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Heritage Lottery Fund



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Executive Summary

The Sustainable Secondary Schools Project (SSSP) involved six secondary schools and nine partner organisations in an openly-structured programme that aimed to explore the ways in which a number of Scottish secondary schools could engage with sustainable development education (SDE). The schools made progress to different degrees, with school stability as a major determinant: the schools facing major external or internal challenges made least progress.

Several managerial and pedagogical approaches were tried, with four emerging as having a short-term or long-term potential as a means of driving change towards SDE in secondary schools. The project was also challenging for the partner organisations, bringing to the fore issues particularly of capacity and of direction.

Overall the project has produced detailed information that will help to inform and support the development of SDE in the emerging 3–18 curriculum for Scottish schools as set out in *A Curriculum for Excellence* (Scottish Executive, 2004) and the ambition to develop in young people 'their capabilities as successful learners, confident individuals, responsible citizens and effective contributors to society'.

This report documents the project's activities and outcomes including detail of the management of the project itself, together with an account of school based activities.

The project was financially supported by the Heritage Lottery Fund. It is also known to them as 'Sustainable Development in Scottish Secondary Schools'.



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Sustainable Development

'The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations.'

For the UK Government and the Devolved Administrations, that goal will be pursued in an integrated way through a sustainable, innovative and productive economy that delivers high levels of employment, and a just society that promotes social inclusion, sustainable communities and personal well-being. This will be done in ways that protect and enhance the physical and natural environment, and use resources and energy as efficiently as possible.

Government must promote a clear understanding of, and commitment to, sustainable development so that all people can contribute to the overall goal through their individual decisions.

Similar objectives will inform all our international endeavours, with the UK actively promoting multilateral and sustainable solutions to today's most pressing environmental, economic and social problems. There is a clear obligation on more prosperous nations both to put their own house in order and to support other countries in the transition towards a more equitable and sustainable world.'

One future – different paths – The UK's shared framework for sustainable development (Defra, 2005)

Sustainable Development Education

'SDE is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come. It is about equipping individuals, communities, groups, businesses and government to live and act sustainably; as well as giving them understanding of the environmental, social and economic issues involved.'

The Holland Report (University of Exeter, 1998)

Background to the Project

In 1992, at the Rio de Janeiro Summit on Environment and Development, the UK Government signed up to Agenda 21 which highlighted the importance of education in achieving sustainable development (SD). This was reiterated in the Secretary of State's Scottish Strategy for Environmental Education (1995) which resulted in the setting up of an Education for Sustainable Development Group. Their paper, *The School – a Sustainable Community?* (March 1996), concluded that there are far-reaching implications for the introduction of SDE including, 'the way that teachers are trained and supported to create a context for successful learning ... The way that teachers manage classes in classrooms and the way that senior managers organise schools and their environments.'

Development of the Project

The idea for the project grew from a meeting held in 1996 to discuss a Scottish version of the Royal Society for the Protection of Birds' (RSPB) publication *Our World, Our Responsibility*. The meeting, attended by Grounds for Learning, RSPB, the Scottish Environmental Education

Council (SEEC), Scottish Natural Heritage (SNH), and the World Wide Fund for Nature (WWF) Scotland, agreed that the considerable progress being made in environmental education (the term most commonly used at that time) in primary schools was not matched in the secondary sector. There was a need to promote a whole-school approach to sustainability through a process-based 'package' targeting secondary schools, drawing on existing good practice and including staff development.

This was to be the first of many meetings of the 'partnership' with new partners brought in as the idea developed. WWF Scotland, with links in both environmental education and development education, met with the Scottish Forum for Development Education in Schools (SFDES) and encouraged them to become involved in the project. It provided a unique and innovative opportunity to develop a practical application of common understanding between the education, environment and development communities in Scotland, progressing recommendations made in Agenda 21. In the early stages the then Scottish Consultative Council on the Curriculum (SCCC) and the Scottish Office Education and Industry Department were viewed as key partners for the project but had no capacity to put time into its development.

The project was conceived in three phases:

- 1 A research phase to clarify the extent of progress on sustainability in secondary schools. This included a literature review, case study review, and research into perceived obstacles.
- 2 Action research.
- 3 Dissemination and implementation.

As the first phase, the Sustainable Schools Partnership (consisting of RSPB Scotland, SEEC, SFDES, SNH and WWF Scotland) commissioned research from the University of Stirling. The research, completed in April 1998, concluded that coverage of anything related to SDE in secondary schools in Scotland was sporadic and marginal to school concerns.

Completion of the research brought an opportunity to promote the proposal to a wider audience of local authorities to gauge their interest and recruit new partners. In November 1998 the Partnership (which by then also included the SCCC and Eco Schools Scotland (ESS)) held a well-attended seminar, organised jointly with the Convention of Scottish Local Authorities, and facilitated and funded by the partners. The research and seminar together provided a valuable means of testing and reviewing the original proposal and assisted in gaining support from funders. It was agreed that the Partnership should continue to seek funding for phase two (development with six pilot schools and their councils over two years) and phase three (dissemination and professional development). Following the seminar SCCC co-ordinated a starter paper that outlined a 'Rationale for Involvement' in the project for an education audience.

Funding

SEEC made an application on behalf of the Partnership to the Heritage Lottery Fund (HLF) which requires a lead body to accept financial and other responsibility. The subsequent demise of SEEC gave rise to lengthy discussions to determine a suitable managing agency.

Around the time that phase two of the project was initiated, SCCC was in the process of merging with the Scottish Council for Educational Technology to form Learning and Teaching Scotland (LT Scotland) and they agreed to take on this role.

In November 2000 the Partnership was informed that their application had been successful and in May 2001 a grant of £248,000, 53% of the estimated project cost, was awarded for a four-year programme (including the already completed research phase). With the offer of funding from HLF came the suggestion that representatives of the built environment should be included and so the Royal Incorporation of Architects in Scotland (RIAS), the Royal Town Planning Institution (RTPI) in Scotland and The Scottish Civic Trust (SCT) joined the partnership.

Additional cash funding for the project of £8,000 was provided by RSPB Scotland, £50,000 sourced from LT Scotland, £26,500 by SNH and £14,000 by WWF Scotland during phases two and three. All partners made offers of funding 'in-kind', based on contributions of staff time for project support and steering group meetings. Over the four years of the project this amounted to the equivalent of £95,400.

In 2004 a revised timescale for the project was approved. Phase two, originally planned to be completed before phase three, was now extended to overlap with the final part of the project.

Objectives of the Project

As stated in the funding application these were to:

- develop new strategies for teaching and learning to make SDE, linking the natural and cultural heritage, an integral part of school activity
- recruit and provide a support network and guidance for pilot schools
- identify future support needs to enable schools to achieve education consistent with SD
- ensure the project is effectively documented and made accessible to a wide audience
- enhance partnerships in the delivery of SDE in Scotland, encouraging consensus on what it means in theory and in practice.

Aims

The aims of the project, as defined at the introductory workshop for pilot schools held in June 2001, were to:

- provide advice on the scope of SDE
- describe its place in the curriculum
- outline its characteristics by working directly with schools to develop and test practical ideas
- demonstrate new ways of making SDE central to school life and an integral part of all school activities.

Management of the Project

The project was managed by a steering group made up of representatives of the partner organisations. Two school representatives were invited to join the steering group in March 2003. Within the steering group there was a management group responsible for strategic decisions. LT Scotland provided financial monitoring and administrative support, and liaised with the HLF. A project co-ordinator, managed by LT Scotland and directed by the steering group, worked with the steering group and pilot schools.

Partners

- Royal Society for the Protection of Birds, Scotland
- Scottish Natural Heritage
- World Wide Fund for Nature Scotland
- International Development Education Association of Scotland (IDEAS) (the IDEAS Schools Forum is the former SFDES)
- Eco Schools Scotland
- Learning and Teaching Scotland
- Royal Incorporation of Architects in Scotland
- Royal Town Planning Institute in Scotland
- Scottish Civic Trust

Selection of Pilot Schools

Local authorities throughout Scotland were approached in May 2000 about the possible inclusion of their schools in the project. Directors of education were asked to nominate a key contact and to advise the Partnership of schools that would be interested. By August 2000 expressions of interest had been received from more than 40 schools.

The 'Rationale for Involvement' was circulated in September 2000.

In March 2001, 42 schools were invited to apply for inclusion in the action research phase of the project. The initial research phase had indicated that the schools selected to participate in the pilot project should meet the following criteria:

- have recent involvement in implementing an initiative in SDE or one of its components (e.g. health education, environmental education, development education, school ethos)
- employ a diversity of starting points based on existing initiatives
- have strong links with the community
- be drawn from a range of locations and sizes across Scotland.

Participating schools were required to:

- initiate and develop a two year programme of change with the active support of their senior management team (SMT) and local authority
- identify an agreed programme of education and training suited to the development needs arising from involvement in the programme
- integrate SDE into the school's aims, policies and development plan
- develop appropriate indicators of success relevant to evaluation of the desired changes within and across the organisation
- participate in a process of dissemination and interpretation such that lessons learned and changes achieved could be communicated to other audiences.

Applications were received from 14 schools and, following visits to short listed schools, in June 2001 six were chosen as the pilot schools:

- Alford Academy, Aberdeenshire
- Braes High School, Falkirk
- Currie Community High School, Edinburgh
- Drummond Community High School, Edinburgh
- Fortrose Academy, Highland
- St Columba's High School, West Dunbartonshire.

Finance

At the time of their application, in addition to advice and support from the project co-ordinator and staff from the partner organisations, each school was offered the following for each of the planned two years of phase two of the project:

- Access to relevant consultants – up to £3000 in fees
- Networking with other pilot schools – up to £1000
- Production of resource materials – £1000
- Staff cover – £4000.

Staffing

Neither of the two original SCCC/LT Scotland permanent professional staff who were involved in the setting up of the project continued in post. The initial manager of phase two of the project, working within LT Scotland, was replaced in 2002. There were difficulties in recruiting a project co-ordinator at the start of the project and after initial interviews in May 2001 no candidate was selected. Temporary part-time staff acted until, in October 2001, a full-time co-ordinator was appointed for a fixed term until April 2004. This appointee resigned in January 2004 and was replaced, again on a part-time basis, by one of the earlier post holders.

Together Days

Seven events were organised to bring schools and partners together. The first was an introductory workshop in June 2001 when pilot schools met with partnership members to discuss the principles underpinning the project, and to share their past involvement with SD and their initial thoughts on potential areas for development.

Further meetings considered schools' project plans and partner support, networking opportunities and school representation on the steering group. There were opportunities for the pilot schools to report back on the work they had done and on the involvement of the partner organisations in their projects, to evaluate their achievements and reflect on future possibilities.

In November 2004 attention turned to the final project report and the format and timetable for the schools' dissemination events.

In addition, in April 2003 representatives from some of the schools and partner organisations attended a CPD weekend at Mar Lodge.

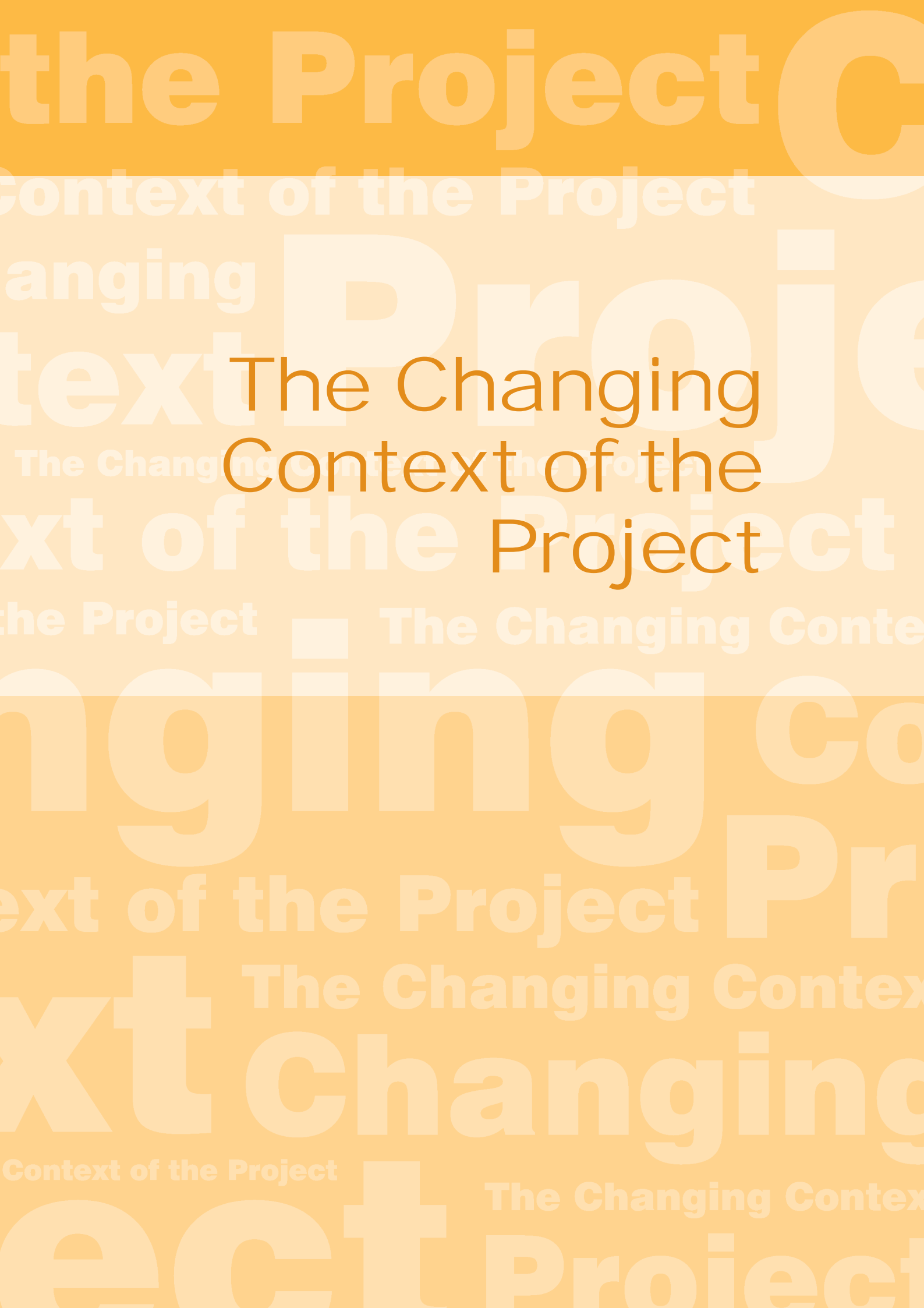
Monitoring and Evaluation

Schools were given an outline project plan to complete and submit at an early stage. The reporting framework was intended to ensure that schools could provide information in a way that allowed comparisons to be made across the project's activities. An attempt was made to devise evaluation criteria, milestones and indicators of success that would reflect the various approaches to the overall project.

Dissemination

During phase two, within the relevant local authorities, dissemination of information about the project and its development was largely through the activities undertaken by the schools' project co-ordinators.





The Changing Context of the Project

The Changing Context of the Project

There were significant changes in the status of SDE in schools during the life of the project. For example, the National Priorities in Education, introduced under the Standards in Scotland's Schools Act (2000), promote aspects of SD in National Priority Four: Values and Citizenship, and use participation in the ESS programme as a measure of performance.

National Policy on SDE

In 2001 *Living and learning in a time of change: Education for Sustainable Development* (LT Scotland, out of print) was published. At that time the only official guidance on SDE, it listed the key concepts on which SDE is founded:

- interdependence
- citizenship and stewardship
- needs and rights of future generations
- diversity
- quality of life
- sustainable change
- care and caution.

It also provided advice on how SDE can be promoted through the 5–14 curriculum, at 14–16 (Standard Grade) and through Higher Still.

The introduction and continued development of citizenship in schools, and the place given to SDE in *Education for Citizenship in Scotland: a paper for discussion and development* (LT Scotland, 2002) gives SDE a curricular place and a potential implementation mechanism absent in 1999 when the application for funding was made.

The Programme for Government (2003) commits the Scottish Executive to:

- emphasising citizenship, community involvement and environmental education throughout the school years
- developing curricular materials to promote environmental awareness
- ensuring that new schools demonstrate commitment to the highest design and environmental standards.

In *A Curriculum for Excellence* (November 2004) the Scottish Executive made its first clear commitments to SDE. In his response to the report of the Curriculum Review Group, the Minister for Education and Young People accepted the 'aspiration for all children and every young person . . . that they should be **successful learners, confident individuals, responsible citizens and effective contributors** to society and at work'.

The purpose of the 3–18 curriculum most relevant to SDE is ‘to enable all young people to become responsible citizens:

with	and able to
<ul style="list-style-type: none"> • respect for others • commitment to participate responsibly in political, economic, social and cultural life 	<ul style="list-style-type: none"> • develop knowledge and understanding of the world and Scotland’s place in it • understand different beliefs and cultures • make informed choices and decisions • evaluate environmental, scientific and technological issues • develop informed, ethical views of complex issues’.

The Minister’s response stated, ‘We will deliver new guidance on a reformed approach to education in S1 to S3 which will increase opportunities for challenge, choice and motivation, for implementation from 2007.

We need to address the long-standing problem of a lack of focus and motivation for many young people in the early part of their secondary schooling. *A Curriculum for Excellence* now defines purposes and is the basis for establishing much clearer outcomes for this stage of schooling. We will also address issues of progression and articulation between early and later secondary stages. We will do this by: [*inter alia*]

... ensuring that opportunities for in-depth activities which extend across and beyond subjects (for example, challenging projects, sustainable development, health promotion, and sports, arts, cultural, community and work-related activities) lie at the heart of the curriculum, not as add-ons’.

To date, Wales has made more progress in implementing SDE than Scotland, England or Northern Ireland. The Welsh Assembly has shown commitment to promoting SDE and global citizenship. In addition to national curriculum policy, guidance for inspectors on how to inspect and evaluate SDE in terms of learning and the sustainability of the school itself has been published.

The Role of SSSP

The change in status of SDE is reflected in the changing status of SSSP. In 2002 SSSP was approached by the Scottish Executive Education Department (SEED) to provide an advisory function on SDE. This culminated in the establishment, in May 2003, of the Sustainable Development Education Liaison Group (SDELG) with a remit to:

- co-ordinate and facilitate the promotion and development of SDE in primary and secondary schools
- provide a forum for organisations with an interest in SDE to express ideas and exchange experiences by encouraging networking and aiding communication
- build connections between SDE and other areas of the curriculum and school management
- identify good practice.

The commitment of £140k of funding and the creation of a post of SD Development Officer in LT Scotland have allayed earlier concerns that SDELG would have no significant influence on policy.

SDELG now consists of representatives of all the SSSP partner organisations, HM Inspectorate of Education, Forestry Commission Scotland and the Scottish Environment Protection Agency. The creation of this group represents a major development in the promotion of SDE in Scottish school education and gives SSSP a means of providing advice and support to the whole school education sector. Most significantly, it also gives SSSP access to all the means by which SEED and its agencies provide information to, and manage and influence the work of, secondary schools.

SDELG commissioned a research study of *Sustainable Development Education in England, Wales, Northern Ireland and Scotland* and a report was published in September 2004 (LT Scotland). The report identifies areas with the greatest potential for the development of SDE in the 5–14 curriculum, Standard Grade and other national qualifications.

That report formed the basis for a seminar in May 2005 in Edinburgh, to which representatives from the four UK jurisdictions were invited. It is now being followed up by a similar desk study of educational policy, curriculum, quality assurance and support in relation to SDE in ten countries worldwide.

The work plan of SDELG in 2005 and 2006 includes promoting and supporting policy development, the collection and dissemination of good practice, evaluation, and the provision of online resources.

Continuing Professional Development for Teachers in Scotland

The nature of planning and delivery of CPD in Scottish schools was changed in 2000 following the recommendations of the McCrone Report. For SSSP, the major consequence is that it is increasingly difficult for local authority education departments to direct teacher in-service training towards specific areas, since the driver of CPD is now individual teachers' training needs rather than local priorities.

It was felt that the original plan for dissemination by in-service training of teachers and production of resources was no longer appropriate. Instead, phase three of the project was adjusted to fall in line with the developing programme of work of SDELG. This report forms part of the revised dissemination strategy which also includes:

- web-based materials produced in collaboration with SDELG
- five regional conferences in conjunction with five local authorities and their respective pilot schools
- a national conference organised by LT Scotland in collaboration with SDELG
- a presence at the SETT conference/exhibition supported by SDELG
- CPD opportunities for teachers and school managers through dissemination events and programmes provided by most of the project's partner organisations.

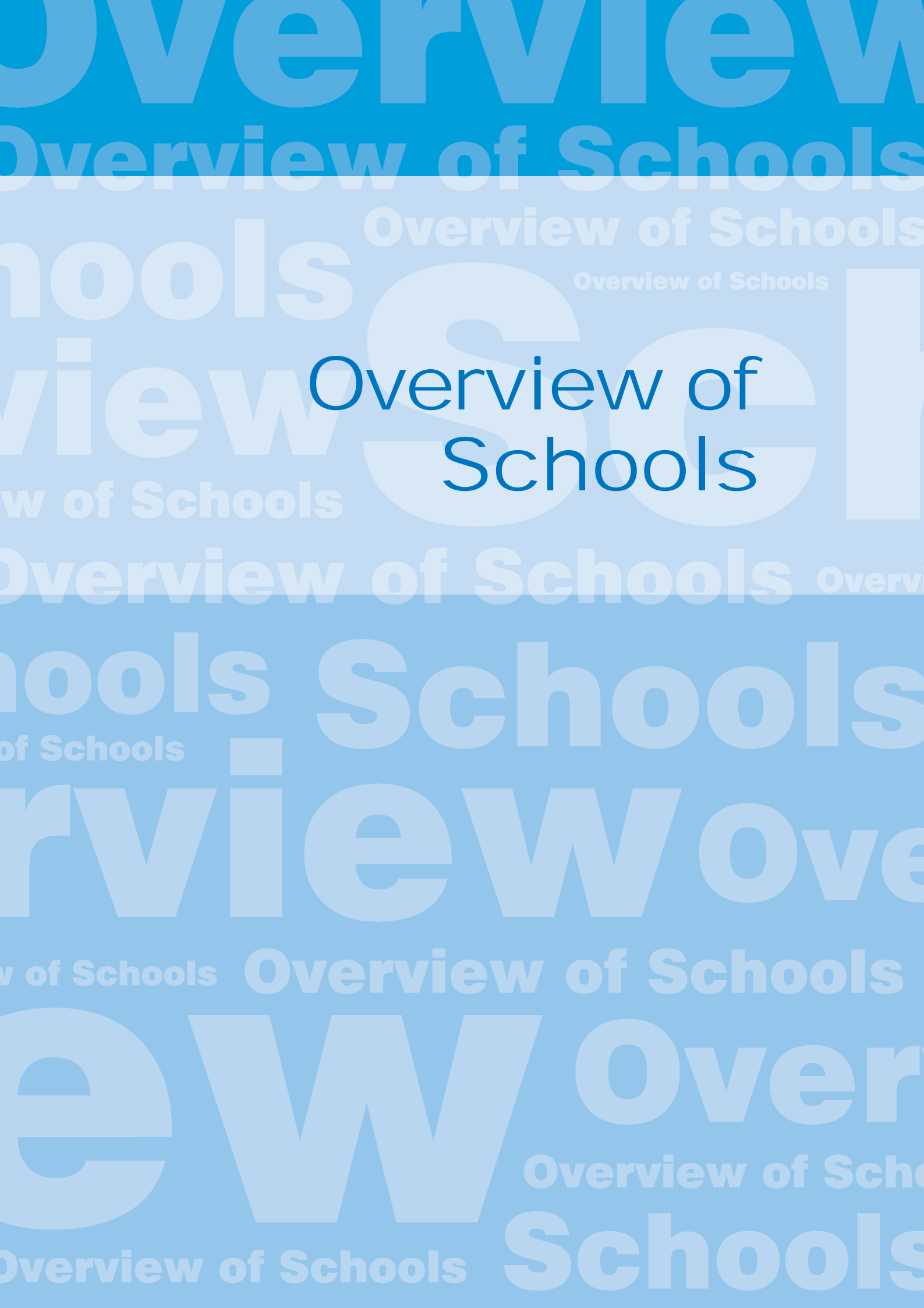
'We acknowledge that there are some good examples of innovative ways of working which accelerate progress towards more sustainable development. However, these are by no means the norm. Good examples should not mask the fact that we have to change substantially the way we do things at a policy, business and personal level.'

Meeting the Needs... Priorities, Actions and Targets for Sustainable Development in Scotland
(Scottish Executive Environment Group, April 2002)

'We must be the change we wish to see in the world.'

Mahatma Gandhi





Overview of Schools

Overview of Schools

	Alford Academy	Braes High School	Currie Community High School
Local authority	Aberdeenshire Council	Falkirk Council	City of Edinburgh Council
Roll at application	585	620	880
Roll 2004-05	600	1100	960
Catchment	Rural	Urban/suburban/rural	Suburban
Starting point (from application and short listing visit report)	<ul style="list-style-type: none"> Environment School grounds SDE in the curriculum Community links Student Council 	<ul style="list-style-type: none"> Ethos Environment used in curriculum Pupil Council Strong links with Community Council Tradition of multi-agency work 	<ul style="list-style-type: none"> Environment (curricular, extra-curricular and community) ESS registered Citizenship and social justice SDE in the curriculum Pupil Council
Areas for development (from application)	<ul style="list-style-type: none"> Involve pupils in school life in a regular and meaningful way. Mobilise talent and resources outside school. Build a stimulating and sustainable campus environment by creating eg Learning Zones. Deliver the revised environmental studies programme in a way that is self-sustaining and emphasises concepts of sustainability. 	<ul style="list-style-type: none"> Bring together pupils, staff, parents, local community, local authority and facilities managers as well as business partners and agencies. Study, through the curriculum, the impact of the siting of the new school on the local community. Identify, through consultation with the Pupil Council, the priorities for developing the environment of the school. 	<ul style="list-style-type: none"> Staff development/adaptation of material for use in the curriculum. Ecological sites: develop and maintain existing sites. Involve pupils in conservation, exhibition and reports, financial management, funding applications. ESS: continue participation and seek assessment. Build a Centre for SDE in school grounds.
Project potential (from short listing visit report)	<ul style="list-style-type: none"> Make existing work more cohesive. Develop community learning zones. Involve students in decision making more. 	<ul style="list-style-type: none"> Develop existing work: school buildings and grounds (with Falkirk Council Environmental Education Officer), Pupil Council, PSE provision (with Community Council). 	<ul style="list-style-type: none"> Sustain existing initiatives through expansion. Curriculum co-ordination. Work on social aspects with S3/4.
Aims and/or Objectives (from project plan)	<ul style="list-style-type: none"> Involve pupils in school life in a regular and meaningful way. Mobilise talent and resources outside school. Build a stimulating and sustainable campus environment by creating, eg Learning Zones. Explore the idea of an external affairs co-ordinator. 	<ul style="list-style-type: none"> Establish a system of pupil participation and consultation. Involve pupils, staff, parents and the wider community in identifying issues to be tackled and work together on these issues. 	<ul style="list-style-type: none"> Raise awareness of the need for change in society to protect the environment for the future, and of the significant contribution that each individual can make. Provide pupils and staff with the opportunity to research and take action on sustainability issues in their own school and their own lives. Improve the health of the school community. Improve the school environment.
Project activities (from school reports)	<ul style="list-style-type: none"> Learning Zone Film Unit Campus improvement Sustainable systems ESS Bronze and Silver Awards Active Citizenship unit in Higher/ Intermediate 1, 2 PSE 	<ul style="list-style-type: none"> Study of Alternative Energy Use Environment Group Pupil Council involvement in sustainability issues School garden Recycling 	<ul style="list-style-type: none"> S1 SDE course with WWF Scotland ESS Green Flag Award CPD with partners Health (including mental health) Community links Curriculum and extra-curricular SDE developed Link with school in Kenya

<p>Departments involved</p>	<p>Art & Design, Drama, Geography, Home Economics, Learning Support, Modern Studies, RMPS</p>	<p>Geography, Biology, Art & Design, Science</p>	<p>Art & Design, Biology, English, Geography, Home Economics, Modern Studies</p>
<p>The project's timetable arrangements</p>	<ul style="list-style-type: none"> Health Day and Environment Day both involved suspending the curriculum for a day. Some groups met within the school day – pupils and teachers took time off classes. Some met after school. Other elements, built into the curriculum, did not require any special arrangements. 	<p>Project activities: paper recycling, work in the courtyard, promotion of a sustainable Christmas with the Core Skills Group, were accommodated within the timetable.</p>	<ul style="list-style-type: none"> SDE delivery team met weekly. Suspended timetable for events. Cross-curricular teaching on water in S1 only partially successful because teachers did not have a complete class in common (sets of 20/30).
<p>Organisational issues arising from the project</p>	<ul style="list-style-type: none"> Availability of staff – need for class cover. Pupils out of class. Changes in key personnel. Difficult to get pupils to stay after school due to rural nature of school. 	<ul style="list-style-type: none"> Changes in key personnel. Availability of staff – need for class cover. Pupils out of class. Difficult to get pupils to stay after school due to rural nature of school. 	<ul style="list-style-type: none"> Strong SMT support. School development plan. Project worker with dedicated time to initiate and co-ordinate activities. Staff changes for teaching S1 SDE course (but positive outcome in terms of disseminating to several departments). Team meetings difficult to organise because of tight schedules and departmental meetings on different days. Personal contact with teachers discussing how SDE opportunities could be developed.
<p>Key features of the project</p>	<ul style="list-style-type: none"> Groups and activities will continue beyond life of project. Important that any new developments are sustainable. Developed sustainable systems to organise initiatives eg student council, careers evening, health day. Sustainability issues best embedded in the curriculum. ESS award is major part of 'Active Citizenship' PSE course at Higher/Intermediate levels. Focus is on individual, group, school and community needs. Partnerships e.g. with Waste Aware Aberdeenshire established and extended. Film unit needs a large budget to maintain it. 	<ul style="list-style-type: none"> Sustainability issues best embedded in the curriculum. Groups and activities will continue beyond life of project. 	<ul style="list-style-type: none"> SDE embedded in the curriculum. Project co-ordinator working with teachers from different subject areas, partners and other outside organisations. Strength of building on ongoing work and drawing together initiatives. Holistic approach to learning and teaching and operation of the campus so school works towards being a sustainable organisation. Number of staff and departments becoming involved has increased gradually throughout the project.

	Drummond Community High School	Fortrose Academy	St Columba's High School
Local authority	City of Edinburgh Council	Highland Council	West Dunbartonshire Council
Roll at application	410	615	920
Roll 2004-05	460	650	850
Catchment	Urban	Rural	Urban
Starting point (from application and short listing visit report)	<ul style="list-style-type: none"> Ethos School Council Equal opportunities and multi cultural social inclusion School grounds 	<ul style="list-style-type: none"> Good relationships; pupil/teacher/local and wider community Ethos Link with local Development Education Centre SDE in curriculum Link with schools in Malawi, South Africa and France 	<ul style="list-style-type: none"> Ethos School Council (S5/6) School grounds
Areas for development (from application)	<ul style="list-style-type: none"> Work on environmental issues with City's local Task Force. Develop a sustainable model for training staff and students to deal with e.g. conflict resolution. 	<ul style="list-style-type: none"> Healthy school New building – environmental factors Develop global links Build on existing practice 	Develop communication system to keep wider community more informed and involved.
Project potential (from short listing visit report)	<ul style="list-style-type: none"> Participate in community litter awareness project. Involve S5/6 more in School Council. Undertake built environment and school grounds work. 	<ul style="list-style-type: none"> Extend SDE in the curriculum. Establish School/Student Council. Strengthen environmental work. Develop community links/learning opportunities. 	Produce high quality community newsletter.
Aims and/or Objectives (from project plan)	Improve the school environment and promote awareness of long-term environmental issues.	<ul style="list-style-type: none"> Ensure that the curriculum offers opportunities for all members of the school community to develop as responsible global citizens and be active in a positive way in ensuring a sustainable future. Develop units of work dealing with issues relevant to global citizenship. (eight subject departments and Learning Support) Set up Task Force – waste minimisation and composting. 	<ul style="list-style-type: none"> Create a self-sustaining school magazine Provide pupils with practical experience of management and enterprise Promote initiative Develop self-reliance and responsibility Raise self-esteem Encourage teamwork Celebrate success Provide information Promote interest in school and community issues Encourage involvement of pupils, parents and staff

<p>Project activities (from school reports)</p>	<ul style="list-style-type: none"> Waste management Transport School grounds Health promotion 	<ul style="list-style-type: none"> Curriculum enhancement in nine departments Links with schools in Malawi, Poland and Italy Range of extra-curricular activities eg Fair Trade tuck shop GPD 	<ul style="list-style-type: none"> Two regular magazines, InfoPlus and InfoXtra S1 cross-curricular course
<p>Departments involved</p>	<ul style="list-style-type: none"> All, through Equality working group Science, Art, Community Education 	<p>Art & Design, Biology, Computing, English, Geography, Maths, Music, RMPE, Technological Education, Learning Support</p>	<ul style="list-style-type: none"> Magazines: two Art teachers and two English teachers Course: cross-curricular
<p>The project's timetable arrangements</p>	<p>Most within school time with the exception of some after school clubs e.g. Really Wild club.</p>	<p>Majority of project work is within the 'normal' timetable with occasional amendments, e.g. S2 Problem Solving Day.</p>	<ul style="list-style-type: none"> Magazines: staff given time for InfoPlus, volunteered for InfoXtra. Course: three x 55 minute periods per week, 12 week course, repeated three times a year.
<p>Organisational issues arising from the project</p>	<p>Recognition that these developments need to be embedded within whole-school priorities.</p>	<p>'Global Citizenship' embedded in the day-to-day curriculum. Arrangements as 'normal' as they could be with project funding allowing 'extra' time to be allocated, enhancing final product – resources or teaching style.</p>	<ul style="list-style-type: none"> Magazines: five issues per year of InfoPlus, two to three of InfoXtra. Course: three members of teaching staff, a consultant artist and librarian. Dedicated room – computers, multimedia projector and interactive white board, internet access. Access to library.
<p>Key features of the project</p>	<ul style="list-style-type: none"> Wide cross-section of departments and organisations are involved which will encourage sustainability. Challenge for the future is to take it forward as part of whole-school priority. 	<ul style="list-style-type: none"> Sustainable Learning and teaching enhanced Starting point for an ongoing development of SDE Awareness levels of theme of 'Global Citizenship' much higher throughout school community 	<ul style="list-style-type: none"> Magazines: raised self-esteem and a sense of achievement, provided a facility for showcasing good work so as to ultimately develop a 'can do' attitude amongst the pupils, staff and community as a whole. Course: taught and developed transferable skills and developed informed attitudes towards sustainability issues. Delivered using a variety of teaching approaches, using the latest technology and a multisensory approach. Organised on a topic basis covering aspects such as transport, energy, housing, health, fair trade, citizenship and their effect on the lives of pupils and the community of Clydebank in the past, present and future.



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The school is a mixed, rural comprehensive which draws pupils from a wide catchment area in west Aberdeenshire containing 14 primary schools. At the time of application the roll was 585. In 1997–98 the school held an Environment Day, tied to the 5–14 Curriculum, for S1/2 pupils. During the next two sessions pupils, parents and staff worked with the wider community, a local artist and the Beechgrove Garden team to develop a sculpture garden with support from Amerada Hess, and BP/Amoco. In 2000–01 a visiting Ghanaian artist worked with pupils and staff over a range of disciplines. Participation in a story-telling project, funded by Barclays and organised jointly by staff (teaching and non-teaching) and representatives of the local community, involved older citizens who passed on stories of local significance to pupils. The school is part of the Royal Northern Countryside Initiative which is a cross-curricular focus on farming and food production. It also has a very active Community ICT centre.

As a school we had already embraced a number of initiatives such as environment day, sculpture garden, On-the-line, BP link, and were trying to find ways to make these more sustainable. Various aspects of sustainability were already firmly embedded within the curriculum of a number of departments eg Geography, Science, RMPS and Modern Studies.

We set up a small steering group to put together a proposal, as the time scale was too short to consult widely. After lengthy discussions about the meaning of sustainability we decided to take a broad view.



Aims	Objectives
<ul style="list-style-type: none"> • To engage our youngsters in school life in a more meaningful and sustained way. • To pull more people into the school and develop even more effective models for non-school personnel to work with teachers and pupils to support initiatives. • To continue to develop and make better use of our campus as a resource but at the same time look at ways to make the interior of the building more educationally stimulating. 	<ul style="list-style-type: none"> • To develop a Learning Zone in the heart of the school that would celebrate learning and highlight the achievements of our youngsters and staff. The focus would be on different themes including environmental studies. There would be an emphasis on using display and interactive techniques with resources developed and/or supported by the school community, local individuals and a wide range of institutions. A committee would be set up to organise this and report back to the steering group. • To develop the campus which was seen as a wide learning zone with high amenity potential. Possible developments included planting trees, installing seating, creating planted areas and identifying learning opportunities. • To develop sustainable structures: opportunities for pupils, staff, parents and members of the community to be actively and effectively involved in initiatives and the life of the school. • To explore the idea of employing an external affairs co-ordinator who would be responsible for arranging visits and guest speakers, fundraising, pursuing bids and applying for funding, and developing external support contacts for subjects.



Management of the Project

The initial bid was put together by a small steering group. Once the bid was accepted we organised a seminar for pupils, teachers, parents and members of the community. Brainstorming sessions allowed us to flesh out some of our initial ideas. The seminar proved to be very successful and gave us the initial momentum to get started.

A steering group, made up of interested parties who volunteered after the seminar, was quickly set up. This consisted of 15 members, including pupils, staff, parents and members of the community. The PT Biology was elected project co-ordinator and given 0.5 days per week to take on this role. We also set up a learning zone committee and a campus committee.

Initially the steering group worked well but we began to get bogged down with small-scale details and there was a lack of decision making. The group was too large to be sustainable. The rector decided to reduce the size of the group to four members, all teachers, so that the energy of pupils, parents and members of the community could be better used in their work with the committees.

After the first year our co-ordinator left Alford to take up a promoted post at another school. The PT Geography agreed to take on the role of co-ordinator for the remainder of the project. It became apparent that there were many initiatives and a structure was developed that identified the various groups and co-ordinated their activities.

In January 2003 we had another major personnel change, our rector left to go on secondment. We had now lost two of the key members of the steering group. Our new members were thrown in at the deep end and had little time to get to grips with all the previous minutes and other information, as both had to take on new SMT roles and SSSP was just one of many things that they were expected to do.

The steering group continued to meet once a month during 2003–04. Obviously this was a significant time commitment. In June 2004 two members of the steering group left and membership of the steering group became an optional CPD activity. The composition of the current group covers a much broader cross-section of the curriculum and we have co-opted our cultural co-ordinator and our janitor onto the group. Each of the sub-groups meets once a term and they report back to the steering group.

The Learning Zone

The Learning Zone has been an exciting challenge. An enthusiastic committee set about discussing the type of information to be displayed and the methods of doing this. The information centred on an interactive database that would include:

- personal pupil input about interview experiences, information about courses and employment (input from former pupils)
- web page for departments
- home page for year groups
- prefect duties and committees
- community links.

Setting up and maintaining this database would be an integral part of the project. The plan was to display this information on a wall mounted plasma screen. A film group was set up by the PT Drama to provide video input to the database. The aim was to provide short news stories about a wide range of events.

Challenges

- Personnel changes – due to movement of staff, the group now has its third chairperson.
- Size of the group – its large size meant it was difficult to agree on the way forward.
- Misapprehension that a huge budget was available to purchase display cases, lighting and plasma screen.

The group had a number of good 'blue sky' ideas. Unfortunately there was no budget available to support them. These ideas will be borne in mind for future spends. The committee was disbanded and the steering group are taking the Learning Zone forward in a limited way with a small budget.

Developments over the past year

We brought in a graphic designer from LT Scotland to look at the corridors and front entrance. His advice helped to inform our planning. Developments are now in small, tangible steps: redecoration of corridor, new notice boards, more user friendly front entrance, display space, film unit's first video, staff intranet and pupil intranet, further development of school website, LCD screen. We also aim to develop an interactive database.

Pupils are involved in decision making as far as is practical and in sub-groups e.g. film unit, website design and notice board groups.

Campus Group

This is a small group made up of pupils, teachers and members of the community. The composition of the group remained the same apart from the pupils; senior pupils tended to serve for a year then move on. Over the past two years we have tried to involve pupils from S5 and S6 so that there is continuity. The group meets once a term after school. This was initially a problem for pupils in the first incarnation of the group. As a rural school with a large number of pupils being bussed in, it meant that they could not always stay after school. Over the last two years pupil members have been more resourceful and more committed.

Our first task was to try to develop a maintenance plan for the work that had already been done. This proved to be difficult during the first year and pupils were reluctant to give up time outside school. Only the committee turned up for our clear-up sessions and planting days despite them being widely advertised around the school.

Maintenance is now more sustainable – SVS pupils work in the garden as part of their service to the community, pupils from the support for learners base work in the garden at the front entrance, pupils taking part in the Duke of Edinburgh Award Scheme can complete the service element by being involved and the local Scout troop, under the leadership of a member of the gardening club, also help out. We are now about to set up a meeting with a gardener who works for a local builder to draw up a yearly maintenance plan.

Pupils were consulted through PSE about the location and type of seating that they would like. A south-facing grassy area behind the school was identified as the location of two picnic tables and a teenage shelter. Despite assurances that this area would be suitable they have had to be moved twice as extensions have been added to the back of the school. They are now cemented in.





Junior pupils were invited to submit plans through the Art department for the transformation of the front entrance. Senior pupils identified the best ideas and, in consultation with a member of the grounds maintenance department of the council, they put together a plan for the area. The area has been landscaped in phases. As part of the final phase a tree was planted by our local MSP on 19 March 2004 to commemorate our participation in the SSSP pilot.

The group is now focusing attention on the pupil entrance. The aim is to provide an area that is more welcoming for our pupils. An S6 Art & Design pupil is currently working on plans in consultation with pupils. The plan will then be discussed with the clerk of works to ensure that it is practical.

Eco Schools

We decided at first not to become involved in the ESS scheme because it did not tie in with our initial aims. However, during the first year of the project we realised that it could provide a structure and a focus for some of the environmental work that we were doing.

An ES group was set up and pupils set about auditing litter. They decided to collect cans as a way of helping the environment. The group reached their target quickly but there were a number of challenges: pupils putting cans that were not empty and other rubbish into collecting bins and storage were problems. Financially, there was little reward for the considerable effort involved. Also, because the group could only meet at lunchtimes, its scope was limited and the teacher and pupils involved became frustrated. The PT Home Economics began to investigate ways that this work could be built into the curriculum, as this seemed a more sustainable way of managing ES.

It proved possible to develop the Intermediate 1, Intermediate 2 and Higher Active Citizenship courses using some of the funding available through SSSP. This is being supported by the local authority which is targeting citizenship as it is one of the five National Priorities. The group is still actively gathering cans. A paper-recycling scheme was set up in 2004 and we had a whole-school anti-litter campaign in the summer term of 2004. As part of our activities week programme we had an environment day.

We achieved our Bronze Award in September 2003 and our Silver Award in June 2004. We are now working towards the Green Flag Award.

Development of Sustainable Structures

SSSP has given us a structure for the many and varied initiatives that the school and its pupils embark upon. Our fundamental aim was to develop sustainable systems and we have been successful on a number of fronts including the student council, school newsletter and the mentoring scheme. Each of these is set up and managed by pupils. Involving pupils over the age ranges ensures continuity.

We try to involve members of the local community where possible. The BP link scheme has an ongoing programme of involving pupils in the Fulcrum challenge and the BP challenge, visits to BP during activities week, work experience and student tutoring. A more ambitious project that is underway is the development of our forestry plot in conjunction with BP, Forest Enterprise and the Scottish Forest Alliance. A pupil group has already been involved



in an audit of the area with the help of Forest Enterprises staff. They are now looking at how the area can be thinned and redeveloped for use by pupils from Alford Academy and feeder primaries, other Aberdeenshire schools and members of the local community. A further example of community involvement is our biannual careers evening which is managed by members of the local community.

A small group of pupils from S4, S5 and S6 are involved in the Cairngorms National Park Youth Communication Initiative. The group is linked to the Geography department but pupils have set up their own committee. Again, the inclusion of pupils across the age ranges ensures continuity when senior pupils leave. We have tried to look for links across the curriculum and Alford film unit has also recently become involved in producing a promotional film about the Cairngorms National Park.

Staff CPD needs are being addressed through a number of the groups that we set up. This means that these groups are more sustainable. Four members of staff have had the opportunity to develop their knowledge of experiential learning through SpeyGrian. This was continued through a weekend at Mar Lodge when a group of interested teachers from Alford Academy, Fortrose Academy and some of the SSSP partners discussed SDE then used walks in the local landscape to consider ways of delivering it.

Some of the Challenges

- Steering group composition – the group was too large initially.
- Changing personnel – a number of staff who were involved in the project have moved on.
- Awareness raising – a staff meeting at the end of the school day was not the best time to try to promote the pilot. Those who were not directly involved in the project were not fully aware of what was going on despite newsletters, articles in the staff bulletin, etc. We really needed to 'sell the idea' to staff and pupils.
- Staff finding time in their already busy schedules.
- Constraints of the curriculum.
- Alford Academy has a number of very active committees looking at a wide range of issues. SSSP is one of many areas that staff can be involved in.
- Time – meetings/preparation take up a lot of non-contact time. Sometimes departmental issues must take priority.
- Pupils' reluctance to get involved.
- Constraints of the school day/rural school.
- 'Environment' a turn-off.
- New build within five years?

Lessons

Sustainability issues need to be built into the curriculum if all pupils are to be involved. This can only happen if there is backing by senior management and it is part of the development planning cycle. It also needs to be fully resourced. New developments have to be sustainable. If developments are dependent on key personnel, problems arise when staff move on. It is essential that there is overall co-ordination to avoid duplication and to identify possible links. This is only possible if the co-ordinator is given sufficient time. Ideally this should be built into the timetable as it avoids the need to cover classes and does not divert attention away from curricular issues.



Impact



The pilot has clearly been successful in delivering three of the four objectives initially set out. Our idea of an external affairs co-ordinator had to be put on hold. After extensive discussions we decided that the school would need to create a new paid post which would have to be externally advertised. This was not feasible at the time. A post that encompasses some of our initial ideas could be created through the new management structures that are currently being introduced.

In addition to meeting our objectives a number of significant new developments took place. The creation of 'Pure Alford TV', our school film club, was a major spin off from the Learning Zone. The group has developed a considerable amount of expertise over the past two years and has now become involved with the Cairngorms National Park Youth Forum.

The development of a Higher, Intermediate 1 and Intermediate 2 Active Citizenship course was born out of a need to have ES and citizenship embedded in the curriculum. It was not one of our original objectives but we realised that there was potential in using ES as a structure to deliver SDE. The course was taught at Intermediate 2 and Higher for the first time during 2003–04 and is now in its second year. It was introduced at Intermediate 1 in session 2004–05.

Make a Difference (MAD) day was a major part of our activities week programme in June 2004. A number of outside speakers came into school to deliver workshops about different aspects of SDE. Pupils from all years who were not on residential trips were involved in the day.

The S2 environment day in August 2004 was delivered by Plan-It-Eco. Sufficient pupils were motivated by the presentation that they have set up an Environment Club. A major project that the Environment Club are involved with is the development of our forestry plot.

Some school departments have developed links with outside agencies:

- Drama – personnel from BBC Scotland have come into school to work with pupils on elements of film production. Pupils have also had the opportunity to visit the BBC Scotland studios in Aberdeen.
- Art & Design – an architect came into school to work with pupils on a topic about designing sustainable buildings. Last year a group of S3 pupils had the opportunity to be part of the FLaT project (Future Learning and Teaching). An architect, sound engineer and a member of The Lighthouse team worked with pupils to explore various aspects of the school. The pupils designed and built prototype solutions for three problems that they identified. The results of this and work in other schools contributed to a recent publication, *From Consultation to Design – design for learning: 21st century schools* by The Lighthouse.
- Geography – a local planner worked with a group of Higher and Advanced Higher pupils to examine the planning issues of building a new Pittodrie stadium.
- Home Economics – the PT Home Economics took part in a one-week teacher placement with Aberdeenshire Council to examine what happens to waste. She has used this knowledge to enhance teaching and learning. She has also made contacts with personnel in Aberdeenshire Council. The waste minimisation officer has come into school to talk to pupils involved in the Active Citizenship course. Some of the pupils also trained to

become master composters. Compost bins were then promoted through the Active Citizenship group to the staff, parents and members of the community and pupils were able to explain how to use them.

The pilot has developed structures for tackling new initiatives that have become intrinsic to the way we do things. It has also highlighted the need to deliver SDE. Staff and pupils are more aware of the issues but there is still a long way to go to fully embed SDE into the curriculum.

The Future

The sustainability steering group will continue to play a major role in the development of SDE in Alford Academy. We have met the aims that we set out at the start of the pilot but over the course of the last three years our ideas have evolved. There is a need to look at SDE across the curriculum and we would like to start by carrying out an audit of what is already being delivered. Our future plans will depend on the outcome of the audit. Current elements of the project will continue and staff will be encouraged to become members of groups through CPD. We will continue to work towards the Green Flag ESS award and need to look at more whole-school involvement. We will continue to develop sustainable methods of delivery in initiatives throughout the school.



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The school is a fully comprehensive six-year school which opened in August 2000. It was part of the Falkirk Schools Project, in which private funding was used to build five new schools, and is the successor to Woodlands High School, an old building in the centre of Falkirk. The new buildings, owned and managed by Class '98 Ltd, a consortium comprising Ballast, Charterhouse and Quale Munro, lie approximately three miles south-east of the town. The school has grown rapidly from a roll of 620 at the time of application to the project to around 1100. The school has endeavoured to retain some of the ethos of the old school while trying to establish a new identity. As a result it faces opportunities and challenges associated with its new relationship to the surrounding community, a new and growing urban/suburban/rural catchment area and a changing staff. The school has a history of involvement in environmental projects, strong links with the community council and a tradition of multi-agency work to support pupils.

Aims of the Project	Objectives
<ul style="list-style-type: none">• To establish a system of pupil participation and consultation.• To involve pupils, staff, parents and the wider community in identifying issues to be tackled and in working together on these issues.	<ul style="list-style-type: none">• Relevant training for members of the pupil council.• A committee in place involving staff, pupils, community education, Falkirk Community Council, PTA, school board, and partnership agencies.

Management of the Project

The assistant headteacher set up an environment group and devised a project plan to improve the school environment in the longer term and give pupils ownership of the new school.

At an early stage training was given to pupils to work as a team.

A member of the SMT was appointed to act as resource manager and project co-ordinator to liaise with the various outside agencies, other council departments and Class '98. A meeting with representatives from the community was held where litter was identified as a major issue.

An environment day was also organised. This involved the whole school (pupils and teachers) during the day, with pupils and the wider community in the evening.

However, owing to the assistant headteacher's retirement, the SMT set up a working group in June 2003 to ensure that the work already started would continue and that sustainability was high on the school's agenda.



The working group soon realised that although sustainability was firmly embedded within the curriculum of a number of departments, such as Geography, Science, RMPS and Modern Studies, there was no overall system for co-ordinating this.

A steering group, made up of interested parties, was quickly set up. This consisted of eight members, including pupils. A teacher of Geography was appointed as project leader and was given 0.5 days per week to take on this role.

The members of the new working group had little time to get to grips with all that was currently going on, with new management structures being implemented and roles and responsibilities changing. However, it was agreed there was a need to revisit the aims and objectives of the group to help the new team focus on the task in hand.

Revised Aims

- To engage the pupils at Braes High School in school life in a more meaningful and sustained way.
- To involve pupils, staff, parents and the wider community in identifying issues to be tackled and working together on these issues.
- To develop our existing practices and make better use of resources to support sustainability.

Revised Objectives

- Form steering committee.
- Re-establish pupil eco group.
- Carry out curriculum audit for all departments.
- Involve pupils at meetings (minutes, newsletters).
- Establish paper recycling scheme.
- Establish school garden.
- Involve pupils, staff, parents.
- Use eco board to highlight achievements of pupils and staff.
- Look at alternative uses of energy.

Various departments within Falkirk Council assisted the school in taking things forward. This led to new initiatives being started such as:

- Environmental education support teacher liaised with school to organise for the prison service to make benches and planters for the proposed school garden.
- The waste minimisation officer helped to take forward paper and card recycling.
- The litter officer helped to organise a litter pick in the school grounds.
- Collaboration with BP to organise and fund a talk by Phil Williams of Plan-It-Eco. This was enthusiastically received by all pupils who attended.
- Renewable Devices were instructed by the school to carry out a feasibility study into uses of alternative energy (see below).

Challenges

- Personnel changes due to movement of staff and management restructuring.
- Lack of budgets to purchase resources for initiatives such as school garden.
- Good ideas for pupil involvement but no funds for resources.



- Raising awareness of staff and pupils.
- Motivating staff and pupils to become involved and sustaining the involvement.
- Time available to make a difference.
- One of a number of active committees within the school.
- Constraints of school day (rural school).

Lessons Learned

Small-scale initiatives can be introduced relatively easily such as:

- paper recycling
- computer and photocopier cartridge recycling
- recycling of aluminium cans.

For this project to be successful in the longer term it needs:

- sustainability issues to be part of the curriculum
- overall co-ordination with sufficient time built in
- to be part of the school's development plan
- earmarked resources in terms of staffing and finance.

CASE STUDY: RENEWABLE ENERGY SCOPING STUDY FOR BRAES HIGH SCHOOL

Introduction

Falkirk Council's Braes High School set out to undertake a feasibility study, with the aim of investigating the potential of utilising sustainable energy solutions at the High School. The project received total funding of £12,500 including:

- Energy Savings Trust £6,500
- Falkirk Council £3,000
- SSSP £2,500.

Aims and Objectives

The main aims of the project were to:

- assess the applicability of implementing sustainable energy solutions at Braes High School
- raise the profile of renewables and foster a greater understanding and awareness of the need and the opportunities to pursue renewables
- investigate the reduction of energy consumption at the school with details of good housekeeping measures for the entire school community
- investigate the potential of improving energy efficiency of the school
- demonstrate how issues of sustainability and energy use can be introduced to pupils.

Who was Involved

- Falkirk Council – officer support and part funding
- SSSP – officer support and part funding
- Renewable Devices – consultants for assessment of site.

Start up of Project

The services sector, of which Braes High School is a part, accounts for a significant proportion of UK electricity consumption (31%), therefore a reduction in this figure would help reduce the emissions of greenhouse gases (and in particular carbon dioxide). As part of their commitment to sustainability, the school identified the potential of using alternative energy systems that would reduce the school's consumption of conventional energy.

Funding of Project

The school's Eco Group, through their lead officer, and the project co-ordinator within SSSP sought funding from within their own organisations and submitted a funding application to the Energy Saving Trust.

Consultants Chosen

Three companies were approached to carry out a scoping study into the use of alternative energy systems. Renewable Devices were the consultants contracted to carry out the study.

Carrying out of Study

Renewable Devices considered the predicted energy usage patterns at the site, together with the renewable resources available such as:

- energy from wind
- hydro turbines
- solar photovoltaic
- thermal systems
- geothermal heat pump installations.

The proposed solutions included a detailed technical summary of technologies and equipment, together with estimated installation costs for the proposed plant while maximising the economic, social and environmental benefits.

A small-scale demonstrable technology system was designed which would serve to raise environmental awareness in the school and the wider community who use its facilities.

Consideration was given to assessing the natural resources at the site with a view to designing specifically tailored renewable energy systems that would reduce or offset current energy use. In addition, the time and cost requirements for the installation of these systems were estimated and the environmental and educational benefit from each suggested system was assessed.

Results of Study

An analysis of the energy usage patterns at Braes High School was produced and energy efficiency measures identified together with good housekeeping practices that could be carried out by pupils and staff on a day-to-day basis to save energy.

Benefits of improvement in this area are that no capital investment is required and action results in immediate savings. By introducing good housekeeping measures as highlighted in the report it should be possible to reduce energy usage by approximately 42,000 kWh per year saving £2,700 and reducing CO₂ emissions by 18 tonnes.

The study highlighted that Braes High School had significant natural resources available to be utilised for power/heat generation in order to reduce energy costs at the school and minimise the environmental impact of running the school. These natural resources included:

- wind resource – excellent resource in terms of wind speed at the height of an average wind turbine tower
- hydro resource – Polmont Burn
- solar resource – solar photovoltaic and solar thermal
- ground source heat pump resource – closed loop system recommended.

The study not only identified the natural resources available but also highlighted the environmental and educational benefits. It covered systems design, planning considerations, cost and payback analysis, and the availability of external funding to pursue each of the proposals.

Next Steps

The report identified a range of good housekeeping measures as the first steps to improving energy efficiency at Braes High School.

It is intended to take forward the proposals highlighted in the report: to initiate an energy awareness campaign amongst staff and pupils and to develop a renewable energy strategy.

A wide range of technical measures was identified for improving the energy performance of the school building. However, as the building structure, the heating system and electrical services are not the responsibility of the school itself and the school does not have the responsibility for capital expenditure on the school building, these measures would have to be determined in consultation with the public finance contractor and its stakeholders.

It is recognised that the report is tailored to Braes High School and its resources. However, much of the information will be valid for and useful to any school in the UK. The report has attracted attention from the Scottish Executive in relation to schools estates strategy. It is therefore intended to make it available to their Architecture Policy Unit, Falkirk Council's Schools Estate Strategy Group and the Council's NPDO Schools Project Team, other local authorities and any other interested parties.

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Currie Community High School (CCHS) serves the areas of Currie, Riccarton, Baberton Mains and Juniper Green on the southwest edge of the City of Edinburgh, approximately six miles from the city centre in a suburban area. An additional 23% of pupils attend from other areas as a result of parental placing requests. At the time of application the school roll was 880 of whom 5% were from minority ethnic groups. The school is in a built-up area, with good access by both train and bus, and has paths and a cycle network nearby. The school has a strong commitment to environmental education and over many years demonstration ecology sites have been created in the school grounds and a strip of ancient woodland has been conserved by the school. These are used for curricular and extra-curricular activities, amenity and by the local community. The school has won several awards for these projects.

CCHS applied to participate in the SSSP pilot scheme to take up the opportunity to extend and develop our approach to sustainability and SDE.

First Steps

Initially a steering group of interested staff was formed, made up of teachers from the departments of Geography, Art & Design and Biology, the school librarian and a project worker. This group was responsible to the headteacher who strongly supported the project throughout.

The project worker, who was already working on various environmental initiatives in the school and community, acted as the project co-ordinator, working with the steering group, other staff, partner organisations etc. This post was part-funded by SSSP.

The steering group held meetings of one period (35 minutes) per week with additional meetings outwith the timetabled day. Initially the group required time to discuss the concept of SDE and then chose an aspect to address. The aims identified by the group were to:

- raise awareness of the need for change in society to protect the environment for the future, and of the significant contribution that each individual can make
- provide the pupils and staff with the opportunity to research and take action on sustainability issues in their own school and their own lives.

There was concern at that time about the health of young people in Scotland and the steering group decided to choose health as our central focus. A class of S1 pupils designed logos and then voted for a logo for the project. This was very successful and the logo (shown right) encompasses the concepts of health and the environment. However the project was continuously developed and directed by identification of opportunities, concerns and feedback received and the remit quickly widened to include many aspects of SDE.

SDE has been included in the school development plan since 2002.

The project was launched at a breakfast meeting with representatives from each tutor group attending. The pupils were asked to organise completion of a questionnaire relating to the quality of the provision in the school cafeteria and to form a committee to take forward SSSP projects. In retrospect, this launch was too early and involved too many pupils.





CPD was identified as an important factor in facilitating understanding of the concept of SDE among staff. Four workshops were delivered in-house by some of the partner organisations: WWF Scotland, ScotDEC (IDEAS) and RSPB. Since then several members of staff have attended CPD events: SpeyGrian, The Lighthouse on school design, WWF Education for Sustainable Development online course and the WWF *Developing Informed Citizens* workshop and *Learning for Sustainability* conference. Staff attending these sessions have brought new expertise into school. The interest and ideas generated and the opportunity to network with others working in the field have been very valuable.

Health Initiatives

There is already extensive teaching on health within the curriculum in PSE, Home Economics, Biology and Chemistry, so the steering group looked at ways that this could be complemented. The group requested the installation of chilled water dispensers and a code of conduct that allowed pupils to drink water during most lessons. Initially staff were concerned about management of this in the classroom but once implemented there were very few problems. It was popular with pupils originally but uptake declined.

Guidance and pupil support staff were concerned that we have an increasing number of pupils within the school who are anxious about school and home life. This led to the development of the programme for 'Cool Heads', the aims of which were to raise the profile of mental wellbeing issues, with particular focus on coping strategies for pupils, and to assist staff to recognise signs for concern and provide them with advice for working with affected pupils.

A mental health practitioner from the Edinburgh Young Persons' Unit addressed a school staff in-service session and worked with S5/6 volunteers who undertake community service providing peer support to younger pupils. These issues were addressed in Social Education lessons delivered to all pupils in the school. There was a particular focus on S5 pupils, who are under a lot of pressure preparing for the Higher examinations. A drama production was written for them by the head of our Drama department and performed by some of the S4 pupils and this was followed by an introduction to relaxation techniques. Evaluation of 'Cool Heads' was very positive and 84% thought the programme should be repeated for S5s the following year. 'Cool Heads' was included in the ESS submission as our day of action for the whole school.



This year the health week focused on healthy eating. A theatre group performed a drama and workshop called 'Junk' for S3 pupils and this was supported by further work in PSE, Science, fruit tasting in Home Economics, posters and clay work in Art and discussions and preparation of posters in Modern Languages. PE organised tests to ascertain the level of pupils' fitness and promoted the opportunities for extra-curricular sport. There was special effort to offer healthy options in the school cafeteria. The Green Machine, a vending machine that offers organic and additive-free products, was installed. Unfortunately, the snacks were not very popular and it was subsequently removed. We are currently investigating a replacement machine that will be stocked with healthy options and the fizzy drinks vending machines have been removed.

There are many other examples of work ongoing in the school to promote healthy living. Although these were not initiated by SSSP, the process of bringing together the work done has opened up communication among departments and has helped to give an overview. The school sports co-ordinator has organised 23 extra-curricular clubs offering alternatives to the more traditional sports to encourage more uptake of opportunities to improve physical fitness. Other activities included 'Bully no more' for S1 pupils and a sexual health and HIV seminar for S5 pupils.



SDE in the Curriculum

The headteacher suggested to the steering group that a course dedicated to SDE should be introduced in S1. The group proposed a framework in which pupils would research aspects of life and the environment in our local area 50 years ago, compare them with today and then envision life in 50 years' time, if we continue to live as we do now, and what changes have to be made to achieve a more sustainable future. A consultant from WWF Scotland worked with the steering group to develop activities and materials to create a course, 'Tracks through Time', which was introduced in CCHS in 2003 and later in St Columba's High School. Working with WWF Scotland, it is planned to publish the course, with case studies of the methodology used both in Currie and St Columba's, in academic year 2005-06. The generic course is adaptable for use in other schools, with core content and optional variations appropriate for the staff teaching the course. CPD elements are included.



The time for the course is taken from the 15% flexibility allowance in the curriculum. It is designed to implement SDE in the Priority area of Ethos: Citizenship, Heritage and Stewardship and to deliver core skills in Literacy, IT and Working with Others. Pupils attend the course for 70 minutes per week for approximately 18 weeks. A core group of three staff: IT teacher, librarian and school project co-ordinator, work with a teacher from Geography, Science, Art or English to teach the course.

The aims of the course are to:

- lead pupils to an understanding of the concept of sustainability
- encourage pupils to investigate and integrate information from different subject areas using different types of resource material so fostering the processes of linked thought
- provide an opportunity for pupils to take practical action towards preservation of the environment for the future.

There are several set but very varied lessons including interpretation of the school grounds, a role-play enacting a meeting between shoppers from 1950, today and 2050 and pupils interviewing senior citizens from the local community. Pupils work in five groups of six pupils with each group studying a different topic:

- Food and diet
- Local environment
- Leisure
- Transport
- Fashion
- School.





Investigation of the topics focuses on some of the following issues:

- use of natural resources
- waste management
- pollution
- climate change
- biodiversity and habitat loss
- economic impact
- respect for others and ethics.

There is clearly overlap between topics with many of the issues in common. This is a positive factor, emphasising the importance of understanding the interdependence of man and the environment, society and the economy, ie the basic concept of SD.

The pupils have the freedom to decide as a group the aspects they will study and the methods they will use. They must undertake research on the past, present and future, addressing current sustainability issues related to their topic. The emphasis is on the processes of investigation and the understanding of man's impact on the environment rather than a comprehensive knowledge of any given topic, but there is a sound body of information for the pupils to assimilate.

The final output of the course must be a web presentation and an oral presentation using these web pages. However pupils may choose:

- The methods of gathering evidence: internet, books, newspapers, interviews, questionnaires, school collection of 1950s artefacts, interpretation of the school grounds. A combination of sources is used by all pupils.
- The format of material displayed on web pages: images downloaded from the internet, text summarising research, creative writing, art work that can be scanned or photographed, graphs and charts.

There is strong emphasis on planning and shared responsibility within the group and in most groups pupils who experience difficulties are supported by more able pupils.

The pupils clearly enjoy creating the web pages and all share the sense of achievement in the completed work of the group as a whole. The groups describe their web presentations to the whole class and several members of staff so that the information on all the topics is shared. Hard copies of some web pages are displayed on parents' evenings and the pupils' work can be accessed on the internet so the work can also be seen by the wider community.



Skills developed include: working with others, critical thinking skills, investigation, integrating and evaluating information from different sources and using it, IT skills, and presentation. The course leads to pupils having an improved understanding of SD issues and we hope that, along with an understanding of the need to care for the environment for the future, there is also some motivation to do so. Some of the completed work can be seen on the school website: currie.hs.edinburgh.digitalbrain.com under the link 'pupil projects'.

Staff enjoy teaching the S1 SDE course and benefits identified include the opportunity to work as a team, cross-departmental working, a raised awareness and understanding of SD, applying an SD focus in their own subject area, new methodology, learning from each

other's teaching methods and learning use of the DigitalBrain web publishing programme. Teaching the course has been challenging but is always interesting and it is continually evolving.

SDE work is developed in S2 to focus more on global and development issues. The school formed a partnership in March 2004 with Chogoria Girls High School in Kenya. Curricular work on Kenya is undertaken in Modern Studies, Computing and English. Some of the learning tasks are linked between Modern Studies and Computing and a unit has been written so that pupils' work can be exchanged between the partner schools. More units are under development in Geography, Drama, Music and Art & Design.

Some teachers and pupils from both schools have now undertaken exchanges and their experiences have been shared on their return. Our headgirl said, 'The students at Chogoria Girls School have an incredible determination and commitment to their studies. We have found their drive to succeed inspirational.'

Our S2 pupils fundraise to sponsor a girl at Chogoria HS throughout her four years of secondary education. The charities committee also raise funds for several schools in the South Meru district of Kenya. The personal contact between schools increases the pupils' understanding about many issues in the developing world and this is reinforced by giving them the opportunity to take practical action to help.

An audit was undertaken which shows that SDE is taught in many subjects at various levels but may not be identified as such. Issues relating to SD can often be discussed in lessons opportunistically. Consistent use of the term 'sustainable development' helps to link relevant issues in different areas of the curriculum and gives an indication of the complexity of the concept.

Eco Schools

The school achieved Green Flag status in June 2004. Much of the work included in the submission had been ongoing independently. The work in health and the environment clearly fulfilled the requirements in the target areas of School Grounds' Development and Healthy Living respectively. However the process of auditing the target areas provided a framework to bring together all the work that was underway, giving a very useful overview of SDE and sustainable practices in the school, and helping to identify areas that required further development.

Working with Partner Organisations

SSSP supported the school both in staff development and working with the pupils in various projects, eg the development of the S1 SDE course (WWF Scotland), achievement of the Green Flag award (ESS), Biodiversity stories (SNH), display of resources (ScotDEC), an architect's work with an S3 Art & Design class to design a garden for an area currently under tarmac (RIAS), the hosting of a UN General Assembly simulation conference for Edinburgh schools focusing on HIV/Aids (Population Concern, one of the organisations within IDEAS). Personal communication with the co-ordinator for SSSP also inspired several ideas and assisted with making contacts for some of our projects.



Eco Schools
Award 2004

Conclusion

We are very grateful to have had the opportunity to participate in SSSP. It has been a challenging and rewarding experience. Through working with the partner organisations and sharing ideas with the other schools we have gained a deeper insight into how to deliver SDE in practice.

Key factors for delivering SDE at CCHS included:

- inclusion of SDE in the school improvement plan and SMT support
- identification of a member of staff with the remit and time to implement and co-ordinate work and develop a whole-school rationale for SDE
- embedding SDE in the curriculum
- relevant extra-curricular activities
- support from SSSP partner organisations
- CPD
- identifying and building on ongoing work
- commitment by the school to SD through sustainable practice in the operation of the campus. It is an important part of the learning experience for pupils to see practical measures being implemented to improve sustainability.
- time for the concept to be understood, passed on and for staff to find ways of including it in their teaching.



The success of the project is attributed to the commitment of the steering group, the teaching staff from different departments who were willing to be flexible and become involved, the strong support the team received from the school SMT and of course the work of the pupils themselves. We hope that through their experience at school our pupils will be better equipped to live and act sustainably, as well as having an understanding of the environmental, social and economic issues involved.

Although SSSP is coming to an end, the work will continue in school. The proposal to install renewable energy generating technology and use data from its monitoring devices in various subjects in the curriculum, the continuation of our link with Chogoria Girls High School in Kenya, the commitment to promoting a healthier lifestyle, and continuation of our ES work are just some of the programmes which will be continued and developed.







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Drummond is a small (roll at time of application of 410) but growing, city centre community school in east central Edinburgh, close to the new Scottish Parliament, museums and galleries. It serves an area characterised by a moderate level of deprivation, with a wide diversity of ethnic groups, especially Asian. It has a track record in equal opportunities and multicultural social inclusion. Links with the community, especially the community police, led to training for staff and students to deal with bullying and conflict resolution. The school has co-operated with the community to undertake some school grounds work in the past.

Drummond entered into the project at a time when many changes were influencing the school. In particular, it was beginning to go through the process of being refurbished through the first phase of a Public Private Partnership (PPP) project. The building work and refurbishment became extremely intrusive which resulted in there being very little time available to engage the school in this project. The PPP contract also affected the school design and how the facilities would be managed. Many aspects of the contract were fixed before the work started which meant they could not then be influenced in any way.

Aspects of school ethos which are most relevant to SSSP are the community school ethos and the equality work in the school. These both underpin many developments in the school and can be closely linked to SSSP principles. It was the intention that SSSP should be taken into account during the whole-school planning process. At the start, a member of the school staff team was given the remit to try and involve school departments in the ethos and planning of the project. He also had the remit of developing extra-curricular activities in the school and through this he supported various departments in setting up specific projects. Unfortunately this became very difficult to manage because of the constant demands made on the whole staff team during the refurbishment.

Despite this, some progress was made early on in the project. In particular, the headteacher and the school's SSSP co-ordinator met with representatives from the City of Edinburgh Council Environmental Consumer Services, Corporate Services and Sustainable Development unit, to discuss particular issues as follows:

- eco efficiency programme
- waste strategy
- water efficiency
- finance with reference to energy efficiency.

Through PPP the school now has to work closely with the facilities management company, which is proving to be a success. This is partly as a result of the early discussions and also through working together with the company to ensure that the school continues to serve the needs of the wider community. This is an aspect which was not taken into account during the setting up of the original contract for schools.

The main issues which have been taken forward through the school's involvement in SSSP are waste management, transport and school grounds. All of these have had direct support from SSSP. However, due to the workload and constraints generated by the PPP project, little progress has been made.



The most noticeable positive outcome of involvement in SSSP is the relationship set up with the facilities management company to resolve issues. In particular, the dialogue with the catering department resulted in the Health Promotion working group entering into discussions about healthy eating throughout the school which led to the removal of fizzy drinks from the vending machines. The group is made up of staff from the school as well as representatives from school students and visiting services. It is currently putting together a health promotion policy.

Another example is the community use of the playground facilities out of school hours. Initially the playground and Astroturf facilities were to be locked, as the facilities management company stated they were responsible for the security of the building. After much discussion, the school managed to negotiate the opening of the grounds, as this has always been an important aspect of the community ethos.



A group of staff, the Good Practice group, have been looking at the physical environment of the school and the educational use to which it could be put. The most recent discussions have been with Land Engineering, the company used by facilities management to maintain the grounds, about plans for landscaping the playground. The good relationships that exist between the school and the facilities management company are enabling the group to take this forward.

The project was introduced to Drummond at a very difficult time for all concerned. The school now anticipates being more fully involved in the ESS programme and, as a first step, will include this in the 2005–06 development plan.





Fortrose Academy

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Fortrose Academy is a six-year, comprehensive, secondary school which serves the rural communities of the Black Isle area of Ross-shire in the Highlands of Scotland. It draws its pupils from eight associated primary schools, all but one of which are small rural primaries. Around 80% of its pupils travel daily from outwith Fortrose on buses ranging from minibuses to double deckers. At the time of application the school roll stood at 615 pupils and work was about to begin on an extension, designed in consultation with the school and incorporating features of sustainable architecture, a community library and ICT facilities. Some classroom teaching and extra-curricular activities, linked with SDE, were already underway and there was a strong working relationship with the local Development Education Centre (DEC). The school ethos had attracted high praise from HM Inspectorate of Education and the authority quality assurance team.

Background to Involvement

An assistant area education manager with The Highland Council suggested to Fortrose Academy that involvement in SSSP might be appropriate for the school. This was on the basis of the school's past record on ethos, on being outward-looking, e.g. the long-established links with communities/schools in, among other places, France and Malawi. In addition, the enthusiasm and experience of the depute rector was seen as an advantage to ensure commitment to, and hopefully success for, the project.

Vision

A very clear school vision for the project and beyond was formulated:

'All pupils leaving Fortrose Academy and all staff in the school will be active global citizens'.

This was, and still is, a challenging vision.

Early Thoughts on Carrying Forward the Project

There was a meeting of interested staff in summer term 2001 attended by approximately half of the teaching staff. Open discussion led to a way forward being developed. The decision was taken at an early stage that to ensure the project's work was sustainable, it had to be embedded in the normal work of departments. This was viewed as a manageable and realistic way of coping with the nature of the secondary school curriculum. A consequence was that the project *per se* would not have a high profile; subject learning and teaching would be enhanced. From these early ideas it became apparent that how people affect sustainability was a major theme; hence the emphasis on global citizenship. Other departmental ideas were to be welcomed and at regular intervals project support was advertised to departments. In addition, cross-curricular or extra-curricular work was to be encouraged. A small steering group was established consisting of the depute rector, a teacher of English, and an education worker from the Highland One World Centre. Bids for support, with a brief action plan, would be submitted to the steering group for consideration.



School Support/Commitment

Discussions at the school SMT were very positive about involvement in SSSP. However, justification in terms of educational benefit was sought before agreeing. In addition, the commitment from a member of SMT was seen as vital in carrying the initiative through to completion. Once departments had shown enthusiasm and the approach of enhancing learning and teaching was adopted, there was little doubt in SMT that there was much to be gained from involvement. In particular, better learning opportunities for pupils and opportunities for staff development were seen as positive and desirable.

In financial terms, the school committed to purchasing a high specification computer for project and other use, and to an amount of staff cover costs to add to that made available by the project.

The project has been on the school development plan each year, not as a separate item but as part of raising achievement and improving learning and teaching.



Departmental Evaluations

Department	Work done	What worked well	What didn't work	Other comments
Biology	Setting up Environmental Monitoring Project with Aigas Field Centre in Beauty with a view to a yearly visit with S3 Biology students. Also a ranger-led visit to Glen Affric.	Students are given the opportunity to appreciate what the local environment has to offer and are able to put theory regarding monitoring techniques into practice.	Difficulty of maintaining continuity of sampled areas – particularly transect in regenerating pinewood. Proved difficult to collate yearly data.	A database of results set up to make recording of results more structured. Aspects of environmental monitoring were covered as part of Comenius link project visits to Italy in March 2004, Scotland in November 2004 and Poland in May 2005.
Geography	Unit on caring for the environment by reducing waste Developed material for Life in Malawi booklet	Recycling exercise – waste sorting (internet) Less Economically Developed Country (LEDC) – Highland One World Group Composting exercise – Highland Waste Minimisation (WHAM) Time being made available to research and to work with others in the department to come up with ideas and produce the material. Involvement with graphic designer. Costs of professional production being covered.	Length of time taken to get a finished product. Time spent with LT Scotland to agree method of production.	Different attitude to waste in the LEDCs Overall a more professional way of producing teaching and learning materials. While giving the wherewithal, ie money, to allow the booklets to be produced, SSSP also was the slowing-down factor (uncertainty over responsibilities?).

English	'Child Labour' unit for Standard Grade English classes	Embedding the work into the curriculum makes it genuinely sustainable. Providing genuine audiences and purposes for work. Improved ethos and attitudes as well as creating a 'buzz'.	Spin-off of fundraising – a lot of fun and in many ways useful but demands a lot of time taken from the curriculum (and teacher energy).	It is crucial that sustainability is embedded in the curriculum and does not exist at its expense. After all, how can we expect our pupils to be reflective, productive, active citizens without good literacy and numeracy skills?
	'Life in Africa' unit for S2 pupils on media, examining perceptions of Africa and how they are formed.	Challenging assumptions created debate. Using a wide variety of materials – maps, pictures, statistics – appealed to and supported a wider range of pupils.	Using the internet independently – reading and evaluating complex information without support – can be demanding for many pupils.	
Music	Month-long unit on samba/South American music. Instruments used. Practical work.	Making their own sustainable instruments from junk. Practical work. Homework sheets. Dancer/musician in residence were very happy to adopt samba into their time/performance. Dovetailed the work.	The home-made sustainable instruments which spilled every lentil, grain of rice	The unit will be continued with invited experts, e.g. bertimbau player.
RMPE	Investigation carried out on an after-school club, a boys' home and HIV/AIDS project in Romania.	Visit to Blythwood depot (local charity). Design of leaflet on work of Blythwood.	Reading too much information. Pupils researching materials on their own initiative – it had to be teacher defined and directed.	
Technological Education	General recycling – used paper was reused for work surface protection when painting and varnishing. Lots of old furniture/fittings were reused/recycled in the workshop.	Lots of wastage avoided and departmental cash saved.		Intend to continue SD work in the department, e.g. use of DVD entitled Sustainable Design, covering Smart car, wind-up radio and Remarkable pencils (made from recycled plastic cups). Timing – project will take place earlier in the year.
	S2 pupils involved in making toy/ornament based on solar cells.	More able pupils found this project interesting and challenging.	Less able pupils did not participate as enthusiastically as expected. Teacher-led activities based on the use of solar cells were devised for this group of pupils.	
	Thinners – water based paints and varnishes introduced to avoid use of white spirit.	Considerable reduction in the use of white spirit.	Thinners – unexpected problems arose when using water-based varnish on coloured pencil and felt pen pictures – images became smudged and unattractive. Timing – many pupils went on French exchange.	

Cross-curricular Extras

The Green Machine

The Green Machine is a company that provides vending machines with healthy snack options. The products are fair trade, organic and additive free. Fortrose Academy was one of the first schools in the UK to install such machines. The products are backed by the Hyperactive Children's Support Group. Ethical concerns and healthy eating promotion were the motivations for installation. The start-up cash came from SSSP. Initially a snack machine and a drinks machine were installed. Break-even rather than profit was the financial approach. Problems with the drinks machine meant it was removed after seven months. The snack and drinks machine is still successful, often selling out. Pupils are involved in the management of the machine. The school still stocks less healthy and less ethically produced snacks through the tuck shop. Pupils have choice.

S2 Problem Solving Day – October 2003



A variety of problem-solving workshops was organised for all S2 pupils around the themes of citizenship, enterprise and sustainability. Highland One World Group (IDEAS), Careers Scotland, WHAM and in-school staff were involved, along with RSPB, SNH and WWF Scotland from SSSP. The aim was to get pupils thinking a bit differently through a variety of activities – some indoors and some outdoors, some practical and some theoretical. Pupil feedback showed the practical workshops were most successful. A positive aspect was the involvement of senior pupils in supporting the day's activities. In attendance were local councillors and the Director of Education, Culture & Sport. The most memorable comment from a pupil was, 'Why can't we learn like this all the time?'



Waste to Energy Project

This project was initiated by Careers Scotland in conjunction with the SSSP project co-ordinator. The basis of the project was to be a decision-making exercise for senior pupils looking at the scenario of developing an energy-producing incinerator at Nigg in Easter Ross. The incinerator would be fuelled by waste which is a local problem. Expert inputs were given covering a variety of viewpoints. Some local secondaries were able to provide teams, although Fortrose Academy could not because of notice and timing. The school was, however, able to provide a film-making team who worked with a local film maker to record the event. Although the film was edited, the support material was not developed, as the project co-ordinator was unable to provide the necessary information. It had been the intention to make this a usable resource for schools that were looking at the issue.

Save the North Sea Project

The SSSP project co-ordinator offered the school the opportunity to be involved in this project through ES. Two pupils were accompanied by the PT Geography to Gothenburg to attend a pupil conference. This was very successful but continuing with the project was not easy to organise.

Fair Trade

A group of pupils expressed an interest in setting up and running a tuck shop stocking fairly traded products. SSSP provided the start-up capital which encouraged the group, Fair Trade Academy, to work together – handling money, planning product orders, advertising, and so on. The chocolate has proved popular and the enterprise is going from strength to strength. The group are now part of a national network of Young Co-operatives attending conferences in Stockton-on-Tees and New Lanark. Using funding from Scotland UnLtd, a fair trade website is being developed by the group. Areas for improvement include better accommodation for the tuck shop (currently a class room) and more autonomy over finances (presently through the school fund). Some of the group want to work at the Fair Trade Academy full-time!



Staff Development

November 2002 INSET Day

Partner organisations were invited to lead sessions for staff at this whole-school staff development day with the aims of informing, inspiring and encouraging participation in the area of SDE. The partner organisations able to lead sessions were WWF Scotland, IDEAS and SNH. In addition WHAM led a session. Other inputs came from teachers in seven different departments highlighting what they had done and their thoughts on the experience.

SpeyGrian

Three members of staff took advantage of the week-long gathering on a boat off the west coast – one in 2002 and two in 2003. The PT Art & Design took part in 2002 and in a follow-up session at Laggan. He found it challenging but, above all, a very positive environment – physically and socially – for taking a refreshing look at issues such as sustainability and perhaps most importantly, education. 'SpeyGrian has changed my life'. The school benefited from a refreshed teacher.

The following year two more members of staff took part. In personal terms the experience on the boat in such an environment was 'fantastic', 'brilliant'. Reservations were expressed about the academic papers – 'not interesting', 'not relevant to our education system', 'ideas outdated and outmoded'. One teacher questioned the lack of teachers; only two of the group had contact with mainstream education.

In spring term 2003 in-school attempts were made to organise a development weekend, for Fortrose Academy staff plus other relevant partners, based on the SpeyGrian philosophy. It proved too difficult to find accommodation dates to suit and the event did not materialise. The benefit of a project co-ordinator with time to develop such an event would have helped.

A similar approach was taken in a weekend event (May 2003) at Mar Lodge with participants from Fortrose Academy, Alford Academy and Wallace High School, plus some of the partner organisations. On reflection, the success was limited in terms of engaging, making connections and change. The shorter length of time was a major factor in this.



ICT

The project coincided with a whole-school emphasis on ICT and increasing its provision. In wanting to record project activities, the use of digital cameras seemed obvious. The school covered costs of the hardware while SSSP supported training sessions for staff. As a result a bank of images recording much of the work is available.

Lunchtime Sessions

Following on from the INSET Day in November 2002, a series of lunchtime sessions for staff have been arranged. There was input from partners, eg SNH, but more often it was a case of being led by school staff. A series of meetings related to the various departmental and extra-curricular initiatives have taken place. These are buffet lunches with input. This model will continue beyond the project as these meetings help staff feel they are keeping in touch and also suit the development framework we have adopted as our way forward.

Links with Partner Organisations

IDEAS

Our strongest links are with IDEAS, specifically Highland One World Group. This has in large part been due to the on the doorstep location and the input from the education worker who has been on call throughout the project. She has been a member of our school SSSP steering group from the outset. Through regular and frequent discussions, wants and needs were identified and supported. She played a major part in the work carried out by the English and Geography departments and helped other departments as well.

Eco Schools Scotland

The ESS manager worked with the school on an evaluation/development tool for use in the project. The school was not enthused by trying for ES status. It was felt to be more appropriate for primary schools, to be too ecology based, and to be of limited use for moving citizenship or SDE forward. Although the school is doing much of what is required, the value of flag status to the school was questioned. The issue is looked at on an annual basis and will be looked at again.

RIAS

RIAS provided support to the Art & Design department for their S2 sustainable design unit with a local architect working with pupils. Through this contact, pupils were invited to attend and make a 'fringe' presentation at an international conference of architects held in Inverness.

SNH

SNH contributed to lunchtime sessions for staff. Further opportunities for working together, eg oral history project, were not followed up by the school.



WWF Scotland

A consultant employed by WWF Scotland worked with the school on an evaluation/development tool for use in the project. The school did not follow up an offer of further collaboration, on *Linkingthinking*. Work with WWF-UK has been ongoing. The depute rector is a member of the WWF-UK Teacher Advisory Group looking at the use of the South Bank University/WWF-UK devised development framework.

The Together Days provided an opportunity for contact with representatives from all the partner organisations. IDEAS, SNH, and WWF Scotland all provided input to the INSET Day and Problem Solving Day. RSPB contributed to the latter and the school provided photographs for use by SCT.

The project co-ordinator has been a frequent visitor to the school, offering ideas and opportunities. Some of these developed well, e.g. Save the North Sea project from ES and some did not, eg energy unit for Physics teachers. The main benefit was the regular visiting which kept the school moving forward.

Indirect Links

We are involved in other initiatives either because of, or informed/influenced by, our part in SSSP.

Malawi link

Fortrose Academy has long had links with schools and wider communities in Malawi. SSSP provided the opportunity to further embed these links in the curriculum, especially in Geography and English. Links with a professional DTP company, Ordie Design, led to high quality colour booklets being produced by school staff, namely *Life in Malawi* and *Life in Africa*. The Malawi link is supported by Department for International Development funding through The British Council with whom we have been working to draw up guidelines for north-south school links. A group of pupils, supported by the Geography department, organised a whole-school coffee morning which raised £500 for the Malawi project. As part of the coffee morning a group of pupils performed on African drums after a workshop with Chief Suleman Chebe from Ghana. Other fundraising is being organised by pupils – active global citizens. Staff also have the opportunity to be active global citizens with a staff karaoke being next!

European link

Fortrose Academy is part of an EU Comenius-funded link with schools in the Opole region of Poland and Puglia in Italy. The project is called *Glocalisation: from local to global* and, among other things, is looking at environmental monitoring and data collection for exchange; at local cultures; and at devising a healthy lifestyle book covering diet, fitness and environmental action. Pupils and staff from the three schools made a presentation about their work at the fifth International Education Conference organised by the Scottish Executive in November 2004.

Highland Environmental Network

Fortrose Academy is part of this network and has hosted the HEN Annual Conference for the last two years. On both occasions the school has had input to the conference.





Careers Scotland

The school was approached by the Head of Service for Careers Scotland to lead a project given the title of *2GETHER – Sustainability, Citizenship and Enterprise in Education linking school, community and business in the Highlands and Islands*. As a result of his SpeyGrian experience, the PT Art & Design was seconded out to carry out this research project between June and October 2003. While the overall aim was to consider the concept of sustainability in relation to the citizenship agenda and enterprise in education, the research was wide-ranging, encompassing global citizenship and the role of the arts in remote communities.

The research evidence is a sample of existing practice in schools in Scotland and demonstrates that teachers are working with pupils in enterprising ways, that local circumstances and business needs have a part to play in the curriculum and that creativity is playing a vital role in schools. Much of this practice, however, remains peripheral to the secondary school syllabus. (For more information see the *2GETHER* project report at www.highlandschools-virtualib.org.uk/2gether.)

The PT Art & Design was then seconded by The Highland Council to manage its response to the document *Determined to Succeed* (Scottish Executive, 2004) with its emphasis on enterprise. The challenge presented by SDE, the citizenship agenda, and *Determined to Succeed* is to provide learning experiences in most, if not all, subject areas.

The Future

Dissemination

The school is keen to play its part in the dissemination process both at a local and national level and whenever possible, staff will be made available to participate in events as requested. A day of interactive seminars, in which IDEAS and WWF Scotland took part, was held in February 2005 as part of the Highland Learning Festival. It is the intention to produce a commemorative pamphlet/magazine for distribution to the school community and possibly beyond. Production of a CPD pack is also being considered.

Policy

In the short term it is intended to produce policy statements covering various aspects of the work involved in SSSP. These should be active policies shared with the whole school community.

Life Skills

Presently, with extra funding made available through the Enterprise in Education initiative, the S1/2 Life Skills (PSE/Social Education) course is being reviewed and restructured. A greater emphasis is being placed on active pupil participation and on incorporating citizenship, enterprise and sustainability in local and global terms. The outcome of this will be shared with Highland secondary schools.

Health Faculty

With the restructuring of promoted posts, a new Health Faculty has been created. This is seen as a major player in carrying forward some of the issues raised in the course of SSSP and being developed through our links with other schools.

Highland Action for Sustainability

This new project, managed by Community Service Volunteers (Scotland), has just appointed a full-time project officer. The Highland-wide project looks to work with schools and the wider community to raise awareness and involvement in sustainability issues. It had been hoped that the project officer could be based in Fortrose Academy (involvement in SSSP was one of the factors in this) but a very high school roll means a shortage of accommodation. The depute rector has been involved in the appointments process and will chair the project advisory group. The school hopes to offer practical support to the project and also to benefit from its work.

Highland One World Group

The school intends to continue building on the very good relationship with Highland One World Group and in particular with the education worker. She will continue to be a member of the school's SSSP steering group which will become the development framework steering group. The depute rector has been invited to be a member of the Highland One World Group advisory committee.

The Highland Council

One of the disappointments of SSSP has been the lack of success in establishing good working relationships with other departments in the council. It is a hope and a target that there will be better communication and action in this area. One event – involving four S4 pupils giving a presentation to The Highland Council Select Committee on Sustainable Development in the council chambers – was very well received. The councillors showed real interest in the subject, and in how education could play its part in dealing with issues related to sustainability. Unfortunately this was not really followed up.

WWF Development Framework

This is seen as the vehicle for planning and progressing much of the work stemming from SSSP and from related matters. On reflection, this framework would have been very helpful for carrying forward the whole project.





St Columba's High School

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St Columba's Clydebank is a large (920 on the roll at the time of application) six-year Roman Catholic comprehensive secondary serving the north end of Clydebank, smaller communities inland (Faifley and Duntocher) and the denominational primary schools in Drumchapel (part of the City of Glasgow). Its catchment is an area of high unemployment, de-industrialisation and severe social deprivation. The school is part of a local authority-wide New Community Schools project and in recent years has made considerable progress on ethos, bringing in several topics related to sustainability with the development plan containing clear statements on the links between ethos and environmental improvement. Improved community liaison is a major objective for the school.

Raising pupils' self-esteem, providing pupils with an appreciation of the world around them, and an understanding of the important part they have to play in its future, are high priorities in the mission of St Columba's. The general area from which the school draws its pupils has experienced dramatic changes. All of the large heavy engineering companies, which provided most of the employment until the 1980s, have now closed. However, a series of major regeneration schemes have been introduced with the aim of improving the social, economic and commercial life of the area. These have included improvement to the infrastructure, renovation of the housing stock and the construction of new recreational and commercial premises. Equipping pupils with the sustainable and versatile skills needed to cope with this rapidly changing society, and basing their experiences in a supportive and effective learning environment is therefore crucial to the life and work of St Columba's. Every attempt has been made within the school's management structure and in the delivery of the curriculum, to help our pupils develop into informed, useful and proactive citizens.

St Columba's involvement in SSSP was mainly two fold:

- the birth, development and expansion of the school magazines *InfoPlus* and *InfoXtra*
- the cross-curricular S1 course looking at sustainability issues relevant to the life and future of the people in Clydebank.

With both aspects of the project there was a direct attempt to influence thinking and facilitate the school's mission statement. Both of these components have now become an integral part of the school's culture, and use each other to promote and develop sustainability issues within the whole school community. They have offered the school an opportunity to develop learning and teaching styles and strategies, to increase cross-curricular working, and provide a medium for showcasing examples of good practice and pupil achievement. They have also helped, and continue to help, advertise and broaden the range and quality of skills and attitudes gained by the pupils; raise their levels of interest, self-esteem and motivation; develop informed attitudes about their future and the environment in which they live; and provide a vehicle for disseminating the necessary information to contribute to meeting the changing needs of the people in Clydebank, and in particular the young people within that community.

The approaches taken within this project were also carefully managed so as to reflect and support the latest educational thinking and recommendations e.g. *5-14 National Guidelines on the Structure and Balance of the Curriculum*; and *Curriculum Design for the Secondary Stages: Guidelines for Schools*.



These documents afforded the school the opportunity to work imaginatively, and so create the best possible environment for the development of core skills such as ICT, presentation, research and collaborative skills. Involvement in SSSP helped provide a vehicle to facilitate this.

InfoPlus Magazine



The magazine itself was initially organised by three members of staff: the head of English, the head of Art and an Art teacher. Material was collected from around the school by staff and pupils, edited and arranged before being sent to a local publisher for publication. The design, layout and content of the magazine were controlled completely by the school, and every attempt was made to make it attractive, informative and accessible to all.

Time was given within the school day for the magazine staff and SMT to meet and the Art teacher is now given one complete half day off timetable to organise the layout of the magazine etc. The funding for this, which initially came through the project, is now taken from the whole-school budget allowing the magazine itself to be sustainable.

At present, mainly staff are involved in the collation of information and editing of *InfoPlus*. On a voluntary basis, a sister magazine, *InfoXtra*, is produced by pupils with a minimum of guidance from staff. The hope is that the skills gained by these pupils can then be transferred to the main school magazine, thus reducing the involvement of staff and increasing the sense of ownership by the pupils.

InfoPlus was designed to raise self-esteem, a sense of achievement and feeling of self-worth, and to develop a 'can do' attitude. It was also there to disseminate information and celebrate success, so raising the profile of the school within the community and the sense of pride and belonging among both staff and pupils. Individual departments could use this medium to showcase work which would also be relevant and interesting to the general community. Experiences of staff and pupils both inside and outwith the school were, and are, also represented, allowing other staff, pupils and parents to get to know them more closely, building stronger relationships. With the positive aspects of the school being advertised in a coherent and interesting manner, all concerned could see where the school was going and what could be done to contribute to its success.

This magazine is produced approximately five times a year with a print run of around 900. Every household receives a copy as well as local parishes, the associated primaries, the local library and surgeries. Copies are also sent to council quality improvement officers, as well as the Director of Education. To date approximately 11 issues of *InfoPlus* have been published, as well as four issues of *InfoXtra*.



At present no local businesses use the school magazine for advertisement purposes or highlighting sustainability issues, however the company that manages the school fitness suite has approached the school to possibly insert an advert to help promote a healthier lifestyle. Perhaps, in a controlled and ethical manner, other institutions could be considered.

Cross-curricular Course

With flexibility in the curriculum came the opportunity to offer this course to our first year pupils as part of a rotation with IT and SuccessMaker. The course would last for approximately 12 weeks with three 55 minute periods available each week. To help facilitate this, a course

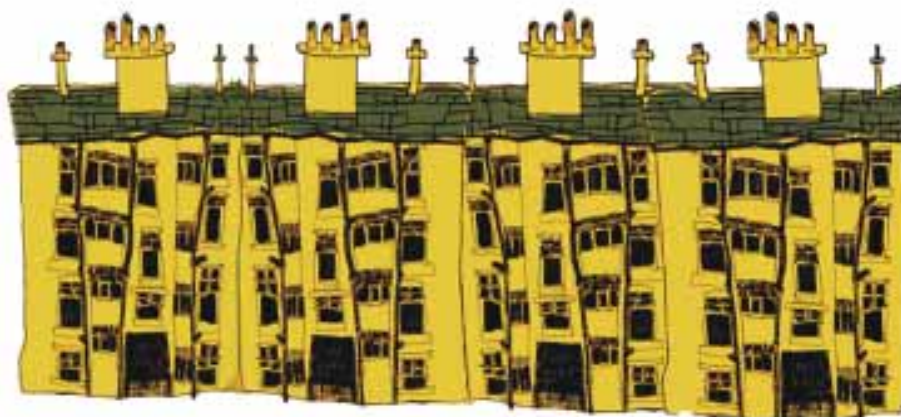
co-ordinator was appointed along with two other teaching staff; namely the head of Science, a teacher of Biology and a teacher of History. This was done on a voluntary basis, although timetable restrictions meant that only certain staff could become involved. One period a week was set aside for planning and collaboration and one day a term for review and development work. During these meetings the course was evaluated and changed accordingly, and this time became a vital part of the course's success.

The staff also had access to the school librarian and a consultant artist who came into the school approximately eight times within each rotation and worked with pupils and staff on illustrating the key issues discussed within the course. This formed part of the staff's CPD activities, in an attempt to make these skills sustainable beyond the lifetime of the project.

For the rotational programme a course rationale, course aims and objectives, course plans and lessons were produced, utilising the latest technology, with the main focus of the work initially being the local area of Clydebank. This itself was a daunting task. Teachers were effectively being asked to fill 36 hours of time with pupils, and at this stage all they had to work with was a blank sheet of paper! However, with the help of the headteacher, the SSSP co-ordinator, the consultant artist and examples of the work being done in Currie Community High School in Edinburgh, these lessons quickly came together. Issues such as housing, transport, employment and recreation, politics, pollution, recycling, saving energy, fair trade and citizenship were discussed and researched. Each issue was tackled in three parts: an information lesson using power point (PP); a research lesson using the internet and library; and an art lesson, allowing pupils to illustrate aspects of their findings. Pupils gathered and presented their information through a project based approach.

At this stage the course explored environmental issues relevant to Clydebank in the last 50 years, the present day, and the projected issues in the next 50 years. However, as the course progressed, changes in approach had to be made. Information relevant to Clydebank was abundant, but was often unsuitable to the age and stage of the pupils involved in the course. Staff felt that the research net needed to be widened and so national and global issues were explored, although how they affected Clydebank was always emphasised and discussed. The order in which each of the issues was tackled was also altered as staff grew in confidence and knowledge, and the amount of support material developed.

A copy of the latest course plan can be seen overleaf.



Environmental Studies Lesson Plan for Cycle 2 – 2004–05

Week	Focus	Lesson	Lesson Outline
1	Introduction	1	Introductory PP – Welcome, defining 'sustainability', identifying issues involved, generation of title page
		2	Library research introduction
		3	Sustainability quiz
2	Energy	1	Energy PP – Lesson covering past, present and future
		2	Energy research activity
		3	Art work on energy – 'Creating clean energy while we work'
3	Transport	1	Transport PP – Lesson covering past, present and future
		2	Transport research activity
		3	Art work on transport – 'Getting about in the future'
4	Waste and recycling 1	1	Waste and recycling PP – Lesson covering past, present and future
		2	Green game
		3	Papercrete pots
5	Sustainable Christmas	1,2 & 3	Christmas trees and colourful wrapping
School closes for Christmas holiday			
6	Waste and recycling 2	1	Waste and recycling PP – Lesson covering past, present and future continued
		2 & 3	Decorating papercrete pots and planting for the future
7	Housing	1	Housing PP – Lesson covering past, present and future
		2	Housing research activity
		3	Art work on housing – 'Houses of the past and future'
8	Education for Life	1	Education PP – Lesson covering how education has changed and the skills needed for the future
		2	Education research
		3	Art work on education – 'Pupils and teachers of the future'
9	Fair Trade & Global Citizenship	1	Fair Trade video / Being a good global citizen
		2	Preparation for the 'Chocolate Trade Game'
		3	Chocolate Trade Game
10	Staff Interviews	1	Interview Skills PP – listening and questioning techniques
		2	Organisation for staff interviews
		3	Staff interviews
11	Lomond Shores	1	Preparation for Lomond Shores visiting National Park website
		2	Visit to Lomond Shores
School closes for February holiday			
12		3	Lomond Shores follow up
13	Political voice	1	Identifying issues to discuss with local councillor and composing questions and letters
		2	Meet local councillor
		3	Follow up meeting
14	Project presentation	1,2 & 3	During this last week pupils work in groups or individually to prepare a presentation on an issue that has interested them most during the course. They then present this to the rest of the class.

The teaching methodologies used were designed to encourage enterprise and creativity, as well as developing core skills such as presentation, investigative and research skills, all of which would be transferable to other curricular areas. For example, the course spent a large amount of time teaching pupils how to collect relevant evidence using the library and internet, and how to interview staff and family members using different questioning techniques.

These methodologies also demanded a change in approach by the teachers. Teachers had to 'think out of the box' and develop skills used in other curricular areas. Fortunately, due to the fact that the teachers and staff involved came from different disciplines, they were all able to share experience and expertise.

The objectives for this course were communicated to pupils, parents and others through *InfoPlus*, displays, talks and presentations and indeed interviews. Posters were placed around the school advertising more sustainable ways to live. Greenlight bags were placed in classrooms to encourage the recycling of paper, and very quickly the whole school community was aware of the work being done. Pupil progress was then relayed to parents using the school reporting procedures, although no formal assessments were carried out.

The profile of the course was also raised through the variety of tasks the pupils were involved in, especially those outwith the normal classroom setting eg visits to Lomond Shores, the Scottish Parliament, and recycling plants. At the Gateway Centre in Lomond Shores the staff developed a morning's events tailored to complement the course we offered and have adapted this as the course has progressed and developed. At present St Columba's is the only school using this local resource in this way.

Visitors also came to the school, such as the Arkeen Theatre Company, who presented a play about sustainability issues in Clydebank, as well as politicians and local councillors. Pupils also interviewed other members of staff, including non-teaching staff, to discover what their lives were like when they were in first year.

The school is now in its second year of the rotations, and so far a total of 250 pupils have experienced the sustainability course. In a bid to obtain extra funding to support an extended period with the consultant artist, quality improvement officers from West Dunbartonshire Council were approached. After an awareness raising exercise, funding was given on the basis that the artist would provide in-service training for the teaching staff in the work he was doing and leave the staff with any necessary teaching resources.

The course is now going from strength to strength and, despite a change in teaching staff, it has been easily transferred due to the organisation of the lessons and resources.

The course in particular has developed the skills of both the staff and the pupils. Secondary school teachers tend to think in isolation. This course forced them to think outside their specialist area and share skills and expertise with staff coming from other curricular areas. Pupils could also see this sharing of information, and saw that what they were learning and exploring had an impact on all aspects of the curriculum.



Conclusion



Involvement in SSSP has provided a great number of opportunities for St Columba's. The project objectives were to set up a school magazine and a rotational course. It is clear that these have been achieved. The magazine is of excellent quality, highlighting issues important to the community of St Columba's, and is read by a large audience. The rotational course has been carefully put together and developed so as to make it sustainable for future years. As pupils move through the school, the S1 course will give them a deeper understanding and appreciation of their local, national and global environments. The school as a whole is now committed to these areas, and the benefits have been felt across the school.

At whole-school level

At SMT level the project facilitated the delivery of a high quality school magazine, and the course allowed the timetable to offer flexibility in the curriculum and further develop the core skills pupils will need in their lives outside the school. The context of the course also allowed the school to further develop informed attitudes, which is a major focus of the school's Christian mission. Both the magazine and the course developed cross-curricular co-operation and so the sharing of skills. Staff, pupils and the wider community can now easily see the extent of the impact of their lives on the world around them.

Teachers and pupils

InfoPlus and *InfoXtra* are held in high regard by the teaching staff, with a good spread of topics being covered. Pupils themselves see their work being celebrated and those pupils involved in *InfoXtra* are developing the necessary skills to become involved in the main magazine.

With respect to the course, teachers involved in its delivery were required to adapt their own learning and teaching strategies and learn new ones. Teachers were forced to consider all subject areas in their lessons, and because of this learn new skills. This initially was not an easy task and it took a number of rotations to build staff confidence.

The pupils' curriculum was also enriched. The course gave them an opportunity to step off the more academic treadmill and relax and explore issues that were affecting their everyday lives. On the whole pupils were well behaved in the classes and contributed well to the work being done. This also improved as the confidence of the staff increased.

Having reached the end of the life of the project the school is committed to carrying on and developing the work that has been achieved so far. A next step for the rotational course is to carry out a whole-school sustainability audit and perhaps develop some of the ideas and issues further up the school through the PSD programmes. The course teaching team is also interested in applying for Eco School status.



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Outcomes for Schools

The outcomes of SDE initiatives are difficult to assess objectively as much of their effect impacts on the ethos within the school and will have long-term benefits. In the view of most pilot schools, SSSP enhanced the preparation of their pupils for life after school. It encouraged flexibility and enrichment in the curriculum, allowing pupils to explore issues, both local and global, that affect their everyday lives, and to develop informed attitudes.

It was acknowledged that development and delivery of new courses required new learning and teaching strategies and it took time to build staff confidence but that such new courses often led to cross-curricular co-operation and the sharing of skills. In addition, new awareness of SDE issues, resources available, and skills learned were transferable to teachers' own subject areas and influenced the involvement of departments in whole-school activities.

Most schools reported that, through the project, they were encouraged to develop sustainable systems, provide an improved and educationally stimulating environment within the school and its grounds and to showcase positive aspects of education. It was also noted that the project provided opportunities for staff development.

It was considered that the project had had a very positive impact on values and attitudes. Pupils had become more aware of the decision making process at a variety of levels, had gained confidence and improved their communication skills. They could also see the sharing of information involved in the delivery of cross-curricular courses and saw that what they were learning and exploring had an impact on all aspects of the curriculum.

School Management

Strong SMT support for the project was crucial. Where the SMT lacked time to provide this support it was judged to have had a major demotivating effect on staff and pupils. It was felt by the schools, sometimes with hindsight, that new developments have to be part of the development planning process. Generally it was recognised that SDE can only be delivered to all pupils if it is built into the curriculum.

Stability

While several factors influenced the extent to which schools were able to engage with the project, the most important factor was stability – those schools with stable staffing, administration and environment were able to make greatest progress. Destabilising events – rebuilding, rapid growth in school roll, loss of key personnel – all led to reduced progress. The ongoing process of change in national and local authority expectations of schools, and the requirement to react to these quickly, is another factor to be taken into account.

Different Approaches

In the absence of a top-down policy blueprint for SDE, individuality of approach allowed schools to focus on initiatives most appropriate to their own situation and most likely to succeed. The project demonstrated that the scope of SDE extends from raising self-esteem to raising awareness of global issues. It can be introduced into many aspects of school life until it is all pervasive and becomes a way of thinking for all members of the school and the

wider community. Its purpose is to provide them with the knowledge, understanding, motivation and opportunity to act responsibly.

Four distinct approaches emerged in the project and some of the schools adopted more than one of these.

- **Cross-curricular teaching**

Two schools introduced short, locally tailored SDE courses for S1, using the flexible time available in the curriculum. These provided a valuable means of introducing SDE to staff and pupils. Limited attempts were also made to link teaching across subject departments but organisational issues proved to be a stumbling block.

- **New National Qualification courses**

One school successfully developed Active Citizenship courses which use the ESS programme to deliver part of the Social Awareness Development unit of the PSE course at Intermediate 1, Intermediate 2 and Higher level, providing a means of accrediting citizenship work in S5/6.

- **Curriculum enhancement**

One school encouraged teachers to review and develop the SDE aspects of their subject teaching. This proved to be successful.

- **Whole-school initiatives**

Most of the schools undertook some activities, usually extra-curricular, which had the potential to involve the whole school. These often took school grounds' improvement or health promotion as a theme. Two schools used the ESS award programme as a framework for some of these activities while others chose not to become involved.

One school produced two new school magazines, which succeeded in raising self-esteem and aspiration, and provided an effective vehicle for communicating with the wider local community.

Characteristics of SDE

The pilot schools developed and tested many different practical ideas. In the activities undertaken, although not all present together, the following could usually be found:

- the contribution of non-teaching school staff or non-school personnel
- the use of technology
- the intention to engage pupils, parents, staff and community
- the use of the school campus or grounds
- mechanisms to ensure the sustainability of the activity
- the crossing of boundaries: between subjects, between curricular and extra-curricular work or between year groups
- the use of the local environment
- the connection between local and wider issues
- links with people in other countries

- learning for real purposes
- increased pupil responsibility
- organic growth
- flexibility
- the use of a wide variety of materials/media to present and record information
- experiential learning.

In addition to the very positive impact on values and attitudes described earlier, the schools reported that there was evidence of improved motivation, confidence, resourcefulness and behaviour in the pupils involved in SDE.

School Achievement

SDE has great potential for initiating and supporting change and improvement in schools. Given modest additional resources, in money, time and support, the project has demonstrated that secondary schools are able to make significant progress. The greatest advances were made in curriculum development, with some success achieved in, generally small-scale, extra-curricular activities. There was some, but limited, progress on the larger-scale practical application of some aspects of SDE, in energy use, transport and school design. (It should be noted that the education element of some of these activities was not always made explicit.) The schools and partner organisations feel that the progress made during the project represents only a first step.

The Capacity of the Partners

The partners found that they had difficulty servicing the project schools. The limited SDE capacity of even the larger partner organisations has clear implications for the development of SDE across all schools in Scotland. The Non-Governmental Organisations (NGOs), institutions and agencies involved are unable alone to support a universal introduction of SDE in Scotland's schools. At the same time, the project demonstrated the value of external contributions to the work of schools. Alternative means of providing this support will have to be identified if the project's successes are to be replicated in other Scottish schools; a broad network, the model provided by one of the partners, may be a way to reduce capacity problems.

Future Support Needs

If SDE is seen as peripheral to a school's main activities and an additional burden on hard-pressed teachers, its chances of success are seriously limited. If it is endorsed at national and local level, properly resourced and written in to schools' development plans and curricula, its prospects are much improved. Its status would be further raised by the adoption of relevant evaluation criteria – many of the performance indicators in *How good is our school?* meet this need.

SDE is most effective when embedded in the curriculum and the life of the school, not undertaken as an addition, but its achievement still requires both time and money. Curriculum audit, development of new courses, enhancement of existing courses, extra-curricular activities and supporting pupils in new areas of responsibility all require time for staff to carry out the associated work and, perhaps more importantly, to reflect on and make explicit the relevance of what they are trying to do. In many cases resources additional to staff time will also be needed.

The work that has already begun in ITE must continue and be built on and CPD will be needed for practising teachers, to enable them to acquire new skills, knowledge and understanding. There is evidence that primary schools are ahead of the secondary sector in SDE and it would be helpful for there to be more communication, co-operation and sharing of good practice between them.

Links with 'experts' proved to be an important part of some of the pilot schools' work. The support provided by the partner organisations cannot be extended to all schools and, in any case, schools found that local links were sometimes more effective. However the absence of any formal network means that schools are dependent on their ability to access what is available, particularly in their local area.

Support from council departments other than education was important to the achievement of some of the pilot schools' project work. This appears to have happened on an *ad hoc* basis but it would be helpful in future if councils as a whole were made more aware of SDE and the potential contribution of their various departments.

The pilot schools themselves will need to be supported in future to enable them to continue their development and to ensure that the experience base is not lost and the investment is made to mean something over an extended period of time.

Consensus in such a complex area is an aspirational goal. The diverse partner organisations and the pilot schools, with their different starting points and experiences, brought varying interpretations of SDE to the project. Their collaboration has encouraged the development of a shared understanding of each other's perspective and of SDE. The activities undertaken have provided them with opportunities to test the validity of their understandings and methodologies within secondary education alongside other participants in the project. Those involved in the project are now more aware of the various elements of sustainability and of the ways in which people may be educated to live more sustainably. Partnerships that grew from school activities have also informed debate about SDE and the extent to which it may be delivered through the ES programme and citizenship education. With the declaration by UNESCO of 2005–14 as the Decade of Education for Sustainable Development globally the time is ripe for this debate to continue, facilitated by SDELG.

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It is recommended that SDE should become a more explicit part of the core activities of Scottish secondary schools. The introduction of SDE into the project schools led to the development of rewarding teaching and learning. It also allows secondary schools to play a meaningful and constructive part in the delivery of a major government priority. SDE has implications for all aspects of a school's work and involves curriculum, school estate and buildings, internal and external relationships and management.

There is a need for the development of a clear framework, and a supported implementation programme, to define the scope and characteristics of SDE for Scottish schools. The open-ended nature of the project and the breadth of the 'Rationale for Involvement' made it difficult for participants to plan. The introduction of a flexible framework will allow schools to implement SDE and monitor progress more easily.

A diversity of approaches to SDE should be encouraged within the overall framework. The project has demonstrated that there are several valid approaches to SDE, which will fit a range of school cultures, locations and experience. It is likely that approaches other than those used in the project will be equally effective.

Leadership from the top will be needed to ensure that schools and local authorities are able to give SDE the priority it merits.

The experiences of SSSP partners and schools, as well as those of schools outwith the project who have recently been progressing SDE, should be used as a core from which to build best practice.

There is a need to clarify the overlaps and relationships between SDE and the variety of other initiatives existing or planned for Scottish secondary schools.





Glossary and
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Commissioned by the project co-ordinator to produce an interactive play at St Columba's HS highlighting sustainability issues relevant to the people of Clydebank. For example, why Clydebank was born, what changes it has seen and what changes are needed to keep it a thriving community in the future. Transport, housing, pollution, litter, conservation etc were all considered in a light hearted and interesting way.

Bigfoot Adventures
Glen Deskry, STRATHDON
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Tel: 019756 51312
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www.bigfootadventures.com

Delivers courses in the outdoor environment: development training and team building events, Duke of Edinburgh Award expeditions, first aid training and paddle sports coaching.

BP Challenge

A joint initiative between BP and Bigfoot Adventures to raise funds for the Archie Foundation (children's hospital in Aberdeen). A group of S6 pupils from Alford were invited to join staff from BP and Bigfoot to complete a two-day physical challenge.

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An EU initiative which supports school partnerships, projects for the training of school education staff, and school education networks. It aims to enhance the quality of teaching, strengthen its European dimension and promote language learning and mobility. Comenius also emphasises: learning in a multi-cultural framework, support for disadvantaged groups, countering under-achievement at school and preventing exclusion.

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Fax: 0131 555 7919
www.est.org.uk

Set up by the government following the 1992 Rio Earth Summit, the Trust is one of the UK's leading organisations addressing the damaging effects of climate change. Its goal is to achieve the sustainable and efficient use of energy and to cut carbon dioxide emissions, one of the key contributors to climate change. The Trust is a non-profit organisation funded by the government and the private sector.

Fulcrum Challenge
Unit 7
Luccombe Business Centre
MILTON ABBAS
Dorset DT11 0BD
Tel: 01258 881399 (2 lines)
office@fulcrum-challenge.org
www.fulcrum-challenge.org

An initiative sponsored by BP. S5/6 pupils could apply to take part in the challenge which consisted of: selection weekend, two days working on an environmental project, 14 day cultural visit (Alford's pupils went to Botswana, Kenya and India), introduction to finance day, two day leadership conference. Pupils had to raise funds to cover their share of the cost of their cultural visit.

Future Learning & Teaching
Programme (FLaT)
New Educational Developments Division
Scottish Executive Education Department
Area 2-B
Victoria Quay
EDINBURGH EH6 6QQ
Tel: 0131 244 0385
Fax: 0131 244 0834
www.flatprojects.org.uk

Established to support and encourage pilot projects that challenge the current concepts of schools and explore new ways of learning and teaching. It will take forward the commitment in *Educating for Excellence* to promote more effective sharing of good practice in learning and teaching.

Global Citizenship in ITE Project

A partnership between the Faculty of Education in the University of Glasgow and IDEAS, funded by the Department for International Development. The project is an attempt to influence the way that student teachers are educated, so that they have a greater global awareness when they enter the teaching profession.

Greenlight Environmental Ltd
Unit 4 Lomond Trade Centre
Lomond Industrial Estate
Alexandria
DUMBARTON G83 0TL
Tel: 01389 721012
Fax: 01389 721112

A recycling company which provides St Columba's HS with a large number of recycling bags for waste paper. On a regular basis the company uplifts the waste paper from the bags and recycles it. Most teachers and pupils now use these bags as a matter of course.

The Green Machine
Organic and Natural Food Company
Unit 10 Puma Trade Park
145 Morden Road
MITCHAM
Surrey CR4 4DG
info@tgm.bizwww.tgm.biz

A vending machine offering schools a wide range of healthier snacks and drinks, with no artificial additives, colourings or flavours.

Highland Environmental Network
Sheila Wickens
Education Centre
Castle Street
DINGWALL IV15 9HU
admin@highlandenvironment.org.uk
www.highlandenvironment.org.uk/id3.html

A voluntary organisation that aims to promote environmental education and community environmental action.

The Lighthouse
Mitchell Lane
GLASGOW G1 3NU
Tel: 0141 221 6362
enquiries@thelighthouse.co.uk
www.thelighthouse.co.uk

The Lighthouse, Scotland's first, dedicated, national centre for architecture and design, opened in July 1999. The centre's vision is to develop the links between design, architecture, and the creative industries, seeing these as interconnected social, educational, economic and cultural issues of concern to everyone.

Linkingthinking

WWF is developing this set of ideas, tools, and activities for teachers, lecturers and other educators, and their students. The package aims to provide a learning and teaching resource that encourages a fresh and highly relevant way of looking at the world.

On-the-line

A joint initiative promoted by Channel 4, Oxfam and WWF to celebrate the millennium. It was an opportunity to get to know about and celebrate life in one of the countries along the Greenwich Meridian. Alford was linked with Ghana – a Ghanaian artist spent some time in school working with children in a number of subject areas – Art, Drama, English, Geography, Music. The main product of the visit was the production of a linguist staff, a traditional Ghanaian staff carved with images that tell a story.

Ordie Interpretive Design
Ordie Cottage
Strathord
Luncarty
PERTH PH1 4PR
Tel/Fax: 01738 828229
al.hamilton97@btconnect.com

A small network of specialists working mainly in countryside design and interpretation.

Papercrete

A generic term for various mixes of fibrous material, usually recycled paper, and cement or clay. It is being developed as a building material.

Plan-It-Eco
% The Environment Centre
Pier Street
SWANSEA SA1 1RY
Tel: 01792 469817

Run by Phil Williams. Aims to promote environmental and cultural awareness and understanding. He delivers lectures and workshops about sustainability to schools and businesses.

Probationer payback scheme
West Dunbartonshire Council

When a probationer is placed in a department, the mentor (usually the PT) is given five extra non-contact periods to fulfil any duties. Mentors are required to produce/develop a piece of work that would be beneficial to the schools across the authority.

Renewable Devices
SAC Bush Estate
EDINBURGH EH26 0PH
Tel: 0131 535 3403
Fax: 0131 535 3303
rdes@renewabledevices.com
www.renewabledevices.com

Provides a wide range of services to industry, commercial renewables developers, communities and the public sector and aims to promote the sensitive and appropriate use of renewable energy in the UK and abroad, making it accessible and affordable.

Remarkable (Pencils) Ltd
The Remarkable Factory
Midland Road
WORCESTER WR5 1DS
Tel: 01905 769 999
Fax: 01905 769 300
info@remarkable.co.uk
www.remarkable.co.uk

Makes a range of stationery products from UK recycled materials, including pencils made from recycled plastic cups.

Scotland UnLtd
54 Manor Place
EDINBURGH EH3 7EH
Tel: 0131 226 7333
Fax: 0131 539 9999
jimbennett@unltd.org.uk
www.scotlandunltd.com

A charity which exists to provide support for social entrepreneurs, financial and development support to social enterprises and to find, resource and develop people with strong community leadership skills.

Scottish Forest Alliance
www.scottishforestalliance.org.uk

A unique woodland conservation project uniting BP, Forestry Commission Scotland, the Woodland Trust Scotland and RSPB Scotland in a collaboration designed to span two centuries. At 10 sites currently, the SFA is regenerating Scotland's fragmented native woodlands. The ultimate aim is to create 10,000 new hectares, promoting biodiversity, encouraging community involvement and furthering the aims of carbon sequestration.

SpeyGrian
C/o Dr Joyce Gilbert
Millend
The Langlands
Luncarty
PERTH PH1 3EX
Tel: 01738 828427
GilbertMoulin@aol.com
www.speygrian.org.uk

An educational trust which promotes experiential outdoor learning. It is a loosely affiliated group of artists, activists, scientists and educators who aim to provide a catalyst for change at both a personal and a national level by bringing new perspectives to the relationship we have with the natural world. They offer training courses, arrange informal meetings and share their reflections through stories, music, writing and art. A central focus is the concept of 'journey' which continues as participants try to carry the experiences and insight gained back into their daily lives while still providing an ongoing support system for each other.

Student tutoring

Part of the *Aiming for a College Education* programme sponsored by BP, Aberdeen City Education Department and Aberdeenshire Education Department. The aim is to provide role models for school pupils and raise aspirations and motivation towards continuing in education. Students from further and higher education work with pupils in school under the supervision of a classroom teacher.

SuccessMaker

A commercially produced software programme that is used to develop numeracy and literacy skills in S1 and S2. Pupils work through the programme at their own pace and reach a level that is appropriate to them. Information from the programme can then be gathered and used to set targets and identify areas of difficulty. Purpose built rooms/IT suites have been set up for this at St Columba's.

WHAM (Highland Waste Minimisation)
The Education Centre
Castle Street
DINGWALL IV15 9HU
Tel: 01349 868255
Fax: 01349 865637
katy@whamweb.org.uk
www.whamweb.org.uk

Aims to promote waste minimisation at a local level through raising awareness, improving access to information, demonstrating good practices and piloting new techniques.

Abbreviations and Acronyms

CPD	Continuing Professional Development
DEC	Development Education Centre
ES(S)	Eco Schools (Scotland)
HLF	Heritage Lottery Fund
IDEAS	International Development Education Association of Scotland
ICT	Information and Communication Technology
IT	Information Technology
ITE	Initial Teacher Education
LT Scotland	Learning and Teaching Scotland
NGO	Non-Governmental Organisation
NPDO	Non Profit Distributing Organisation
PP	PowerPoint
PPP	Public Private Partnership
PSA	Parent Staff Association
PSD/E	Personal and Social Development/Education
PTA	Parent Teacher Association
RIAS	Royal Incorporation of Architects in Scotland
RMPE/S	Religious, Moral and Philosophical Education/Studies
RSPB	Royal Society for the Protection of Birds
RTPI	Royal Town Planning Institute
SCCC	Scottish Consultative Council on the Curriculum
SCT	Scottish Civic Trust
SD(E)	Sustainable Development (Education)
SDELG	Sustainable Development Education Liaison Group
SEEC	Scottish Environmental Education Council
SEED	Scottish Executive Education Department
SFDES	Scottish Forum for Development Education in Schools
SMT	Senior Management Team
SNH	Scottish Natural Heritage
SSSP	Sustainable Secondary Schools Project
SVS	Social and Vocational Skills
WHAM	Highland Waste Minimisation
WWF	World Wide Fund for Nature

Contacts

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Currie Community HS Dolphin Avenue CURRIE EH14 5RD	Dr Alison Nind	0131 449 2165 alison.nind@currie.edin.sch.uk curriehs.edinburgh.digitalbrain.com/
Drummond Community HS 41 Bellevue Place EDINBURGH EH7 4BS	Ms Muriel Buchanan Headteacher	0131 556 2651 muriel.buchanan@drummond.edin.sch.uk www.drummond.edin.sch.uk
Eco Schools Scotland Keep Scotland Beautiful Islay House Livilands Lane STIRLING FK8 2BG	Ms Kate Campbell Eco Schools Manager	01786 468232 kate.campbell@ksbscotland.org.uk www.ecoschoolsscotland.org
Fortrose Academy Academy Street FORTROSE Ross-shire IV10 8TW	Mr John Tracey Depute Headteacher	01381 620310 john.tracey@highland.gov.uk www.netmedia.co.uk/history/fortrose.html
IDEAS C/o Oxfam In Scotland Regional Office 207 Bath Street GLASGOW G2 4HZ	Ms Anne Kane Oxfam Curriculum Adviser and IDEAS Representative	0845 900 5678 akane@oxfam.org.uk
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Continued on next page.

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RTPI in Scotland 57 Melville Street EDINBURGH EH3 7HL	Ms Catherine Quigley	0131 226 1959 catherine.quigley@rspb.org.uk
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WWF Scotland Little Dunkeld DUNKELD Perthshire PH8 0AD	Ms Morag Watson Education Policy Officer	01887 820449 mwatson@wwfscotland.org.uk www.wwf.org.uk/scotland



The Sustainable Secondary Schools Project (SSSP) involved six secondary schools and nine partner organisations in an openly-structured programme aimed at exploring ways in which Scottish secondary schools could engage with sustainable development education.

This report documents the project's activities and outcomes together with an account of school-based activities.

The project has produced detailed information that will also help to inform and support the role of sustainable development education in the emerging 3-18 curriculum for Scottish schools, as set out in *A Curriculum for Excellence* (Scottish Executive, 2004) and the ambition to develop in young people 'their capabilities as successful learners, confident individuals, responsible citizens and effective contributors to society'.

The project was financially supported by the Heritage Lottery Fund.



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