

Sustainable Communities Scotland 2025

Scotland's Futures Forum
&
The University of St Andrews



University of St Andrews
School of Management



Attendees

Group 1

Pat Abel - Community Rep
Campbell Christie - Rapploch & SFF Board
Eric Dawson - Architecture & Design Scotland
Andrew Staines - SEPA
Roz Wheeler - Rural Affairs & Environment Committee

Group 2

Linda Boyes - The Assoc. of Chief Officers
of Scottish Voluntary Organisations
Katriona Carmichael - Strategy Unit, Scottish Gov.
Anne Carty - Scottish Water
Donald Jarvie - Scottish Futures Forum
Bristow Muldoon - Royal Society of Edinburgh

Group 3

Kevin Braidwood - Rapploch
David Cullum - Private Bills Unit, Scottish Parliament
Inderpaul Johar - Architecture Design Scotland
George Thomson - Volunteer Development Scotland
Stephen Tinsley - Sustainable Development Research Centre

Group 4

Sam Cassels - Architecture & Design Scotland
Alan Dobie - Scottish Business Crime Centre Ltd
Ewan Mearns - Scottish Enterprise
Dr. Marc Rands - Royal Society of Edinburgh
Paul Sizeland - Scotland & Northern Ireland Forum for
Environmental Research

Backcasting Group

Pamela Brown - Rapploch
Dr. Audrey MacDougall - Head of Lifelong Learning
Analytical Services Unit
Mike McCarron - Community Rep
Diarmaid Lawlor - Architecture & Design Scotland
Robert Rae - Scottish Futures Forum

University of St Andrews

Peter McKiernan - Programme Director
Gary Bowman - Facilitator
Swapnesh Masrani - Facilitator
Ryan Parks - Facilitator
Alexa Schubert - Facilitator
Keith Aitken - Journalist
Lisa Mackenzie - Scottish Futures Forum



Further Reading

"Rekindling Community" & "Hell and High Water"
by Alastair McIntosh

"Toward Sustainable Communities" By Mark Roseland

<http://www.walkable.org/>



What is Sustainability?

'Sustainability' has no single or agreed meaning. 'It takes on meaning within different political ideologies and programmes underpinned by different kinds of knowledge, values and philosophy' (Huckle 1996: 3). A 'weak' view of sustainable development looks to continuing economic growth on terms that favour existing financiers and corporations (while maintaining the support of the majority of voters in countries like the UK). A strong view 'represents a revised form of self-reliant community development which sustains people's livelihoods using appropriate technology' (Huckle 1996: 4). The former would fit in with what we might now describe as the mainstream of politics in many northern countries; the latter represents a greener and more holistic vision. It echoes the concerns of E. F. Schumacher (1973) when he argued for a concern with appropriate scale, wholeness and connectedness.

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Thought Provoking Quotes

“Prosperity without growth”

“For young people today, obtaining educational qualifications is a necessary stepping stone for social mobility”

“Commuting can kill communities”

“It is vital for our success that we create communities which provide new homes in the right place, of the right type and which contribute to reducing energy demand and impact on the environment”



Thought Provoking Quotes

“It's this simple: wind farms the size of London, or safe, clean nuclear plants”

“Around one fifth of all the UK's greenhouse gas emissions are from the food system”

“Many Scots drive to work without being aware of the alternatives”

“The priority has to be waste prevention”



Climate Change Stats

- Recently, Scotland's emissions have decreased slightly, due largely to the decline in heavy industry. Energy and transport emissions, that account for over 1/2 of Scotland's emissions, are increasing.
- Climate Change Bill for Scotland- 50% lower emissions by 2030
- Since 1914 average temperatures in Scotland have risen by 0.5°C

“Sectors responsible for Scotland's greenhouse emissions: power stations (26%), road transport (18%), heating homes (14%), agriculture (23%), industrial/commercial (23%).”



Energy Issues to Consider

Making Non-Renewables cleaner *vs.* expanding
Renewables

Small Scale renewables attached to individual buildings
vs. District wide systems (i.e. District heating)

The viability of Renewables *vs.* the potential for
Nuclear Energy



Energy Quickfacts

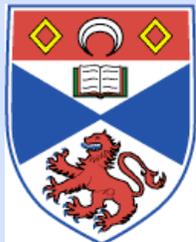
Type	Advantages	Drawback
Wind	Abundant Resource/highly developed technology	More expensive/unsightly
Wave	Potential for Scotland to become a world leader/ abundant resource	New technology
Solar	Easily used to directly heat buildings	Expensive for residential implementation, but getting more affordable
Hydro	Existing technology/can be implemented in small scale for residential use by diverting small section of river	Concern over damage to ecosystems
Nuclear	Clean, Emissions free	Concern over security/ waste disposal/health implications



Food Current Issues

The key for food production/diversity is to provide enough good quality food, while balancing environmental, economic and social factors.

Global food Competition	Products from developing countries are oftentimes less expensive than from the U.K., despite shipping costs
Local vs. Imported Food	20% of emissions in the UK are from the food system
Rising Food Prices	Compared to 2005 maize will increase by 40%, wheat 20%, and rice 14% by 2016-17
Sustainable Farming Methods	Often, farmers still need to use pesticides to create an economically viable operation
Food Biodiversity	Animals bred for particular conditions are more difficult to keep healthy, leading to the use of antibiotics and climate controlled housing
Large scale farming	Release large amounts of air pollutants from large scale animal operations, putting workers at risk for severe and chronic health problems.



Water Quickfacts

- The demand for water will continue to rise in the developed world, 10% by 2025
- The west of Scotland is becoming wetter and the east dryer. This could cause distribution problems.
- Re-use of grey-water and storm-water is becoming increasingly important as areas try to conserve. It can be used in garden applications and to flush toilets
- Large-scale flooding is predicted to rise due to the increased temperatures and changing/irregular snowfall patterns



Transport Quickfacts



Type	Advantages	Drawbacks
Car Sharing	Potential to reduce traffic dramatically	Seen as inconvenient, best for those who drive less than 4000 miles/year
Electric Cars	Rapidly growing technology/could cut carbon emissions especially if electricity is from renewable sources	Infrastructure must be in place for recharging
High Speed Rail	Provides viable alternative to flying	Not as environmentally friendly as commonly believed
Biofuels	Viable option, championed by GM in their Flexfuel Vehicles,	No processing plants for rapeseed exist in Scotland
Congestion Charges	Effectively discourages people from driving into City Centres	Resistance from constituency
Bus Rapid Transit	Easier to implement than subway/trams but provides similar benefits	Some infrastructure changes and investment needed
Bicycle Sharing	Schemes in France are effective in reducing congestion/convenient for users	Difficult to fund/implement on a large scale

Transport Quickfacts

- Effects of hypothetically removing all traffic from Scotland's roads during the peak commuting hours in the morning:
 - 34% decrease in Carbon Monoxide emissions
 - 21% decrease in CO2 emissions
- Need to 'incentivise' public transport: "In real terms the cost of motoring has fallen by 10% over the last 25 years while average bus and rail fares have risen by 40%."
- Current public transit systems are effective in urban areas but cannot be implemented in rural areas. Instead, it is important to consider ways in which these rural areas can be connected via on demand services (call-for-a-ride minibuses) and expanded standard bus routes.



Waste Quickfacts

Type	Advantages	Issues
Recycling	Effective strategy to reduce volume of rubbish	Still relatively low recycling rates/ inadequate processing facilities
Incineration	Can reduce amount of rubbish/provide fuel to produce energy	May emit more carbon than burning fossil fuels
Landfill	Convenience	Large source of methane, which is far more damaging to the atmosphere than CO ₂



Waste Quickfacts

- Important to make recycling more convenient for people through country-wide roadside collection
- More waste needs to be separated and recycled such as: textile, wood, and other organics

Note on Consumption: If everyone on the planet consumed as much as the average Scot, an additional 1.8 Earths would be required to support global resource consumption.



Homeworking Quickfacts

Effect of new Technology	Technology such as video-conferencing, internet, fax and high speed broadband have increased the ease of working from home
Company Benefits	Those who work from home are more productive and work more hours
Drawbacks	Can leave workers feeling tied to their work/ blurring the line between home and work

