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

2019-2024

Conservation status assessment for the species:

S1261 - Sand lizard

(*Lacerta agilis*)

Wales

Cyfoeth Naturiol Cymru
Natural Resources Wales

JNCC

For further information please contact:

Natural Resources Wales, Welsh Government Offices, Cathays Park, King Edward VII Avenue, Cardiff, CF10 3NQ. https://naturalresources.wales

JNCC, Quay House, 2 East Station Road, Fletton Quays, Peterborough, PE2 8YY. https://jncc.gov.uk

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Important note - Please read

- The information in this document represents the Wales 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 Resources Wales, 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: Sand lizard

Distribution Map

Range Map

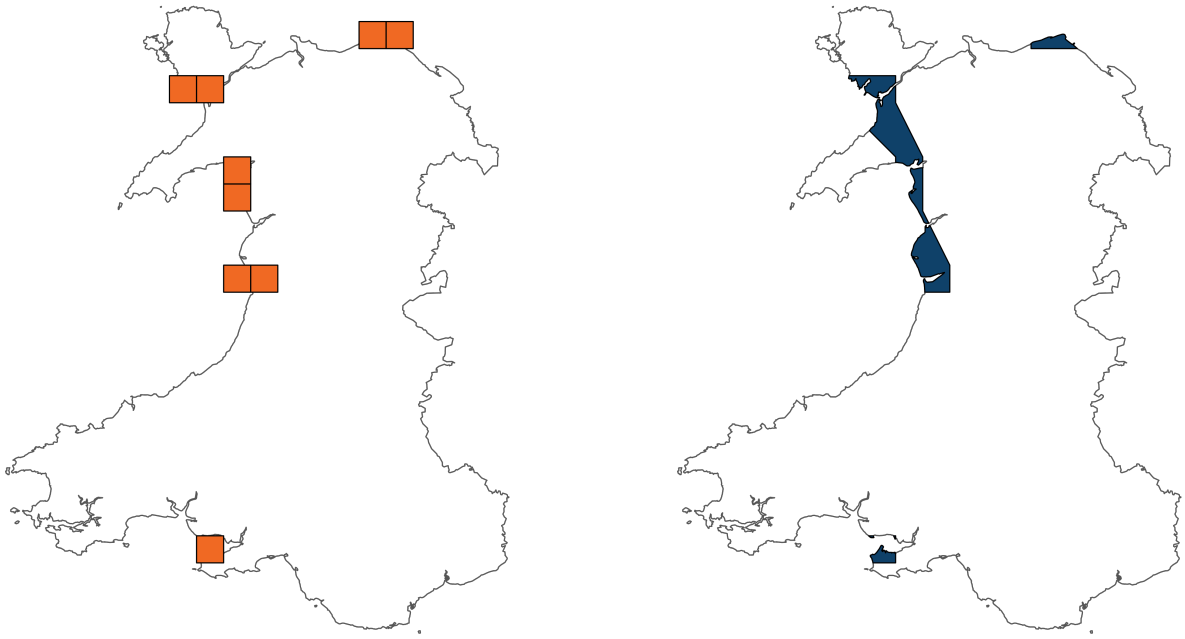

Figure 1: Wales distribution and range map for S1261 - Sand lizard (*Lacerta agilis*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority. The 10km grid square distribution map is based on available species records within the current reporting period.

Table 1: Table summarising the conservation status for S1261 - Sand lizard (*Lacerta agilis*). 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)

Unfavourable-inadequate (U1)

Breakdown of Overall Conservation Status

Range (see section 5)	**Unfavourable-inadequate (U1)**
Population (see section 6)	**Unfavourable-inadequate (U1)**
Habitat for the species (see section 7)	**Favourable (FV)**
Future prospects (see section 10)	**Unfavourable-inadequate (U1)**

List of Sections

National Level

1. General information

1.1 Country	Wales
1.2 Species code	S1261
1.3 Species scientific name	*Lacerta agilis*
1.4 Alternative species scientific name	
1.5 Common name	Sand lizard
Annex(es)	IV

2. Maps

2.1 Sensitive species	No
2.2 Year or period	2019-2024
2.3 Distribution map	Yes
2.4 Distribution map; Method used	Complete survey or a statistically robust estimate

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)	719.56
5.2 Short-term trend; Period	2019-2024
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	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	
c) Rate of decrease	

5.9 Long-term trend; Method used	

5.10 Favourable Reference Range (FRR)

a) Area (km²)	
b) Pre-defined increment	Current range is between 2% and 10% smaller than the FRR
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	moderate

5.11 Change and reason for change in surface area of range

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	

5.12 Additional information

No additional information

6. Population

6.1 Year or period	1995-2024

6.2 Population size (in reporting unit)

a) Unit	number of map 1x1 km grid cells
b) Minimum	
c) Maximum	

d) Best single value	26
6.3 Type of estimate	Best estimate
6.4 Quality of extrapolation to reporting unit	

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

a) Unit	No unit - not reported
b) Minimum	
c) Maximum	
d) Best single value	
e) Type of estimate	
6.6 Population size; Method used	Complete survey or a statistically robust estimate
6.7 Short-term trend; Period	2013-2024
6.8 Short-term trend; Direction	Increasing
6.9 Short-term trend; Magnitude	
a) Estimated minimum	100
b) Estimated maximum	100
c) Pre-defined range	
d) Unknown	No
e) Type of estimate	Best estimate
f) Rate of decrease	
6.10 Short-term trend; Method used	Complete survey or a statistically robust estimate
6.11 Long-term trend; Period	1989-2024
6.12 Long-term trend; Direction	Increasing
6.13 Long-term trend; Magnitude	

a) Minimum	
b) Maximum	
c) Confidence interval	
d) Rate of decrease	
6.14 Long-term trend; Method used	Complete survey or a statistically robust estimate

6.15 Favourable Reference Population (FRP)

ai) Population size	
aii) Unit	
b) Pre-defined increment	Current population is between 5% and 25% smaller than the FRP
c) Unknown	No
d) Method used	Reference-based approach
e) Quality of information	moderate

6.16 Change and reason for change in population size

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

6.17 Additional information

No additional information

6.18 Age structure, mortality and reproduction deviation	No deviation from normal

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	2007-2024
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

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
PK03: Mixed source air pollution, air-borne pollutants	Ongoing and likely to be in the future	Medium (M)
PK04: Atmospheric N-deposition	Ongoing and likely to be in the future	Medium (M)
PM07: Natural processes without direct or indirect influence from human activities or climate change	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	Expand the current range of the species (related to ‘Range’)
9.3 Location of the measures taken	Only inside 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
MM01: Management of habitats (others than agriculture and forest) to slow, stop or reverse natural processes that occur without direct or indirect influence from human activities or climate change	High (H)
MI05: Management of problematic native species	High (H)
MI02: Management, control or eradication of established invasive alien species of Union concern	Medium (M)
MI03: Management, control or eradication of other invasive alien species	Medium (M)
MI04: Restoration of habitats affected by invasive alien species (incl. of Union concern and others)	Medium (M)
MS03: Restoration of habitat of species from the directives	High (H)
MS02: Reintroduce species from the directives	Medium (M)
MF08: Manage changes in hydrological and coastal systems and regimes for construction and development (incl. restoration of habitats).	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	Negative - slight/moderate deterioration

10.1b Future prospects of parameters

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

10.2 Additional information

No additional information

11. Conclusions

11.1 Range	Unfavourable-inadequate (U1)
11.2 Population	Unfavourable-inadequate (U1)
11.3 Habitat for the species	Favourable (FV)
11.4 Future prospects	Unfavourable-inadequate (U1)
11.5 Overall assessment of Conservation Status	Unfavourable-inadequate (U1)
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
b) Minimum
c) Maximum

d) Best single value
12.2 Type of estimate
12.3 Population size inside the network; Method used
12.4 Short-term trend of population size within the network; Direction
12.5 Short-term trend of population size within the network; Method used
12.6 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Direction
12.7 Short-term trend of habitat for the species inside the pSCIs, SCIs and SACs network; Method used

12.8 Additional information

No additional information

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

BRIG 2007. A preliminary assessment of the implications of climate change for the implementation of UK BAP targets. Report to UK Biodiversity Partnership Standing Committee. (Draft).

HERPETOLOGICAL CONSERVATION TRUST 2001. Sand lizard and natterjack toad recovery project 2000. CCW Contract Science Report 467. Countryside Council for Wales, Bangor.

AMPHIBIAN AND REPTILE CONSERVATION TRUST 2011. Sand lizard and natterjack toad recovery project 2009-2011. CCW Contract Science Report 963, Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2003a. Sand lizard and natterjack toad recovery project 2002. CCW Contract Science Report 573. Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2003b. Database and geographical information system. CCW Contract Science Report 574. Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2005. Sand lizard and natterjack toad recovery project 2004. CCW Contract Science Report 665. Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2006. Sand lizard and natterjack toad recovery project 2005. CCW Contract Science Report 727. Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2007. Sand lizard and natterjack toad recovery project 2005-2006. CCW Contract Science Report 774. Countryside Council for Wales, Bangor.

HERPETOLOGICAL CONSERVATION TRUST 2009. Sand lizard and natterjack toad recovery project 2007-2009. CCW Contract Science Report 872. Countryside Council for Wales, Bangor.

HILL, P, MOULTON, N & FOSTER, J 2016. Sand lizard surveys at Newborough Warren NNR and sand dune habitat management guidance. Amphibian and Reptile Conservation Trust, Bournemouth.

MOULTON, N & BUCKLEY, J 2015. Sand lizard and natterjack toad recovery project 2011-2014. NRW Evidence Report. Report No.32. 23pp. Bangor.

MOULTON, N & CORBETT, K 1999. The sand lizard conservation handbook. English Nature, Peterborough.

ARC Data. Occupancy data for herpetofauna is based on data held internally by Amphibian and Reptile Conservation, combining a variety of data sources.

EDGAR, P 2007. The conservation status of the natterjack toad Bufo calamita and sand lizard Lacerta agilis in Wales. CCW Contract Science Report 788. Countryside Council for Wales, Bangor.

GLEED-OWEN, C, BUCKLEY, J, CONEYBEER, J, GENT, T, MCCRACKEN, M, MOULTON, N, & WRIGHT, D 2005. Costed plans and options for herpetofauna surveillance and monitoring. CCW Contract Science Report 666. Countryside Council for Wales, Bangor.

OWENS JB, WILKINSON JW, WÜSTER W, BARLOW A, PAPADOPULOS A. 2022. Genetic ancestry of introduced populations of sand lizard (Lacerta agilis) in Wales. NRW Evidence Report. Report No: 596, 30pp, Natural Resources Wales, Bangor.

GREEN, K & MOULTON, N 2015. Sand lizard rapid site assessment 2014: Assessment of the status of sand lizards Lacerta agilis in Great Britain through a Rapid Site Assessment approach. Amphibian & Reptile Conservation Research Report 15/02.

Main pressures

8.2 Sources of information

No sources of information

15. Explanatory Notes

Field label	Note
5.3: Short-term trend; Direction	In Wales, there has been no change in range since the last reporting round.
5.11: Change and reason for change in surface area of range	This species was extinct in Wales until 1995 when it was first reintroduced as part of the Species Recovery Project and the UKBAP action plan. In Wales, the range has increased, as lizards have been reintroduced to more locations and spread within those localities. They were present at 1 locality and 1x 10km square (Morfa Harlech I, SH52) from 1995 to 2000 when a release further north at Morfa Harlech took place (Morfa Harlech II, SH53). In 2003 releases began at Gronant (SJ08), followed by Presthaven/ Talacre in 2004 (SJ18). In 2006, animals were released at Towyn, Aberdovey (SN69) at a third Morfa Harlech locality in 2008 (Morfa Harlech III, SH53) and at Ynys Las (SN59) in 2009. Surveillance has shown that animals have spread out on each site from the original release foci (For data see reports cited in 4.2). Populations were found at Aberffraw on Anglesey (SH36) in 2010, at Newborough Warren (SH46) in 2012 and on Gower (SS49) in 2018. It is thought likely that these were all unauthorised releases and are not part of the planned UKBAP project (Hill et al, 2016). The map is based on the datasets held by Amphibian and Reptile Conservation Trust who were UKBAP lead partner for this species and who implement the re-introduction programme in Wales. More recent data have come from the Local Environmental Records Centres (LERCs) in Wales.
6.5: Additional population size	Best single value 26 (reported as the analogous 1km) In England subpopulations were consider to be centred on a discrete „focus“ such as tumulus or south-facing slope, while in Wales the estimates were directly based on the 1km square count. Thirteen subpopulations (13 1 km squares) existed in Wales during

	the period 2007-2012, all derived from re-introductions to suitable dune habitat (see HCT refs in 2.2 and ARC data). This has increased from 15 subpopulations (15 1km squares) to 26 due to introductions and natural spread. There are also an additional 6 subpopulations (6 1 km squares) resulting from the unauthorised release of animals on other sites which are not included in the population estimates..
6.6: Population size; Method used	Mapped records at 1km square resolution are available for all of the re-introduction sites in Wales (See HCT, 2003b and all HCT refs cited in 4.2 and ARC data) enabling them to be related to sub population distributions.
6.9: Short-term trend; Magnitude	The number of 1 km squares in Wales has increased from13 in the 2013 report to 26. Sand lizards were extinct in Wales until the start of a reintroduction programme to suitable dune habitat which commenced in 1995 and by the 2019 report they were recorded in 15 1km squares. However, it was also noted in the last report there were an additional 6 1 km squares resulting from unauthorised releases but these were not included in the population count. Following recent research into the genetic ancestry of sand lizards in Wales it has been identified that the unauthorised populations in Gower (south Wales) and Aberffraw (Anglesey) are indistinguishable from the north-western “dune race” of sand lizards found in Merseyside and the existing reintroduced populations in North Wales (Owens et al. 2022). The report considered that it is likely that the population in Newborough (Anglesley) is also of the same origins. For this reason it has been decided to include these 1km squares in the population count for this report. (The 10km squares from these unauthorised populations were included in the range calculations in the 2019 report). The short term trend between 2013 and 2024 is therefore

	an increase from 13 1km squares to 26, equivalent to a 100% increase.
6.11: Long-term trend; Period	Sand lizards were extinct in Wales in 1989. They were first re-introduced in 1995. In 2007 they were reported from 4 1km squares, 13 squares in 2013, 15 in 2019 with an additional 6 making 21 1km squares and 26 in the current report. The population has increased from 0 to 26 1km squares during the time period
6.12: Long-term trend; Direction	This species was extinct in Wales until 1995 when it was first reintroduced to Wales as part of the Species Recovery Project and the UKBAP action plan. The population count is based on the NBN datasets provided by Amphibian and Reptile Conservation Trust who are UKBAP lead partner for this species and who implement the reintroduction programme in Wales supplemented with more recent records from the Wales LERCs. Relevant data for all of the report fields can be found in the references listed at 4.2. All sand lizards in Wales are located solely in sand dune habitat. Unofficial release sites on Anglesey and Gower have not been included in the data presented, but have been noted here for completeness.
6.16: Change and reason for change in population size	Mainly due to genuine change because of re-introductions.
6.18: Age structure, mortality and reproduction	The reintroduced populations are breeding (egg laying behaviour and juveniles have been recorded) and sightings are spreading out from release points. This suggests that the population structure is normal and no deviation is taking place
7.1: Sufficiency of area and quality of occupied habitat	Area Sand lizards in Wales occur only in sand dune habitat and there is thought to be a sufficient area of suitable habitat within the currently occupied range in Wales to support a viable population of the species.

	Quality Moderate overall as several sites are in better condition than the others. The sand dune habitat at the re-introduction areas is under management regimes suitable for sand lizards. They mostly inhabit the frontal areas of dunes where there should be a mosaic of open bare sand (for egg laying) and denser marram for shelter. Continuous dense vegetation is not ideal as it is difficult for the lizards to bask and reproduce (Moulton & Corbett, 1999). However, as at all Welsh dune systems, there is an issue of dune stabilisation due to reduced sand availability and possible enrichment from aerial nitrogen. Sand patching has been carried out on Talacre-Gronant dune system in the past five years. These sites are not generally grazed by stock, though ponies are being trialled at sites such as Gronant. These and future management may include interventions to increase dune mobility for a range of dune taxa. The dune systems themselves are however restricted physically by landward infrastructure (roads/rail, golf course and caravan sites/houses).
7.2: Sufficiency of area and quality of occupied habitat; Methods used	Extrapolation is selected here because it is not empirically known exactly how much of the available suitable habitat the lizards on each re-introduced site are using. Whilst the HCT reports listed in 4.2 assessed the habitats prior to release of animals at each site, there is no quantitative record of habitat quality across the range of occupied sites.
8.1: Characterisation of pressures	Pressures: Pressures affecting sand lizards are summarised in Moulton & Corbett, 1999. PK03 and PK04: aerial pollution relates to the contribution of nitrogen/ammonia to dune stabilisation producing less mobile systems and open sand for egg laying.

PM07: succession on dune systems with scrub encroachment leads to shading out of basking and egg laying sites and also impacts on dune mobility.

The following pressures are considered low and so not formally ranked in line with JNCC guidance.

PA08: undergrazing (often the product of extensive grazing regimes) leads to dominance of marram and lack of bare sand. Rabbits are important grazers on most sites, whilst farm stock may be present occasionally on 1 site.

PF03: several of the subpopulations at re-introduction sites have golf courses adjacent to and built upon dune habitat. Impacts from these are slight, but they do restrict the ability of dune managers to maintain the dynamics of the systems in a holistic manner.

Threats:

PK03 and PK04: aerial pollution relates to the contribution of nitrogen and other pollutants such as ammonia, to dune stabilisation producing less mobile systems and open sand for egg laying, this is considered likely to continue to be a threat on all dune systems.

PM07: the threat of succession on dune systems continues, with scrub encroachment leads to shading out of basking and egg laying sites and also impacts on dune mobility.

The following pressures are considered low and so not formally ranked in line with JNCC guidance.

PA08: undergrazing (often the product of extensive grazing regimes) leads to dominance of marram and lack of bare sand. The trend for stabilisation continues to be a threat at all the sand lizard re-introduction sites.

PF03: several of the subpopulations at re-introduction sites

	have golf courses adjacent to and built upon dune habitat. Impacts from these are currently slight, but they do restrict the ability of dune managers to maintain the system in a holistic manner and there is the threat of further expansion of courses due to increased demand for leisure provision. PM07: relates to the impact of disease on the rabbit grazers of most systems. Declines in their populations due to myxomatosis and rabbit haemorrhagic disease threaten the maintenance of open dune systems. PJ04: Climate change threats to coastal vertebrates include sea-level rise, increased storm surges leading to beach erosion and/or changes in sediment deposition. Effects of changes to climatic variables are especially likely to impact on the thermoregulation and reproductive patterns of lizards (eg sunshine hours, winter and summer temperatures, water availability). (See Brig, 2007 for discussion of risk to habitat of sand lizard- the species itself was not selected for this study).
9.3: Location of the measures taken	All reintroductions have taken place within SACs and SSSIs.
9.5: List of main conservation measures	Ongoing management of existing sand dune habitats is required, notably sand patching, control of encroaching native scrub as well as invasive plants. Further reintroductions at new sites might be investigated. General conservation of sand dune habitat, which is itself under threat from numerous sources is required. In relation to the conservation measures above: MM01 – control of vegetational succession of sand dunes and scrapes, keeping patches of sand exposed. MI05 – control of native species likely to colonise sand dune habitat, such as sea buckthorn, birch trees. MI02 – EU listed invasive species of sand dunes include

	pampas grass, giant hogweed, and Himalayan Balsam. These species are not as prominent in Welsh sand dunes at present but still represent a threat on the horizon. MI03 – other invasive species of concern but not listed on the EU list include the plants Japanese rose, Russian vine, red hot poker, with one vertebrate, the domestic cat. For domestic cats, there have been cases where planners have been advised against housing developments adjacent to sand dunes to prevent incursions from domestic cats. MI04 – restoration of habitats after removal of invasive species can include removal of enriched soils amidst sand dune habitats. MS03 – restoration of habitats from the directives – sand dunes are listed under the directive, and measures to restore can be of benefit to sand lizards. MS02 – reintroductions have taken place across Wales, but colonisation of other sand dune or even heathland habitats could continue providing they are in suitable condition. MF08 – changes in coastal systems can include notching embanked sand dunes and even removal of sea defences where appropriate to facilitate development of sand dunes with natural processes such as movement of sands.
10.1: Future trends and prospects of parameters	Future prospect of range The range of sand lizards in Wales is likely to remain stable over the next 12 years. Losses of established populations and significant natural expansion of the species range are uncertain but considered unlikely over this timescale Future prospect of habitat for species slightly negative is a more accurate habitat trend because of the listed pressures and threats (section 8.1) relating to change in dune systems (decline in mobility, coastal

	erosion, climatic change, successional change etc) that will lead to a reduced quality in habitat. These pressures and threats may not be adequately addressed by the measures available to manage the habitat. The re-introduced populations are all producing offspring and expanding across recipient sites. Although the expansion of sand dune habitat is severely limited, there is still space for population expansion whilst dunes remain mobile.
11.1: Range	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 more than 10% below the Favourable Reference Range.
11.2: Population	Conclusion on Population reached because:(i) the short-term trend direction in Population size is increasing; (ii) the current Population size is not more than 25% below the Favourable Reference Population and iii) reproduction, mortality and age structure not deviating from normal.
11.3: Habitat for the species	Conclusion on Habitat for the species reached because: i) the area of occupied habitat is sufficiently large for the long-term survival of the species (ii) the quality of occupied habitat is suitable for the long-term survival of the species; and (iii) the short-term trend in area of habitat is stable
11.4: Future prospects	Conclusion on Future prospects reached because: (i) the Future prospects for Range are poor; (ii) the Future prospects for Population are poor; and (iii) the Future prospects for Habitat for the species are poor.
11.5: Overall assessment of Conservation Status	Overall assessment of Conservation Status is Unfavourable-inadequate because three of the conclusion conclusions are Unfavourable-inadequate
6.15: Favourable Reference Population (FRP)	The UK-level FRV for population was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh

	experts and considered appropriate for use in Wales based on current population trends and abundance.
5.10: Favourable Reference Range (FRR)	The UK-level FRV for range was developed by JNCC using an audit trail based on the year the FRV was first established and any changes made in subsequent reporting rounds. The audit may draw from any combination of the 2007, 2013, or 2019 Habitats Directive reports and reflects the full rationale used for the 2019 Article 17 reporting. This FRV was reviewed by Welsh experts and considered appropriate for use in Wales based on current distribution and trends.