

<b>Institution:</b> University of Northumbria at Newcastle		
<b>Unit of Assessment:</b> 14 (Geography and Environmental Studies)		
<b>Title of case study:</b> Mainstreaming Green Infrastructure in the UK: A self-assessment tool putting the natural environment at the heart of strategic and local planning policy in the built environment		
<b>Period when the underpinning research was undertaken</b> November 2016 – December 2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Alister Scott	Professor	01/11/2016 – present
<b>Period when the claimed impact occurred:</b> January 2017 – December 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<b>1. Summary of the impact</b> (indicative maximum 100 words) <p>Professor Alister Scott's research has exposed significant neglect of nature in the design and delivery of statutory planning policies, resulting in reduced quantity and quality of green infrastructure (GI) for people, communities, and biodiversity. Scott's research co-designed and tested a self-assessment policy tool that improved the design and impact of planning policies by mainstreaming GI - translating, integrating, and normalising GI from environmental policy areas into economic and social policy priorities. Scott's tool has been used by planning authorities to improve GI policy at regional scales e.g., West of England Combined Authority and Essex County Council, crucially going beyond existing national policy requirements, framing GI as an environmental, social, and economic asset. Natural England have used Scott's research to develop their GI national standards framework and for the current pilot testing phase. The tool is also referenced as a key resource for local authorities by the UK Green Infrastructure Partnership and Building with Nature (UK standard for GI). The tool has also been used to assess English, Scottish, Northern Irish, and Welsh government guidance, exposing significant gaps and vulnerabilities in their GI planning policies.</p>		
<b>2. Underpinning research</b> (indicative maximum 500 words) <p>Scott's research exposes a consistent weakness in planning policy and decision-making which neglects the value of nature in local planning and regional development policy [R1], as evidenced through impacts on green infrastructure (GI) [R2, R3]. GI is a purposefully planned multifunctional network involving green and blue features such as parks, rivers, trees, and plants to deliver multiple benefits in urban and rural settings. GI has been undervalued in planning policy which prioritises 'grey infrastructure,' associated with housing, transport, and economic development [R1, R2]. A lack of definitional and conceptual clarity around GI and its fit with established and emerging environmental terms hinders effective communication of the multiple benefits it generates as an environmental, social, and economic asset. [R1, R3]. Furthermore, the impact of GI initiatives is constrained by its lack of mainstreaming outside the environmental policy area. Scott's approach to mainstreaming involves translating, integrating, and normalising GI from its roots in environmental policy into the priorities, strategies, and practices in economic and social domains [R1]. The idea that protecting or enhancing nature is a lost opportunity for economic development still pervades much business and government thinking [R1, R2]. Scott's research has fused the concepts used in planning and the ecosystem development to build stronger conceptual frameworks uniting established and emerging environmental terms to help mainstream nature using GI [R1]. Furthermore, work with academics and professional institutes has conceptualised how GI fits with the wide variety of other environmental terms now encountered in policy and provided an improved framework for communicating with planning professionals and authorities, providing them with stronger theoretical foundations and tools to mainstream GI within their work [R1, R3].</p>		

In 2017, Scott secured a 3-year Natural Environment Research Council (NERC) Fellowship to improve inclusion of GI in the planning system [G1]. Scott employed a transdisciplinary research model working with multiple planning authorities, stakeholders, and institutes at different scales, primarily across the UK but also involving New Zealand. This work led to Scott's research conceptualising 'hooks' (for communicating with professional audiences) and 'bridges' (for communicating with wider publics) [R1]. 'Hooks' involve the identification and prioritisation of key statutory priorities in daily practice for a particular specialist audience (e.g., for planners the National Planning Policy Framework; duty to cooperate requirement) [R1, R4]. 'Bridges' involve the identification and prioritisation of terms or concepts that are understandable across multiple audiences and publics with strong political traction such as climate emergency or green recovery [R1, R4]. Using these hooks and bridges, Scott demonstrated the potential of mainstreaming nature using GI into the heart of planning policies and strategies alongside traditional grey infrastructure by changing conventional understandings of nature and GI and their use in policy [R1, R3]. Moreover, Scott's research reimagines mainstreaming to go beyond merely integrating GI into existing planning policies, instead as something that becomes normalised in existing daily practice, changing perceptions and behaviours to nature as an economic and social asset around which planning policies and strategies should be reshaped [R1, R3].

This research has culminated in a co-designed GI policy assessment tool (GIPAT) which was developed in an ongoing partnership with Max Hislop (Programme Manager at Glasgow and Clyde Valley Green Network). The GIPAT was subsequently tested and validated by West of England Combined Authority planners and UK Green Infrastructure partnership [R2, R4]. These collaborations have also led to assessment of the efficacy of English, Welsh, and Northern Irish national planning guidance, highlighting core GI deficiencies, vulnerabilities, and opportunities [R4]. The self-assessment tool uniquely captures GI multifunctionality across 26 assessment criteria involving mainstreaming, integration, biodiversity, water, air, access, recreation, and environmental management functions and assesses strength of associated policy wording [R2]. The tool has been used to assess UK national (all devolved countries), regional, and local policy frameworks [R4, R5] with its translation into an EU PERFECT expert policy paper [R5] and its adaptation into a framework for use in New Zealand to incorporate Maori values within Tasman district development plan processes [R6].

### 3. References to the research (indicative maximum of six references)

**R1. Alister Scott**, Carter C., Hardman, M., Grayson, N., and Slaney T. (2018) 'Mainstreaming ecosystem science in spatial planning practice: exploiting a hybrid opportunity space' *Land Use Policy* **70**: 232-246 <https://doi.org/10.1016/j.landusepol.2017.10.002>

**R2. Hislop M., Alister Scott\***, and Corbett, A. (2019) 'What does good green infrastructure planning policy look like? Developing and testing a policy assessment tool within Central Scotland UK' *Planning Theory and Practice* **20**(5): 633-655  
<https://doi.org/10.1080/14649357.2019.1678667>

\*Corresponding author

**R3. Alister Scott et al (2020)** 'Understanding our growing environmental vocabulary in England Connecting Green Infrastructure, Natural Capital, Ecosystem Services and Net Gains within the English Planning System' <https://mainstreaminggreeninfrastructure.com/project-page.php?understanding-our-growing-environmental-vocabulary-in-england>

**R4. Alister Scott** and Hislop, M. (2019) 'What does good GI policy look like?' *Town and Country Planning* **88**(5): 177-184  
[https://researchportal.northumbria.ac.uk/files/20073861/AlisterScott\\_what\\_does\\_good\\_green\\_infrastructure\\_policy\\_look\\_like.pdf](https://researchportal.northumbria.ac.uk/files/20073861/AlisterScott_what_does_good_green_infrastructure_policy_look_like.pdf)

**R5. Alister Scott** and Hislop, M. (2019) 'What does good green infrastructure policy look like? Developing a policy assessment tool to assess plans, policies and programmes' *Expert Policy*

## Paper 3 EU PERFECT

[https://www.interregeurope.eu/fileadmin/user\\_upload/tx\\_tevprojects/library/file\\_1592825117.pdf](https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1592825117.pdf)

**R6.** Ransom, M. and **Alister Scott (2020)** 'A planning assessment method for Aotearoa/New Zealand based on ecosystem services' *Planning Quarterly* **219**: 12-19 available on request

**Research Funding**

G1. Alister Scott, Fellowship, **NERC - NE/R00398X/1 2017-2020** Mainstreaming green infrastructure in planning policy and decision making: Translating NERC science into a co-produced spatial planning toolkit GBP168,695

**G2. Alister Scott, CI, NERC - NE/N017587/1, March 2016-February 2018** Injecting a Natural Capital Planning Tool into Green-Blue Infrastructure Management GBP99,508

G3. Alister Scott, PI, **Planning Advisory Service - AF2002309 2019-2020** Improving strategic planning for nature conservation GBP15,000

G4. Alister Scott, CI, **EPSRC - EP/P002021/1, June 2016-November 2017** From Citizen to Co-innovator, from City Council to Facilitator: Integrating Urban Systems to Provide Better Outcomes for People GBP403,478

**4. Details of the impact** (indicative maximum 750 words)

Scott's GI mainstreaming tool, the GIPAT [E1], has been embedded into the GI Strategies of the West of England and Essex County Council. The West of England GI Strategy now requires the tool's use in the design of local plan policies in Bath and North East Somerset, Bristol City, North Somerset, and South Gloucestershire councils; whilst in Essex the tool forms a key part in the council GI standards. Scott's ongoing work, and these regional successes, have been used to guide policies and resources at national planning via Natural England, Building with Nature, and the Town and Country Planning Association.

**4.1 Mainstreaming GI into West of England and Essex County Council**

Sarah Jackson, GI Coordinator for the West of England Combined Authority (WECA) notes it *'was while Professor Scott was presenting to WECA in a July 2018 workshop that we began to realise the importance of GI mainstreaming as a central policy objective'* [E2, p1]. As a result of Scott's partnership with WECA, GIPAT was co-designed and tested in 2 workshops with further meetings to improve GI mainstreaming and environmental interrelationships [E2, p2]. In July 2020 the West of England Joint GI Strategy 2020-2030 (JGIS) was published [E2, p5]. Jackson explains, *'[t]he JGIS draws heavily upon the work of Professor Alister Scott...where the relationships between natural capital ecosystem services, net gain, GI health and wellbeing are described'* [E2, p1]. Crucially, the JGIS now includes a *'requirement for the four constituent local authorities to use the GI policy Assessment Matrix tool [GIPAT] in developing their Local Plan policies'* [E2, p1, Action Plan actions A7; A8; A9, p34].

GIPAT is transforming GI policy design in WECA. For example, Bath and North East Somerset Council (BANES) revised the local plan policy for 2013-2036 *'[a]s a result of working with Scott'* so that the *'GI policy now explicitly addresses all the different GI functions moving away from a single vulnerable "protect and enhance the GI network" policy which still characterises many contemporary local plans'* [E2, p2]. Jackson observes GI policy now goes *'beyond that required under the national planning policy guidance [and] crucially designing and delivering good GI policy both at BANES and WoE (West of England) scales'* [E2, p2].

Scott developed a further partnership with Essex County Council, with Jayne Rogers, Environment Officer to support their draft GI strategy process. This was assessed using GIPAT and core weaknesses therein were addressed in a workshop led by Scott involving 30 stakeholders across the council to *'help strengthen the Strategy through the development of*

*principles and robust key actions in each chapter'* [E3, p1]. A final strategy was published in March 2020 [E3, p4]. Rogers stated that *'Scott's research and the Toolkit have made the GI Strategy more robust against changing political circumstances and other obstacles by mainstreaming GI into our policy objectives and into the Essex planning system'* [E3, p2]. Scott has also designed/supported Essex County and District Councils to *'develop a GI framework as part of our GI strategy development and to inform project work and outputs for Essex as a pilot for the Government's 25 Year Environment Plan with Natural England'* [E3, p2]. Overall, *'[t]he research and tool have helped to push forward the programme to integrate GI and is instrumental in driving this agenda forward'* [E3, p2].

#### **4.2 Improving GI standards across the UK through national planning and environmental organisations and governments**

Scott's research contributed to Natural England's GI Standards Framework Project set up to respond to a requirement in HM Government's 25-year Environment Plan [E4] (Natural England is the Government's adviser for the natural environment in England). Scott's research and GIPAT are a core reference in Natural England's confidential guidance for the GI pilots [E4, p23-24, NP03] as well as a core resource in Building with Nature's (a national organisation offering the UK's first benchmark for GI standards) local authority training resources [E5]. Work is ongoing with Scott providing GI thought leadership with Essex and WECA as exemplar GI pilots feeding into the Natural England national program. Jackson at WECA explains Scott's role as *'developing our thinking and supporting our role as a frontrunner pilot for Natural England's GI Standards Framework'* [E2, p1]. GIPAT is also being used to assess all 5 WECA pilot project outputs as evidenced in their draft workplan [E2, p2, p3-4]. Scott has worked closely with Natural England since 2017 delivering training workshops on GI policy and GIPAT, guiding policy development. Jane Houghton, Natural England Project Manager, explains, saying Scott's *'unpacking of mainstreaming and recognition of the need to go beyond integration and to identify the hooks for engagement... [and] articulation of mainstreaming through place-making... is embedded within our GI standards principles'* [E6].

Max Hislop, who helped develop the GIPAT as part of Scott's research, confirms, *'[t]he finalised tool has been used to assess how robust... the GI policies are in the English (NPPF) and Welsh National Planning Policy guidance (PPW10) and Northern Ireland (SPP15)'* [E7]. The partnership also enabled *'a valuable contribution to a meeting with the Scottish Government in early 2020... who are developing Scotland's new National Planning Framework'* [E7, E8 Scott acknowledged p5, p54]. The Scottish Government November 2020 position statement states *'green infrastructure should be an integral part of place-making and our policies on this can be strengthened'* [E9, p14].

Scott's GIPAT work has strengthened the UK Green Infrastructure Partnership (GIP) run by the Town and Country Planning Association (TCPA), a network of over 2,500 organisations and professionals in GI across the UK and globally and benefitted local planning authorities by *'addressing a weakness in the current planning system'* [E10]. GIP Director, Julia Thrift, explains that *'as a result of engaging with Scott's research, planning authorities have been given the tools to maximise the benefits of green infrastructure within their Local Plans and policies in ways they were unable to before'* [E10]. This new capacity has enabled planners and local authorities using Scott's toolkit to *'go beyond the requirements of national guidance by mainstreaming green infrastructure into policy development'* [E10]. Thrift confirms that GIP have worked closely with Scott since 2017, including Scott using his research to conduct a review of the GIP's operations [E10]. The *'associated evaluation report influenced changes in the ways that the GIP was managed, strengthening it, and providing the groundwork from which a new funding proposal for the GIP is being created'* [E10]. The policy assessment tool has helped TCPA strengthen the GIP activities including through workshops and creating an expert policy guide for EU-PERFECT, an EU-funded project led by the TCPA that is exploring how green infrastructure can be better included in policy and funding decisions across the EU [E10].



5. Sources to corroborate the impact (indicative maximum of 10 references)		
Ref.	Source of corroboration	Link to claimed impact
E1	The GI Policy Assessment Matrix Tool – collated pdfs from the website and the tool itself	The tool offers a new way for planning authorities to develop policy – change in practice described in text with resulting changes to policies
E2	Testimonial - Sarah Jackson West of England Combined Authority Working Group GI and GI Strategy document	Impact on WoE GI policy
E3	Testimonial - Jayne Rogers Essex County GI strategy	Impact on Essex County GI policy
E4	Natural England Standards for GI pilot programmes	Impact on national GI standards
E5	Building with Nature's local authority training resources	Impact on national training for local planning authorities on GI
E6	Testimonial - Jane Houghton, Natural England Senior Advisor and Project Manager	Influence on national GI policy and guidance
E7	Testimonial - Max Hislop, Programme Manager, Glasgow and Clyde Valley Green Network Partnership	Impact on national environmental policy/decision making
E8	Glasgow Clyde Valley local authority planning policy document	Impact on regional planning and GI policy
E9	Scotland's Fourth National Planning Framework Position Statement	Impact on Scottish planning and GI policy
E10	Testimonial - Julia Thrift Director of Green Infrastructure Partnership	Impact on key stakeholder shaping national policy discourse