Initial assessment of NERC research impact pathways for green infrastructure practice

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Mainstreaming Green Infrastructure

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NERC SCIENCE OF THE ENVIRONMENT

4 key questions REVISED

Key questions underpinning this fellowship:

1. Why isn't GI being mainstreamed in planning policy and decision-making processes?

2. How can we translate existing NERC and other research science associated with GI cumulatively into additional pathways to impact to address key policy and practice challenges and opportunities?

3. How can we demonstrate and evaluate the added value of GI in planning policies and interventions?

4. How can we change/influence behaviour(s) of key actors in the planning arena regarding their valuation and use of GI in policy making and practice?

My role as a NERC Knowledge Exchange Fellow

As a knowledge exchange fellow I see my role as a catalyst integrating multiple planning policy and practice viewpoints across key stakeholders who use/shape the planning system.

These participants will co-produce the project's outputs within a managed process that is developmental, pragmatic and peer reviewed; delivering a suite of guidance, tools and resources that mainstream GI in policy and decision making thereby embracing the government's economic growth and quality of life agendas.

Plan

- On being a NERC KE fellow.....

- Unpacking Green Infrastructure

- The Mainstreaming challenge

- Preliminary Research Investigations and exploiting impact pathways

- Policy/Practice needs (flip chart exercise debrief)

- Future priorities

What makes a jolly good urban GI fellow?

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Are these the right questions?

G-Dating Agency : Revised programme

- EVIDENCE PART 1
  - WS1 Assessing focus and pathways to impact of NERC/RCUK science
  - WS2 Assessing/classifying policy and practice case studies (call for evidence)
  - WS3 Deep dives into 6 different types GI current initiatives (contract)
- SOCIAL LEARNING PART 2
  - WS4 Working with key decision makers on GI questions using a delphi platform
  - WS5 Prioritise areas to work through for maximum impact (eg revised NPPG?)
  - WS5 Developing interactive web portal to help with dating.

"I think I would get along really well with someone as disagreeable as me."

Key decision makers and influencers: who is missing?

Usual

- Planners (Private and Public)
- Defra family
- Voluntary sector
- Professional Institutes

Unusual

- Building Control
- Councillors
- PINS/DCLG
- Planning academics
- Business/Enterprise Partnerships
- Developers
- Scotland and Wales

What is Green Infrastructure?

- "A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities" DCLG 2012 glossary

- 2.80 "Green infrastructure maintains critical ecological links between town and country"

- 3.22 "High-quality green infrastructure can also drive local economic growth and regeneration".


National Planning Policy Framework
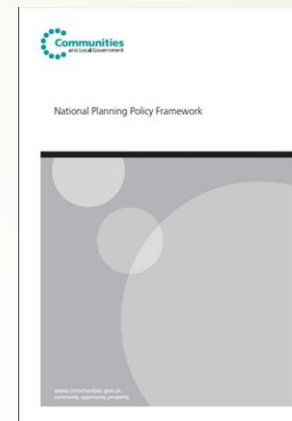
The Natural Choice: securing the value of nature

Green as **critical** infrastructure

As Benedict and McMahon (2006:2) recognise "..Green space is often viewed as something that is nice to have, GI implies something we must have"

" ... a green infrastructure approach .... sees ecological and natural assets as critical infrastructure, equivalent to water or power networks, for example, that provides multiple social, environmental and economic functions (Shaffler, 2013).
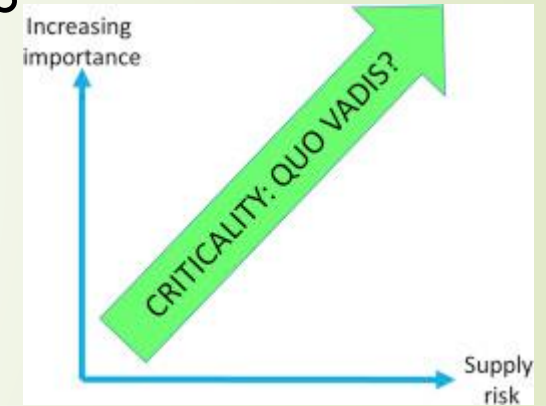
Unpacking Mainstreaming

➡ Embedding a concept, idea or knowledge in daily practice and systems of multiple audiences and decision makers.

Rogers, 2003
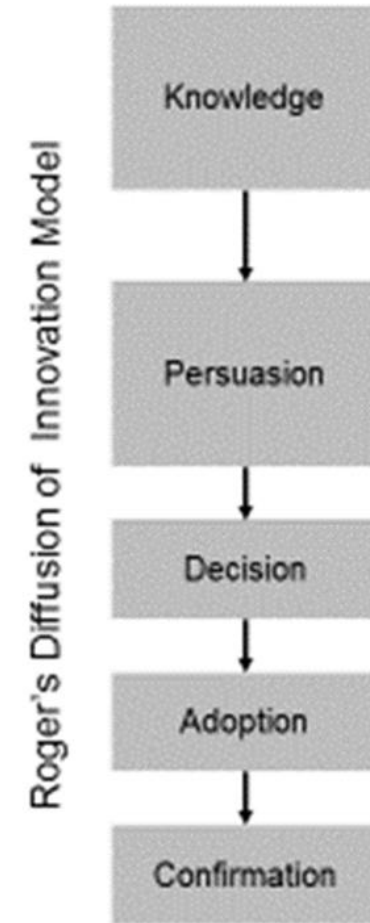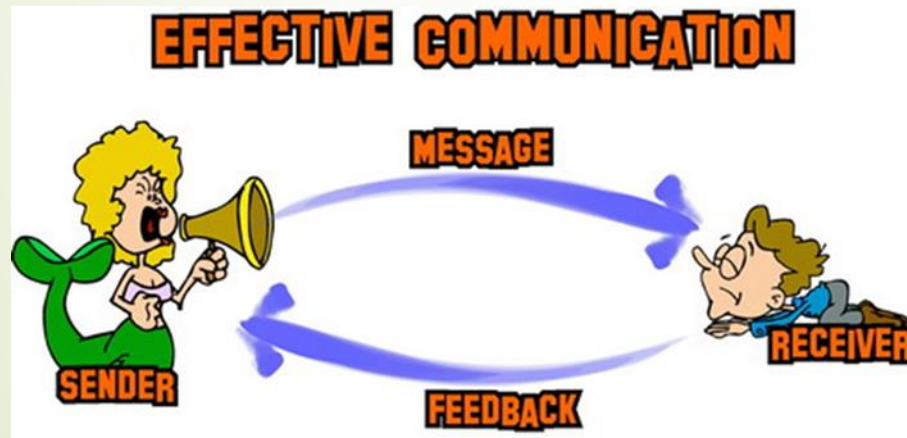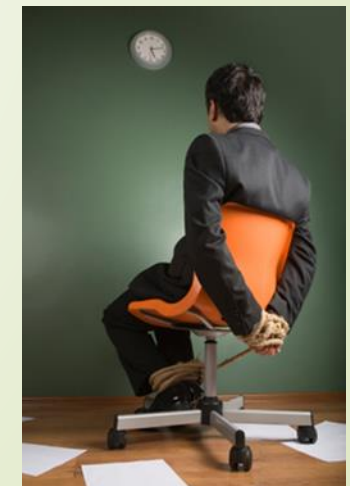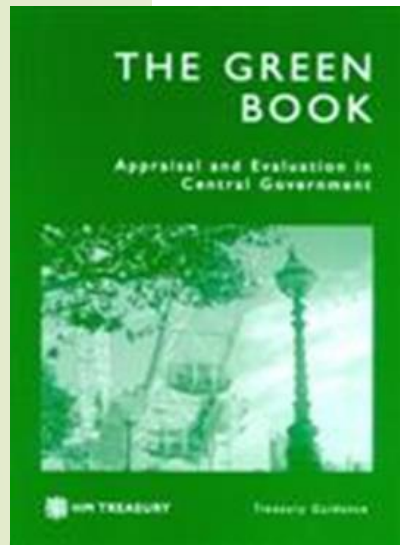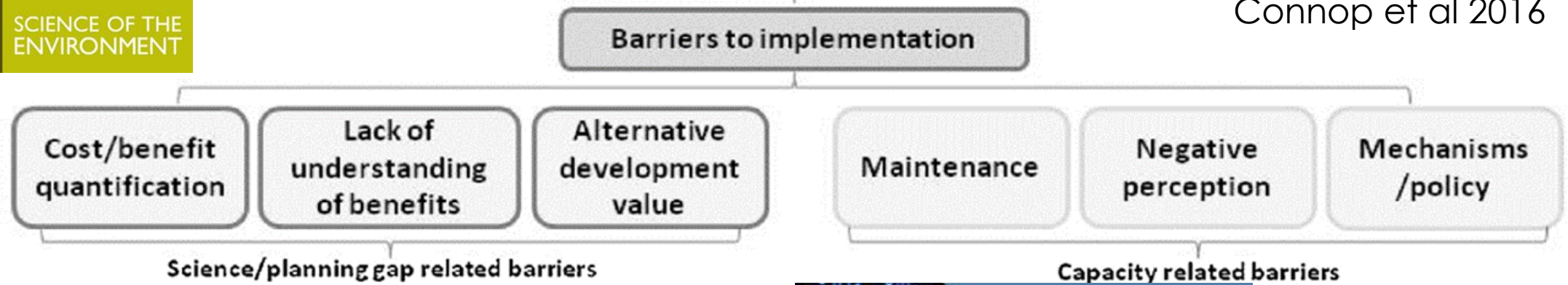
Degrees of GI mainstreaming

- Does not reflect poor to good.
- Reflect capacity and capability at a given time
- Can move either way in response to success or failure
- Changing audiences and/ governance frameworks
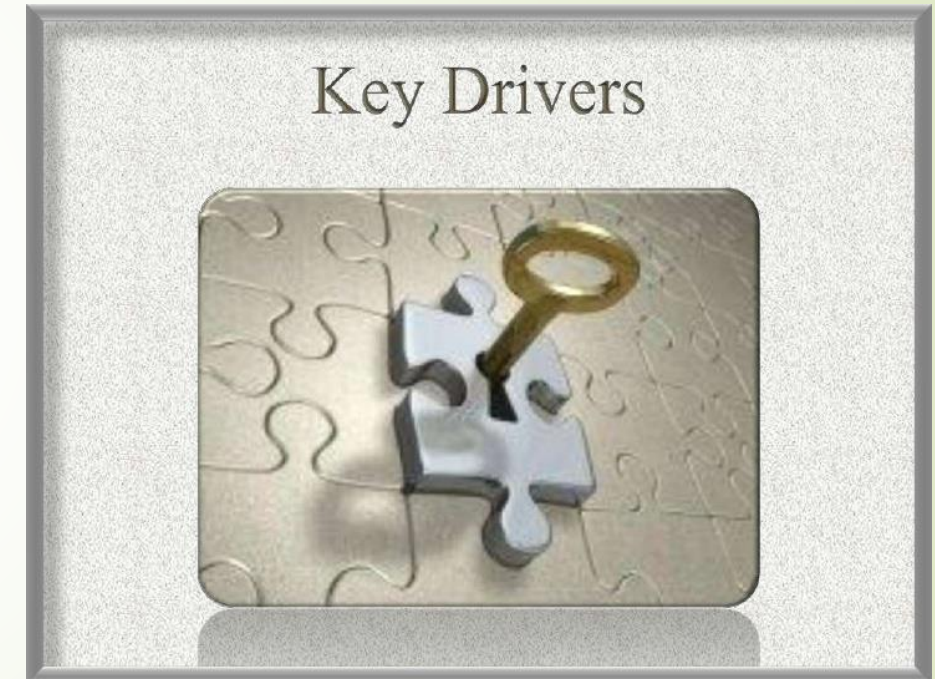
Scott et al in press

Retrofit   Incremental   Challenge/Benefits led   Systemic

Key Drivers of Research

- Government/EU funding
- REF2020 Research Assessment Exercise
- BEIS Industrial Strategy
  - Productivity
- Societal challenges
  - Benefiting from natural resources
  - Resilience to environmental hazards
  - Managing environmental change

Key Drivers

Preliminary assessment of NERC research WS1 (10 days work)

- Paper review 13 NERC GI innovation projects (Mike Grace BCU)
  - Interviewed 6 GI projects
- Interviewed 5 other GI NERC/RCUK funded projects
- Discussions with 6 policy audiences
- Working myself on 2 relevant projects
- Attended end of project dissemination event

Relevant Projects: GI Explicit and GI Implicit

- 5 Urban Living Pilots (Bristol, Leeds, Birmingham, York and Newcastle)

- 2 VNN health and well being projects Sheffield and Manchester

- 13 GI Innovation Projects (various)

- 2 EPSRC projects (Green Blue and soils carbon capture)

- NERC BESS projects (Urban Bess: Bedford, Milton Keynes)

- NERC Regional landscape scale project in South West

- EU projects nature based sols

' I'm not sure who to support. One is spoilt for choice these days!'

Headline Results

- Exciting new science with huge potential for improving mainstreaming processes

- Too many new tools and toolkits may confuse practitioners

- Separate projects lacking benefits from integration and bundling

- Limited engagement with built environment professions in project design and management

- Pathways to impact limited in planning arena

- Researcher gap in knowledge about planning system

Challenges
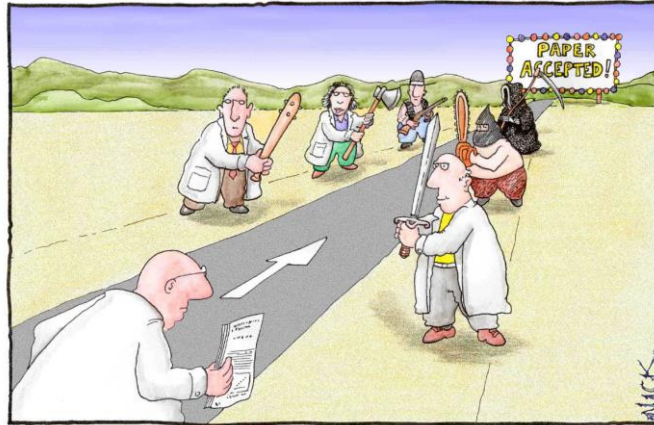
Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

- Peer review timing gap (2 years)
- Researcher project sovereignty hinders integration
- Legacy of toolkits and updating.
- End Users Finding/ Accessing research
- Open access issues and costs
- Lack of a one stop research shop

"All I'm saying is we've been to five different stores and they can't all be one-stop shopping!"

Preliminary Results: Focus

Health and well being	Med
SuDS	Med
Energy	Low
Environmental Growth	Med
Water	Med
Trees	Low
Manchester	Med
Ecosystem services /natural capital	Hi
Mainstreaming	Low
nature based solutions	Hi

- Range of foci
- Nature based solutions theme
- Dominant role of ecosystem services and natural capital
- Environmental growth theme
- Manchester GI research hotbed
- Mainstreaming limited goal.

Research process (as stated)

social learning	**MED**
co-design	**HIGH**
interdisciplinary	**HIGH**
specialist	**MED**
russian doll	**MED**

- Huge variation over way co-design used
- What makes an interdisciplinary project can it step up to be transdisciplinary
- Russian doll projects (mini projects within the project)

Policy partners

Natural Environment bodies	HIGH
Built Environment sector	LOW
Councillors	LOW
DCLG	NIL
Public Sector	HIGH
Private Sector	MED
Voluntary Sector	HIGH
Professional bodies	MED

- Focus on working with usual suspects in natural environment
- See rise of health in projects as a new partner
- DCLG conspicuous by absence
- Councillors not in projects (1).
- Professional bodies dominated by one or two (not ICE/CIOB/RIBA)

Outputs

|	
toolkits	MED
tools	HIGH
guidance	HIGH
evidence	MED
peer review	HIGH
social media	HIGH
Capacity building	MED
Web site	HIGH

- Research Bids: emphasis on innovation creating the new
- Role of peer review papers as key measure of research success
- Increased role of social media

Pathways to impact : Planning

	current	potential
National guidance /policy	NIL	LOW
Development plans *	LOW	HIGH
Development Management	LOW	MED
Evidence base	MED	*NIL
Bespoke tool	HIGH	*NIL
Existing tools	NIL	HIGH

Section 106 agreements
Community infrastructure levy
Planning Conditions
Building regulations
Enforcement

- Potential can go up and down

- Danger of developing tools and evidence that doesn't fit current decision or operating systems

- Need to design research that prioritises working/adapting existing tools
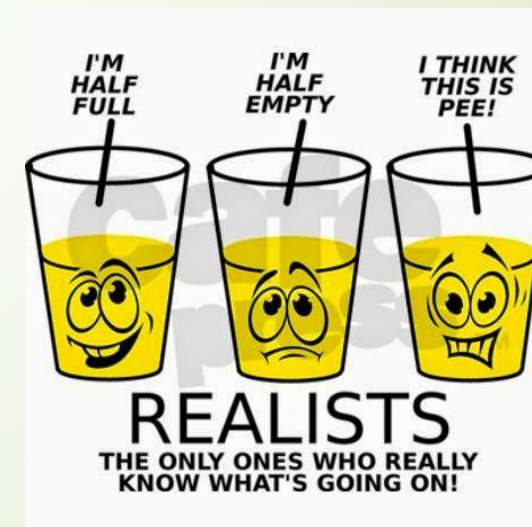
Flipping chart feedback

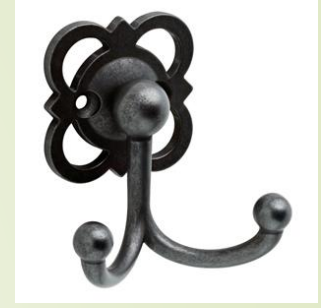Policy Challenges   Research Priorities

Optimising impact for spatial planning

- Involving and working with councillors as political champions

- Involving planning/built env staff in project design and /or core project

- Working with existing administrative and decision support systems/tools

- Raising standards across all areas of GI policy and decisions.

- Maximising social learning platforms

- Avoiding GI specialist silos

- Monitoring/Enforcing on GI developments

- "If inspectors find that local authorities haven't appropriately assessed and planned for green infrastructure to meet health and wellbeing needs (alongside other functions of green infrastructure such as urban cooling and sustainable urban drainage) then they would not find the plan sound" Govt response to Parks Inquiry report

Hooks :
For Research to exploit?

Policy Challenges

- Wider process of UK planning reform

- Duty to cooperate

- Housing crisis

- Devolution and combined authorities

- Transferring ES benefits into funding mechanisms

Fellow Priorities

- Learning from doing (Call for evidence)

- Building practice challenge led portal to connect with academic research project outputs

- Training for researchers on planning system and maximising impact.

- Identify opportunity spaces (eg local plan GI policy; NPPF rewrite; DCLG consultation on viability and (M)OAN

- Individual and Cumulative impact of research and policy to influence national guidance

- Working with "Unusual Suspects"

Key Messages

The Road to Success is paved with failures

- Mainstreaming as a dynamic process of social learning and diffusion

- Need better 2 way bridges between research and practice

- Researchers involve /work with target audiences on **their own terms and priorities**

- Built environment professionals **engage with researchers on your problems**

- Need investment in capacity building and social learning to **change work and research practices** (360 degree reflection)

- Please join/follow my G-dating agency ……………………..

- @mainstreamGI

- https://mainstreaminggreeninfrastructure.com/index.php