Scottish Environment LINK

Sustainable Land Use Case Studies

Summary

- Scotland needs an ambitious and forward thinking Land Use Strategy which sets out a long term vision for sustainable land use and how to achieve it.
- The Scottish Government's Land Use Strategy must cover rural, coastal and urban land. It must recognise the increasing pressures on our land resources and the conflicts that can occur between users, and promote win-win solutions.
- LINK's case studies demonstrate such win-win solutions – showing what multi-functional land use can look like and the benefits it can provide for the economy, society and the environment.

Introduction

Scotland's land is used in a huge variety of ways and provides a large number of benefits, from food and fuel to wildlife and well-being. The need to get more from our limited land resources has increased in recent years and there is concern that this will lead to further environmental impact. Climate change adds another dangerous pressure.

A requirement of the Climate Change (Scotland) Act 2009 is that the Scottish Government produces a Land Use Strategy (LUS) by March 2011. It must set out government objectives for sustainable land use and policies to achieve this.

Sustainable Land Use

The LUS is a real opportunity to tackle climate change and deliver other public objectives. It has the potential to support landscape and wildlife protection, to ensure more co-ordinated planning and delivery between agencies, to reward multi-benefit land use and to resolve conflicts between different land uses. LINK set out its vision for the LUS in its report 'Living with the Land'[1]. It recommended that the LUS must have a long-term vision, strong principles, clear definitions and as broad a scope as possible. Critically, it needs to be based on the internationally-accepted definition of sustainable development, in which environmental and social goals genuinely have equal status to economic ones.

Case Studies

LINK's Case Studies show what sustainable land use can look like on the ground. They demonstrate how it has been achieved through planning and partnership working and how multiple benefits from land can be realised. The case studies highlight approaches to land use and management that can be applied much more widely in Scotland and demonstrate what can be achieved through more integrated and different ways of working.

[1] LINK, Living with the Land – Proposals for Scotland's First Sustainable Land Use Strategy, http://www.scotlink.org/files/publication/LINKReports/LINKReportLivingwithLand.pdf

Case Studies – Common Themes and Lessons Learnt

Themes and Lessons	Case study reference
Multiple benefits • Land management can be adapted to deliver multiple benefits rather than single outcomes.	Ben Lomond Corrour Tarland
Strategic direction • A strategic approach is needed to maximise synergies from land use and to guide tough decision-making.	Nigg Bay Freiburg Slateford Green
Sufficient scale • Land management initiatives need to be of sufficiently large scale to achieve multiple benefits.	Corrour Dalriada Ben Lomond
Longevity • Initiatives need a clear vision and to be sufficiently long-term to realise benefits and ensure their continuation.	Isle of Bute Strathaird Nigg Bay
Community engagement • Community buy-in and involvement is essential for the long-term sustainability of outcomes.	Strathaird Dalriada Tarland
Funding • Initiatives need designing beyond the life of, often short-term, funding to ensure sustainability in the long term. • Not all areas can or will secure large scale funding and therefore low-cost/win-win solutions are needed.	Isle of Bute Dalriada Royal Edinburgh Hospital Nigg Bay
Expert support • External support and expertise is important to achieving the desired aims and needs to be built in to project design. • Facilitation is a specialist skill and is important to encourage and achieve community buy-in and involvement.	Dalriada Strathaird Tarland Corrour
Partnership • By working together, organisations with differing specific interests and skills can achieve common aims.	Isle of Bute Ben Lomond Dalriada
Benefits from private and public land • Private land can deliver valuable public benefits. • Land owned by public bodies should be used sustainably, to benefit local communities and the environment.	Corrour Royal Edinburgh Hospital Tarland
Planning • Planning processes must be adapted to promote environmental innovations and technology, and aim for multiple benefits in the long-term from urban land.	Freiburg Slateford Green Royal Edinburgh Hospital
Learning lessons • There is no need to 'reinvent the wheel'. Experiences and lessons learned should be shared and replicated.	Isle of Bute Freiburg Royal Edinburgh Hospital

For more information

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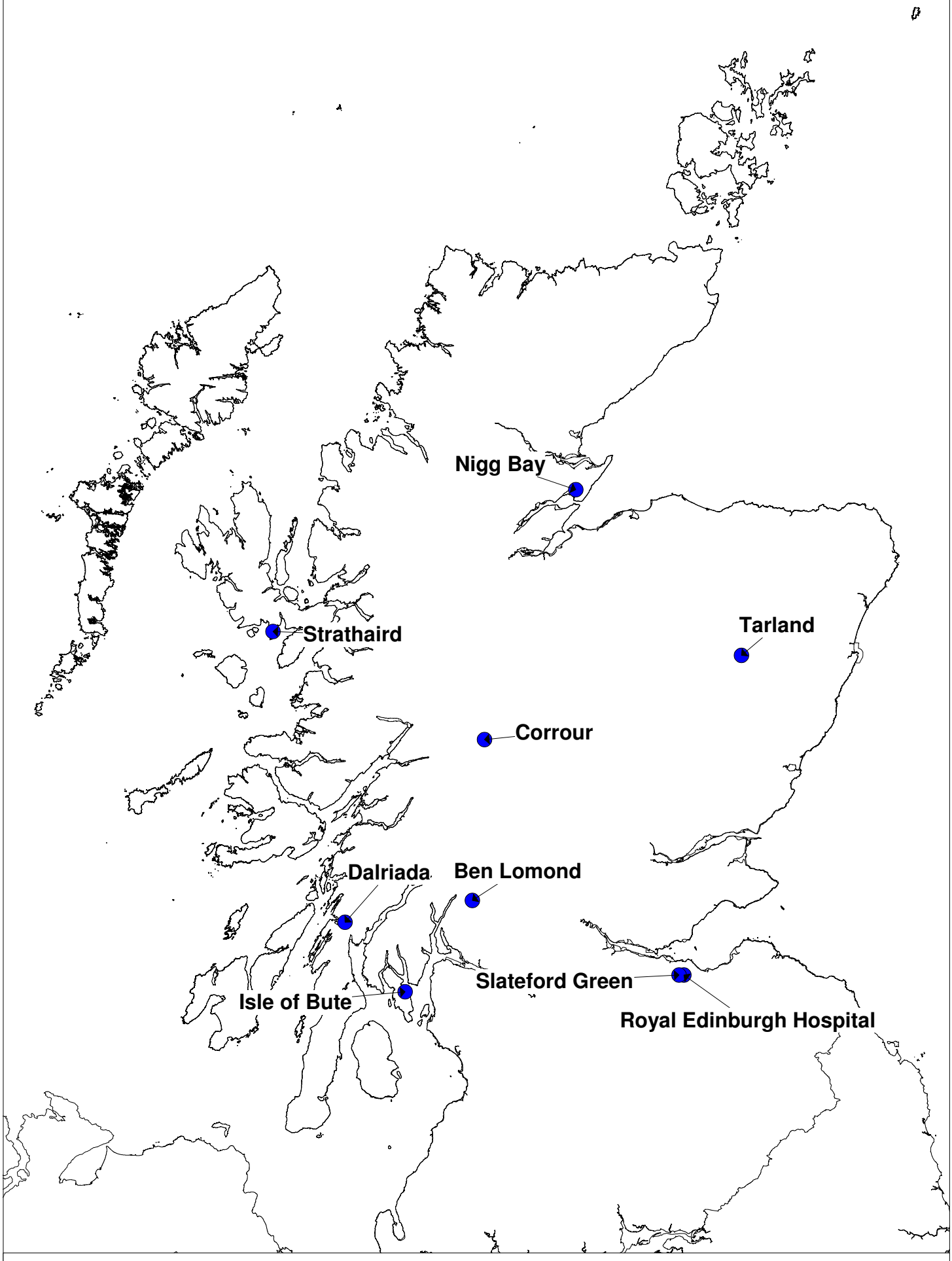
LINK

Case study locations in Scotland



Sustainable Land Use Case Study

Ben Lomond

Developing a sustainable multi-use mountainscape

Introduction

Situated on the east side of Loch Lomond, Ben Lomond, owned and managed by the National Trust for Scotland, extends to 2173 ha, and includes the summits of Ben Lomond and Ptarmigan to the North, and Beinn Uird to the South. The area is part of the Ben Lomond National Memorial Park (BLNMP), which is managed in partnership with Forestry Commission Scotland (FCS) and the Scottish Government.

A large part of the area is a SSSI, designated for its full range of upland habitats from low to high altitude. Ben Lomond also lies within the Loch Lomond and The Trossachs National Park (LLTNP), the Loch Lomond National Scenic Area (NSA) and Loch Lomond Environmentally Sensitive Area (ESA). Most of the NTS property is used for hill grazing and is let to a farm tenant based at Blairvockie Farm. Ben Lomond attracts more than 30,000 walkers a year, with many thousands more enjoying its well-known outline.

Land use benefits

Ben Lomond has traditionally been managed for grazing and forestry as well as allowing public access. NTS now manages the land as a model of integrated conservation management, where natural and cultural heritage, socio-economic and visitor access interests are balanced, and linked with the interests of partner bodies. Integrated management will multiply the benefits from the land, including biodiversity, landscape, access, carbon storage, heritage conservation, timber resources, and food, in the form of livestock.

Achievements

- **Footpaths & Access:** Ben Lomond is one of the busiest hill walking destinations in Scotland and as a result footpath maintenance is important on more than 10km of paths. The average width of the main path has been reduced from 15m to 1.5m, and the previously widely eroded scar is now largely regenerated. A new low level loop walk gives excellent access and education opportunities to see locally important archaeological sites.

- **Biodiversity:** NTS, in partnership with the tenant farmer, has halved sheep numbers on the estate and increased numbers of Galloway cattle in order to favour habitat conservation, whilst still enabling the independent farm tenancy business to continue. Grazing reductions have led to the recovery of wild flower species and wet meadow habitat, and has ensured that upland heath habitats, covering over 50% of the property, are now in a process of gradual recovery rather than decline. This benefits the locally rare black grouse and other species.
- **Carbon storage:** In 2008/09 NTS raised the water table level on 35ha of blanket bog, by damming over 70 major muir grips (drains) with several hundred hand-built peat dams. *Sphagnum* moss is already colonising the still pools of water created in this process. Blanket bog restoration at Ben Lomond will benefit a range of wildlife, including black grouse, improve water quality coming from the hill and protect the carbon stored in the peat.
- **Woodland and Forestry:** Fenced enclosures erected in 1990 and 1998 have expanded, or are in the process of expanding, woodland cover on the lower to mid-slopes - more than doubling the original 29 hectares of woodland present on the ground, a good proportion at high altitude (250m to 400m). Habitat restoration work on Trust ground has also been greatly enhanced by the work of neighbouring FCS owned and managed lower slopes. Here large tracts of plantation spruce have been harvested, making way for re-establishment of woodlands, natural to the area, through planting and natural regeneration.

In conclusion

The best practice land management at Ben Lomond demonstrates a balanced approach to achieving a sustainable landscape which delivers excellent access, commercial land use, develops historical understanding, promotes biodiversity and attempts woodland restoration. The Scottish Government's Land Use Strategy must encourage this approach on all of Scotland's mountains. To do this it needs to bring together ecosystems services principles, High Nature Value farming objectives, SRDP funding, local knowledge and partnership development. More of Scotland's upland areas need to be managed in this way in order to achieve multiple benefits from land and to maximise 'win wins' for Scotland's environment, economy and people.

For more information

Website: http://www.nts.org.uk/Property/11/
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Author: John Campbell, NTS
Date: May 2010

Sustainable Land Use Case Study

Corrour Estate

Biodiversity and wild land on a remote upland estate

Introduction

The Corrour Estate is a 20,000 ha privately owned estate in the Highlands. It lies to the east of Fort William in Lochaber. The estate owner bought the traditional deer stalking estate 10 years ago and wishes to convert it into a sustainable estate. *"We want to protect and enhance Corrour's natural heritage for future generations. The land has an intrinsic value as a wilderness and provides social benefits. We will manage Corrour holistically and sustainably, promoting biodiversity and beauty, and using resources responsibly. This does not mean restoring Corrour to any particular historic state, but rather allowing the natural processes to regenerate healthy ecosystems by controlling and removing damaging impacts. We take advice from the John Muir Trust, and share their vision for caring for the wild places of Scotland. We hope our strategy will become a model for other Highland estates"* – The Corrour Estate.

The Corrour estate is working in partnership with John Muir Trust (JMT).

Land use benefits

Corrour is adopting a holistic approach to protecting the land and is addressing the social and environmental impacts of all its activities on the estate.

It aims to realise and optimise a number of benefits from the land use including:

- Biodiversity - habitat improvement through grazing reduction and re-structuring commercial woodland to native woodland.
- Timber and venison products
- Renewable energy - wood-fuel and hydroelectric power.
- Access and visitor management
- Landscape and wild land

Achievements

Corrour has demonstrated commitment to achieving its goal for conversion to a sustainable estate by developing and implementing a whole estate sustainability plan. This work is in its initial phase but so far has:

- Completed a biodiversity action plan

- Completed a three year deer management plan and a cull to reduce numbers
- Implemented a programme of habitat monitoring
- Developed its own brand venison processing facility and marketing enterprise
- Developed an energy plan, insulated housing stock, re-instated an old hydro scheme and is actively exploring new hydro schemes
- Developed a visitor management plan, renovated and built high quality tourist accommodation and achieved high occupancy levels.
- Implemented a fence removal plan and carried out deer management without fencing.

Corrour is not seeking a quick short-term fix or PR exercise. It has a long-term aim of integration of land management and implementation of sustainable estate management.

In conclusion

Large portions of Scotland's land and landscape is owned and managed through private estates. Estates have an important role to play in ensuring that landscapes and the ecosystem services they provide are protected, maintained and maximised. Corrour is an examplar of enlightened forward thinking estate management. More estates should be encouraged to produce and implement a whole estate management plan and to work with other organisations and Government to maximise multiple environmental benefits from private land.

For more information

Website: http://www.corrour.co.uk/content/default.asp, http://www.jmt.org/corrour-estate.asp

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Date:28/06/2010

Sustainable Land Use Case Study

Dalriada

A heritage-based landscape partnership in Argyll

Introduction

Dalriada is a 296km2 area of mid Argyll that includes North Knapdale, Kilmartin Glen as far north as Carnassarie Castle, the Crinan Canal Corridor and Kilmichael Glassary. It has a uniquely rich legacy of natural and built heritage, from Atlantic oakwoods and mires of international importance to the visible remains of thousands of years of human occupation.

The Dalriada Project was initiated in 2006 to coordinate a wide range of activities with the aim of protecting and enhancing natural and cultural heritage, and promoting access and enjoyment of the Dalriada area. The project has been funded by the Heritage Lottery Fund and a range of other partners including Forestry Commission Scotland, Scottish Natural Heritage, Argyll and Bute Council, Argyll and the Islands LEADER and Argyll and the Islands Enterprise.

Land use benefits

The Dalriada area now demonstrates an increase in benefits from the various land uses. These benefits include:

- Natural heritage, biodiversity and landscapes
- Built and cultural heritage
- Access to and enjoyment of the landscape, and tourism
- Education and community participation

Achievements

- **Access**: Peoples' enjoyment of Dariada has been enhanced through information and guidance which interprets what is experienced. Access within Dalriada has been improved through providing new leaflets, podcasts and trails. A cohesive and comprehensive interpretation plan has been adopted for the area.
- **Community involvement**: The project has trained numerous local volunteers in various activities and involved the community in planning to develop tourism

opportunities in Dalriada. Local people have been trained to recognise, appreciate and enhance their local heritage.

- **Ancient woodland restoration**: Dalriada holds 2368ha of ancient semi-natural woodland, an important but fragmented and at risk habitat. 268ha have been protected and restored through activities such as removal of non-native species including conifers.
- **Biodiversity**: 113ha of open habitats over 5 sites have been restored by introducing traditional grazing livestock. This grazing has provided ideal management to benefit key habitats and species. Land has been managed specifically for black grouse including work to create suitable lek (breeding) areas.
- **Historic landscape and archaeology**: The unique historical and cultural heritage of this area is reflected in the differing land uses. In partnership with Kilmartin Museum significant features have been surveyed, excavated and public awareness and understanding of them raised.

In conclusion

The landscape of Dalriada is a rich mixture of varied and important examples of heritage and culture, habitat and biodiversity. These occur within, and rely on the management of, a variety of land uses, especially farming and forestry. This project has trained local people in recognising the importance and value of all aspects of their local heritage. These new skills are enabling assets to be better marketed to the benefit of the local economy, through tourism initiatives. Land must be managed in ways that maximise the multiple benefits and public goods inherent in the landscape and by using approaches which value these. Involving the local community in planning and implementation is key to achieving this.

For more information

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Author: J Wordsworth, Archaeology Scotland
Date: 14th June 2010

Sustainable Land Use Case Study

Freiburg, Germany

An eco-town exemplar from Europe

Introduction

Freiburg is a historic city in the south-west corner of Germany. The city covers a gently undulating area of land covering 153.07 km^2. In 2008 the population of Freiburg was 219,655. It serves as an exemplar of good practice in sustainable urban planning with a level of excellence which cannot be matched in Scotland.

Strong partnerships between the local authority, the Mayor, the chief planner and most importantly the community have driven the town's environmental success. The eco-town concept started with the expansion of Freiburg through two new urban extensions, Vauban and Rieselfeld. Development was guided by the principles of good urban design and landscaping, with a large traffic free centre and a 3,000 km network of light rail, buses and urban railways.

Land use benefits

The urban landscape of Freiburg delivers benefits to climate change, health and wellbeing, wildlife and community engagement. The urban planning provides exemplary results and displays a clear focus on low energy development resulting in built environments that complies with the hierarchy of energy saving, energy efficiency and use of renewable sources of energy. In practice, this means that Freiburg offers:

- Small shops and community facilities scattered throughout residential areas.
- Community cooperatives which commission blocks of houses and help design and manage communal spaces.
- Primacy for pedestrians and cyclists, with car speeds kept below 15 mph and parking either away from the centres, or underground.
- High density housing which enables high quality public transport systems and walkable neighbourhoods.
- Housing designed to minimise energy consumption.
- A high proportion of land given over to nature.

Achievements

The City has sought to apply environmental thinking to everything it does. Achievements can be considered around the themes for the goals of Eco-towns:

- **Connectivity** – Rates of active and public transport have increased, with a corresponding decrease in car use, from 60% in 1976 to 34% in 2010.
- **Climate Change** – 10% of electricity consumed in the city comes from renewable energy sources. Energy consumption has been cut through insulation and careful siting of homes. Half of the energy is produced locally, doubling the overall efficiency from 40% to 80%, and enables waste heat to be reused through Combined Heat and Power. Small renewable energy producers are incentivised through funds obtained from taxing traditional energy suppliers.
- **Waste** - Waste has been reduced by a factor of six over 17 years through returnable packaging and recycling.
- **Community** - Communities were engaged from the start in the design and management of public spaces. Social housing is indistinguishable from other housing, and settlements have a very low turnover. Schools function as community hubs and are not isolated by walls and fences.
- **Character** – Planning has ensured a predominantly green landscape with communal public areas where children can play safely. None of the buildings are more than 12.5 metres high to keep them lower than the trees and to assist air circulation. Extensive use is made of balconies to give everyone private outdoor space.

In conclusion

There are few good examples of sustainable urban planning and development in Scotland but valuable lessons can be learned from other European countries. Freiburg shows the type of ambition needed and intends to continue to lead environmental policy and practice on eco-town planning and development in Europe. For example, it has a target to increase the proportion of renewable energy from solar power from 10% to 40%.

The Scottish Government must be bold and do more to follow the example of Freiburg when developing urban areas. It must use the Land Use Strategy and National Planning Framework to outline how this can be achieved.

For more information

This case study has been taken from: http://showcase.homesandcommunities.co.uk/
Photos: Courtesy of John Whitelegg
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Sustainable Land Use Case Study

Isle of Bute

A partnership approach to an island's heritage

Introduction

The Isle of Bute lies in the Firth of Clyde. In 2008 the 'Discover Bute' Landscape Partnership (DBLP) project was launched to enable residents, visitors and new audiences to discover Bute by increasing the benefits they receive from their interaction with the island, and its landscape and heritage.

DBLP covers the whole island, will run for 4 years and is a partnership of many groups and individuals who share the vision and intend to work together with the wider community to make the project a success and turn ideas into practical projects on the ground.

Land use benefits

Through the project the aim is that Bute can enhance visitors' and residents' experiences of the landscape through maximising what the land provides through:

- Adventure, intellectual enquiry and education;
- Direct involvement in the conservation and enhancement of the natural and built heritage;
- The distinctive features of the landscape of Bute - managed for future generations;
- Access, with emphasis on walkers, cyclists and those with limited mobility.

Achievements

DBLP has worked alongside the existing land uses of the island (mainly farming) to conserve key features of Bute's heritage, landscape and biodiversity in a sustainable way. The project works closely with the community and operates a series of programmes:

- Hedgerows, Trees & Small Woodlands
- Stone Walls
- Small Features & Boundaries

- Heritage Sites & Access
- Audience Development & Training

These activities have already enhanced the condition of the heritage, landscape and environment of Bute, as well increasing access for visitors and locals. Importantly it set in place the skills and commitment of the local community towards maintaining the island's landscape. In the longer term these will boost the local economy and set in place more sustainable management of the Bute landscape.

In conclusion

Learning from previous schemes such as Nadair and the Dalriada Project, the DBLP has shown the importance of community engagement in developing Landscape Partnership Schemes. This is vital for the long term success of these schemes beyond the limits of their project funding and to enable local communities to gain ownership of the scheme objectives. This is being mirrored in the approaches undertaken under new projects such as Loch Lomond and National Park Community Partnership Scheme, and the Scapa Flow and Ochils Landscape Partnership.

Partners include:

- Bute Conservation Trust (Lead Partner)
- Argyll & Bute Council
- Argyll Training
- All Bute Schools
- Bute Community Council
- Bute Connections
- Bute Healthy Living Initiative
- Bute Marketing Group
- Buteshire Natural History Society
- Bute Sons and Daughters Bute Tale Spinners
- Cal Mac
- Community Groups: play schemes, Phoenix Group, Boy's and Girl's clubs Dry Stone Walling Association
- The Farm Environment Ltd
- Glasgow Archaeological Society
- Glasgow University
- Heritage Lottery Fund
- HIE
- Historic Scotland
- LEADER
- Mount Stuart Trust
- National Museums Scotland
- RCAHMS
- RSPB
- Scottish Story Telling Centre
- SNH
- Strathclyde Police
- West Coast Motors

For more information

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Date: 14th June 2010

Sustainable Land Use Case Study

Nigg Bay

Managed coastal realignment on the Cromarty Firth

Scottish Environment LINK

Andy Hay (rspb-images.com)

Introduction

Nigg Bay is an extensive area of mudflat, saltmarsh and wet grassland on the Cromarty Firth. It is an area of international importance for migratory bird species, such as bar-tailed godwits and knot.

A combination of natural processes and climate change are causing sea levels to rise and increase the risk of coastal flooding. Coastal flooding has the potential to cause millions of pounds of damage. Traditional 'hard' flood defences cost millions of pounds to maintain, this cost rising as sea levels rise. In addition, as sea levels rise saltmarsh and mudflats are 'squeezed' against the sea wall presenting a serious loss of habitat for the important bird species. Saltmarsh dissipates wave energy but as it is squeezed against sea walls, it provides less protection to the walls, making existing sea walls less effective and increasingly costly to maintain.

RSPB Scotland has a reserve at Nigg Bay where it has trialled coastal realignment, with the support of Heritage Lottery Funding and Scottish Natural Heritage (SNH).

Land use benefits

The coastal realignment at Nigg Bay demonstrates an affordable and sustainable solution to the problem of sea level rise as a result of climate change, helping nature and society adapt to climate change impacts. Instead of costly hard engineered sea defences and loss of habitat it provides:

- Sustainable flood risk management
- Coastal wetland habitat for coastal bird species such as waders wading birds, ducks, geese & swans.
- Future opportunity for public access and recreation
- Future opportunity for livestock grazing on the saltmarsh

LINK

Achievements

The RSPB undertook Scotland's first coastal realignment project at Nigg Bay in 2003 when the seawall was breached in two places. The 25 ha site had been used for rough grazing and had only received small-scale drainage.

Results of the realignment for biodiversity have been good, with the habitat returning more swiftly than expected. The site now holds up to 2,000 of the 10,000 or so birds that winter in the whole of Nigg Bay (depending on tides & weather). Ten species of wading birds and nine species of wildfowl have been recorded using the site.

Around 21ha of saltmarsh and mudflat has been created adding 12% more saltmarsh to Nigg Bay. Vegetation and invertebrate monitoring shows that a good saltmarsh flora has developed, and that the site now holds invertebrates of a size valuable as wading bird food. The realignment site shows the full range of saltmarsh zones, from grassland, through upper, mid and lower saltmarsh communities to mudflats. Repeat monitoring continues but observation of the birds themselves leads the RSPB to expect that the vegetation and invertebrates will have further developed and increased in abundance.

In conclusion

Scotland will have to do more managed coastal realignment, and quickly, if we are to keep pace with the rate of intertidal habitat loss along some sections of our coasts and the rising cost of maintaining the existing sea defences. Managed realignment will help us adapt to climate change in a sustainable way but may mean the loss of some agricultural land. We need a strategic approach to coastal squeeze, flood risk management and food production delivered through the Scottish Government's Land Use Strategy.

For more information

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Date: May 2010

Sustainable Land Use Case Study

Royal Edinburgh Hospital Community Gardens

Health benefits from community cultivation

Scottish Environment LINK

Introduction

There is a huge waiting list for allotments in Edinburgh; approx. 2600 people were on the list with a 5-10 year wait, at the time of writing. A renewed desire to 'grow your own' and a lack of land within the urban, built environment is causing this. The Scottish Allotments and Gardens Society (SAGS) and the Federation of City Farms and Community Gardens (FCFCG) are working with NHS Lothian to make NHS land available for community cultivation – rather than traditional allotments. Community engagement and a collaborative approach are essential to this initiative as the health and wellbeing benefits of community gardening are central to NHS Lothian's mission.

A pilot project in the grounds of the Royal Edinburgh Hospital is turning 15 acres of overgrown and unused land into 30 community gardens within the next 2-3 years. A steering group for the Royal Edinburgh Hospital Community Gardens (REHCG) consists of NHS Lothian, SAGS and FCFCG with Cyrenians engaged as a management organisation, responsible for day to day running. Cyrenians have formed a 'Partnership Development Group' including Transition Towns movement, local community groups, the Volunteer Centre and a Housing Association for people with learning difficulties. Strong links are being developed with staff and patients at the psychiatric hospital, and with existing gardening projects working in the grounds and orchard (Artlink and Occupational Therapy Horticultural Unit).

The pilot is moving forward on shoe-string budget with 'seedcorn' funding from NHS Lothian, and contributions from Cyrenians, and Community Food and Health Scotland. Other sources of funding are being sought.

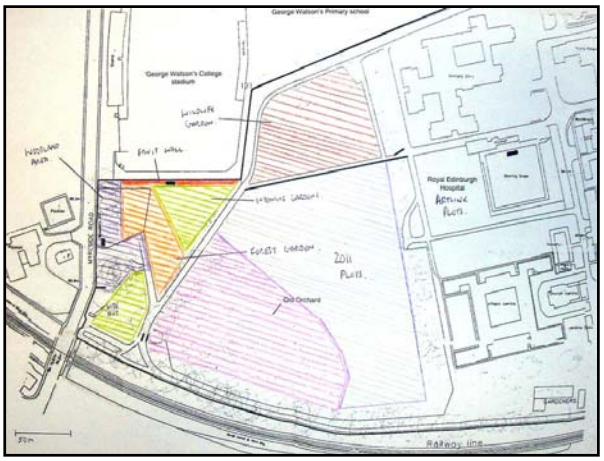
Land use benefits

The unused NHS land within the urban environment has the potential to provide a number of benefits to the community

- Involvement in the planning, development and operation of the REHCG from the local community, the hospital community and groups working with people who are normally excluded.

- Reducing health inequalities
- Increasing opportunities to Grow Your Own fresh fruit and vegetables by transforming unused land

Achievements



- **Volunteer involvement**: 2,000 volunteer hours since Jan 2010 including individual regular helpers and team work days for specific projects from community organizations and corporate groups; volunteer manual and policies have been developed
- **Site development**: A large derelict area has been cleared; infrastructure established; a series of raised beds put in place; plans for a forest garden area laid out; and a field area cultivated.
- **Community Engagement**: 40 people attended a public meeting in February 2010, facilitated by an expert in community consultation from the University of Edinburgh. Strong support was expressed for a collaborative approach rather than people wanting individual plots.
- **Publicity:** The project has created and managed a website achieving nearly 1,000 hits a month; created branding (using a pro-bono designer) and signage; produced leaflets; and is being filmed for Beechgrove Garden in August 2010
- **Political support:** Phase 1 of the development was opened by the Minister for Public Health, Shona Robison MSP, on May 18

In conclusion

REHCG is a pilot project, with a strong emphasis on learning, evidence gathering and recording. FCFCG and SAGS are unaware of any similar projects in existence using NHS land. REHCG found that it can be very difficult to negotiate leases with public landowners and therefore, it is hoped that the success of this project will encourage other NHS boards to follow suit, using the REHCG as a template. This catalyst effect is already starting - NHS Lothian has other sites that could be used for community gardening, and is currently investigating a site at the Astley Ainslee Hospital in Edinburgh.

The Land Use Strategy should require Government and public bodies to identify opportunities to develop green space develop green space in urban landscapes for the benefit of communities, wildlife and a sustainable environment.

For more information

Website: http://royaledinburghcommunitygardens.wordpress.com/
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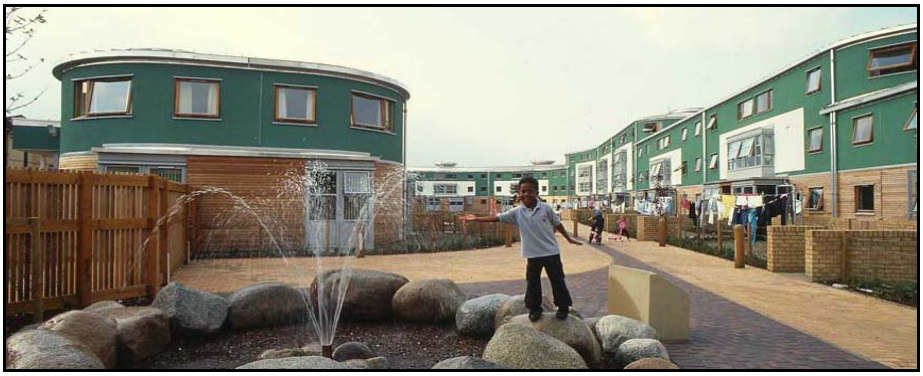
Author: Helen Pank, Federation of City Farms and Community Gardens
Date: 17/05/10

Sustainable Land Use Case Study

Slateford Green

Sustainable housing in the capital city



Introduction

Slateford Green is a housing development completed in 2000. It is located some 2 miles west of Edinburgh city centre in Gorgie/Dalry, a traditional tenemental 'mixed use' inner city neighbourhood. The new neighbourhood sits on a former railway goods yard of some 6ha which in 1995 was due to be 'conventionally' developed. However, in the absence of business proposals, it was chosen as a site for a sustainable housing 'ideas' competition project launched by Canmore Housing Association Ltd in conjunction with an associate company, Malcolm Homes Ltd. The proposals were supported and funding was provided by Communities Scotland and private sources. The project and its management process addressed:

- Strategic priorities for the development of 'brownfield' rather than 'greenfield' land and for affordable housing taking advantage of its location to support the area's local shops, amenities, schools and good public transport links.
- Concern for considerable community involvement in the management of the project through local representation on the Association, local consultation exercises and in selection of the competition winner. Lothian Region and the City of Edinburgh Councils later became involved in helping to develop the 'car free' aspects.

Land use benefits

The following multiple benefits have been realised from the urban development at Slateford Green:

- Affordable housing, contributing to inner city regeneration and the reuse of derelict land
- A more balanced community and a range of house sizes
- Sustainable housing offering a "uniquely blended application of leading innovative ideas, market products, new technology, energy efficiency and ecologically sound concepts and practices" (Development Brief). This includes reduced GHG emissions, biodiversity and sustainable water treatment.

11418 DunCanHA.jpg

Achievements

- Slateford Green contains 120 flats offering a mix of tenures, sizes and types for a range of housing needs. Many flats have been constructed to allow for later conversion for wheel chair use and other needs. The development also has community facilities and an internet cafe.
- High standards of energy efficiency, use of passive solar warming and stack ventilation effects, a district heating system and sustainable/recycled building materials are included in the development. Originally, it had been hoped that the heating system could use waste heat from an adjacent distillery but a 20-year agreement could not be reached – though the distillery closed down some 9 years later some estimate the extra capital cost would have been repaid in 7 years. The Energy Savings Trust reported in 2005 that the heating system achieved annual household fuel savings of £250, with commensurate emissions savings.
- A sustainable urban drainage system with retention ponds as part of the landscaping (and air cooling) is incorporated though a planned full grey water system was not approved.
- Tenant surveys demonstrate considerable satisfaction. They also showed improvements could be made to recycling so additional facilities at each stair have been installed. Composting is also made possible on a small area of the site given over to allotments.
- Slateford Green was planned as a car free development from the outset - car ownership of association households is low. There are facilities for Edinburgh's City Car Club. Former rail lines were converted to cycle & walk ways and continue the principles of 'barrier free' house design out into the wider site.

In conclusion

Though completed 10 years ago, Slateford Green remains an exemplar in meeting the objectives of sustainable house design. Cost and barriers in the planning process hindered some innovations and were not incorporated into the final design, for example, photovoltaics, grey-water treatment and the use of waste heat from the distillery. These innovations and the ones now benefiting the residents of Slateford Green need to be more broadly applied within mainstream housing developments. Planning processes must be adapted to promote environmental technology and aim for multiple benefits in the long-term from urban land.

For more information

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Sustainable Land Use Case Study

Strathaird

Fuel for the future on Skye

Introduction

Bounded by the sea, Loch Slapin and the Cuillin ridge, Strathaird forms the area either side of the road as you descend to Elgol, on the Isle of Skye. It covers almost 6500 hectares of land, including Bla Bheinn and the route down to the beautiful Camasunary beach. Strathaird has various designations including National Scenic Area, Special Protection Area, and several Sites of Special Scientific Interest. In addition to its exhilarating mountain scenery, the area holds archaeological significance, has a rich plant and animal life, and varied geology.

Central to the work of the John Muir Trust, as owners of Strathaird and its other Skye estates, is integrating conservation with crofting, forestry and other uses of the land. Some 167 hectares of commercial woodland are currently managed by the Trust and these are being restructured, including felling of tranches of non-native Sitka Spruce and Lodgepole, with a wood fuel business developing around this, supplying firewood locally. The Trust has well established links with the local community association and grazing committee and, more recently, the Trust has worked with the wider community. Meetings have been held to discuss how woodland management can help and support the local community to move towards a low carbon future.

Land use benefits

Management of the land at Strathaird takes an integrated approach to all land uses and aims to achieve the following multiple benefits from the land:

- Wood fuel production alongside native woodland regeneration
- Food production through crofting
- Biodiversity conservation
- Environmental enhancement e.g. workparties' litter collection on Strathaird's coastline
- Access and environmental protection through footpath management

Achievements

Adapting the land use at Strathaird has included work to reconfigure commercial forestry and to regenerate natural woodland, as part of the Isle of Skye Coastal

Woodland Scheme. This involved developing plans that meet local needs, such as for a long-term sustainable wood fuel supply. In addition, a sustainable and local supply of wood for fuel would enable the community to reduce its carbon footprint while supporting the local environment.

A wood fuel feasibility study was carried out and a community event held to look at what is involved in converting to wood as a fuel. The local school and parent council have lent support to these activities and the John Muir Trust has established a forest plan that meets a range of needs, including, wood as fuel, increasing biodiversity and addressing recreational aims. As a result of these discussions, the long-term forest plan for Strathaird has incorporated local needs, recognising that people live on the land too. Crofters have engaged with discussions about planting on crofting land and people are actively considering switching to wood for fuel.

The discussions around wood as fuel have led people to look at other issues relating to long-term sustainability, such as energy efficiency measures and how to encourage tourism without destroying the environment. The John Muir Trust has started undertaking energy efficiency measures in its own properties, including one in residential use. It aims to use the properties to demonstrate the working and benefits of wood fuel boiler options. The wood fuel initiative is being developed to ensure priority goes to supplying local people who convert to wood as fuel.

In conclusion

Scotland has a great opportunity to utilise its woodland resources to increase its proportion of energy coming from renewable sources and, in addition, boost employment and biodiversity. Government must encourage and incentivise wood-fuel and sustainable woodland management in order to realise this potential. Particular emphasis should be given to the development of community scale schemes and helping rural communities reduce their carbon footprint. Such schemes and communities often need long-term, expert support and facilitation to ensure that they make the most of opportunities.

For more information

Websites: www.jmtcommunities.blogspot.com
www.jmt.org/skye-estates.asp
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Date: 24 June 2010

Sustainable Land Use Case Study

Tarland Catchment

Sustainable water management on a catchment scale

Introduction

Tarland catchment in Aberdeenshire is a 7000ha, predominantly agricultural catchment. The Tarland Burn is a tributary of the River Dee but suffers from diffuse pollution as a result of the surrounding land management. A number of initiatives in the catchment have aimed to address this issue in response to the requirements of the EU Water Framework Directive and to increase the number of other environmental, economic and social benefits from the land use.

Tarland catchment was included in the 3 Dee Vision Project funded by the European Interreg IIIB North Sea Programme. This partnership project worked on a number of issues including flood alleviation, biodiversity enhancement and wastewater treatment. The Tarland Catchment Initiative led by the Macaulay Institute continues to work to improve water quality and riparian habitats in the Tarland catchment through improved land management.

Land use benefits

The range of initiatives in the catchment aimed to increase the benefits from the land including:

- Improved chemical and biological water quality in Tarland Burn
- Habitat management for biodiversity including enhanced wetland habitat for wading birds and wintering wildfowl
- Flood risk management
- Adaptation to the impacts of climate change
- Community engagement and environmental education opportunities

Achievements

One example of the success seen in the Tarland Catchment is the improvement to the Tarland Waste Water Treatement Works, operated by Scottish Water. This work demonstrates how carefully planning and stakeholder engagment can ensure a sustainable solution and multiple benefits from the management of land.

Tarland's wastewater was previously treated by settlement before being discharged over grass plots adjacent to the treatment works for biological treatment. These grass plots became a valuable habitat for wetland birds as the low lying vegetation and standing water provided important feeding sites. The treated water eventually found its way to the Tarland Burn.

Scottish Water Solution's £2M development of the water treatment works was a response to growth of Tarland village outstripping the capacity of the works. The new treatment process planned to discharge higher quality effluent directly into the burn but this would have resulted in loss of the wetland habitat and its wildlife. Discussion with the RSPB, MacRobert Estate, SNH, Aberdeenshire Council and FWAG led to a more sustainable solution and integrated approach to the management of the land, and the continued discharge of effluent onto the grass plots. This has retained valuable year-round habitat for birds. Each year since completion in 2006, the plot has held 15-20 pairs of breeding waders and ducks, with a further 15-20 pairs nesting nearby and using the area. Five pairs of redshank breed here most years. In winter, tens or hundreds of ducks, geese and gulls are regularly found.

In 2007, a community bird hide was constructed by MacRobert Estate and the 3 Dee Vision project, with support from RSPB Scotland. The hide is now a valuable local resource, maintained by Tarland residents. Management of the site will continue to be planned and organised by a consortium of the estate, local residents and RSPB Scotland. There are also plans to expand the habitat area.

In conclusion

The ongoing work in the Tarland Catchment shows the need for scientists, regulators, agencies, local farmers and the community to work together to seek the best solutions to improving land management for the benefit of water resources and wildlife. The example of Scottish Water's improvement works demonstrated the need for public bodies to discharge their duties in the most sustainable way. This will become more critical in response to the impacts of climate change and increased pressure on land use. Community and partnership working is essential in order to ensure that sustainable solutions are implemented when development takes place.

For more information

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