.3 Type of estimate Best estimate

6.4 Quality of extrapolation to reporting unit low

6.5 Additional population size (using population unit other than reporting unit)

a) Unit

b) Minimum

c) Maximum

d) Best single value

e) Type of estimate

6.6 Population size; Method used	Based mainly on extrapolation from a limited amount of data
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6.7 Short-term trend; Period	2013-2024
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6.8 Short-term trend; Direction	Increasing
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6.9 Short-term trend; Magnitude	
--	--

a) Estimated minimum	
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b) Estimated maximum	
----------------------	--

c) Pre-defined range	
----------------------	--

d) Unknown	Yes
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e) Type of estimate	
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f) Rate of decrease	
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6.10 Short-term trend; Method used	Based mainly on extrapolation from a limited amount of data
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6.11 Long-term trend; Period	
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6.12 Long-term trend; Direction	
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6.13 Long-term trend; Magnitude	
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a) Minimum	
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b) Maximum	
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c) Confidence interval	
------------------------	--

d) Rate of decrease	
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6.14 Long-term trend; Method used	
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6.15 Favourable Reference Population (FRP)	
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ai) Population size	
---------------------	--

aii) Unit	
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b) Pre-defined increment	
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c) Unknown	Yes
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d) Method used	
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e) Quality of information	
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6.16 Change and reason for change in population size

a) Change	No
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b) Genuine change	
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c) Improved knowledge or more accurate data	
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d) Different method	
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e) No information	
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f) Other reason	
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g) Main reason	
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6.17 Additional information

Estimates of population size have been taken from Mathews et al (2018). The length of riparian habitat for Scotland, England and Wales was taken from Harris et al (1995) and multiplied by the percentage of each country included in the species distribution to give the length of riparian habitat within that country. The length of suitable coastline in England was taken from Jefferies et al (2003). Population size was adjusted using occupancy values (Crawford, 2010). As no population density estimates or occupancy values were available for English or Welsh coastline, inland population values were used and this may have resulted in a conservative estimate for the number of coastal otters in these countries. However, it was thought that this was preferable to using Scottish coastal values due to the differences in coastal habitat. Population size estimates are based on a single population density estimate for riparian habitats and these estimates were applied to all riparian habitats and coastlines, meaning that variation due to habitat heterogeneity was not accounted for. It also meant that confidence limits could not be calculated.

6.18 Age structure, mortality and reproduction deviation	No deviation from normal
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7. Habitat for the species

7.1 Sufficiency of area and quality of occupied habitat (for long-term survival)

a) Is area of occupied habitat sufficient? Yes

b) Is quality of occupied habitat sufficient? Yes

c) If No or Unknown, is there a sufficiently large area of unoccupied habitat of suitable quality?

7.2 Sufficiency of area and quality of occupied habitat; Method used

a) Sufficiency of area of occupied habitat; Method used Based mainly on extrapolation from a limited amount of data

b) Sufficiency of quality of occupied habitat; Method used Based mainly on extrapolation from a limited amount of data

7.3 Short-term trend; Period 2013-2024

7.4 Short-term trend; Direction Stable

7.5 Short-term trend; Method used Based mainly on extrapolation from a limited amount of data

7.6 Long-term trend; Period

7.7 Long-term trend; Direction

7.8 Long-term trend; Method used

7.9 Additional information

There is no reliable measure of the quality of the occupied habitat, but the population and range trends for the species are considered stable. Therefore, the area and quality of occupied habitat are likely to be sufficient to maintain the species at FCS.

8. Main pressures

8.1 Characterisation of pressures

Table 3: Pressures affecting the species, including timing and importance/impact ranking. Pressures are defined as factors acting currently and/or during the reporting period (2019–2024). Rankings are: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Pressure	Timing	Ranking
PE01: Roads, paths, railroads and related infrastructure	Ongoing and likely to be in the future	High (H)
PG11: Illegal shooting/killing	Ongoing and likely to be in the future	Medium (M)
PG13: Bycatch and incidental killing (due to fishing and hunting activities)	Ongoing and likely to be in the future	High (H)
PL05: Modification of hydrological flow (mixed or unknown drivers)	Ongoing and likely to be in the future	High (H)
PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial)	Ongoing and likely to be in the future	Medium (M)
PK02: Mixed source marine water pollution (marine and coastal)	Ongoing and likely to be in the future	Medium (M)
PA14: Use of plant protection chemicals in agriculture	Ongoing and likely to be in the future	Medium (M)
PM02: Flooding	Ongoing and likely to be in the future	Medium (M)
PL06: Physical alteration of water bodies (mixed or unknown drivers)	Ongoing and likely to be in the future	Medium (M)

8.2 Sources of information

See section 14 References

8.3 Additional information

No 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	Both inside and outside National Site Network
9.4 Response to measures	Medium-term results (within the next two reporting periods, 2025–2036)

9.5 List of main conservation measures

Table 4: Key conservation measures addressing current pressures and/or anticipated threats during the next two reporting periods (2025–2036). Measures are ranked by importance/impact: High (direct/immediate influence and/or large spatial extent) and Medium (moderate direct/immediate influence, mainly indirect and/or regional extent).

Conservation measure	Ranking
MK02: Reduce impact of multi-purpose hydrological changes	High (H)
MA14: Other measures related to agricultural practices	Medium (M)
ME01: Reduce impact of transport operation and infrastructure	High (H)
MC12: Manage water abstraction for resource extraction and energy production	High (H)
MG01: Management of professional/commercial fishing, shellfish and seaweed harvesting (incl. restoration of habitats)	High (H)
MG04: Control/eradication of illegal killing, fishing and harvesting of wild plants, fungi and animals	Medium (M)
MG05: Reduce bycatch and incidental killing of non-target species	High (H)
MK01: Reduce impact of mixed source pollution	Medium (M)
MS03: Restoration of habitat of species from the directives	High (H)
MA13: Manage agricultural drainage and water abstraction (incl. the restoration of drained or hydrologically altered habitats)	Medium (M)
ME02: Manage/reduce/eliminate pollution to surface or ground water from transport	Medium (M)

MF04: Reduce/eliminate pollution to surface or ground waters from commercial, residential and recreational areas and activities, and from industrial activities and structures	High (H)
MK03: Restoration of habitats impacted by multi-purpose hydrological changes	High (H)
MA10: Reduce/eliminate point or diffuse source pollution to surface or ground waters (including marine) from agricultural activities	Medium (M)

9.6 Additional information

No additional information

10. Future prospects

10.1a Future trends of parameters

ai) Range	Overall stable
bi) Population	Overall stable
ci) Habitat for the species	Overall stable

10.1b Future prospects of parameters

a ii) Range	Good
b ii) Population	Good
c ii) Habitat for the species	Good

10.2 Additional information

National surveys of otter have shown an increase in the number of occupied 10km squares across the UK, with an increase from 5.8% in 1977-79 to 76% in 2022-23 in England (Crawford, 2010; Mathews et al, in prep.). Although there have been improvements in some aspects of water quality following the banning of organochlorine pesticides, there are still widespread issues of diffuse particulate pollution and eutrophication. Impacts of other pollutants (e.g. from road run-off) are unclear. There has also been some loss of connectivity through dams, weirs, land drainage, embankments, channel deepening, straightening and widening (Newson, 2002). Changes in habitat quality are more likely than substantial changes in length of waterways (Mathews et al, 2018). Overall, based on the current trends and current (and potential future) pressures

and threats, the future prospects for this species have been assessed as stable for habitat, with continuing increases for range and population.

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	Improving

11.7 Change and reason for change in conservation status

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

11.7 Change and reason for change in conservation status trend

This field is not reported as the period 2019-2024 marks the first instance in which conservation status has been assessed at the national level, meaning no comparisons to previous reports can be drawn.

11.8 Additional information

No additional information

12. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex II species

12.1 Population size inside the pSCIs, SCIs and SACs network

a) Unit	number of individuals
b) Minimum	
c) Maximum	

d) Best single value

12.2 Type of estimate

12.3 Population size inside the network; Method used Insufficient or no data available

12.4 Short-term trend of population size within the network; Direction Unknown

12.5 Short-term trend of population size within the network; Method used Based mainly on extrapolation from a limited amount of data

12.6 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Direction Unknown

12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used Insufficient or no data available

12.8 Additional information

14 SACs wholly or partly in England (covering over 140,000 ha) contain *Lutra lutra* as one of the listed features. Due to the way in which these SAC sites are monitored, the length of river banks is unknown for most of the sites and consequently, the population of *L. lutra* within each site is impossible to estimate using the methodology in Jefferies et al (2003). However, national otter surveys (Crawford, 2010; Mathews et al, in prep.) indicate that the population is continuing to rise in England and as the habitat within these sites is generally either in favourable condition, or is being managed to improve its condition, it is likely that the population of *L. lutra* within SACs is also increasing. Where otters are a SAC feature and are being monitored they are mostly in favourable condition.

13. Complementary information

13.1 Justification of percentage thresholds for trends

No justification information

13.2 Trans-boundary assessment

No trans-boundary assessment information

13.2 Other relevant information

No other relevant information

14. References

Biogeographical and marine regions

4.2 Sources of information

Chanin, P. (2003). Ecology of the European otter. Conserving Natura 2000 rivers ecology series No. 10. English Nature, Peterborough

Crawford, A. (2010). Fifth Otter Survey of England 2009-2010. Environment Agency, Bristol

Harris, S. and Yalden, D. (2008). Mammals of the British Isles: handbook. Mammal Society

Harris, S., Morris, P., Wray, S. and Yalden, D. (1995). A review of British mammals: population estimates and conservation status of British mammals other than cetaceans. JNCC

Jefferies, D.J., Strachan, C., and Strachan, R. (2003). Estimating numbers of the three interacting riparian mammals in Britain using survey data. In: Jefferies, D.J. (ed.) The water vole and mink survey of 1996-1998 with a history of the long-term changes in the status of both species and their causes. Vincent Wildlife Trust, Ledbury

JNCC (2019). Fourth report by the United Kingdom on the Article 17 Habitats Directive. Available at <http://jncc.gov.uk/our-work/article-17-habitats-directive-report-2019/>

Kean, E., Lyons, G. and Chadwick, E.A. (2013). Persistent organic pollutants and indicators of otter health. CHEMTrust

Liles, G. (2003). Conserving Natura 2000 Rivers Conservation Techniques Series No.5: Otter Breeding Sites - Conservation and Management. English Nature, Peterborough

Macdonald, S.M. and Mason, C.F. (1980). Observations on the marking behaviour of a coastal population of otters. *Acta Theriologica*, 25 (19), 245-253

Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C., McDonald, R.A. and Shore, R.F. (2018). A review of the population and conservation status of British Mammals. A report by the Mammal Society under contract to Natural England, Natural Resources Wales and Scottish Natural Heritage

Mathews, F., Scholey, G., Crawford, A., O'Malley, K. and Hunter, B. (in prep.). Sixth otter survey of England 2022 - 2023. Technical Report. Mammal Society, Environment Agency and Natural England.

Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
1.5: Common name	Otters are present in still and running freshwater systems, from coasts to uplands, and are capable of long overland and ditch journeys between watersheds. Otters also exploit marine environments, particularly along rocky coastlines (Mathews et al, 2018; Chanin, 2003). Their dependence on water makes this species vulnerable to pollution and river management (Harris & Yalden, 2008). The species has suffered from severe historic declines. likely to have been caused by persistent organic pollutants, but has now recovered much of its former range (Chanin, 2003; Kean et al, 2013).
5.5: Short-term trend; Method used	Range is based on presence data collected between 1995-2024. Areas that contain very isolated records may not have been included in the distribution. The range map has been produced following the same methodology that was used in 2007 and 2013, whereby a 45km alpha hull value has been used for all species with a starting range unit of individual 10km squares. In 2018, range was taken from Mathews et al, whereby an alpha hull value of 20km was drawn around the presence records, which represented the best balance between the inclusion of unoccupied sites (i.e. where records are sparse but close enough for inclusion) and the exclusion of occupied areas due to gaps in the data (i.e. where records exist but are too isolated for inclusion). An additional 10km buffer was added to the final hull polygon to provide smoothing to the hull and to ensure that the hull covered the areas recorded rather than intersecting them. That process led to the production of much finer detailed maps being produced. However, this approach to mapping was not an option for this reporting round (2018-2024).
5.12: Additional information	The National Otter Survey methodology provides data on the area of occupancy, but the method is difficult to apply systematically to coastal areas because of the difficulties of finding field signs in tidal environments, and the potential

	<p>for habitat-specific differences in sprainting behaviour (Macdonald & Mason 1980). Further analysis on the importance of coastal habitats in England is warranted. Although this limitation on otter surveys in England is important to consider, it is less likely to exclude significant areas of occupancy than would be the case in other parts of the UK. This is because much of England's coastline does not offer suitable habitat and most individuals are likely to be using nearby rivers where they should be detected using the standard riparian methodology (Mathews et al, in prep.).</p>
6.18: Age structure, mortality and reproduction	<p>There is no evidence to suggest any deviation from the normal age structure, mortality, or reproduction rates. However, this assessment is primarily based on anecdotal observations. No formal studies have been conducted to confirm these findings.</p>
8.1: Characterisation of pressures	<p>There are several important pressures affecting this species, including, transport infrastructure, the use of biocides (which caused the population crash in the 1960s-70s), by-catch and incidental capture, pollution to surface waters, and changes in hydraulic conditions. The species has previously suffered a huge population crash due to the use of toxic pesticides and this could remain a serious threat, although more rigorous control of pesticides, including the banning of substances, is now in place. Road deaths and accidental capture (e.g. in fishing equipment) continue to cause mortality.</p>
9.5: List of main conservation measures	<p>Conservation measures for this species include: continued legal protection; habitat protection (SACs) and habitat management (through agri-environment schemes, SAC and SSSI management etc); the regulation and/or banning of pesticides and other pollutants; promotion of better consideration by Highways Agency and local planning authorities when considering development or road proposals.</p>