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

2019-2024

Conservation status assessment for the habitat:

H6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

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 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 habitat 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 habitat (section 11 National Site Network coverage for Annex I habitats).

Further details on the approach to the Habitats Regulations Reporting 2019-2024 are available on the JNCC website.

Assessment Summary: Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

Distribution Map

Range Map

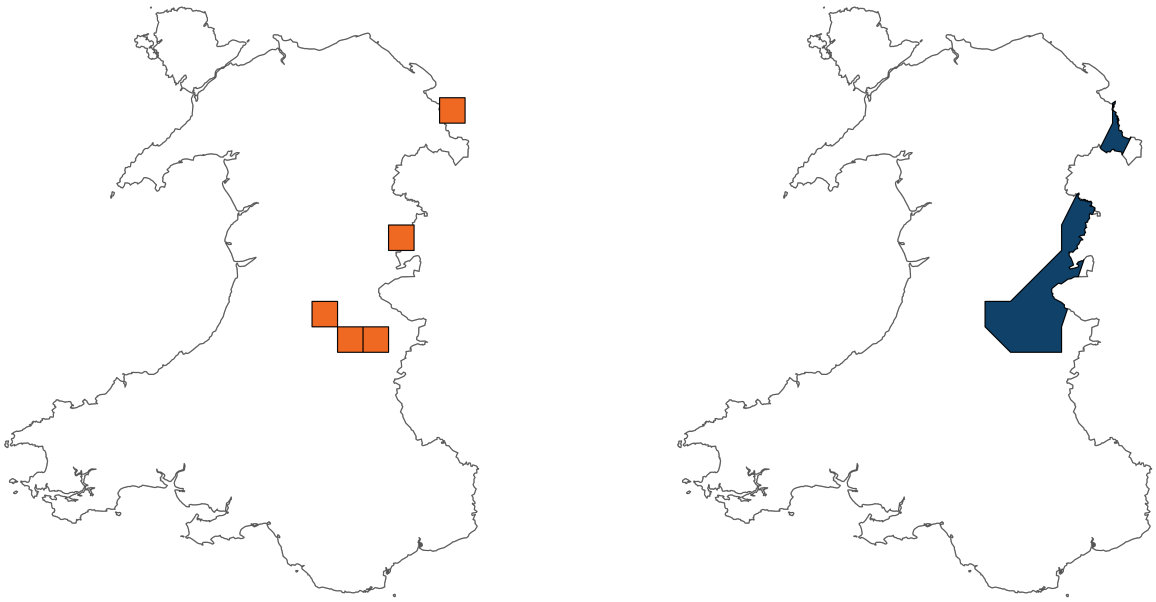

Figure 1: Wales distribution and range map for H6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*). Coastline boundary derived from the Oil and Gas Authority's OGA and Lloyd's Register SNS Regional Geological Maps (Open Source). Open Government Licence v3 (OGL). Contains data © 2017 Oil and Gas Authority. The 10km grid square distribution map is based on available habitat records within the current reporting period.

Table 1: Table summarising the conservation status for H6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*). Overall conservation status for habitat is based on assessments of range, area covered by habitat, structure and functions, and future prospects.

Overall Conservation Status (see section 10)

Unfavourable-bad (U2)

Breakdown of Overall Conservation Status

Range (see section 4)	**Favourable (FV)**
Area covered by habitat (see section 5)	**Unfavourable-bad (U2)**
Structure and functions (see section 6)	**Unknown (XX)**
Future prospects (see section 9)	**Unfavourable-bad (U2)**

List of Sections

National Level

1. General information

1.1 Country	Wales
1.2 Habitat code	H6510 - Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)

2. Maps

2.1 Year or period	2009-2017
2.2 Distribution map	Yes
2.3 Distribution map; Method used	Complete survey or a statistically robust estimate

2.4 Additional information

No additional information

Biogeographical Level

3. Biogeographical and marine regions

3.1 Biogeographical or marine region where the habitat occurs ATL

3.2 Sources of information

See section 13 References

4. Range

4.1 Surface area (km²)	1,057.38
4.2 Short-term trend; Period	2013-2024
4.3 Short-term trend; Direction	Stable
4.4 Short-term trend; Magnitude	

a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
4.5 Short-term trend; Method used	Complete survey or a statistically robust estimate
4.6 Long-term trend; Period	
4.7 Long-term trend; Direction	
4.8 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Rate of decrease	
4.9 Long-term trend; Method used	

4.10 Favourable Reference Range (FRR)

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

4.11 Change and reason for change in surface area of range

a) Change	Yes
b) Genuine change	No

c) Improved knowledge or more accurate data	Yes
d) Different method	No
e) No information	No
f) Other reason	No
g) Main reason	Improved knowledge/more accurate data

4.12 Additional information

No additional information

5. Area covered by habitat

5.1 Year or period	2004-2024
5.2 Surface area (km²)	
a) Minimum	
b) Maximum	
c) Best single value	0.107
5.3 Type of estimate	Best estimate
5.4 Surface area; Method used	Complete survey or a statistically robust estimate
5.5 Short-term trend; Period	2013-2024
5.6 Short-term trend; Direction	Stable
5.7 Short-term trend; Magnitude	
a) Estimated minimum	
b) Estimated maximum	
c) Pre-defined range	
d) Unknown	
e) Type of estimate	
f) Rate of decrease	
5.8 Short-term trend; Method used	Based mainly on extrapolation from a limited amount of data

5.9 Long-term trend; Period	1989-2024
5.10 Long-term trend; Direction	Decreasing
5.11 Long-term trend; Magnitude	
a) Minimum	
b) Maximum	
c) Confidence interval	
d) Rate of decrease	Decreasing <=1% (one percent or less) per year on average
5.12 Long-term trend; Method used	Based mainly on extrapolation from a limited amount of data
5.13 Favourable Reference Area (FRA)	
a) Area (km²)	
b) Pre-defined increment	Current area is between 51% and 100% smaller than the FRA
c) Unknown	No
d) Method used	Expert opinion
e) Quality of information	

5.14 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	

5.15 Additional information

No additional information

6. Structure and functions

6.1 Condition of habitat (km²)

Area in good condition	
ai) Minimum	0
aii) Maximum	0
Area not in good condition	
bi) Minimum	0
bii) Maximum	0
Area where condition is unknown	
ci) Minimum	0.107
cii) Maximum	0.107
6.2 Condition of habitat; Method used	Insufficient or no data available
6.3 Short-term trend of habitat area in good condition; Period	
6.4 Short-term trend of habitat area in good condition; Direction	Unknown
6.5 Short-term trend of habitat area in good condition; Method used	Insufficient or no data available

6.6 Typical species

Has the list of typical species changed in comparison to the previous reporting period?	No

6.7 Typical species; Method used

6.8 Additional information

Typical species were not used directly in the assessment of conservation status for habitat structure and function as a comprehensive list of typical species for each habitat was not available. However, the status of typical species was considered when the condition of individual sites was assessed using Common Standards Monitoring Guidance. Common Standards Monitoring (CSM) data was used to assess the area of habitat in 'good' and 'not good' condition (field 6.1). Species were a component of the attributes assessed under CSM. Therefore, an assessment of species is considered to have formed part of the reporting under field 6.1 which supported the Habitats Structure and Function assessment (field 10.3).

7. Main pressures

7.1 Characterisation of pressures

Table 2: Pressures affecting the habitat, 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
PA06: Mowing or cutting of grasslands	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)
PK04: Atmospheric N-deposition	Ongoing and likely to be in the future	High (H)
PL02: Drainage (mixed or unknown drivers)	Ongoing and likely to be in the future	High (H)
PA02: Conversion from one type of agricultural land use to another (excluding drainage and burning)	Ongoing and likely to be in the future	Medium (M)
PA07: Intensive grazing or overgrazing by livestock	Ongoing and likely to be in the future	Medium (M)
PA08: Extensive grazing or undergrazing by livestock	Ongoing and likely to be in the future	Medium (M)
PA13: Application of natural or synthetic fertilisers on agricultural land	Ongoing and likely to be in the future	Medium (M)
PA20: Live stock farming generating pollution	Ongoing and likely to be in the future	Medium (M)

PL05: Modification of hydrological flow (mixed or unknown drivers)	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)
PM02: Flooding	Ongoing and likely to be in the future	Medium (M)

7.2 Sources of information

See section 13 References

7.3 Additional information

No additional information

8. Conservation measures

8.1: Status of measures

a) Are measures needed?	Yes
b) Indicate the status of measures	Measures identified and taken
8.2 Main purpose of the measures taken	Maintain the current range, surface area or structure and functions of the habitat type
8.3 Location of the measures taken	Only outside National Site Network
8.4 Response to measures	Medium-term results (within the next two reporting periods, 2025–2036)

8.5 List of main conservation measures

Table 3: 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
MA01: Prevent conversion of natural and semi-natural habitats, and habitats of species into agricultural land	High (H)

MA05: Adapt mowing, grazing and other equivalent agricultural activities (e.g. burning)	High (H)
MA07: Restoration of Annex I agricultural habitats (incl. re-establish and improve)	High (H)
MA09: Manage the use of natural and synthetic fertilisers as well as chemicals in agricultural for plant and animal production	High (H)
MK03: Restoration of habitats impacted by multi-purpose hydrological changes	High (H)
MA03: Maintain existing extensive agricultural practices and agricultural landscape features	Medium (M)
MK01: Reduce impact of mixed source pollution	Medium (M)
MI05: Management of problematic native species	Medium (M)

8.6 Additional information

Only part of the measures identified have been taken

9. Future prospects

9.1a Future trends of parameters

ai) Range	Overall stable
bi) Area	Unknown
ci) Structure and functions	Very negative - important deterioration

9.1b Future prospects of parameters

aii) Range	Good
bii) Area	Unknown
cii) Structure and functions	Bad

9.2 Additional information

No additional information

10. Conclusions

10.1 Range	Favourable (FV)
10.2 Area	Unfavourable-bad (U2)
10.3 Specific structure and functions (incl. typical species)	Unknown (XX)
10.4 Future prospects	Unfavourable-bad (U2)
10.5 Overall assessment of Conservation Status	Unfavourable-bad (U2)
10.6 Overall trend in Conservation Status	Stable

10.7 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.

10.7 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.

10.8 Additional information

No additional information

11. UK National Site Network (pSCIs, SCIs, SACs) coverage for Annex I habitat types

11.1 Surface area of the habitat type inside the pSCIs, SCIs and SACs network (km^2)

a) Minimum	
b) Maximum	
c) Best single value	0

11.2 Type of estimate

11.3 Habitat area inside the network; Method used

11.4 Short-term trend of habitat area within the network; Direction

11.5 Short-term trend of habitat area within the network; Method used

11.6 Short-term trend of habitat area in good condition within the network; Direction

11.7 Short-term trend of habitat area in good condition within the network; Method used

11.8 Additional information

Feature is not present in the NSN

12. Complementary information

12.1 Justification of percentage thresholds for trends

No justification information

12.2 Other relevant information

No other relevant information

13. References

Biogeographical and marine regions

3.2 Sources of information

Blackstock, T. H., Howe E. A., Stevens, J. P., Burrows, C. R. & Jones, P. S. 2010. Habitats of Wales. A comprehensive field survey 1979–1997. University of Wales Press, Cardiff.

CCW. 2005. Supplementary CCW guidance on performance indicators for monitoring designated sites: lowland grasslands. CCW HQ internal report.

Firth, E & Firth, A. 2025. Investigation of the historic extent of floodplain meadows in three Welsh catchments: Dee, Usk, and Teifi. NRW Evidence Reports. Report No: 878, 38pp, Natural Resources Wales.

Guest, D. 2012. Assessing pressures and threats for article 17 reporting based on information in CCW's Actions Database. CCW HQ internal document.

Jefferson, R.G. and Pinches, C.E. 2011. The conservation of flood-plain meadows in Great Britain: an overview. Fritillary, 5. The Journal of the Ashmolean Natural History Society of Oxfordshire and the Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust.

JNCC. 2004. Common standards monitoring guidance for lowland grasslands. JNCC. Available from: http://jncc.defra.gov.uk/PDF/CSM_lowland_grassland.pdf [Accessed 22/05/2018]

Natural Resources Wales. 2013. Actions Database. NRW internal database.

Natural Resources Wales. 2018. Briefing Note. Article 17, 2013-18: Pressures, threats and conservation measures guidance. Internal NRW document.

O'Rourke C. 2025a. Welsh Floodplain Meadows: Review of Lowland Grassland Survey of Wales Data. NRW Evidence Reports. Report No: 888. Natural Resources Wales.

O'Rourke, C. 2025b. Welsh floodplain meadows: strategic summary. NRW Evidence Reports. Report No: 889. Natural Resources Wales.

Rodwell, J.S. (ed.). 1992. British plant communities. Volume 3. Grasslands and montane communities. Cambridge University Press, Cambridge.

Rothero, E., Lake, S. and Gowing, D. (eds). 2016. Floodplain Meadows – Beauty and Utility. A Technical Handbook. Milton Keynes, Floodplain Meadows Partnership.

Staddon, P.L., et al. 2023. Re-evaluating the sensitivity of habitats to climate change. NECR478. Natural England.

Stevens, J. & Smith, S. 2012. H6510 Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis): Wales GIS inventory. CCW HQ dataset.

Stevens, D. P., Smith, S. L. N., Blackstock, T. H., Bosanquet, S. D. S. & Stevens, J. P. 2010. Grasslands of Wales. A survey of lowland species-rich grasslands, 1987–2004. University of Wales Press, Cardiff.

UK Government. 2010. The Air Quality Standards Regulations 2010. Available from: https://www.legislation.gov.uk/uksi/2010/1001/contents

Welsh Government. 2023. The Agriculture (Wales) Act 2023. Available from: https://www.gov.wales/agriculture-wales-act-2023

Welsh Government. 2024a. The Clean Air Plan for Wales 2024. Available from: https://www.gov.wales/clean-air-plan-wales-healthy-air-healthy-wales

Welsh Government. 2024b. The Environment (Air Quality and Soundscapes) (Wales) Act 2024. Available from: https://www.legislation.gov.uk/asc/2024/2/contents

Main pressures

7.2 Sources of information

No sources of information

14. Explanatory Notes

Field label	Note
2.3: Distribution map; Method used	The distribution (and extent) of H6510 has been calculated from revisits to sites originally surveyed as part of the Lowland Grassland Survey of Wales 1987-2004 (LGSW; Stevens et al., 2010). The LGSW was a targeted NVC (Rodwell (ed.), 1992) survey focussing on grasslands of high conservation interest in the Welsh lowlands. All LGSW occurrences of NVC MG4, Alopecurus pratensis – Sanguisorba officinalis grassland, were included in the definition of H6510. This source was the basis for the Welsh distribution data in each of the reporting rounds. Mapped LGSW records for MG4 were incorporated into a polygon-based GIS inventory for the habitat (Stevens & Smith, 2012) with one more recent (2023) additional record. The LGSW drew information from the Habitat Survey of Wales (Blackstock et al., 2010), a comprehensive field-by-field survey. The former included any known examples of MG4 which, within a single site, formed at least 0.5 ha, together with smaller stands where they occurred in association with other grasslands of high conservation value. Although the data together are considered to give comprehensive coverage of the region, there are some potential deficiencies (although it is not known if these would affect 10km square distribution), for example: 1. Small isolated stands of the habitat (under 0.5 ha) may not have been specifically targeted for NVC survey. 2. Some examples of H6510 may have been overlooked during Phase 1 survey, for example meadows surveyed after the hay had been cut.

	A re-evaluation of the MG4 community definition look place in 2016, effectively slightly broadening the habitat definition (Rothero et al., 2016). An assessment of selected samples of other (not MG4) species-rich neutral grasslands recorded in Wales was undertaken in 2024-25, taking into account the re-evaluated MG4 definition (O'Rourke, 2025a). This work did not identify any additional MG4 examples but was limited to six vegetation stands. H6510 has been confirmed from just eight sites in Wales. These were originally surveyed by the LGSW in the period 1989 to 1999, but received revisits which confirmed the continued presence of MG4 in the 2009 to 2012 period and further revisits to six of them in this reporting round. There is therefore a high level of confidence that the distribution map is an accurate representation of actual current distribution, notwithstanding the possible presence of overlooked examples of the habitat and the age of much of the data and information. A single additional, unconfirmed example of the habitat was recorded in summer 2024, falling within the current range (Francesca Sanchez pers. com.).
5.1: Year or period	The data used to produce the total area figure are from NVC vegetation maps from the period 2004 to 2012, apart from one site with a tiny area (0.1 ha; less than 1% of the total extent) surveyed in 1995. Six out of eight sites have been revisited in the current reporting round but no amendments to areas undertaken.
5.3: Type of estimate	The current total area is considered to be an accurate reflection of the habitat's presence in the region. The area is based on high quality data from NVC surveys and coverage is comprehensive, although, as described in 2.3, some areas of the habitat may have been overlooked or were too small for inclusion in detailed surveys. Five of the seven sites identified in the last reporting round have been visited in the current round, but not remapped. A

	single additional (eighth) site with the habitat has been identified in the current round, and there is a further unconfirmed location; both of these sites require mapping and/or confirmation (see 2.3).
5.4: Surface area; Method used	See 2.3
5.12: Long-term trend; Method used	The assessment of long-term trend is based on revisits to sites over the 1989 to 2024 period: six out of eight sites have had one or more visit in that period since the baseline survey (see 2.3). A notable decline in area was recorded at one H6510 site in the period. Although this site partially recovered between 2007 and 2012, overall this has meant a small decrease in total extent of the habitat over the 1989-2024 period. However, there has been limited new information since 2012; site visits in the current reporting round have not assessed any possible changes in area.
5.14: Change and reason for change in surface area	Although an additional site with H6510 has been discovered and other tentatively identified (see 2.3), these have not been mapped.
6.1: Condition of habitat	This is given as unknown as monitoring data is only available for two sites in the 2007-12 period and no sites since then.
6.3: Short-term trend of habitat area in good condition; Period	No monitoring undertaken in the period.
6.5: Short-term trend of habitat area in good condition; Method used	Assessment of structure and function within designated sites (SAC and SSSI) is mainly based on the results of Common Standards Monitoring (CSM; JNCC, 2004; CCW, 2005) visits. However, no monitoring of H6510 has taken place in the past two reporting rounds. Two SSSIs supporting the habitat in Wales were monitored between 2007 and 2012. The habitat at both sites was considered then as unfavourable, due to a paucity of positive indicator species and the presence of negative indicators. However,

	five SSSIs were considered to be under suitable management in 2012 (see 2013 report).
7.1: Characterisation of pressures	Due to a lack of recent data, pressures were partly evaluated using the information provided in the 2008-2013 reporting round, along with observations made during recent site visits and expert judgement. Data on the habitat were available from NRW's statutory sites Actions Database in 2013 (NRW, 2013), but no updated information was available in this or the previous reporting rounds. The Actions Database provided information on 'issues' affecting habitats and species within the protected sites series in Wales and were used to provide a basis for quantifying pressures relating to the habitat, following procedures outlined by Guest (2012) and NRW (2018). The protected sites (SSSI) hold 100% of the mapped H6510 resource in Wales by area. PA06 – Mowing and cutting (High). Insufficient cutting was highlighted for 29% of units. Two of the key sites are affected. PJ03 – Changes in precipitation due to climate change (High). 'Lowland wet meadows', which encompass H6510, are ranked amongst the 'most sensitive' habitats to climate change-induced changes, at risk from both flooding and drought (Staddon et al., 2023). PK04 - Atmospheric N-deposition is assessed using the agreed approach and updated deposition data. Using a data overlay method in ARC GIS, 100% of the habitat by area (polygon data) was recorded at or above the relevant lower Critical Load limit (10kg N ha-1 yr-1). PL02 Drainage (unknown drivers) is included in reference to inappropriate drainage management, especially insufficient drainage, which has been observed as a significant issue affecting the two sites with the largest areas of the habitat in Wales. It is hence given a High ranking.

PA02 - Conversion of agricultural habitat into another type of agricultural habitat (Medium). This has been added on the basis of expert judgment, to reflect the fact that some examples of the habitat not on statutory protected sites have very likely been overlooked, as shown by the recent unconfirmed discovery of an additional H6510 site. These would be very vulnerable to agricultural intensification.

PA07 Intensive or overgrazing (Medium). Grazing was highlighted previously as an issue in 43% of management units on sites with the habitat as a key feature, with grazing type/timing and overgrazing implicated. However, recent site visits suggest that overgrazing issues have been largely addressed in some management units, so this is now listed as a medium pressure (high in the last reporting round).

PA08 Extensive grazing or undergrazing by livestock. (Medium). Under-grazing, including the absence of aftermath grazing following the hay cut, remains an issue on some sites where management agreements are absent of have not been renewed.

PA13 Application of fertilisers (Medium). Fertiliser application was highlighted as an issue for 14% units (NRW, 2013) and is the suspected cause of the loss of habitat at one site in the long-term period.

PL06 Physical alteration of water bodies (Medium). H6510 sites are very vulnerable to physical alterations in rivers. In recent years, physical river changes have been proposed for rivers which would affect at least two H6510 sites.

PM02 Flooding is listed (Medium), as inundation during the growing season can cause significant damage to plant communities – detrimental effects of late spring flooding were observed in 2024 at the largest H6510 site in Wales.

	PA20 Live stock farming generating pollution is given a medium ranking to reflect the impact of ammonia emissions from agriculture (particularly intensive poultry units and dairy) on semi-natural grassland habitats. PI03 Problematic native species (Low). Spread of Filipendula ulmaria and Carex acutiformis is a local issue, largely related to insufficient cutting and drainage issues. Other pressures assessed, mainly through expert judgement, as low include PA05 Abandonment of grassland management, PA10 Livestock farming without grazing, in reference here to supplementary stock feeding, PB01 Afforestation and PF01 Conversion to built-up areas. Likely impact is limited due to the fact all confirmed H6510 is on statutory protected sites, although it is likely that it occurs on unmapped non-statutory sites which would be more vulnerable (see 2.3). PM07 natural processes (Low) is listed in reference to possible high levels of siltation from riverine depositions potentially leading to natural succession, for example to drier grassland.
8.5: List of main conservation measures	Statutory protection of existing areas of habitat is excellent, with all confirmed examples held within the SSSI series. The majority (6 out of 8) of these sites were considered to be under suitable management in 2012 (NRW, 2013), with data from NRWs Actions Database indicating that 'appropriate conservation management' was in place on 57% of SSSI management units containing the habitat. However, there is a lack of up-to-date information on the habitat in NRW's current sites actions database SAFLE. Also, given the limited extent and highly fragmented nature of the remaining sites, there is an urgent need to expand the habitat to improve its resilience to the various ongoing pressures. High ranking is given to MA01 Prevent conversion into agricultural land and MA09 Manage the use of fertilisers

and chemicals in agricultural production. Statutory site protection has been shown to act as an effective mechanism in preventing conversion into agricultural land (MA01) and preventing or limiting fertiliser and chemical usage (MA09) (e.g. Stevens et al., 2010; Ridding et al. 2017).

MA05 Adapt mowing, grazing and other equivalent agricultural activities and MK03 Restoration of habitats impacted by multi-purpose hydrological changes are also ranked as High, recognising targeted management enacted though SSSI management agreements on protected sites. Management agreements on protected sites also provide a mechanism for dealing with MI05 Management of problematic native species (ranked Medium).

MA07 Recreate Annex I agricultural habitats is also ranked High, recognising that restoration/creation of sites is essential in order to mitigate the impacts of past losses and to build the resilience of the habitat as a whole. Significant groundwork has been done to facilitate this (e.g. Frith & Frith, 2025, O'Rourke, 2025b).

MK01 Reduce impact of mixed source pollution (ranked High): There are various air quality strategies and initiatives in place to protect and enhance biodiversity. Air quality limit values set out in the Air Quality Strategy (AQS) are transposed into national legislation by the Air Quality Standards Regulations 2010. Nitrogen deposition continues to impact semi-natural habitats in Wales. These regulations are not habitat-specific, however with introduction of The Environment (Air Quality and Soundscapes) (Wales) Act 2024 in Wales, brings in new national targets for air quality pollutants, with the potential of directly influencing habitat protection.

This key legislative advancement requires mandatory targets for fine particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$) to be established by February 2027,

	including new powers for Welsh Ministers to set pollutant-specific targets in future years (e.g., ammonia, nitrogen dioxide) linked to biodiversity outcomes, potentially enabling future habitat-sensitive thresholds. Welsh Government have also introduced The Agriculture (Wales) Act in 2023. It aims to establish a framework of Sustainable Land Management (SLM) objectives to underpin agricultural support, including the Sustainable Farming Scheme (SFS). The Act provides Welsh Ministers with the power to provide support (financial or otherwise) for or in connection with 15 purposes, including 'Improving air quality'. Welsh Government published a consultation on the SFS which closed in March 2024. Welsh Ministers will not be making final scheme design decisions until further stakeholder work is undertaken. Agri-environment schemes serve to Maintain existing extensive agricultural practices and agricultural landscape features (MA03). This is given Medium rank, although in the 2020-23 period none of the habitat was covered by Glastir Advanced grassland options. MA11 (Low ranking) refers to poultry units which have expanded in number greatly in Wales in recent years - national regulations are in place but have been insufficient to prevent locally increasing ammonia pollution from these units.
9.1:Future trends and prospects of parameters	Range: Given the excellent level of statutory protection for this habitat there is unlikely to be any change in the range for this habitat over the next 12 years, although the small size and patchy distribution of remaining stands does make the habitat vulnerable to range changes if local losses occur. However, the discovery of two additional sites (one unconfirmed) in the current reporting round suggests the possibility of there being further undiscovered (and unprotected) examples, loss of which could affect range.

	Area: The overall trend in the extent of H6510 over the next 12 years is difficult to predict with any confidence. All confirmed examples in Wales are protected within the SSSI series, but there is a complete lack of recent information on issues affecting the habitat on SSSIs in SAFLE, even though significant issues at some sites are known about from recent site visits. The habitat is known to be highly susceptible to changes in hydrology (notably the extent, duration and timing of flooding) and both positive and negative fluctuations in the extent of the habitat within the SSSI series are known to have occurred in recent years. Structure & function: There is very limited information available on the current condition and recent trends in the structure and functions of this habitat at its remaining Welsh stations, with no structured monitoring within the current reporting round. Despite the inclusion of 100% of the confirmed resource in the SSSI series, several ongoing pressures and threats to the habitat remain and are not fully mitigated by existing conservation measures. These include significant ongoing impacts of precipitation changes due to climate change and atmospheric nitrogen deposition (both High ranked pressures, see 7.1). The Future prospects for Structure and functions takes into account that at least 25% of the habitat area is expected to be in unfavourable (not good) condition in c.2035 due to nutrient N critical load exceedance, unless additional measures are taken to reduce N deposition impacts.
10.1: 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 approximately equal to the Favourable Reference Range.

10.2: Area	Conclusion on Area reached because:(i) the short-term trend direction in Area is stable; and (ii) the current Area is more than 10% below the Favourable Reference Area.
10.3: Specific structure and functions	Conclusion on Structure and function reached because 100% of the habitat has 'unknown' condition.
10.4: Future prospects	Conclusion on Future prospects reached because: (i) the Future prospects for Range are good; (ii) the Future prospects for Area covered by habitat are unknown; and (iii) the Future prospects for Structure and function are bad.
10.5: Overall assessment of Conservation Status	Overall assessment of Conservation Status is Unfavourable-bad because two of the conclusions are Unfavourable-bad.
11.1: Surface area of the habitat type inside the pSCIs, SCIs and SACs network	H6510 is not a recognised feature on any Welsh SAC and no known stands are present within the National Site Network (formerly Natura 2000).
5.13: Favourable Reference Area (FRA)	The UK-level FRV for surface area 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. Following expert review, a Wales-level FRV was derived based on habitat extent and trend evidence specific to Wales, rather than adopting the UK-level value. The revised FRV has been set as Stevens et al (2010) estimated losses of dry unimproved grassland to be 97% between 1930's and 1980s-90s. In England and Wales, MG4 (H6510) 'sustained large but unquantifiable losses' over 50 years from mid-1950s to mid-2000s (Jefferson & Pinches 2011). Loss of area at one of the eight known Welsh sites was recorded between 1989 and 2007. The existing area is probably similar to when the Directive came into force (1992), so loss was prior to that. Recent evidence has demonstrated the widespread historic presence of meadows on floodplains in Wales (Firth & Firth, 2025). The

	habitat is dynamic, which increases its vulnerability to stochastic events. H6510 has recently been ranked amongst the 'most sensitive' habitats to climate change-induced changes Staddon et al. (2023).
4.10: 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.