

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

2019-2024

Conservation status assessment for the species:

S1096 - Brook lamprey

(Lampetra planeri)

England



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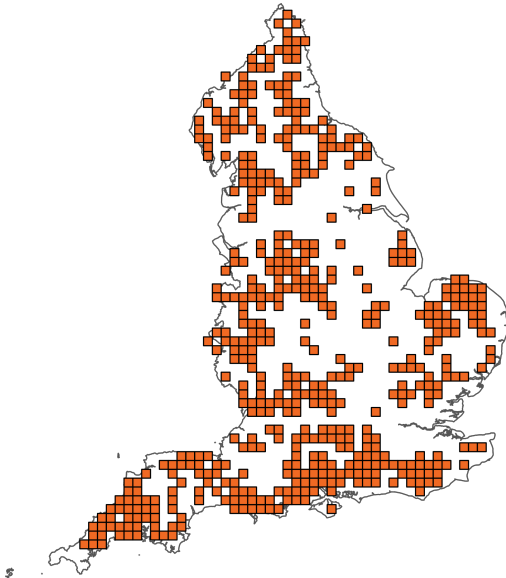
Important note - Please read

- 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: Brook lamprey

Distribution Map



Range Map



Figure 1: England distribution and range map for S1096 - Brook lamprey (*Lampetra planeri*). 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 S1096 - Brook lamprey (*Lampetra planeri*). 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	S1096
1.3 Species scientific name	<i>Lampetra planeri</i>
1.4 Alternative species scientific name	
1.5 Common name	Brook lamprey
Annex(es)	II

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2000-2024
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Based mainly on extrapolation from a limited amount of data

2.5 Additional information

No additional information

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) 115,273.79

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 2000-2024

5.7 Long-term trend; Direction Stable

5.8 Long-term trend;
Magnitude

a) Minimum

b) Maximum

c) Rate of decrease

5.9 Long-term trend; Method used	Based mainly on expert opinion with very limited data
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5.10 Favourable Reference Range (FRR)

a) Area (km²)

b) Pre-defined increment	Current range is less than 2% smaller than the FRR
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c) Unknown	No
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d) Method used	Expert opinion
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e) Quality of information	moderate
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5.11 Change and reason for change in surface area of range

a) Change	No
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b) Genuine change	
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c) Improved knowledge or more accurate data	
--	--

d) Different method	
----------------------------	--

e) No information	
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f) Other reason	
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g) Main reason	
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5.12 Additional information

No additional information

6. Population

6.1 Year or period	2000-2024
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6.2 Population size (in reporting unit)

a) Unit	number of map 1x1 km grid cells
----------------	---------------------------------

b) Minimum	
-------------------	--

c) Maximum	
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d) Best single value	1,439
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 expert opinion with very limited data
6.7 Short-term trend; Period	2013-2024
6.8 Short-term trend; Direction	Stable
6.9 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
6.10 Short-term trend; Method used	Based mainly on expert opinion with very limited data
6.11 Long-term trend; Period	2000-2024
6.12 Long-term trend; Direction	Stable
6.13 Long-term trend; Magnitude	

a) Minimum

b) Maximum

c) Confidence interval

d) Rate of decrease

6.14 Long-term trend; Method used Based mainly on expert opinion with very limited data

6.15 Favourable Reference Population (FRP)

ai) Population size

aii) Unit

b) Pre-defined increment Current population is less than 5% smaller than the FRP

c) Unknown No

d) Method used Expert opinion

e) Quality of information low

6.16 Change and reason for change in population size

a) Change No

b) Genuine change

c) Improved knowledge or more accurate data

d) Different method

e) No information

f) Other reason

g) Main reason

6.17 Additional information

No additional information

6.18 Age structure, mortality and reproduction deviation Unknown

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 expert opinion with very limited data

b) Sufficiency of quality of occupied habitat; Method used Based mainly on expert opinion with very limited 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 expert opinion with very limited data

7.6 Long-term trend; Period 2000-2024

7.7 Long-term trend; Direction Stable

7.8 Long-term trend; Method used

7.9 Additional information

No additional information

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
PK01: Mixed source pollution to surface and ground waters (limnic and terrestrial)	Ongoing and likely to be in the future	High (H)
PI01: Invasive alien species of Union concern	Ongoing and likely to be in the future	High (H)
PL01: Abstraction from groundwater, surface water or mixed water (mixed or unknown drivers)	Ongoing and likely to be in the future	Medium (M)
PA17: Agricultural activities generating pollution to surface or ground waters (including marine)	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)
PJ14: Other climate related changes in abiotic conditions	Ongoing and likely to be in the future	High (H)
PL03: Old barriers or other obsolete infrastructures (mixed or unknown drivers)	Ongoing and likely to be in the future	High (H)
PJ03: Changes in precipitation regimes due to climate change	Ongoing and likely to be in the future	High (H)
PL06: Physical alteration of water bodies (mixed or unknown drivers)	Ongoing and likely to be in the future	High (H)
PD02: Hydropower (dams, weirs, run-off-the-river and respective infrastructure)	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	Restore the habitat of the species (related to '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
MK01: Reduce impact of mixed source pollution	High (H)
MA10: Reduce/eliminate point or diffuse source pollution to surface or ground waters (including marine) from agricultural activities	High (H)
MF02: Habitat restoration of areas impacted by residential, commercial, industrial and recreational infrastructure, operations and activities	High (H)
MK03: Restoration of habitats impacted by multi-purpose hydrological changes	High (H)
MF09: Adapt the management of water abstraction for public supply and for industrial and commercial use to reduce negative impacts on habitats and species (incl. restoration of habitats)	Medium (M)
MJ01: Implement climate change mitigation measures	High (H)

9.6 Additional information

Work has continued to reduce point and diffuse discharges to both the national site network and wider river network. Major infrastructure projects to improve sewerage, such as removal or upgrade of combined sewer overflows and improved phosphorus removal from treated sewage effluent, has been funded via the water industry's programme of strategic improvements such as AMP and PR rounds. However, further investigations are needed into the application of new best available technology for

phosphorus removal and the increased availability of mains sewerage for rural populations. The England Catchment Sensitive Farming Initiative is continuing to promote a range of best agricultural practices to reduce pollution loads to priority aquatic sites. A combination of Habitats Site, SSSI and Water Framework objectives continues to drive improvements in water quality with diffuse water pollution prevention plans developed for many sites. New Countryside Stewardship payments are being developed to incentivise good agricultural practices.

A major programme of physical restoration has been implemented on the designated river network, involving the development of a long-term strategic plan for each river and its programmed implementation. These plans address key issues such as dams and weirs, floodplain reconnection, channel modifications, lack of riparian habitat, lack of riparian trees and lack of woody debris in the channel. Outside of the designated site network, river restoration schemes have focused on addressing channel modifications and the many weirs and dams on the river network in England. A further driver for river restoration has been the increased prominence of natural flood management. If properly implemented, NFM has the potential to enable widespread improvements in many previously degraded riverine habitats.

The rationale behind restoring river habitat in England is the restoration of natural riverine processes, which creates characteristic habitats and provides for individual species to an extent dependent on the natural character of the river. This rationale is also the main adaptation response for combatting climate change. Some aspects of restoring natural function are also seen as climate change mitigation measures, such as the re-establishment of natural tree cover and riparian vegetation which is being implemented as part of many river restoration schemes and agri-environment schemes. These interventions may result in moderated extremes of flow, reductions in water temperature and increased water quality.

Improvements have been achieved with limiting abstraction volumes and improving flow regimes by altering compensation flows from water company assets via AMP and PR rounds. However, further improvements are required to naturalise flows at many sites. As part of the on-going abstraction reform process, abstraction licences will become environmental permits and a greater emphasis will be given to environmental considerations. Since 2022 many previously exempt abstractions require a permit.

Detailed assessments are being made of potential risks to brook lamprey due to abstractions from existing and new water supply infrastructure. Where problems are highlighted mitigation measures such as improved screening or modified operating procedures are being implemented.

10. Future prospects

10.1a Future trends of parameters

ai) Range	Overall stable
bi) Population	Positive - increasing $\leq 1\%$ (one percent or less) per year on average
ci) Habitat for the species	Positive - slight/moderate improvement

10.1b Future prospects of parameters

aii) Range	Good
bii) Population	Good
cii) Habitat for the species	Good

10.2 Additional information

As improvements continue to be made regarding water quality and re-establishment of natural riverine processes in England and plans are developed and implemented to improve fish passage for brook lamprey in rivers throughout England, the area of freshwater habitat suitable for lamprey spawning and ammocoete development may be expected to increase. Set in opposition to this generally positive outlook are the unknowns of climate change effects which may lead to more extreme flow variations, the potential for continued diffuse agricultural pollution resulting in inputs of nutrients and fine sediment and the possibility of increases in energy production infrastructure associated with run of river hydropower.

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 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 map 1x1 km grid cells

b) Minimum

c) Maximum

d) Best single value 247

12.2 Type of estimate Best estimate

12.3 Population size inside the network; Method used Based mainly on expert opinion with very limited data

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

12.5 Short-term trend of population size within the network; Method used Based mainly on expert opinion with very limited data

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

Stable

12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used

Based mainly on expert opinion with very limited data

12.8 Additional information

The situation within the SAC network broadly reflects the general situation within higher quality areas of the river resource outside of the network. As improvements continue to be made regarding water quality and re-establishment of natural riverine processes in England and plans are developed and implemented to improve fish passage for brook lamprey in rivers throughout England, the area of freshwater habitat suitable for lamprey spawning and ammocoete development may be expected to increase. The rate of improvement may be expected to be greater within the SAC network than outside of it. Set in opposition to this generally positive outlook are the unknowns of climate change effects which may lead to more extreme flow variations and the potential for continued diffuse agricultural pollution resulting in inputs of nutrients and fine sediment. However, it is less likely that future barriers to brook lamprey movement would be permitted within the SAC site series.

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

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Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
2.4: Distribution map; Method used	Data contained within the National Biodiversity Network Database has been used to produce distribution maps for brook lamprey. This data has been collated from both routine and ad-hoc fish surveys. Both adult and transformers are captured during routine electric fishing surveys (although the techniques may be refined for lamprey specific surveys) and benthic samples, therefore, recording effort across England is relatively high. However, they may be under recorded in some habitats due to operational difficulties deploying survey gear in these areas. In addition, brook lamprey distribution is likely to be under-represented in England as lamprey ammocoetes are unlikely to be speciated due to difficulties with identification. As it is not possible to distinguish between <i>Lampetra planeri</i> and <i>Lampetra fluviatilis</i> , only <i>L. planeri</i> records have been used in the range assessment, therefore, additional <i>Lampetra</i> records may be <i>L. fluviatilis</i> .
5.3: Short-term trend; Direction	Although the distribution of brook lamprey is still below historical/ pristine condition, the distribution of brook lamprey has been slowly increasing. This is largely due to improvements in water quality, which have improved lamprey habitat and allowed populations to recover and expand its distribution within its natural range.
5.9: Long-term trend; Method used	Although the distribution of brook lamprey is still below historical/ pristine condition, the distribution of brook lamprey has been slowly increasing. This is largely due to improvements in water quality, which have improved lamprey habitat and allowed populations to recover and expand its distribution within its natural range. Records for brook lamprey are common throughout the trend period, however, survey effort is not consistent across the species range. It is therefore impossible to accurately assess a trend direction. The species is being regularly recorded across its natural range and there has been no

	<p>significant increase in pressures, which suggests that the population is at least stable. The likelihood of an improving trend seems low because many of the artificial physical barriers to upstream migration that have blocked passage to historical upstream spawning grounds are still in place. Where fish passes have been added, they are generally unsuitable for brook lamprey. However, the water quality of a number of English rivers has improved in recent years, and this may have removed chemical barriers for migrating adults and improved ammocoete survival.</p>
6.2: Population size	<p>There is a paucity of data for assessing the population size and status of lamprey species in Great Britain. Brook lamprey are the most widespread lamprey species in the UK, but gaining an understanding of population number is difficult. Brook and river lamprey ammocoetes cannot be distinguished in the field.</p>
6.8: Short-term trend; Direction	<p>Records for brook lamprey are common throughout the short term trend period, however, survey effort is not consistent across the species range. It is therefore impossible to accurately assess a trend direction. The species is being regularly recorded across its natural range and there has been no significant increase in pressures, which suggests that the population is at least stable. The likelihood of an improving trend seems low because many of the artificial physical barriers to upstream migration that have blocked passage to historical upstream spawning grounds are still in place. Where fish passes have been added, they are generally unsuitable for brook lamprey. However, the water quality of a number of English rivers has improved in recent years, and this may have removed chemical barriers for migrating adults and improved ammocoete survival.</p>
6.18: Age structure, mortality and reproduction	<p>The lack of a coordinated monitoring programme which encompasses all lifestages of brook lamprey makes it impossible to accurately assess whether the population is recruiting efficiently. However, as brook lamprey do not undergo migrations to the marine environment but instead move upstream to spawn, the continued presence of adult</p>

brook lamprey within a river catchment would indicate that the population has remained viable over time and is recruiting successfully

10.1: Future trends and prospects of parameters

10.1.a. Assumes widespread species, with a large natural range within England. However, the species may expect to become increasingly distributed and abundant within this range, assuming no further increases in barriers to upstream migration associated with hydropower development and unsuitable fish passage solutions.

10.1.b. The species may expect to become increasingly distributed and abundant within its natural range, assuming no further increases in barriers to upstream migration associated with hydropower development and unsuitable fish passage solutions.

10.1.c. Assumes that water quality improvements and physical habitat restoration continues, with no further increases in barriers to upstream migration associated with hydropower development and unsuitable fish passage solutions.