Co-creating Circular Tourism Action Plans in Remote Heritage Sites: Evidence from Three Scottish Castles

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Abstract. The transition from conventional tourism models toward more regenerative and place-based approaches has increased interest in the relationship between circular tourism and responsible tourism, particularly in remote heritage sites that, despite their significant cultural assets, often remain outside major tourism flows and struggle to convert heritage value into broader territorial benefits. In this perspective, circular tourism is understood not only in terms of resource efficiency, but as a broader approach linking heritage conservation, local economies, environmental stewardship, community well-being, and long-term resilience.

Against this background, the paper analyses three Scottish castles—Doune, Caerlaverock, and Blackness—as case studies for testing a participatory and place-sensitive approach to the co-creation of Circular Tourism Action Plans. Methodologically, the study adopts a collaborative multicriteria evaluation approach combining documentary analysis, site-based evidence, and stakeholder engagement to identify challenges, prioritise intervention fields, and support locally grounded strategies.

The findings show that a shared evaluative framework can be applied across different heritage contexts while generating differentiated and site-specific priorities. The process proved effective not only in defining action fields, but also in supporting co-evaluation and collective learning among local actors. The paper argues that Circular Tourism Action Plans can emerge as transferable yet context-sensitive outputs, adaptable to other heritage destinations facing similar challenges of conservation, accessibility, local benefit, and resilience.

Keywords: Circular cultural tourism · Responsible tourism · Participatory evaluation · Peripheral heritage destinations · Heritage regeneration

1 Introduction

Heritage destinations are increasingly expected to reconcile conservation, visitor management, local benefit and climate responsibility within the same strategic framework. This challenge is particularly urgent in peripheral and less-known areas, where tourism can produce uneven territorial effects and where heritage management requires tools capable of combining place sensitivity, community involvement and long-term resilience.

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The growing convergence between heritage-led development, climate-sensitive territorial planning, and circular economy thinking has opened new avenues for reinterpreting cultural tourism beyond conventional growth-oriented models [1–3]. In this evolving field, circular cultural tourism offers a particularly fertile conceptual and operational lens. It shifts attention away from linear tourism dynamics based on attraction, consumption, and leakage, and toward regenerative and place-based processes in which heritage, landscape, local economies, environmental resources, and community capacities are mutually reinforcing [4–12]. Within this perspective, tourism is no longer understood as an external force acting upon a heritage site, but as a potential catalyst for more balanced territorial development, capable of retaining value locally, reducing environmental pressures, strengthening identity, and fostering longer-term resilience [4]. The European-funded Horizon 2020 research and innovation project Be.CULTOUR (Beyond cultural tourism) explicitly articulated this ambition as a move beyond conventional cultural tourism toward a more human-centred and circular tourism economy grounded in heritage and landscape values [13].

This shift becomes clearer when circular tourism is contrasted with conventional linear tourism. Although tourism is usually classified as a service sector, it relies on large flows of energy, water, food, mobility, land, and cultural and natural resources, and may therefore reproduce a "take-make-dispose" logic with significant environmental, social, and cultural externalities [14]. Earlier circular tourism scholarship has argued that tourism needs to move beyond extractive and volatile development models and toward more sustainable and regenerative strategies capable of generating multidimensional benefits while reducing environmental and social costs [2]. Thus, circular tourism is not only about mitigating impacts, but about rethinking tourism development and management in ways that retain value locally, reduce pressure on resources, and strengthen the long-term resilience of destinations and communities [15]. Rather than limiting circularity to resource efficiency alone, the Be.CULTOUR framework is built around three interrelated domains: environmental regeneration, human-centred approach, and cultural experience. It therefore includes not only the reduction of waste, emissions, and resource consumption, but also human capital enhancement, community wellbeing, fairness and inclusion, local entrepreneurship, cooperation and collaboration, cultural heritage appreciation, place authenticity, landscape integrity, and transformative travel experience. Circularity is thus linked to the regeneration of territorial capacities and to the enhancement of less-known, underused, and peripheral cultural and natural resources.

This conceptual orientation is especially significant in peripheral, rural, or lesser-known heritage contexts. In such areas, tourism often occupies an ambiguous position. On the one hand, it may support place recognition, local entrepreneurship, and heritage valorisation [16–20]. On the other hand, it may exacerbate infrastructural fragility, generate uneven benefits, produce conservation pressures, and deepen the gap between visitors' experience of place and residents' lived realities [16, 21–23]. A circular approach suggests that tourism should be assessed not only through visitor flows or economic performance, but through its capacity to support conservation, low-carbon accessibility, social inclusion, local value recirculation, community wellbeing, and adaptive territorial governance [15].

This orientation resonates strongly with the Responsible Tourism Framework developed by Historic Environment Scotland (HES) [24]. The framework defines responsible tourism through a set of interrelated principles - environmental stewardship, sustainable resource use, community involvement, maximising local economic benefits, and equality, diversity, and inclusion - and situates tourism within a wider agenda of climate action, net zero transition, wellbeing economy ambitions, accessibility, community wealth building, and place-based development. It also makes a crucial methodological point: progress in responsible tourism cannot be understood through a one-size-fits-all logic. Instead, it requires differentiated baselines, site-sensitive indicators, and evaluation models capable of reflecting local conditions, capacities, and aspirations. HES further argues that traditional indicators such as visitor numbers and commercial revenue capture only part of the picture, and that broader qualitative and multidimensional measures - such as authenticity of place, community wellbeing, satisfaction, and quality of experience - must also be considered. This makes the framework especially relevant for heritage-led territorial regeneration, where tourism must be aligned with conservation, local wellbeing, accessibility, and long-term place-based resilience.

In this paper, circular tourism is not used as a synonym for responsible tourism or regenerative tourism, but as a distinct analytical lens. Responsible tourism is understood primarily as a normative and policy-oriented framework, centred on principles such as environmental stewardship, community benefit, inclusion, and sustainable resource use. Circular tourism, by contrast, is used here as a multidimensional evaluative and operational framework that focuses on how value, resources, benefits, and territorial capacities can be retained, recirculated, and strengthened over time within heritage destinations. In this sense, circularity adds a specific emphasis on interrelations between heritage conservation, local economies, accessibility, environmental pressures, and governance conditions, allowing tourism to be analysed not only in terms of impacts, but also in terms of systemic territorial regeneration. Regenerative and place-based approaches are closely related to this perspective, but they remain broader and less directly operational in the context of this study. The concept of circular tourism is therefore preferred because it provides a more explicit framework for structuring the evaluation process and for translating it into locally grounded action priorities.

This paper addresses these issues through a collaborative experimentation undertaken in Scotland by the University of Glasgow, the National Research Council of Italy (CNR-ISPC), and Historic Environment Scotland. The study applied circular cultural tourism criteria and indicators developed within Be.CULTOUR to three heritage case studies (Doune Castle, Caerlaverock Castle, and Blackness Castle) and used them to support the co-creation of Local Action Plans through participatory processes involving students, experts, stakeholders, and institutional actors. The research was informed simultaneously by the Be.CULTOUR circular cultural tourism approach and by the HES Responsible Tourism Framework, thereby allowing the study to connect heritage-based circularity with responsible tourism objectives such as low-carbon mobility, accessibility, local economic benefits, community engagement, and place-sensitive governance.

Despite the growing policy and academic attention devoted to regenerative, circular and responsible tourism, there is still a limited understanding of how these principles can be operationalised in concrete heritage settings, especially in peripheral destinations

where conservation needs, visitor pressures, local benefit and climate-related concerns must be addressed simultaneously. This gap is particularly relevant at a time when heritage managers and public authorities are increasingly required to align tourism development with broader goals of territorial resilience, community involvement and long-term stewardship. Against this background, the paper investigates how a participatory and multicriteria evaluation approach can support the co-creation of Local Action Plans in three Scottish heritage sites. More specifically, it addresses the following research questions: (1) How can circular and responsible tourism principles be translated into a place-sensitive evaluative process for heritage sites? (2) How can a shared methodological framework generate differentiated priorities across distinct local contexts? (3) To what extent can such an approach be considered transferable to other heritage destinations?

The originality of the paper lies not in proposing a wholly new circular tourism framework, but in making the Be.CULTOUR circular cultural tourism perspective and the Historic Environment Scotland Responsible Tourism Framework operational through their application in three remote Scottish heritage sites. More specifically, the study shows how these theoretical frameworks can be translated into a shared evaluative process that combines indicators, contextual evidence, and stakeholder engagement in order to generate place-sensitive Local Action Plans. The paper's distinctive contribution therefore lies in the experimental application of these frameworks in real heritage contexts and in demonstrating their usefulness for producing context-sensitive and potentially transferable action priorities in peripheral destinations.

1.1 Study Areas

The research focused on three Scottish heritage sites managed by Historic Environment Scotland: Doune Castle, Caerlaverock Castle, and Blackness Castle. The three cases were selected because they allowed a common methodological framework to be tested across markedly different territorial and tourism configurations.

Doune Castle, located in Stirlingshire, is one of Scotland's most recognisable medieval monuments. Its significance lies both in its historical and architectural importance and in its strong visibility within screen tourism circuits. Official HES documentation shows a marked growth in visitation over the last decade, with substantial increases associated with its role as a filming location for productions such as Monty Python and the Holy Grail, Game of Thrones, and Outlander. This success, however, has also intensified pressure on the landscape setting and on the site's carrying conditions. The Doune Castle Landscape Conservation Management Plan identifies deterioration linked to footfall and vehicle movement, including erosion of earthworks, the exposure of below-ground archaeology, parking problems, and a lack of coordinated landscape management responses.

Caerlaverock Castle presents a different territorial condition. While its iconic triangular form and moat make it a highly distinctive monument, its heritage significance is closely tied to a broader environmental and territorial setting composed of coastal landscapes, nature reserves, local cultural assets, nearby attractions, and slow-mobility opportunities. The relevance of this case lies in the fact that tourism performance cannot be meaningfully interpreted at the scale of the monument alone. Instead, it demands a destination-scale perspective in which the castle operates as part of a wider system of

access routes, landscape experiences, local economic opportunities, and regional collaboration. It is therefore particularly useful for analysing how circularity depends on the integration of heritage, landscape, mobility, and dispersed local experiences.

Blackness Castle adds a third and complementary condition. Here, the most pressing challenge is not simply site pressure or destination definition, but the interaction between heritage tourism, infrastructure, accessibility, local liveability, and the redistribution of economic benefits. Blackness combines strong scenic value, coastal location, historical depth, and links with screen tourism, yet it also faces serious limitations related to public transport, parking, interpretation, accessibility, and local value recirculation. As such, it is particularly useful for examining the infrastructural and socio-spatial preconditions of circular tourism.

Taken together, the three cases create a robust comparative framework. Doune foregrounds the problem of managing visibility and pressure; Caerlaverock foregrounds territorial integration and destination logic; Blackness foregrounds access, infrastructure, and community benefit. This diversity makes it possible to test whether a common analytical structure can remain methodologically coherent while yielding differentiated and context-sensitive priorities.

2 Methodology

The study adopted a participatory evaluation design combining documentary analysis, indicator-based assessment, contextual site reading, and stakeholder-oriented co-creation. The objective was not to produce a fixed ranking of the three sites, nor to apply a standardised sustainability index, but to develop an evaluative process capable of translating broad principles of circularity and responsibility into locally meaningful strategic orientations.

The first conceptual pillar of the research was the circular cultural tourism framework developed within Be.CULTOUR [13, 19]. In operational terms, this framework was translated into four interrelated dimensions (social and human capital, cultural capital, economic capital, and environmental capital) used as a common analytical structure across the three Scottish case studies. These dimensions made it possible to interpret tourism as a multidimensional process affecting not only heritage use and visitor experience, but also local entrepreneurship, accessibility, environmental quality, cooperation, wellbeing, and place authenticity.

The second conceptual pillar was the HES Responsible Tourism Framework, which provided the institutional and policy-oriented basis for reinterpreting circularity within the context of Scottish heritage management. Through its emphasis on environmental stewardship, sustainable resource use, community involvement, local economic benefits, and inclusion, the HES framework allowed the research to situate circular tourism within a broader agenda of climate responsibility, accessibility, community benefit, and place-based governance.

Beyond the indicator structure, the methodological design was also informed by the Be.CULTOUR protocol for human-centred innovation in sustainable and circular cultural tourism. In this paper, the co-creation of Local Action Plans was conceived as a structured, place-based process grounded in stakeholder engagement, collaborative interpretation of evidence, and the definition of locally relevant strategic priorities.

The overall co-design logic followed the early stages of the Be.CULTOUR methodology, particularly the exploration and Action Plans co-design phases. Accordingly, the participatory multicriteria evaluation was organised as a sequential process in which the Be.CULTOUR and HES frameworks were combined into a shared evaluative structure based on four dimensions—social and human capital, cultural capital, economic capital, and environmental capital—and applied to the three case studies through quantitative and qualitative indicators, together with documentary, contextual, and site-based evidence. This preliminary assessment was then discussed and refined through participatory co-evaluation workshops involving institutional actors, heritage managers, researchers, students, and local stakeholders, and finally synthesised into the identification of key issues, context-sensitive priorities, and the resulting Local Action Plans (Fig. 1).

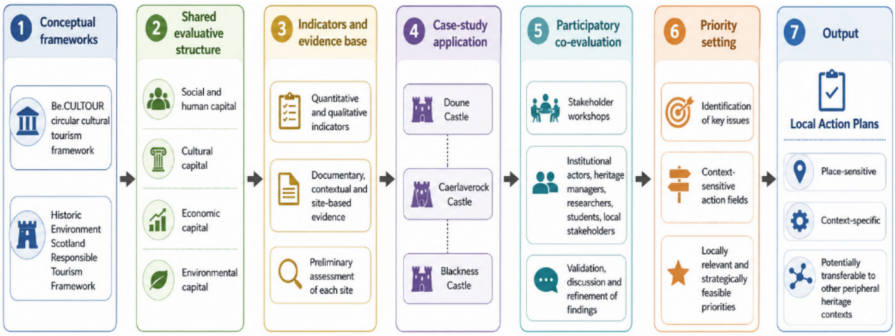

Fig. 1. Participatory workflow for co-creating Circular Tourism Action Plans.

The participatory process was organised through a series of case-based workshops designed as structured co-evaluation and co-creation sessions. Each workshop involved a mixed group of participants, including institutional actors, heritage managers, researchers, students, and local stakeholders with knowledge of the site and its wider territorial context. The workshops were based on the discussion of preliminary findings derived from documentary, contextual, and site-based analysis, and were designed to compare analytical evidence, local perceptions, and strategic expectations. Rather than aiming at consensus from the outset, the process allowed different viewpoints to emerge around issues such as accessibility, visitor pressure, local benefit, and conservation priorities. These exchanges were then used to refine the interpretation of each case and to identify the action fields that were considered both locally relevant and strategically feasible.

The three cases were analysed through the same evaluative architecture in order to test its replicability across different heritage contexts while allowing for place-specific outcomes (Table 1).

The evidence base of the study combined official published sources used to define the institutional, policy, and territorial context of the three sites, including the HES Responsible Tourism Framework, related policy and strategy documents, and official site-level publications; and site-specific contextual data used to operationalise the indicator framework, including information on visitor dynamics, accessibility, transport conditions,

Table 1. Methodological design of the comparative study.

Case study	Main territorial/heritage profile	Main sources and evidence	Participatory process	Output
Doune Castle	High-profile heritage attraction affected by visitor concentration and seasonal pressure	Documentary sources, site-based evidence, workshop discussions	Stakeholder workshop aimed at identifying critical pressures and action priorities	Local Action Plan focused on visitor management, conservation compatibility and seasonal redistribution
Caerlaverock Castle	Heritage site embedded in a wider landscape and destination context	Documentary sources, site-based evidence, workshop discussions	Stakeholder workshop aimed at connecting site management with destination-scale opportunities	Local Action Plan focused on destination integration, mobility, local experiences and territorial connectivity
Blackness Castle	Heritage site affected by accessibility issues, infrastructural constraints and community tensions	Documentary sources, site-based evidence, workshop discussions	Stakeholder workshop aimed at identifying barriers, local concerns and collaborative opportunities	Local Action Plan focused on accessibility, decentralisation of visitor spending and regional collaboration

site significance, conservation issues, interpretative provision, and local infrastructure (Table 2).

Also, the study relied on evidence generated within the research process through indicator application, contextual interpretation, and participatory co-creation. This evidence formed the empirical basis for the identification of action priorities in each case study. The Local Action Plans can also be interpreted as the output of a co-evaluative decision-support process. This is particularly relevant for evaluation studies, as it shows how participatory planning can be structured around indicators without reducing the process either to technocratic assessment or to unstructured consultation.

Table 2. Comparative synthesis of case-study problems and observed variables.

Case study	Main problems identified	Indicators / variables observed
Doune Castle	Visitor concentration, seasonality, landscape fragility, conservation-management tensions	Visitor pressure, seasonal patterns, access conditions, landscape degradation, local benefit potential, interpretative orientation
Caerlaverock Castle	Remoteness, fragmented visitor offer, weak integration between site and wider destination	Accessibility, connectivity, destination integration, local services, mobility opportunities, visitor experience diversification
Blackness Castle	Accessibility barriers, infrastructural deficits, weak local capture of spending, community tensions	Public transport conditions, accessibility, interpretative provision, local spending retention, regional collaboration potential

3 Results

3.1 Doune Castle: Managing Visibility, Pressure, and Landscape Fragility

The Doune Castle case demonstrated the usefulness of the integrated framework for analysing a heritage site characterised by strong visibility and increasing pressure. A first and decisive result concerns the identification of a mismatch between the site's cultural attractiveness and the fragility of its territorial support conditions. Official HES evidence shows substantial visitor growth over the last decade, associated not only with the monument's intrinsic significance but also with the impact of film and television exposure. This growth has increased the site's appeal and strategic relevance, but it has also amplified pressures on the wider landscape setting and on the site's capacity to absorb visitation without compromising heritage value.

This condition is strongly reinforced by the Doune Castle Landscape Conservation Management Plan, which identifies significant deterioration linked to rising footfall and increased vehicle movement [25]. The plan points to erosion affecting earthworks, exposure of below-ground archaeology, parking-related disturbances, and a piecemeal approach to landscape maintenance and presentation. It also stresses that the management of the site's broader landscape setting has often remained secondary to the conservation of the built fabric itself, despite the fact that landscape quality is fundamental both to heritage significance and to the visitor experience.

A second result concerns the value of the circular indicator framework in revealing the interdependence of issues that might otherwise be treated separately. At Doune, visitor concentration, seasonality, access patterns, interpretative orientation, and local benefit could not be meaningfully separated from landscape conservation and long-term site resilience. The analysis therefore highlighted that site resilience depends not only on conservation measures, but also on how tourism is distributed, interpreted, and territorially connected.

A third result lies in the action-oriented nature of the participatory process. The Doune case showed that the pathway toward a more circular tourism model could not be reduced to managing flows alone. Instead, it pointed toward a more articulated strategy involving de-seasonalisation, sustainable access, strengthened local economic linkages, more inclusive and diversified interpretation, and visitor management approaches compatible with heritage conservation.

The resulting action fields for Doune converged around five priorities. The first was visitor redistribution and de-seasonalisation, with the aim of reducing concentration peaks and creating a more balanced annual pattern of use. The second was sustainable mobility and access, particularly through a stronger emphasis on low-carbon visitor routes and access options. The third was community-based value creation, aimed at strengthening local economic recirculation rather than limiting the benefits of tourism to the site itself. The fourth was interpretative diversification, broadening the experiential offer beyond narrowly screen-tourism-oriented narratives. The fifth was conservation-compatible visitor management, recognising that any tourism strategy for Doune must remain aligned with the protection of landscape, archaeology, and long-term site resilience.

3.2 Caerlaverock Castle: From Site-Based Heritage to Shared Destination Logic

If Doune highlighted the challenge of managing visibility and pressure, Caerlaverock shifted the evaluative scale toward a wider territorial and destination logic. One of the most significant results of this case was the recognition that circular tourism at Caerlaverock could not be meaningfully framed at the level of the monument alone. The castle emerged instead as an anchor within a larger territorial constellation composed of coastal landscapes, natural assets, nearby attractions, cultural experiences, routes of access and mobility, nature-based experiences, and local service networks.

This change of scale is analytically important. It suggests that in some heritage contexts, circularity is less about improving the efficiency or sustainability of a single site than about constructing a more integrated destination ecology. In the Caerlaverock case, the relationship between monument, landscape, local services, nearby experiences, and slow-tourism opportunities became central to the evaluative process.

A second result concerns the reinterpretation of seasonality and relative remoteness not only as constraints, but as opportunities. Rather than approaching lower shoulder-season visitation simply as a deficit, the case pointed toward the possibility of developing more immersive, slower, and higher-quality tourism experiences, less dependent on volume growth and more aligned with place-sensitive development. This supports an important point in circular cultural tourism: peripheral heritage destinations need not imitate high-intensity visitor economies. Their strength may lie precisely in their capacity to offer different temporalities, richer territorial immersion, and a stronger balance between heritage, nature, and community.

A third result concerns the identification of structural barriers to this transition. These included access and mobility challenges, limited facilities, fragmented promotion, limited integration between the castle and surrounding attractions, and insufficient support for longer stays and broader visitor itineraries. The evaluative process showed that these

constraints reduce both visitor dwell time and the possibility of distributing benefits across the wider destination.

The action fields emerging from the Caerlaverock case therefore reflected a clearly territorial logic. They included destination identity and positioning, aimed at strengthening the site's uniqueness within a wider offer; sustainable access and wayfinding, especially through walking, cycling, and integrated access solutions; integrated visitor experience, designed to encourage longer stays and multi-site exploration; inclusive and digital accessibility, particularly through interpretative enhancement; community engagement and local sourcing, linking tourism more directly to local products, education, and capacity building; and environmental and circular infrastructure improvements, aimed at reinforcing responsible destination management.

The Caerlaverock case thus demonstrated that participatory evaluation can effectively transform the object of planning itself. Rather than focusing solely on a heritage asset, the process helped construct a shared destination perspective, in which site value is inseparable from territorial relationships.

3.3 Blackness Castle: Infrastructure, Accessibility, and the Redistribution of Value

The Blackness case brought another dimension sharply into focus: the infrastructural and socio-spatial conditions required for circular tourism to produce broad-based local benefits. The site combines a strong scenic coastal setting, historical depth, regional centrality, and screen-tourism potential, yet these strengths coexist with serious limitations in access, interpretation, local service provision, and community relations.

A first result concerns the coexistence of high territorial potential and severe infrastructural constraint. Blackness appears well placed, both geographically and symbolically, to serve as a node within a wider heritage and coastal tourism network. Yet the evaluative process showed that this potential is constrained by poor public transport, limited parking, weak digital presence, and accessibility barriers both to the site and within it. In this case, circularity could not be advanced meaningfully without addressing infrastructure.

A second result concerns the centrality of economic recirculation as an evaluative issue. The Blackness case made visible the problem of short, site-centred visits and limited local spending. Tourism, in this context, risked remaining extractive even at modest scale: visitors arrived, consumed the site, and left, while the surrounding area captured only a limited share of the benefits. This finding is important because it shows that circular tourism cannot be understood only through environmental and conservation indicators. It must also address the geography of spending, length of stay, and the distribution of economic opportunity.

A third result concerns the relationship between tourism and local liveability. At Blackness, tensions linked to transport and parking made it clear that tourism cannot be assumed to benefit local communities automatically. A responsible and circular approach requires that burdens and benefits be jointly assessed. Tourism that generates inconvenience, congestion, and limited local return may undermine its own legitimacy.

The action fields identified for Blackness therefore reflected an explicitly systemic transition agenda. These included transport and responsible access, with a focus on

public transport enhancement, shared mobility, and parking solutions; inclusive access and interpretation, combining physical accessibility improvements with digital interpretation; experience diversification and off-season programming, aimed at broadening the site's role and reducing narrow patterns of visitation; decentralisation of spending, through stronger local service linkages and longer-stay opportunities; regional collaboration, positioning Blackness within a wider network of nearby attractions; and green operational improvements, linking site management to circular economy and climate-responsible practices.

Compared with Doune and Caerlaverock, Blackness foregrounded most clearly the fact that circular tourism depends on the repair and strengthening of relationships: between the site and the community, between visitors and the regional economy, and between tourism attractiveness and local infrastructural capacity.

3.4 Cross-Case Synthesis

Taken together, the three case studies confirm that the integrated methodological framework is both replicable and non-standardising. The same analytical structure—based on circular cultural tourism dimensions and responsible tourism principles—was maintained across the three sites, yet the priorities that emerged were clearly differentiated (Table 3).

At Doune, the dominant issue was how to manage strong visibility and visitor pressure while safeguarding landscape integrity and strengthening local recirculation.

At Caerlaverock, the dominant issue was how to develop a shared destination model integrating monument, landscape, mobility, and quality territorial experiences.

At Blackness, the dominant issue was how to address infrastructural, accessibility, and community-related constraints in order to decentralise value and create broader territorial benefits.

Workshop discussions broadly converged on pressure and conservation issues at Doune, destination integration at Caerlaverock, and accessibility and local benefit at Blackness, while also revealing different expectations regarding the scale and feasibility of future interventions.

The methodological framework was replicated across different heritage sites while generating differentiated and context-sensitive priorities, thereby supporting both comparability and local specificity. Cross-case comparison highlights both the replicability and the adaptability of the proposed evaluative process. While all three case studies shared a common methodological structure, the resulting priorities differed according to their specific combinations of visitor pressure, environmental sensitivity, infrastructural conditions, local economic integration and governance dynamics. This confirms that the value of the approach lies not in producing standardised outputs, but in enabling structured comparison while preserving place-based differentiation.

This variation is methodologically important. It confirms that the usefulness of circular tourism indicators does not lie in producing uniform rankings or generic sustainability labels. Their real value lies in structuring a place-sensitive and participatory evaluative process capable of revealing differentiated pathways of transition while maintaining a coherent evaluative structure across diverse heritage contexts.

Table 3. Synthesis of workshop results.

Site	Main challenges identified	Action priorities	Predominant scale of intervention	Evaluative insights
Doune Castle	Visitor pressure, seasonality, landscape fragility, conservation-management tensions	Visitor redistribution, de-seasonalisation, sustainable access, conservation-compatible management	Site and surrounding landscape	The main challenge lies in balancing attractiveness with resilience and conservation needs
Caerlaverock Castle	Remoteness, fragmented visitor offer, weak integration between site and wider destination	Destination integration, improved connectivity, multi-site experience design, local value creation	Territorial / destination scale	The key shift is from site-based management to a broader destination perspective
Blackness Castle	Accessibility barriers, infrastructural deficits, weak local capture of spending, community tensions	Accessibility improvements, transport solutions, decentralised spending, stronger regional collaboration	Site and regional network	The main issue is linking heritage tourism to local liveability and shared territorial benefits

4 Discussion

The three Scottish cases offer several broader insights relevant to heritage planning, environmental appraisal, and multicriteria evaluation. The originality of this experimentation lies not only in the application of indicator frameworks, but in the way indicators were mobilised within a participatory and human-centred co-creation process. In this study, indicators did not operate merely as technical measurement devices; rather, they served as structuring tools for dialogue, interpretation, and action prioritisation. The Local Action Plans can therefore be understood as the outcome of a shared evaluative process aimed at aligning circularity, responsibility, and place-based tourism development.

Moreover, the research confirms the analytical value of integrating circular cultural tourism with responsible tourism. The Be.CULTOUR framework offered a strong multidimensional structure through the four capital dimensions, while the HES Responsible Tourism Framework provided a policy-oriented articulation of those dimensions through community involvement, low-carbon access, local economic benefits, accessibility, and environmental stewardship. This integration prevented circularity from being reduced to

material circularity alone. Instead, it enabled the study to approach circular tourism as a broader condition involving social inclusion, interpretative quality, local recirculation, and territorial collaboration.

A further theoretical implication concerns the kind of circularity adopted in tourism planning. More radical and culture-led approaches are needed if circularity is to support strong sustainability, community wellbeing, place-making, and regenerative territorial development. From this perspective, the present study aligns with an interpretation of circular cultural tourism that treats tourism not as an end in itself, but as an instrument for strengthening heritage conservation, local entrepreneurship, ecological responsibility, and the social and cultural resilience of destinations. The paper therefore adopts a regenerative and culture-led interpretation of circular tourism, rather than a narrowly technical or efficiency-based one.

This evidence formed the empirical basis for the identification of action priorities in each case study. Through co-creation, analytical evidence was translated into strategic fields of action that reflected both expert understanding and local judgement. The process moved from assessment to prioritisation, and from prioritisation to action orientation. This is particularly relevant for evaluation studies, because it shows how participatory planning can be structured around indicators without reducing the process to technocratic assessment or, conversely, to unstructured consultation.

Fourth, the study highlights the importance of territorial scale in circular heritage tourism. In all three cases, but especially at Caerlaverock and Blackness, the circularity of tourism could not be assessed at the scale of the monument alone. It depended on relations with mobility networks, village services, local businesses, regional itineraries, surrounding landscapes, and nearby attractions. This suggests that circular cultural tourism should be approached not only as a site-management issue, but as a territorial governance issue.

Fifth, the research reveals the significance of data asymmetries and data gaps. Some dimensions, such as official site significance, conservation pressures, policy priorities, and some visitor figures, were relatively well documented. Others, such as transport behaviour, local spending patterns, waste monitoring, and community perceptions of tourism benefit, were more unevenly evidenced. This has methodological consequences. What cannot be measured or observed consistently tends to remain less visible in decision-making. Strengthening monitoring systems therefore becomes part of the circular transition itself, not merely a technical add-on.

Finally, the cases collectively suggest that peripheral heritage sites should not be interpreted as marginal or secondary versions of major tourism destinations. Rather, they can act as laboratories for more responsible and circular models of tourism development. Their relative remoteness, lower density, and strong territorial embeddedness may enable forms of experimentation less feasible in high-pressure mass-tourism settings. Yet this potential can only be realised if evaluation frameworks are capable of linking heritage value, community aspirations, infrastructural realities, and long-term local development pathways.

More broadly, the study suggests that circular tourism should not be reduced to a weak sustainability perspective focused only on efficiency gains, waste reduction, or technological fixes. In line with the Be.CULTOUR framework, circularity in cultural

tourism also entails local entrepreneurship, community wellbeing, cooperation, cultural heritage appreciation, landscape integrity, and place authenticity. Tourism is therefore not treated as an end in itself, but as an instrument within a wider territorial development perspective, whose value depends on its capacity to strengthen rather than erode the ecological, cultural, and social conditions of the destination.

5 Conclusions

This paper has examined a collaborative experimentation aimed at co-creating Local Action Plans for circular cultural tourism in three Scottish heritage sites (Doune Castle, Caerlaverock Castle, and Blackness Castle) through the integration of circular cultural tourism indicators, the HES Responsible Tourism Framework, and a participatory multicriteria evaluation process.

Four main conclusions emerge. First, circular tourism indicators are most useful when employed as decision-support tools rather than as static descriptive metrics. Their relevance lies in their ability to structure a multidimensional understanding of tourism and to reveal interactions between conservation, access, mobility, interpretation, local economy, and community wellbeing.

Second, the integration between the circular cultural tourism framework and the HES Responsible Tourism Framework proved particularly productive. It enabled the study to connect a multidimensional understanding of circularity with institutional priorities concerning climate action, low-carbon visitor experiences, accessibility, local economic benefits, and community engagement. In doing so, it created a stronger bridge between research-oriented innovation and public-policy relevance.

Third, participatory co-creation functioned as a form of co-evaluation. The Local Action Plans that emerged were not merely operational lists of actions, but the outcome of a process through which evidence, situated knowledge, and strategic judgement were combined. This supports the idea that participatory processes in heritage tourism planning are most valuable when they are evaluative as well as consultative.

Fourth, the three cases confirm the need for context-sensitive and place-based approaches. While the same methodological architecture was applied across the three sites, the priorities that emerged were substantially different: pressure management and landscape fragility at Doune, territorial integration and shared destination logic at Caerlaverock, and infrastructure, accessibility, and decentralised benefits at Blackness. Replicability, therefore, should not be equated with standardisation. It should be understood as methodological coherence combined with local adaptation.

In this paper, the Local Action Plans are not presented as fully developed implementation-ready plans, but as co-created strategic outputs identifying key issues, priority action fields, and context-sensitive directions for future intervention. The approach also presents some limitations. Its effectiveness depends on the availability of sufficiently robust documentary and contextual evidence, on the institutional capacity of the actors involved, and on the presence of stakeholders able and willing to engage in a meaningful co-evaluation process. For this reason, the same methodology may prove more difficult to apply in contexts characterised by fragmented governance, limited data, or weaker policy support. Its transferability should therefore be understood not as direct

replicability of outputs, but as the adaptation of a shared evaluative process to different territorial and institutional conditions.

Overall, the study contributes to current debates on heritage-led regeneration and sustainable tourism transitions by showing how circular tourism principles can be translated into locally grounded action through a participatory evaluative process. In this respect, the paper offers both a methodological contribution to participatory evaluation and a practical contribution to heritage-based tourism planning in peripheral contexts. In this sense, Local Action Plans become not only planning instruments, but also tools for aligning conservation, responsibility, community benefit, and territorial resilience within a shared development vision for heritage-led, responsible, and circular territorial regeneration.

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