Scoping Review Protocol: the wider value and co-benefits of agri-environment scheme heritage actions for the natural environment and for people

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Status. This is a pre-registered protocol, published before the review is conducted, in line with evidence-synthesis best practice. It specifies the method; it does not report findings. It is released openly as a demonstration of method and to invite comment.

1. Background and rationale

Agri-environment schemes (AES) are the primary mechanism through which England conserves the rural historic environment, and the largest single source of government heritage funding. Seventy-five per cent of Scheduled Monuments and all Registered Battlefields lie on farmland; eighty-four per cent of Scheduled Monuments at Risk are on farmland. AES heritage actions manage heritage across roughly 330,000 hectares and have helped remove around 1,200 Scheduled Monuments from Historic England's Heritage at Risk Register. As nature recovery is delivered faster, at greater scale and under tighter budgets, heritage actions risk being overlooked unless their wider co-benefits for nature, people and the economy can be evidenced. The co-benefit evidence currently exists but is fragmented across disciplines and grey literature. This protocol specifies a transparent, replicable scoping review to establish a defensible baseline of that evidence.

2. Objectives and research questions

The review addresses five questions:

- What is the extent, quality and consistency of existing evidence on the wider environmental, social, cultural and economic benefits delivered by AES heritage actions?
- What is the contribution of AES heritage actions to Environmental Improvement Plan targets and other national priorities for nature recovery and sustainable land management?
- How do heritage actions contribute to broader policy priorities (nature recovery, place-making, resilience, rural economic development)?
- What is the indicative value for money of heritage actions when their multi-objective benefits are taken into account?
- Where are the key evidence gaps, and what further research would most effectively address them?

3. Methods

3.1 Design

A scoping review (Arksey and O'Malley, 2005; Levac et al., 2010; JBI, 2020), reported per the PRISMA extension for Scoping Reviews (PRISMA-ScR; Tricco et al., 2018), operated to the Collaboration for Environmental Evidence Guidelines and Standards for Evidence Synthesis in Environmental Management (v5.1, 2022), and aligned to Natural England's own evidence-review method (NEER001; Stone, 2013) and Evidence Strategy principles. Search effort is time-boxed with the discipline of a Rapid Evidence Assessment (GSR REA Toolkit) to fit a defined timetable.

3.2 Framing (PCC)

Population: rural land and historic-environment features under AES. Concept: the wider environmental, social, cultural and economic co-benefits of heritage actions. Context: the English agri-environment setting (SFI26 and Countryside Stewardship Higher Tier).

3.3 Eligibility criteria

Include	Exclude
Evidence on AES heritage actions (HEF1, HEF6, CHS2-CHS9, CWS7, CWD21/22, BND1/2) and their wider environmental, social, cultural or economic outcomes.	Studies unrelated to AES heritage actions, or not transferable to an English rural / agri-environment context.
Studies addressing biodiversity, soils, water quality, carbon, landscape, access and engagement, and economic value.	Evidence lacking methodological robustness (opinion pieces; unverifiable AI-generated content).
English-language; non-English articles with an English abstract, coded at abstract level only.	Non-English full texts without an English abstract.

3.4 Information sources and search strategy

Academic databases: Scopus, Web of Science, JSTOR, and Google Scholar (for recall). Grey literature: Defra Monitoring and Evaluation outputs, Natural England Access to Evidence, Historic England research, Forestry Commission outputs, the 25 Year Environment Plan, EIP 2023 and 2025, and the SFI26 and CSHT action specifications. Every string, database and hit count is logged. Illustrative core string:

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("agri-environment*" OR "Countryside Stewardship" OR "Environmental Stewardship" OR "SFI") AND
(heritage OR archaeolog* OR "historic environment" OR monument OR "traditional building") AND
(biodiversity OR soil* OR carbon OR water OR landscape OR access OR wellbeing OR economic*)
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3.5 Selection process

Two-stage screening (title/abstract, then full text). Records dual-screened independently by two reviewers; conflicts resolved by a third. Inter-rater reliability reported as Cohen's kappa (Landis and Koch, 1977), with at least substantial agreement (>= 0.61) before full screening. Flow reported per PRISMA 2020.

3.6 Data charting

Charting framework: heritage action (by code) x co-benefit domain x evidence strength and type x geography x EIP-target linkage. Two reviewers independently chart the first 5-10 studies and reconcile the framework before full extraction. Output is a systematic evidence map and evidence-gap map.

3.7 Value-for-money synthesis

Indicative VfM is assessed using the HM Treasury Green Book and Enabling a Natural Capital Approach (ENCA), applying value (benefit) transfer (Defra/eftec guidelines) where primary valuation is not feasible, and using the DCMS/Historic England Culture and Heritage Capital framework as the bridge between heritage and natural-capital valuation. Confidence is stated explicitly; benefits that cannot be defensibly monetised are reported in physical or qualitative terms. A worked methodological demonstrator accompanies this protocol.

3.8 Evidence-gap analysis

Gaps are prioritised into a research-needs register ranked by policy relevance and tractability.

4. Quality assurance

- method pre-registered before searching; scope fixed at protocol stage.
- dual independent screening and charting; reproducible selection.
- evidence statements with internal and external validity appraisal feeding numbered conclusions, per NEER001.
- uncertainties, limitations and assumptions stated transparently, per the Natural England Evidence Strategy.

5. Outputs, dissemination and data

A findings report; an accessible one-page briefing and infographic (WCAG 2.2 AA); and a dissemination webinar. All data are provided in open formats, suitable for release under the Open Government Licence, with a FAIR archiving plan.

6. Use of AI

Consistent with PPN 2/24: AI may support information gathering (search scaffolding, deduplication, reference management) with manual verification; it is not used to review or appraise papers. All AI use is recorded with a replicable decision log.

7. Selected references

- Arksey, H. and O'Malley, L. (2005) Int. J. Social Research Methodology, 8(1), 19-32.
- Collaboration for Environmental Evidence (2022) Guidelines and Standards for Evidence Synthesis in Environmental Management, v5.1.
- Levac, D. et al. (2010) Implementation Science, 5, 69.
- Page, M.J. et al. (2021) PRISMA 2020. BMJ, 372, n71.
- Stone, D. (2013) Natural England Evidence Reviews NEER001.
- Tricco, A.C. et al. (2018) PRISMA-ScR. Annals of Internal Medicine, 169(7), 467-473.