How can local authorities stimulate & support behavioural change in response to climate change?

A report for Hampshire County Council undertaken as part of the ESPACE project September 2004 – May 2005

Volume 2: Appendices

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1. Purpose of scoping interviews
Before the research phase of the project, we conducted 12 initial scoping interviews with Hampshire County Council members and officers (one of whom actually worked for the South East Regional Assembly) who were seen as likely to have an opinion on how the project might best serve the Council and the people of Hampshire. We used these interviews for a variety of purposes, including to identify initiatives and people that should be included in stakeholder interviews in Phase 2, to identify areas that might be helpful to HCC officers involved in this area for us to examine in Phase 4, provided that this can be done in a way consistent with the brief for the project, to identify other initiatives taking place in the county that we should be aware of and to identify what people in key roles hoped for from this project. We were also looking to understand how key officers currently see the challenge and the role of HCC. We were also seeking to check out whether the county had the necessary level of understanding of the issues to be able to lead effectively in this area.

2. Methodology and questions asked
We wished to minimise the well-known power dynamic that emerges when one party (the interviewer) takes control of the agenda and does not allow deviation from it. For this reason, the interviews were carried out in a semi-structured manner, with the intention of ensuring that certain key generally open questions were asked, while also allowing a free flow of conversation and the building of ideas together and opening possibilities for the interviewee to raise items that we might not previously seen as relevant.

Four of the interviews were carried out face to face. While we would have preferred all to have been done in this way, there was simply not enough time for this to be possible and the other conversations were by telephone. The conversations were relatively lengthy, with even senior interviewees being prepared to give generously of their time.

We greatly enjoyed them and came to appreciate the quality of HCC’s people and of their work in this area. We understand that the interviewees generally enjoyed the conversations too, and we are very pleased about this.

We sought to:
- Understand the interviewee’s role and their potential interest in this project
- Find out how they became involved in, and see your role on, climate change
- Discover what they hope for from this project …
- … and how the project might fit into other processes
- Identify other initiatives (past, present, future) of which we should be aware
- Identify any parameters or principles that the interviewee thinks should be observed as we work
- Ask for advice re: stakeholders, possible case studies, other people to talk to (now or later), existing research (internal or external), desk research data or sources, etc.
- Identify how the interviewee currently sees HCC’s role in awakening and supporting stakeholder participation
- Find out what the interviewee has learned about what works, doesn’t work in practice
- Find out how he or she would like to be kept in touch.

A short note was made during the interview, which was later typed up. We did not discover any information that we would regard as confidential, and yet we generally
Summary of initial scoping interviews

(with few exceptions) prefer not to attribute comments at this stage for the conversations were relatively open. We can always seek permission if attribution seems appropriate.

3. List of people interviewed
Attachment 2 is a list of the 12 people that we interviewed. We identified these from discussions with representatives of the Environment Department as being people who would be likely to have an opinion on how the project might best serve the Council and the people of Hampshire.

4. What we learned
Here is a selection of what interviewees said on specific questions. Note that interviewees’ comments are not always presented in the same order and that it is not therefore possible to connect a comment with any particular interviewee.

4.1 How did interviewees became involved in climate change?
Some interviewees have clearly been interested in this subject for a long time, others had become involved through their role. About half mentioned a personal interest that preceded their professional involvement (though this might have been true of a higher proportion). We were not able to identify any difference between those who became involved through their role and those who were personally interested in terms of their attitudes to their work on climate change.

a) In November 1999 I attended the Royal Geographical Society Conference on climate change. Until that time I hadn’t thought about it. Michael Meacher was brilliant. I am attracted by new challenges; this is a serious challenge. It is not a question of if but of when: timescales extend far into future. However my first love was waste – I could see that in Hampshire’s geology our behaviour simply must be changed.

b) I have high awareness of climate change and its implications within my role. On the other hand, current pressures have been such that I have not been able to devote as much time to climate change during the process as I would have liked.

c) Through my role (several said this).

d) I have had a long standing interest.

e) I’ve been involved since the first international workshop. Prior to my current role I worked for the Environment Agency so came across climate change generally but took more specific interest as result of ESPACE. I am now the informal office information specialist on climate change!

f) I have been interested since 1995. I began work formally in 1998, when work was first sanctioned by members.

g) I became involved through the Environment Group and the initiatives of the Carbon Trust’s Carbon Management Programme which was sponsored by PWC and which facilitated a range of thinking about all this.

4.2 How do interviewees see their role on climate change?
What impressed us was quite how clearly the interviewees saw that they had an important role on climate change even where, in one case, there was what appeared to be genuine regret that it is not being better fulfilled at present. This was not just people in the Environment Department, it was general, and there were no exceptions. While
Summary of initial scoping interviews

this is obviously and (from our perspective) unapologetically an unrepresentative group, we do not think that such coherence as to the importance of climate change could occur unless it is indeed the case that HCC management takes the issue seriously.

a) Awareness. We must continue to spread the word: this is a key issue. We can do quite a lot, but gradually. We do not have the budget to change things dramatically. We must try to use the resources we have got to change behaviour.

b) HCC has many initiatives, many good people, in many ways it is an excellent authority. We have looked at our own service areas to identify which are important. We thought it important to put our own house in order and to learn from doing that. If we can learn from doing it ourselves, that provides a good basis. We have made big strides, have built a ‘Red Guard’ cohort and a model of change that can influence others. The ‘Red Guard’ is very positive and understands the issue well and can go on to influence others. We must make slow sustained progress in focused areas, with some of these being at the level of wider society. Our decisions are made at many times. We must take these opportunities. As with waste, we must use the contracts. We must support as well as challenge. The role of LAs is changing. It is driven more and more by budgets and indicators and there is a danger that we will be under pressure to drop non-statutory things if we cannot justify them. On the other hand, the Comprehensive Performance Assessments are taken very seriously by CEO’s and if we can get climate change included in that process it will give a kick!

c) Our communications role is key, both vis-à-vis local population and elected members.

d) I represent Corporate on Sustainable Development Group, which is chaired by Alison Quant. My role is to make corporate strategy incorporate, even exemplify, sustainable development thinking.

e) Awareness-raising among advisory groups such as Housing, Transport, Rural Affairs, Natural Resources. Their members are drawn from councils and organisations like the Environment Agency. Early on we passed on papers about what climate change would mean in the South East to ALL the advisory groups. We made all groups aware of cc impacts, threats and opportunities before writing policy. Part of the appraisal process will be to ascertain whether they have fully understood the information. Questions and principles checked against policy will inform the sustainability report which will grow from consultation in Jan to March.

f) That’s a philosophical question!’ I and the team are trying to understand the implications of climate change and build them into policies and strategies: how should Hampshire develop and change, taking a longer term view. agreed he is operating at the coal face: the 25 year view involves climate change and directly influences actions in the shorter term.

g) We influence it in all possible ways – e.g. potentially new construction of roads, behaviour change, congestion charging.

h) I really want to take this seriously. The County Council has parked Climate Change in the past. Now we need to mainstream this within the consciousness of HCC. I would be keen to take a leadership role, provided that I can see a focus. I feel a bit bereft of arguments at present.

i) We recognise that we have a big and important role. We have a very large built estate: 1k sites, 5k buildings, 35k employees. Our buildings are heavily used by the general public. The carbon management process is measuring energy usage, aiming to derive best value indicators. We are aiming to identify high energy
buildings so as to make them more efficient. We aim to start small and build up towards sustainable strategies. We are working with the Building Research Establishment towards repair, reuse and recycle strategies for buildings, to identify how to use repair and refurbishment programmes to improve standards. We are also using projects – the Queen Elizabeth country park woodchip boilers, social services homes – to develop more far reaching strategies. We are also looking at the feasibility of CHP in strategic sites. However we have not done much on adaptation agenda as yet.

4.3 Interviewees’ interest in and hopes from this project
Interviewees widely recognised the importance of the issues addressed by this project.

a) Awareness is a major issue: if climate change is driven by lifestyle decisions, and if these decisions are of poor quality, we need to raise awareness in a meaningful way. We have to present Climate Change anew. We should really influence the way that development happens. We need to call the Environment Department to its role. We need to involve the community very practically in a way that offers added value. We want something very practical and applied. We need to be able to communicate it to several hundred senior managers. We need to be able to apply it to our services. We need to be able to measure it, to show that there is value for money. We need a clear strategy on climate change, a clear plan that allows us to do as much as we can – over a 4 year period. We need something quite hard-edged, for the next iteration of the corporate strategy. A programme to work with the farming community is key.

b) I am very interested in this project. This is a classic issue which no party or person can solve in isolation. We have very good experts but we are less good at turning that into action. We are not far enough on yet and this project can help.

c) I do not know how to convert the information that exists into action by individuals, whether adaptation or mitigation. I do not know how to measure behavioural change or attitudinal change and their impact, etc. I do not know how to create a relationship between input and output. If I spent £1m on advertising I would know what to measure. I need to understand what changes in behaviour we should observe and measure.

d) We can help clarify the role of training as above. We can also clarify the communication role and the information people need. Can we articulate the sector agendas and articulate their interests? I am particularly interested in the agricultural sector, in understanding what presses their buttons.

e) Changing behaviour, attitudes and values in the community is hard. We have to resolve this issue. We need to know how to do this. We have real experts: Bryan Boult is internationally known (one of a number of such appreciative comments about HCC colleagues). But what can we do? How do we extend the influencing role?

f) I don’t know – my problem is not really knowing what ESPACE is about.

g) A high priority in my speeches is behaviour change at the local and individual level.

h) We’re very interested in knowing the outcome of this research on behaviour change. We want to get people engaged in understanding policy and its implementation

i) Project can help with Education, where I see a big potential for building on HCC’s extensive community base. Schools have dedicated funding: they hold
Summary of initial scoping interviews

4.4 Other processes and initiatives, contacts
We were given a very long list of wider processes within which HCC is involved on climate change and another list of initiatives within the county sponsored by HCC or within which it participates. Copies of both are available upon request. We were also given a long list of contacts. These were made available for stakeholder interviews and a good number were followed up in opening rounds of this project. The overall impression that we gained was that HCC is very active indeed on climate change issues. No-one could fairly accuse the Council, or its employees, of failing to act. The problem, if there is one, is far more likely to be to do with connecting initiatives and making sense of the learning from them.

4.5 Any parameters or principles that the project should respect
We asked for any parameters and principles that we should respect during the execution of this project. These, along with purpose, are sometimes seen as necessary for setting the terms of reference of strategic projects such as this one. There are benefits in seeking a variety of perspectives in defining these. (In this case purpose was clear: to identify options for influencing personal, social and organisational behaviour in response to climate change).

Most of the people to whom we asked this question (not everybody) had no particular suggestions. We were reminded to show sensitivity to diversity within HCC: different approaches does not imply a lack of commitment! We were also reminded of the need to work realistically on budgets, etc. This interviewee reminded us that Value for Money will need to be shown, in case of a future budget squeeze.

4.6 How did interviewees see their role in awakening / supporting stakeholder participation?
None of the interviewees doubted that HCC plays a potentially vital role in connecting with the public. This contrasts sharply with the private sector, where (in our experience) it is rare for managers to accept that they have a role in awakening wider responses.

a) Community leadership is crucial, using the top-down to empower the bottom-up... Besides my role, my colleagues feel that they have to 'account' to me on this issue. They understand the agenda enough to evaluate their own behaviour and they feel that they are not doing enough... We must not try to get people to change their minds.

b) There is a leadership role and a partnership role. We need to synthesise these... We need a handful of people with a broader vision; we need to find ways of bringing together people’s broader needs into a coherent programme.

c) Behavioural and attitudinal change will be a key responsibility of local government in the 21st century.

d) HCC can act as exemplar of best practice; we can also provide ‘pump-priming’ money – e.g. putting in a bit of money to stimulate design such as the Petersfield Solar heating at the open air swimming pool, which only cost £8k.

e) HCC should be an incubator of ideas. For instance by finding ways to begin use of hydrogen as a fuel in the county.

f) The people we talk to tend to be aware, but implementation is the problem. For example, planners could grant permission for a building with a condition about
water or energy efficiency but developers can turn round and say building regulations don’t support it. Who checks in any case that they have followed the policy? And does the person buying the new house then replace the efficient shower with a power shower?

g) Outreach – especially education – is key.

h) HCC has a wider role of community leadership. Changing behaviour, attitudes and values in the community is hard. 9 times out of 10, when people don’t know what to do, they call the Council. We can influence through consultation, leaflets etc.

4.7 Ideas of what works / doesn’t work

Relatively few interviewees gave a view on this, which we found interesting. Each of the comments accords well with a part of the research, though obviously not with all of it. We were particularly interested as to the strength with which the comment on disturbing information at d) was made. This was the only time that this issue came up, but it does connect with issues in the wider research. Here are some interesting comments:

a) It helps to have someone with a strong personal interest. This could be an officer, or a member (if we can get them to focus!). They need to translate the issue into a form that plebs like me (sic!) can understand, can do something about! Having some money helps!

b) If I get judgemental of people, that doesn’t work: it is much better if I can laugh with them and share some humanity. I am a pragmatist. I think that a mixture of compulsion (e.g. fines, fiscal incentives, making parking harder) and enabling by helping them to do it easily works best. A ration of about 10:90. We need to fit people’s lifestyles and have visible and practical things to offer. We must not use moral persuasion to try to get people to change their minds. In Hampshire people are time poor but money rich. They will not change behaviour for marginal cost savings.

c) ‘We do not think that climate change is a good message (on travel behaviour). We think that the public health agenda is better. Congestion is another good route to changing behaviour. The problem is ‘why should I?’ People want other people to change behaviour. People must want to do it for themselves.’

d) Nothing like AIDS or sex education! Nothing horrid or frightening. I didn’t open the security leaflet. I do not like to be frightened. I want clear pathways to information. I want to know what has been done, what we are doing.

e) Economic instruments work better – ‘if it is profitable, they will do it! Piloting is good – e.g. if we could pilot a sustainable community. There are difficulties with planning – there is terrific NIMBYism.

4.8 Other comments from interviewee

A great many other comments were made by interviewees on a wide range of topics.

(i) Climate change team is keen but needs a sharper edge …

a) In the past, climate change has had no champion at Board or Management Team level. There is a good cabinet here, keen on sustainable development. The team needs to publicise what works, share learning. It can do a lot by influence.

b) Young team, brand new (on climate change) tend to sit in the office. My impression: great academic thinkers, not great practitioners. … The team needs to think about multi-layered solutions and share with them and the community:
loads of scope for subtlety. If they say ‘We are the climate change team and you should do this …’ no-one will listen.

On the other hand, and echoing on the comments above about specific people:

c) I cannot believe the quality of our people.

(ii) ... but something does seem to be working in HCC

d) People are starting to do things for themselves. For instance, the Pay and Benefits people came to us and asked for help on the leased car scheme. They put a limit on the carbon emissions from a leased car.

e) There are policies and procedures to help me. I can use these to communicate to people. For instance, I was able to use the 12 points of the corporate sustainable development strategy to go through everything in detail to help me in building design. For instance, biodiversity gave me a mandate on gardens. From a personal point of view, I wouldn’t always know. I wouldn’t know where to go and I wouldn’t be able to answer a question in committee.

f) There are lots of people around who are very supportive, who will go the extra mile. HCC is an ‘excellent authority’: it gives good opportunities to become involved in things.

g) Councillors have picked up on this – overt formal council approval since 1999. However until recently, Climate Change was a very specialist issue. We do see the cross-cutting nature of the issues.

h) We have a lot of strands of good practice. We have good information. We have not yet really grasped them all.” This is an enormous subject: the technicalities take a long time to get to grips with, even for a specialist.

i) 5 years ago there were a lot of cynics. There are fewer now.

(iii) Perspectives on HCC’s role

j) Hampshire has 1.2 million people. 35k work for HCC. Probably means 120k people closely involved through families/partners etc. That is 10% of the population. A cross-section of Hampshire society, very close to the county’s ethnic mix figures, for instance. 80% of HCC spend is education and social services. The members have an impact over about 10%. HCC can be seen in different ways: as a corporate body run by members, as a deliverer of services, as a network. Very widely dispersed staff: a very high % has never visited Winchester.

k) Conservative council, Lib Dems in 2nd place. Tory heartland, little likelihood of a change in June 2005. Priorities: balancing the books, delivery focus. We were not so strong on the detail in the past.

l) There is a big problem of trust when working with wider networks – e.g. across Europe. They are always framed by the press as ‘jollies’

m) A big issue is being held responsible for things over which have no control: partnership working. We do control schools. Not NHS.

n) Schools are no longer under the CC’s control: their agendas are now cost and performance. On schools, competitions, prizes, getting to people’s pride is best. We (HCC) should use more of these dimensions.

(iv) Other comments

o) (On timescales) A big obstacle on the issue is that whatever we do now will have little effect for a long time.
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p) (On Hampshire MPs) *When we talk to them, they are not interested (in climate change).*

q) (On transport) *You need a brave local authority (Winchester DC) to take on this agenda (i.e. 'hard' transport measures). Since DETR broke up and Transport became a separate Department of State, the emphasis has retreated onto the core transport agenda. 5 year targets tend to focus minds onto the short term options (red routes) and not fundamental solutions. The Highways Agency has only just begun to take an interest in travel planning. Difficult because they operate the big trunk roads and Motorways that dominate transport in the county.*

5. Conclusions

We have been very impressed with the qualities of the people to whom we have spoken, both in terms of their evident commitment and in terms of their expertise. We have also been very favourably impressed with what we have learned about County Council. While it would not be possible to speak with total confidence based on such a small number of discussions, away for the most part from front-line operations, we have enough experience in a wide range of other organisations to be impressed with what HCC has done. Given that it is such a significant part of the County’s employment, and that it reaches so widely into the community, we think that it offers a potentially strong base for future outreach.

In particular, and crucially, we believe that the council has managed to create an environment within which at least some of those who want to act environmentally can easily do so. On the other hand, the interviews identified a concern that the county risks ‘initiative overload’ and that it may need to focus rather more in the future on supporting and co-ordinating different activities. The importance of HCC’s potential role in behaviour change is widely accepted. Relatively few people, however, had a clear idea of what that might be. We see this as positive: it would be much worse if people denied that they might have such a role (common in industry) or had a fixed (but inadequate) idea as to what it might be (common in Government-level information strategies over recent years).
Summary of initial scoping interviews

Attachment 1: Letter sent to participants in scoping interviews

Brief for preliminary meetings on behaviour and awareness:
The purpose of the awareness and behaviour work is to identify how the County Council can assist the people of Hampshire to take appropriate action in response to the challenge of climate change while meeting the Council’s objectives. It is clear that public bodies potentially have much to offer, but there is little consensus on how best to do that.

The work will be in several phases. During the first phase of research, we shall be doing several things: a) Working on case studies from inside and outside the county to inquire into good practice in response to climate change and what practitioners have found, b) carrying out formal research interviews of stakeholders to find out their current level of awareness and what they think they and others need c) doing a review of academic and other literature into this issue. We shall also (d) be investigating specific climate-related issues that are likely to affect key stakeholder groups. This will be ‘broad’ research. During the next phase we shall be pulling together what we have learned so as to identify areas for deeper study. In the third phase we shall be repeating steps a) to c) in greater detail but with a narrower group of people before going on to the report. Case studies will be carried out by Susan Ballard, an ex award-winning BBC journalist with a great deal of experience of climate change work. Stakeholder research will be co-ordinated by Joe Seydel, who has considerable experience of qualitative research on climate change. The literature review will be carried out by David Ballard, who is a specialist on behavioural change in relation to climate change (an interest that is shared by the others in the team).

Before the research phase of the project, David Ballard will be conducting some initial scoping interviews with Hampshire County Council members and officers who are likely to have an opinion on how the project might best serve the Council and the people of Hampshire. This is for a number of reasons, including:
To identify possible stakeholders and case studies for later work;
To identify sources of information about and generally begin to get to know Hampshire and the Council;
To gain understanding of other initiatives into which the project should fit;
To give people a chance to influence the way the work is carried out and state how it might help them;
To gain understanding of the Council’s current approach and ways of thinking about this issue.
To allow people to ask to be kept in touch in various ways;
To help identify parameters and principles for the project.

A checklist of issues that we will cover is below. The discussions will be quite informal (following a ‘guided interview’ approach) using this checklist. There is no need to prepare for the interview unless you wish.

If you have any questions or wish to offer some ideas afterwards, you can contact David Ballard in the following ways (contact details were attached).

Many thanks
Summary of initial scoping interviews

**Checklist of issues to cover:**
Introduce research team and purpose of project
Understand who you are and your interest in this project
Find out how you became involved in, and see your role on, climate change
Discover what you hope for from this project …
… and how it fits into other processes
Identify other initiatives (past, present, future) of which we should be aware
Identify any parameters or principles that you think should be observed as we work
Share the process of the project and answer any questions
Ask for advice re: stakeholders, possible case studies, other people to talk to (now or later), existing research (internal or external), desk research data or sources, etc.
Identify how you currently see HCC’s role in awakening and supporting stakeholder participation
Find out what you have learned about what works, doesn’t work
Find out how you would like to be kept in touch.

Not all of this might be possible in the time in every interview, but by meeting different people from different parts of the organisation, we hope to focus the first stage of research proper without reinventing every wheel!
Attachment 2 – List of people interviewed.

(a) *Bryan Boult, Head of Environment Strategy, Environment Department.*
Interested in climate change since 1995. Began work formally in 1998, when work was first sanctioned by members. Head of Environment Strategy for two years, previously Head of Environment Group. Environmental Sustainability Agenda is his primary focus.

(b) John Buckett, Transport Department. Responsible for Local Transport planning, and the capital programme – including maintenance and bridges (not major trunk roads, motorways), accessibility, air quality, target driven – air quality, cycle use, traffic growth/containment.

(c) Joanne Cleasby, South East Regional Assembly (Planning). One of two officers co-ordinating the Sustainability Appraisal of the South East Plan. As a partner to ESPACE, the Assembly has a role to incorporate adaptation to the Plan. She holds an MSc in Environmental Technology from Imperial College and a BSc in Resources and the Environment. Prior to joining the Assembly she worked for the Environment Agency in the Regional Planning Team, so was already knowledgeable on climate change but took a more specific interest as result of ESPACE.

(d) Merrick Denton Thompson, Assistant Director, Performance & Innovation, Environment Department. Has a very wide range of support responsibilities within the Department, including HR, Finance and Communication. Research responsibilities include strategic planning needs: does strategic planning and scenario planning addressing (for instance) risks for elderly and very young. Has front line responsibility for Ecology, River Hamble Harbour Authority. On the departmental board, he has co-ordinating responsibility for rural affairs, for national parks and for coastal zone management. He will soon become local lead on agriculture.

(e) Mike Fitch, Head of Property Management, Architects Department, Property, Buildings & Regulatory Services. Manages HCC’s built estate, which is of significant size, and so potentially has a major role on both mitigation and adaptation. Represents Department on Sustainable Development Group since April 2004.

(f) *Jane Graham, Capital Resources Officer, Social Services Department. Has an Environmental Science degree. She is responsible for buildings and land in social services – e.g. nursing home provision, and for travel planning. Reports to Assistant Director and is a member of departmental sustainable development group, chaired by her boss, Dave Ward, who fully supports her involvement. This has its own action plan, meets 3 or 4 times per annum, and has local representatives around the department.

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(g) Bob Lisney, Assistant Director Natural Resources, Environment Department. In role since January 2004. Main responsibilities corporate sustainability, water, waste, renewables, climate change. Has overall responsibility for the project and for ESPACE, but is not involved on a day-to-day basis in this issue.

(h) Alison Quant, Director, Environment Department. Previously at London Borough of Richmond and Cambridgeshire County Council. Two years in her current role. Member of HCC’s Senior Management Team and Chairs the Sustainable Development Steering Group.

(i) Stuart Roberts, Head of Spatial Strategy, Environment Department. Leads County’s involvement in the Regional Spatial Strategy to 2026 (the ‘South East Plan’), which replaces the County Structure Plan but which is being prepared at Regional Assembly level. The draft plan was submitted in late 2004 and is now in the public domain. There will be sub-regional strategies for some areas, which include South Hampshire and North Hampshire, but not Winchester, Alton and Andover.

(j) * Councillor John West, Cabinet member, Green energy champion. His role is to promote green energy in council discussions – the role is less formal than as a Chair of a Scrutiny Committee.

(k) Councillor Mike Woodhall Cabinet member and Deputy Leader of HCC. Climate change champion. Also has an economic portfolio and a strong interest in waste. Member of Assembly of European Regions and so takes a leading role with Accession Countries to EU, which enables him to get a good handle on what is going on in Europe. For instance, gets access at a very high level in Moscow and other Russian municipalities. Involved in ESPACE project. He owns a small construction company.

(Interviews marked as * were carried out face-to-face)
Appendix B
Stakeholder interviews with local opinion leaders

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1. Summary

Background and Methodology

In November 2004, Rosslyn Research conducted 45 telephone interviews with stakeholders, with the aim of contributing to the development of a set of case studies for the next phase of the project.

Interviews covered the following areas:

- Explanation and objectives of study
- Personal involvement in climate change initiatives/ specific groups
- Professional involvement in climate change initiatives
- List of initiatives involved in (personal or professional)
- Selection of prime case study
- Questions about prime case study
- Suggestions for other stakeholders who should be contacted about that case study
- Selection of further case study (if relevant)
- Willingness to be interviewed again
- Suggestions for other stakeholders who should be contacted

A full copy of the discussion guide can be found in Appendix 1 of this report

Intended stakeholder classifications were, initially:

- National Politicians
- Regional Authorities
- Local
  - Local Politicians (Hampshire County)
  - Local Politicians (Unitary Authorities)
  - Hampshire County Council Staff/Public Sector Decision Makers/ NGOs
- Business
  - Local Businesses
  - Construction Industry
  - Agriculture/ Forestry
- Local Opinion Leaders (including Media)

These classifications were modified in the course of interviewing; for this analytical summary, stakeholders are classified as follows;

- National/International Opinion Leaders
- Regional NGO Representatives
- Regional / Local Public Sector Decision Makers
- Hampshire County Council Staff
- Business
Stakeholder interviews with local opinion leaders

- Local Businesses
- Construction Industry
- Agriculture/Forestry
- Local Opinion Leaders

Those approached came from four sources:
- 2002 Hampshire and Climate Change Summit participants list, supplied by Hampshire County Council
- Independently sourced local stakeholders
- Independently sourced non-local stakeholders
- Stakeholders suggested by respondents during the course of this programme of interviewing

Summary Findings for National/International Opinion Leaders

The level of uncertainty with which climate experts work is such that their predictions would be regarded as worthless in most other areas of science or engineering. This creates a major credibility problem; policy-makers, and even more so the general public, have a particular conception of scientific expertise, and are unreceptive to a complex message which includes a great number of caveats.

The main problem is perceived to be how to communicate expert assessment accurately to political leaders and the public, and thereby have climate change acknowledged as a globally urgent issue, when there is such uncertainty in the scientific data. Non-experts are worryingly ill-informed; not only about the facts but even about the type or structure of factual information that already exists.

Most expect or assume that the very most urgent need is to change attitudes amongst policy-makers; raise the profile of the issue of climate change, have funding and projects organised more permanently and centrally, and subsequently address public attitudes and behaviour.

Summary Findings for Regional NGO Representatives

Fragmentary funding and non-coordination are major concerns. Lack of quantitative measures of success is a major barrier to securing funding. The actual process of applying for funding is very complex and demanding.

Communication should be personal and local where possible but backed up by centralized information infrastructure.

The biggest issue is the challenge of integrating not-for-profit and at times apparently anti-profit initiatives into the economic mainstream.
Summary Findings for Regional / Local Public Sector Decision Makers

In structural terms, the next development should be integration of various existing research programmes and other initiatives. In terms of substance, there is great readiness for and expectation of transport-based mitigation programmes.

Public sector must lead by example if they are to bring about behavioural change, e.g. with regard to car use.

Simple robust quantitative measures are a good communication/motivation tool for bringing about behavioural change, and in particular they are the key to persuading the public that a lot of small individual behavioural changes can have a large overall impact.

Many initiatives are expensive and difficult to set up but easy and cheap to run once they are in place. It’s important to convince policy-makers and the public in general that once you are over the “energy barrier” of setting up an initiative, you are at a new state of equilibrium which can continue without constant external input of money and effort.

Summary Findings for Hampshire County Council Staff

The best way to motivate the public is by extending their existing concerns:

- pollution (greenhouse gas emissions pollute as well as warm)
- recycling (less landfill = less greenhouse gas emissions)
- savings (insulated house = lower heating bills)
- quality of life issues (fewer journeys by private car = more pleasant journeys when they are made, more biodiverse and less car-centred urban areas are climate-change mitigation measures but also improve QOL)

Three major problems:

- it’s hard to persuade the public away from an exclusive focus on mitigation and towards adaptation (especially managed retreat from coast)
- it’s hard to persuade the public that a great number of small changes can have a great impact
- initiatives are too localized and fragmented

The public must be involved from an early stage (contrast with national opinion leaders). They will not readily address their own behaviour unless it’s through dialogue.
Summary Findings for Business

For commercial organisations keeping costs down is the main determinant factor for taking up climate change initiatives. Therefore promoting low-energy practices as cost-effective is crucial in this area. Where savings can be made in fuel bills for example this is seen as good business sense rather than a mitigation measure.

Apart from simple commercial self-interest, there are three other ways in which businesses may come to address climate change issues:

- government regulation
- for smaller businesses, local sense of community
- for larger businesses, enlightened self-interest drives transport/energy companies towards adaptation and mitigation measures

Summary Findings for Local Opinion Leaders

On a local level; there is a great interest in environmental initiatives taken on by government agencies such as the Environment Agency and English Nature, as they directly affect people's everyday lives. This has led to opposition by local parties concerned, in particular farmers who see land left for managed retreat as a threat to their livelihoods. There is also widespread opposition to wind farms, on the grounds that they degrade the amenity of the countryside where they are located.

Also we see competing interests between local government and environmental agencies on management of coastlines and housing issues as well as competing interests amongst local groups on matters such as water management. There seems to be a pressing need to consider how to accommodate environmental issues in a way that addresses the interests of all the interested parties.
Stakeholder interviews with local opinion leaders

2. National / international opinion leaders

Professor Trevor Tanton
Professor of Environmental Technology

Stakeholder group:
National Opinion Leader

Case study:
In Lewes he is looking at the impact of the rise in sea level and how the effects of increased flooding can be managed within coastal towns that are sitting on estuaries. He is also looking at whether, technically engineering-wise he can cost effectively manage the current situation in Lewes out of the jam it is in. With these places that are technically flooding due to increased run-off from the rivers and the discharge into the sea, he is looking to see if there are practical solutions to manage flooding in these estuarine towns within the tidal influence. Lewes is experiencing increased storms and higher tides in winter caused by sea level rises related to climate change.

He is part of ACCUE (Adaptation to Climate Change in the Urban Environment – see http://www.art.man.ac.uk/PLANNING/cure/PDF WP2.pdf). This project involves architects, geographers and civil engineers. It’s part of a larger project looking at the effect of climate change and managing the risk associated with managing the living conditions within towns. He is working on the technological adaptations that can be made as result of the effects of climate change is funded by the ESRC (The Economic and Social Research Council). He also works closely with Lewes Town Council, the Environment Agency. The main instigators of this project are the ESRC who put in a bid for this project to look at the potential effects of managing climate change in cities and Peter is a part of this bid. The University of Manchester Department of Planning and Landscape actually manage the project in Lewes.

The main objective of this project to look at the science and statistics behind the effects of climate change so that they can predict what type and height of defences they need to build to take into account the alluvial flow from the hills and the level of the sea hen the water floods down the river. Above all they are looking to find improved ways of managing the flooding of estuarine towns when a high tide will prevent the floodwater flowing out to sea.

They are at the point where results have been obtained that show that the risk is manageable in certain circumstances.

Timescale and future plans
This initiative has been going for 18 months and could go on for either 3 months or year depending on how the modelling works out.

The engineers will soon come up with solutions that will enable the local authorities to make decisions as to what lands are feasible to be defended, which land is to be left undefended and which land will be allowed to collapse into the sea.

ESRC are also very keen on dissemination and when this project is finished in 18 months there will be an active campaign to disseminate this information to the planners,
Stakeholder interviews with local opinion leaders

geographers, public, universities etc. Also the solutions made from this project will go into codes of practice so that any engineer who is building for this situation has a solution that is workable.

Measures of success:
The project has been successful so far in that they have the results and are now modelling the results to see whether the solution they think is the best one is a feasible one, using computer modelling. They will either get the results in three months or a year depending on how the modelling goes.

Problems:
The problem is that they need to check all the conditions and all the range of boundary conditions in which the solution works, so it is hard to say what results point to. There is a need to get more concrete information so that they can make decisions regarding these changing scenarios. It is thought that in Lewes that the estimate for precipitation will be 20% wetter in winter but within the 95% confidence limit that they work within, this could be 10% drier and up to 40% wetter. Yet even these stats are pretty much a guess and these statistics would not be acceptable for any other form of science or engineering.

Learning points
People are not well informed, as they discovered from surveys. There is a feeling that the Environment Agency does warn people who live in estuarine river flood planes of the flood threat. However they have also learned that there is a solution to estuarine rivers with narrow valleys and with towns on flood planes.

In future it would be best to get researchers who have a good overall view and will come up with a workable solution. Also necessary to get design criteria for the given conditions that can be extrapolated for similar estuarine populated areas in a narrow valley.

Future projects:
He is also looking in various parts of the project at how cities will be affected by the rise in temperatures caused by climate change. In particular they are looking at the living effects in cities of climate change. There will be increased heat islands that will make the pollution worse over the big cities where there are limited winds to push the pollution in and out.

In Hampshire the biggest problem is the water in summer as Hampshire is short of water and there is still extensive housebuilding, although on the coast there is no space to build. The government’s plans for major house building will lead to more and more flooding in the southeast s they can only build on the flood plain. The Environment Agency wants to restrict house building on the flood plains and to protect these areas to stop the water getting down to the sea too quickly.
**Sir Crispin Tickell**  
Advisor on Climate Change to the Government and Chancellor of University of Kent

**Stakeholder group:**  
National Opinion Leader

**Case study:**

**Description:** As an advisor he is not involved in any particular climate change projects. But he is involved in lobbying various international governments, government agencies and multinational companies on the issues dealt with in the Kyoto agreement. He believes that the mention of methane in the Kyoto agreement is a very inadequate one. Methane emissions are 21 times more harmful than carbon dioxide. Methane is much easier to measure and restrain, so we should look at 2012 and see how we can get the USA involved. Particularly as some of the New England states, California and some US companies are taking their own steps.

He is currently involved in looking at different forms of renewable energy including nuclear energy. Although running costs for this are low the capital costs are very high.

**Timescale and future plans**  
N/A

**Measures of success:**  
One measure of success would be all governments signing up to the Kyoto agreement.

**Problems:**  
His job is made all the more difficult by the fact that once the agreement has been signed they should then fail to ratify it. Kyoto is an imperfect agreement, which comes into force on 16th February 2005.

One of the conclusions that was reached was that the public could be persuaded to consider nuclear power if the government wanted to inform them as to its benefits. In some ways people’s objections to nuclear energy are superficial. They don’t particularly like the idea of nuclear as they associate it with disposal of high levels of waste.

**Learning points:**
The vital thing is that the industrial world emits the most carbon dioxide and we need to develop good energy policies that reduce emissions and to bring the rest of the world comes along too. The rest of the world will only follow if the industrial world gives a good example with good energy policies as they could in the future emit more CO\textsubscript{2} than the industrial world.

One solution to combat the effects of climate change in the South is to build more housing in the northeast and northwest. The land in the southeast is low-lying land and with sea level rising, more flooding will occur. He believes that there is an enormous area of policy making that doesn’t seem to be aware of these issues.
Stakeholder interviews with local opinion leaders

Professor Nils Roar Sælthun
Hydrologist

Stakeholder group:
Opinion leader (Transnational)

Case study:
Description:

**FLOWS - Floodplain Land Use Optimising Workable Sustainability**

**Practical work is well under way**

It is a transnational project with participants from Germany, the Netherlands, Norway, Sweden and the United Kingdom. A government agency from each country acts as lead partner in the respective participant countries. In the UK, Cambridgeshire County Council.

Aims to develop practical projects to identify how people need to adapt to live with water. Addressing systematically the problem of how to persuade people to act rationally in the face of low-probability high-negative-impact events such as flooding. Also to ascertain risk and inform the public involved, making them aware of the risks, but in a way that they accept there is a risk, even if low-probability. Flooding is a part of life, not always avoidable, but people must take some responsibility.

Second strand of FLOWS aims – develop a sound planning template for land use in areas of higher flood risk.

**Timescale and future plans**

FLOWS was approved in November 2002. It is to be completed by June 2006.

**Measures of success:**
Too early to tell

**Instigators:**
Norway - Norwegian Water Resources and Energy Directorate
UK - Cambridgeshire County Council
Germany (Ministry of Civil Construction and Transport
The Netherlands - Province of Flevoland
Sweden - County Administrative Board of Värmland

Also
In the UK, Lincs County Council is running package 3.
Also, Cambs County Council is running the UK
Cambs and Norfolk CCs have some overall coordinating responsibility

**Learning points:**
Communication in a way that gets the aimed result is turning out to be more complicated than was expected. It is ineffective simply to put the facts about possible
but low-probability negative outcomes in front of people. Risk needs to be communicated not only by numbers; behaviour change may best be achieved by appealing to people’s sense of responsibility for others (their own dependents, their community) rather than by addressing them as individual calculators of their own personal risk-strategy.

Search for a completely consensual, universally accepted level of “tolerable risk” is unachievable.
David Viner
Research scientist

Stakeholder group:
National Opinion Leader

Case study:
Description: Involved in a research called ECLATE which looks at the impact and mitigation of climate change, look at the interactions of climate change with tourism, how climate impacts upon tourism, how industry adapts to the climate and how tourism adapts to the climate change problems.

The main objective of the project is to raise the awareness of the issue and bring together the scientific community and stakeholders, and quantify the relationship between climate change and tourism.

Along with a whole host of researchers and stakeholders around the world, David Viner is one of the main instigators and enablers of the project.

Timescale and future plans
Currently in planning stage and hope to complete project in the next 5 years

Measures of success:
Success will be measured by the amount of money we bring into the project

Problems:
A few NGO’s who don’t understand the science behind what they do.

Learning points:
Only involved in science aspect of research so no opinion of overall running of project.
Edward Dawson
Regional Director for South East, The Campaign to Protect Rural England

Stakeholder group:
National Opinion Leader

Case study:
SECTORS – South East Climate Threats and Opportunities Research Study that has been commissioned by the climate change strategy group. They will study the impacts of climate change on environment, economy and society. They will be studying different areas of industry such as agriculture, horticulture & forestry: Biodiversity, Emergency planning, Health, Planning, Tourism, Utilities & infrastructure, Business & economy.

The main objective is to map the selected sectors in the region in terms of their climate change issues and responses and to identify sector-based adaptation strategies and to develop a set of regional climate change indicators. To look at existing research activities relevant to climate change impacts and adaptation within the region and to advise on the development of a geographical information system to aid in planning in the region. It’s more to do with adapting to climate change rather than mitigation. Like the South East coastal plan.

The initiative is in its early stages, and he is preparing a South East plan for April next year and getting crucial consultation and feedback; then it will be reworked by the autumn of next year following public consultation.

The main instigators of the project are the Regional Assembly for Southeast along with, SEEDA and the Government office for South East. The drivers and champions of the project have been the Local Authorities under guidance from the local county environment agencies. Also groups like the Countryside Alliance and English Nature. The enablers and implementers have been The Climate Change Partnership and the Regional Assembly.

Timescale and future plans
Over the next year they hope to implement the plan and monitor it for various agencies like the local authorities. It will be something that is ongoing, so there are no real set timescales.

Also they will be publicising the South East plan and launching it in mid January 2005. There will be continuing work with advisory groups on climate change as well as looking at rural and housing issues. There is also an integrated regional forum that will look at sustainable development.

Measures of success:
Measure of success is in the policy making. If the policies are sound and well justified then they can say they have an effective policy for the next 20 years.
Stakeholder interviews with local opinion leaders

Problems:
Too early to say.

Learning points:
There is going to be a need to adapt the strategies used whilst project is up and running and it will be costly and the local authorities will have to take account of what they do in future as far as planning issues are concerned.

As far as people's attitudes go, it is a question of making people aware that effects of climate change will have to be dealt with now rather than later.

If projects like these need funding then they need to put it on Government’s agenda so it can be sourced and funded centrally. This will enable policy-making to proceed on the broader range of issues.
Stakeholder interviews with local opinion leaders

Gary Foster
South East Regional Manager, Carbon Trust

Stakeholder group:
National Opinion Leader

Case study:
He talks to various business groups, giving advice on how to cut carbon emissions. He is currently involved in a pilot scheme called ‘Carbon Management Programs’ in the South East with deals with large energy users.

Main objective is to encourage large companies to adopt strategies and sustainable approaches to managing their carbon risk and capitalising on their options. It also covers transport and building companies.

The Carbon Trust and the 20 local authorities have been the main instigators and champions of this project. The enablers have been the local authorities and the businesses monitoring their carbon reduction levels.

Timescale and future plans
They are defining a strategy with each local authority and by the end of March all the authorities will have a plan for action which will include carbon management.

It will take about 9mths for the first action plan to be implemented and then it will be looked at again in 2 years time. The first meetings with the local authorities take place in March and it will be ongoing from there.

When pilot scheme is over they would like to evaluate its success and roll it out to the private sector. They would also like to evaluate what the financial impact of climate changes are for businesses.

Measures of success:
The five local authorities are in the action plan stage and in the private sector they are getting a good response.

Problems:
N/A

Learning points:
It’s far more useful to gather information logistically. Also offer information for saving carbon under one process to help communication with senior managers. A program like this brings a large number of people together to help raise the profile.
Stakeholder interviews with local opinion leaders

Ian Davies
Division Manager, Sustainable Energy Division, Environment Centre (Southampton)

Stakeholder group:
National Opinion Leader

Case study:
Ian’s division is responsible for two energy efficiency advice centres. One covering Hampshire and Isle of Wight and one West Sussex and also a local authority support programme.

They carry out ‘home energy’ survey checks, where individuals fill out a form and give details of their home energy efficiency. For example, information about their insulation, their heating and their glazing etc. They fill out that questionnaire and in return they receive a free report which is tailored to their own home and tells them what methods they can adapt to reduce (CO₂) energy use. Sustainable Energy Division also provides them with information about grants and discounts that can enable put those measures in place.

They have a range of other projects that are carried out in conjunction with local authorities such as the ‘Solar Streets’ project where they are working with three housing associations and each one has given them 5 properties and on each property they are installing solar hot water and making sure they are fully insulated so they can be exemplar models of what people can be doing.

They have also been working with schools in ‘Solar Car Challenge’ project where they invite schools across Hampshire to design solar power cars and race them.

The aim of initiatives like these is to make people aware of climate change and get people to reduce CO₂ emissions. They hope to reach 20,000 households per annum.

Timescale and future plans
No time scale, work is ongoing.

Measures of success:
Success is measured through savings on fuel bills. They get figures of the kilowatt-hours of electricity saved in pounds and pence and savings on fuel bills.

Problems:
Engaging with members of the public can always be done better and getting then concerned about issues of climate change isn’t easy. In the past trying to engage people has been quite difficult.

Problem with a lot of bodies with own agendas and not enough joint thinking between regional and local bodies.

Increasing need to integrate groups such as the South East Climate Change Partnership with local and regional initiatives.
Learning points:
Finding best ways to engage with public. We have been learning what presses people’s buttons to get them engaged and interested.

More effective speaking to people face to face, especially in their home. But this is expensive.
**Jonathan Braken**
Institute of British Geography

**Stakeholder group:**
National Opinion Leader, Education

**Case study:**
Involved in ‘Education for Sustainable Development’ (ESD) which provides resources for schools in Hampshire area i.e. footprints web site which gives you an outline of your impacts on the environment such as your carbon change emissions and your impact on climate change emissions.

Object of this initiative is to raise awareness of individual’s impact on carbon emission and the environment in general. The main drivers and champions of this project are the Royal Geographical Society and Institute of British Geography. The enablers have been DfES.

**Timescale and future plans**
N/A

**Measures of success:**
Measure of success will be number of hits on the web.

**Problems:**
All educational resources have problem of reaching out to busy teachers who are bombarded by info and have little chance of training opportunities.

**Learning points:**
Learned how you can use resources that are already out there for different purposes and give them new modern relevance for different audiences. Archives material and collections are used as an educational resource by tapping into national curriculum.

Difficult to gauge success on ‘hits on web’ as on the web as are many different subsets of different pages.
Stakeholder interviews with local opinion leaders

**Kate Potter**
Principle Officer, Biodiversity

**Stakeholder group:**
National Opinion Leader

**Case study:**

*Description:* Kate Potter leading a project called ‘BRANCH’, this stands for ‘Biodiversity Required Adaptations for North West Europe under a changing climate’.

The Environment Agency will be providing a baseline map of coastal biodiversity habitats. This information will be used to inform the models and modelling being produced by other organisations and partners. They will look at the habitats that are there at the moment. They will use different climate change scenarios like sea level rises or increases or reduced rainfall to see how these habitats could change over time. Will use remote sensing methods such as aerial photography and baseline habitat mapping using GIS mapping systems to produce the maps here in Hampshire, Sussex and Kent.

It is the effects of climate change that are being looked at not the causes, yet they will look at mitigation measures briefly. This is something to be looked at in the future. The aim of the project will be to decipher how certain habitats will need to adapt to climate change and whether current Government Local Authority and Environment Agency policies are all robust enough to take into account the effects of climate change.

So far the project has been running for three months gathering the information, which is running well, successfully gathering information. The main champions and enablers of the project have been English Nature, Hampshire County Council and Kent County Council. Other partners have included the Tyndal centre, who are a climate change research centre, The Climate Change Institute based at Oxford University, Dutch partners called Alterra, a consultancy firm, and French partners called Conservatoire de Littoral in the province of Limburg.

There will also be some stakeholder involvement which for the modelling will be the technical experts who are software technical experts. Also surveyors will produce some of the data for the modelling to be put onto the system.

**Timescale and future plans**

This is a three-year data acquisition programme after which they have to produce a report of the findings. From there they hope to establish a rolling program of coastal monitoring to determine whether habitat is eroding due to climate change and determine what action to take as a result.

**Measures of success:**

They will measure the success of the project when we have reliable data to formulate and determine policies going forward at the end of the three-year period. The data will then be available to the Government, Local authorities, The South -East Coastal Monitoring group and the public to access, in a cost-effective manner.
Stakeholder interviews with local opinion leaders

Problems:
There are some problems associated with the Interreg side of things, which is a European funding process; they are having problems administering the processes of acquiring the matched funding. It’s to do with how to submit claims and the processes need to go through to meet their requirements. These are just set up problems that they will get used to dealing with.

Learning points:
They hope to map the coastline and monitor the effects climate change is having on it. Also to produce a picture of coastal change and to follow on and mitigate the effects of climate change on the coastline with other projects. Models produced will enable other authorities in England and Europe to follow the same process in an efficient manner
Stakeholder interviews with local opinion leaders

**Peter Stott**  
Met Office, Hadley Centre

**Stakeholder group:**  
National Opinion Leader

**Case study:**  
The research project ‘Human Contribution to the European Heat Waves of 2003’ looked at heat waves and whether the heat wave in Europe 2003 can be blamed to some extent on human inducement of climate change. Found it necessary to research because it both tackles an event that has already happened on the one hand, and on the other it promotes the findings in hope that they will encourage more research and raise the importance and awareness of the climate change.

Peter Stott and Miles Allen in Oxford are the main instigators of this research project while DEFRA, Welcome Trust UK and US funding from NOAA and DOE have enabled them to launch project.

**Timescale and future plans**  
Waiting for Kyoto summit to take place next month only then will they have a better understanding of what to do about it

**Measures of success:**  
Success will be measured by the level of interest expressed amongst the public. He has undertaken interviews with the BBC and CNN and hopes that it will come up in the next Kyoto summit.

**Problems:**  
Some vociferous attacking from various people: climate sceptics/collection of individuals, some of whom are scientists who attack the conclusion of majority of scientists that climate change is happening.

**Learning points:**  
They have learned that they can apply a theoretical model to a real world problem. It wasn’t obvious at the start of the project. They know that climate change is happening and it will continue to happen no matter what is done. It is only down to us as individuals to understand it better and prepare for it.

Any behavioural changes expected are *more to do with the authorities* and their willingness to make climate change issues a priority.
3. Regional NGO representatives

Stephanie Evans
Solent Local Authority Support Programme Manager,
The Environment Centre

Stakeholder group:
Regional NGO

Case study:
Hampshire Solar Streets project, which is installing 15 solar panels into the social housing on one street. The main objective of this project is to promote the use of renewable energy, technology and energy efficiency. It’s also a measure to reduce fossil fuel emissions.

One of the behavioural changes she hopes to see is that by installing the 15 solar panels this will reduce CO2 emissions from the properties involved. Also she hopes to see a reduction in fuel bills as well. And that the example encourages other residents to consider at least the general issue of renewable energy; it’s not realistic at present to expect many people to install solar panels.

Stephanie has been in close contact with Claire Weston, a conservation officer for Eastleigh Borough Council and the main instigator of this particular installation project in Eastleigh. It was her who initially got in contact with the Environment Centre and expressed a wish to have a solar street installed for Eastleigh.

She has also worked closely with other bodies that have helped to champion the cause of the project such as Hyde Housing Association, Drum Head Housing Association, East Hampshire District Council, Solent Local Authority and Wessex Solar Systems.

Other groups/bodies or authorities that are involved in the initiative are: Clear Skies (funding), SEEDA (funding), Government of South East/Hampshire City Council, London Energy (subsidising the installation) and the Environment Centre.

The Environment Centre aim to communicate the measures to the general public, the local authority staff and officers, and to the housing associations. One way to publicise the initiative was to hold a street party to launch the project and also some delegates went to a sustainable energy conference.

Timescale and future plans
The Environment Centre started the project in May 2003 and has secured funding for the project. She hopes to have the installation of panels start in March 2005 with completion of installations by of summer 2005.

Measures of success:
The main measures of success will be completion of installation, the reduction of fuel bills and CO2 emissions. Also the level of publicity and awareness generated by the project amongst the public is a good measure of success.
Stakeholder interviews with local opinion leaders

Problems:
The initiative has been successful in generating support so far. The one problem that they have encountered was that the initial sites they were going to work on had to be changed.

Learning points:
It is important to think of appropriate sites in the initial planning. In future, she would like to see each local authority informed on climate change locally, for local issues. Possibly a regional climate change campaign or a national campaign – maybe run ads like the ones for smoking where the all that gunk is coming out of the cigarettes, so maybe they could run one on climate change using shock tactics.
Stakeholder interviews with local opinion leaders

David Bridges
MD, Eco Centre

Stakeholder group:
Regional NGO

Case study:
Description: As David Bridges works for the Eco Centre, there is no one particular climate change initiative or end result that he can quantify. The work he does is ongoing such as waste collecting for compost, this being the biggest ongoing project. The aim of this is to collect as much waste as possible and return it to the land as organic matter. In the long term the Eco Centre aim to raise awareness among children, particularly on how useful food waste and other waste can be and why we should recycle as much as possible.

The Eco Centre are the main instigators and implementers while the main enablers are “Fair Bairn” and “Seed” which is basically lottery funding. Hampshire County Council is also involved in a small role They occasionally provide some small funding.

The Eco Centre also had an arrangement as part of their funding contract with a compost company to give lectures on composting, so they could promote the project as well. So they have delegates who visit schools, lead seminars and lessons. For the children it’s quite educational.

Timescale and future plans
The project has been under way for 3 years now and the Eco Centre intend to make it an ongoing project.

Measures of success:
One measure of success is that they hope to see children are becoming more aware, more self-motivated and excited about the action. However he points out that there are no quantitative measures involved in this project. They can only monitor things from the qualitative perspective.

Problems:
There have been some problems: the local farmers who leave meat out are not happy about children sweeping it into the compost. There is also high tension about foot and mouth disease, so kids have to dress up in special jackets and boots, which he thinks is an overreaction.

Learning points:
The Eco Centre have learned that carrying out a project when there is only insecure short term funding is very difficult. Outcome could be a lot better if there was less bureaucracy involved. They have also had reports that in 1-week children’s awareness changed regarding not only waste recycling but also housework and attitudes towards peers.

Lack of any quantitative measures is probably one of their biggest funding obstacles.
Helen Dragon
Sustainability Outreach Officer, Southampton Sustainability Forum (based at the Environment Centre)

Stakeholder group:
Regional NGO

Case study:
Southampton Sustainability Forum is a voluntary non-governmental organisation/pressure group. It’s a very small group.

Helen has been involved with the ‘Green Resolutions’ project. That’s a project she has been working on with the local authority’s support programme, which is based in the Environment Centre. The Environment Centre have been working with Eastleigh, and she is doing some dispatch duty at the Environment Centre on behalf of Southampton City Council. Helen has a unique role where she is funded by Southampton City Council but is not a Council member. She is currently outposted at the Environment Centre and has a management team and is directly managed by the Environment Centre Chief Executive.

They aim to visit 5 families in Southampton City Council area four or five times during the year and on each visit tell them about a different way they can improve their sustainability. For example they talk about energy efficiency, saving water and fair trade.

On each visit an energy advisor or ‘expert’ is dispatched to talk to the 5 families. The energy adviser also takes a free gift along with them. Each visit has a different free gift and in this way it is hoped that it will create increased publicity. The first free gift is a Fair Trade hamper. Then they had a hippo water saving device for the toilet. There has also been an ‘energy’ plug which is plugged into household appliances and displays how much energy has been used. Then on the last visit in the run up towards Christmas they have what is called the ‘Good Shopping Guide’ where they try to promote ethical shopping. Includes ethical banking, insurance where a portion of money is set aside for aid and development overseas.

Southampton Sustainability Forum aims to affect the attitudes of the 5 families in the short term and get lots of publicity in the long term. Another objective is increased awareness in the home of reducing energy consumption and environmentally friendly initiatives to reduce CO2 emissions.

Eastleigh Borough Council and the Local Authority Support Programme are the main people that she meets with and they discuss how the projects going and how they can plan for the future.

In terms of measures to maximise publicity the Southampton Sustainability Forum send out press releases during the year at different times and they also take pictures of the families participating in the project. More than one article has been published in the Hampshire Home Energy newsletter. Helen also personally writes in the Sustainability
Stakeholder interviews with local opinion leaders

Forum newsletter, which goes out to all 150 members, and 400 copies are also printed and distributed at community events and in the local libraries.

**Timescale and future plans**
Initiative started in January 2004 but will only last until the end of the year. Helen is currently waiting to see if next year’s project gets the go-ahead. The proposals not yet finalised.

**Measures of success:**
There are no quantitative measures of success but Helen has recognised some qualitative indicators in terms of change of behavioural patterns. For example she has heard stories such as a young boy who sleeps in a bunk bed but gets out of bed to switch his television off every night. Also they have had one family who have built a compost heap in their garden.

Also some people are thinking of getting a Liquid Petroleum Gas (LPG) conversion to their cars.

**Problems:**
Initiative has gone well apart from two families dropping out due to *lack of momentum* and a huge lull between visits.

**Learning points:**
Through the ‘Green Resolutions’ project they have learned that people are in a lot of different situations (socially, economically etc) so you can’t give same advice to everybody. *Also level of knowledge isn’t as high was expected to be.*

In terms of publicity it is quite good to have personal stories published in press releases where you can relate the bigger picture to the public.

Local Authority Support Programme are very useful as they have been able to bring the key people in the different councils together to be able to work on projects and so that brings the costs down. So if the Local Authority Support Programme does launches an initiative there is no reason why each council can’t use it.
Stakeholder interviews with local opinion leaders

Kate Moore
Business Division Manager

Stakeholder group:
Regional NGO

Case study:
Description: Kate works with SME’s (Small to Medium Sized Enterprises) mainly in the Isle of Wight and Hampshire County Council, helping them to improve their environmental performance. A lot of the work she is involved with boils down to energy efficiency as part of the Carbon Trust Action Energy Programme.

One particular project that is close to heart is CRED (Carbon Reduction), the brainchild of a group of students from the University of East Anglia. CRED is working with businesses, local authorities and schools and just about anyone. CRED is launching an initiative called the 60% challenge where they want to prove that one can reduce carbon emissions by 60% by 2025 not 2050. Kate is working on bringing that project down to Hampshire and the Isle of Wight, and has been working on that for most of 2004.

The purpose of the project is to stimulate and encourage individuals and organisations in Hampshire and the Isle of Wight to reduce their CO2 emissions by 60% by 2025. Also they want to get 1,000 companies signed up within first 2 years. This is the purpose and the overall objective.

Their strategy is to link up people and organisations that are already taking practical steps and then the aim is to scale up the already current successful initiatives where possible.

In East Anglia CRED is talking with the local Dioceses as the churches have East/West orientation so they have big south facing roofs. So they’re working with church groups on things like that.

CRED is also working with schools in terms of installing micro-renewable wind turbines and solar panels. They are running courses on how to be more energy efficient in the home and doing audits of big businesses on 'Where are you wasting energy?' These are examples of things they hope to work on in Hampshire and the Isle of Wight.

Kate is liaising with CRED and University of East Anglia to see how the project can be implemented into Hampshire. As part of the groundwork she is also working on Environmental Management Systems (EMS) with businesses. Where a company wants to put an EMS in place then step one is to find out what impact that company is having on the environment and she would go in and do an audit. She would then go back with the results and give them a rough idea of how much CO2 they are emitting.

One of the main champions of this initiative has been Gary Foster, Regional Director for Carbon Trust for the South East, who organised a big climate change conference (Oct 2002) in which Hampshire County Council were involved. About over 120 people attended and a group of people came out of that from Hampshire and Isle of Wight area who were interested in implementing EMS initiatives.
Stakeholder interviews with local opinion leaders

On an informal basis they share information with the Business Environment Forum. Also informally through their partners, whether that be the Environment Agency or Business Link or other small environment consultancies in the Hampshire area. They also liaise with Olive Strategic Risk Management.

**Timescale and future plans**
CRED would like to get this initiative set up in Hampshire and the Isle of Wight in two years.

They are also looking to explore different channels of getting to the right people such as lawyers and accountants and other professional services firms. Also looking to approach the big organisations like the Institute of Directors, in order to engage a different audience.

**Measures of success:**
There is no real measure of success or monitoring of how businesses have implemented initiatives. They are only brought in on a consultancy basis. Unless there is a long term working relationship with that company, on a monitoring basis, then they just provide them with advice, help them to set up an EMS, provide training and then set them off. Hopefully they can start to see changes in behavioural patterns. For example, people may decide to switch to new technology or implement strategies to reduce emissions in their homes.

**Problems:**
They have found that lot of companies don’t have time to really address or understand the issue of energy use. It comes as a low priority in many cases. Also there has been a lack of money amongst businesses to invest in technology for EMS and there has been slow take-up.

A lot of businesses are not sure whether the initiatives apply to them. Also it has proven difficult getting through to senior management level. Measures get diluted and slowed when middle management are consulted.

**Learning points:**
They have learned to continue to run events and seminars throughout the year looking at an event focused particularly on energy with a strong link to climate change. This would be a good way of companies getting involved that are not already environmentally aware.

She would like to see more being done to join up the different bits and pieces of the project. Kate’s organisation also works with the South East Climate Change Partnership, whose obvious focus is on adaptation, but worried that the overall message is fragmented as not a lot of work is being done on mitigation and therefore not enough cohesion amongst individual bodies and groups involved.
Keith Richards  
Managing Director, TV Energy

Stakeholder group:  
Regional NGO

Case study:  
All their projects are to do with green energy production, wind energy, solar power and other sustainable sources of energy. They use energy sources that don’t use fuels that emit CO2 into the environment and therefore not affecting climate change. TV Energy also gets involved in education, profile raising and marketing of green energy and trying to get people’s attitudes and perceptions of green energy to change and to get them to take action. The size of projects range from small school projects to ones like the Bracknell project, which is a twelve million-pound project involving a 6 megawatt electrical thermal installation. The Bracknell project also involves the burning of wood fuel from their coppices, tree surgery waste and potential green waste from civic amenity sites. There are also wind energy and solar energy installations at Bracknell.

The project he is currently involved in is the ‘Leckford Estates’ project. They have 50 hectares of wood under coppice of which 10 hectares is on the Leckford estates. The overall purpose of the project is to produce coppice wood for use as an alternative fuel at an existing incinerator at Slough run by the Slough Estates. The Slough generator is already modified and using coppice trees, tree surgery waste, and other green energy sources. This incinerator will take all the coppiced wood TV Energy can produce for them. It is hoped that the wood will absorb CO2 from the atmosphere and although burning will release CO2, continuous production will absorb more than is released. The coppiced wood has been planted and they are currently growing it.

They want too see more alternative cleaner fuels being used for energy production and to sell wood on the behalf of power stations and residential projects. It is an ongoing process to educate people in the process of production of alternative fuels that have less harmful effects on the environment.

TV Energy have been the instigators of the project while the champions of the project include Waitrose, who own the Leckford estates, Slough Heat and Power and Dr Royce Longton, who is head of West Berks County Council. The enablers have included the Forestry Commission who have provided them with planting grants. Other groups and bodies who have been involved include National Wind Power, Shanks Waste Services, The Environment Agency, The Country Wide Agency, Reading University Oxford Brookes University, Friends of the Earth, RSPB and regional government bodies such as GOSE, SECEA and SEERA.

Timescale and future plans  
About 8–10 oven-dried tonnes of coppiced wood are in production per hectare per month that will be producing fuel in three years time. Future plans are to grow the wood for the next three years and to have it available and maintain this source of fuel into the foreseeable future. Also looking to develop new markets, and to bring on more landowners and market the wood for landowners and farmers.
Measures of success:
The measure of success can be measured in part by the fact that they already have customers who are willing to buy the coppiced wood when it comes to fruition in three years time. Slough Power Station, local organisations and the Bracknell estate project are all ready to use the wood when it comes to fruition. Also Slough Power station has modified their furnaces to progressively move over to coppiced wood fuel.

Problems:
There has been some opposition from groups such as CPRE (Council for Protection of Rural England, ANOMB and North Wessex Downs.

Learning points:
They have learned that they can get large organisations to get involved in major energy projects especially when there are grants from the forestry commission that can cover half the cost of planting.

In order to produce a new fuel on a commercial basis it is necessary to have a market that can use the fuel already set up. This is necessary to get other farmers and landowners on board. Again this is a project that aims to integrate funded activity into the mainstream economy.
Stakeholder interviews with local opinion leaders

**Alison Tingley**  
AONB Officer  
East Hampshire AONB

**Stakeholder group:**  
Regional NGO

**Case study:**  
The *Natural Light Project*, which was set up by Hampshire County Council. It is a group of consultants who assist with development of renewable energy projects on a scale that is consistent with the nature of the resource and the needs of the local community.

Part of their work is the conservation of the landscape and woodland management; particularly with relation to managing old woods and bringing them into production. As there is not much money in this area due to a lack of a market for the wood, one of the ideas is to get more people to use biomass boilers; this would create demand for the wood. This would be a more sustainable way of managing the old woodland and would have the added benefit of cutting CO2 emissions.

As part of the Natural Light Project they have supported grant applications to Defra, and helped to source local wood and find places to chip the wood. The Sustainability Centre at East Meon (http://www.earthworks-trust.com/) is deciding whether to install biomass boilers and the Natural Light Project have sourced the wood, should they do so. They are still looking at where to store and chip the wood for the Sustainability Centre should they go ahead.

They have carried out a project looking at the needs of the small market town of Petersfield. They advised them on how to reduce the need for electricity from the national grid and the normal forms of electricity. They have also been approached by Petersfield open swimming pool to assist them with the installation of solar panels to heat the water.

**Timescale and future plans:** The timescale for the natural light project is ongoing, they are looking for new schemes to get involved in. Overall aim is to help organisations to get through the process of applying for funding, accessing woods and chipping facilities and generally advise people about using sustainable energy systems. The Natural Light Project wants to look at biomass in more detail and to do a study of the councils and the large organisations within the AONB to analyse what their energy needs are and when boilers are likely to come up for replacement. Once they have gathered this information they want to pass it to private sector organisations that could then talk to them about changing over to using biomass boilers. The more people they get using biomass boilers the more the supply chain can hold together.

**Measures of success:** They measure the projects’ success by whether the funding is put in place and whether the projects go ahead.
Stakeholder interviews with local opinion leaders

Problems: Part of the Petersfield project was a plan for the installation of a wind turbine. This was envisaged to be placed on the top of Bucks Hill in the National Nature Reserve, the highest point in the South Downs. Against the wind turbine at Petersfield these organisations were involved: CPRE, Ramblers Association, East Meon Parish Council.

Learning points:
The natural light project invited various people involved in their projects, from building the boilers to chipping the wood, woodland workers, the public etc and this was a very constructive process. There were presentations, workshops and discussions for half a day and they found this very useful in keeping people aware of how things work and why they do things.

Implementing projects can be difficult and time consuming as it can take a long time to go through committees and to get the expenditure and funding

For the Biomass Boilers project the most difficult factor has been the supply chain of accessing wood, wood storage and chipping the wood, as these industries have diminished and it is difficult to find someone to source, chip and store wood.

Valuable expertise is being developed for the question of how to integrate funded projects into the economic mainstream.
4. Regional / local public sector decision makers

Tony Birch
Regional Flood Officer

Stakeholder group:
Local Public Sector Decision Maker, rural economy

Case study:
Tony Birch will be involved in shoreline management plans-looking at the interface between sea and land and how they’re going to be managed in the next 50 – 100 years. Topics dealt with will include how land should be used next to the coastline, management of flooding and the consequences of flooding, reviewing of the impacts of rural land use and land management on flood generation.

This research project is known as Fd2114, which is joint UK/EU venture, raising awareness about impact of climate change on the coastlines. The objective of the project is to find out whether they can influence changes in rural land use or soil management to reduce run-off and thereby reduce flooding, soil erosion and defuse pollution.

It’s too early to say if project has been successful but they are planning to set up a national forum. Tony is the instigator and main champion of the project.

Timescale and future plans
No time scales as yet as project is not up and running yet.

Measures of success:
In 50 years time if large fields are stripped of topsoil this would be a bad thing.

Problems:
Too early to say but there here could be a problem in that there’s no way of measuring potential risk. It’s impossible to measure the risks sooner than 10-30 years ahead

Learning points:
That there needs to be more integrated research. Well it seems that rural land use has had an impact on run-off and global climate change will have an impact on that, so if we need to influence rural land use, we have to change behavioural patterns. There is a need to change attitudes and become less dependent on natural resources.
Rob Creighton  
Sustainability Co-ordinator, Southampton City Council.

**Stakeholder group:**  
Local Public Sector Decision Maker, *transport*

**Case study:**  
Rob Creighton is part of the team who are involved with climate change in Southampton. They have drawn up their climate change strategy for the city. This involves a range of activities and an action plan. He is also involved in quality management which is involving pollution control and is related to climate change. Main objective of this initiative is to reduce emissions for the city in line with Government guidelines by 20%.

Looking to get people to change their lifestyle by getting people out of their cars and on to public transport We need people to change their lifestyle to enable the city to reduce emissions, so we look to educate the public.

We plan to have 20% of our vehicles using LPG and bio-diesel in our transport fleet by the end of the year and to progressively change them over to more friendly fuels. In the long term they’re looking to develop non-fossil fuel carbon utilising vehicles and in the long term will look to use these as they have a large fleet that can be used to test situations and to develop new systems in their cars and vehicles.

Transport is also way of *mitigating* greenhouse gas emissions. His group, the planning and sustainability group, are the instigators and champions of the project. They have been working closely with the South East Climate Change Partnership and ESPACE to decide what the best measures are. Also Natural Resources Initiative, Material Resources Initiative, Tyndale Centre for Climate Change and DEFFRA.

**Timescale and future plans**  
The plan has been in place for three months it runs from 2004 – 2009 and will be reviewed every two years.

**Measures of success:**  
The air quality can be measured and modelled very easily. In order to measure greenhouse gas emission they have to rely on various forms of modelling and inventory of emissions. They gather information by calculating how much fuel is used in the city from a database of gas, fuel use in the city, looking at how much is sold.

**Problems:**  
It is difficult to get people to take on board that the little things they can do will effect climate change, which is a major world-wide problem.
Learning points:
They have learned that you need to work with many people to have a multi-pronged approach to look at and mitigate the effects of climate change. They are looking for funding which may be available from various sources. They feel they can have an impact on climate change and they are working with the community to help, them to realise that they can have an impact.
Stakeholder interviews with local opinion leaders

**David Payne**
Regional Planner, South East England Regional Assembly

**Stakeholder group:**
Local Public Sector Decision Maker

**Case study:**
‘Plan for the Southeast of England’ which aims to construct and present the Regional Spatial Strategy Environmental plans for the South East to the local authorities and government. This will ensure future development help to *mitigate and adapt*, particularly to climate change, drought in summer and increased flood risk in the winter.

They have been the enablers and implementers of initiative and have also worked with English Nature, Local Authorities, Ministry of Agriculture Fisheries and Food, Environmental NGO’s, water companies, Highways Agency, waste companies, RSPB Wildlife Trust, Energy Agencies, Countryside Agency and regional and national power companies.

**Timescale and future plans**
They have completed the plan, which is going to be presented to the assembly on Monday 29th November 2004 for approval. The plan will then go out to public consultation, which would also involve examining housing numbers and their impact on climate change and flooding. Next year the plans will go out to public examination. In the Summer 2006 the plans will be approved and implemented.

**Measures of success:**
*Monitoring processes* are in place to examine policies locally and *whether local authorities take up the policy recommendations*. This also involves identification of the size of developments.

**Problems:**
No problems so far.

**Learning points:**
It’s too early to say but there will be a plan in place, which will enable them to adapt to, mitigate and minimise climate change.
**Julian Wright**  
Climate Change Group South West

**Stakeholder group:**  
Local Public Sector Decision Maker

**Case study:**  
‘BEAT’, a biomass project, developing a computer life cycle analysis tool that would allow his team to balance negative environmental impacts with the positive advantages of carbon savings of biomass generation. Aim of project is to get the Environment Agency to consult in planning process based on their environmental impact assessments, when people are proposing biomass energy schemes.

Martin Thowdore at Environment Agency instigated and championed the project and while consultants AEAT have enabled it.

**Timescale and future plans**  
Final consultation has taken place with Carbon Trust and Environment Agency and the Biomass Task Force and it should be launched in the next couple of months.

**Measures of success:**  
No measure of success

**Problems:**  
None

**Learning points:**  
You’ll never get complete consensus, but it’s important to get as much consensus as possible when appointing consultants. You need to find out who the experts in the field are.
Stakeholder interviews with local opinion leaders

Paul Over
Head of Property Services, District Council

Stakeholder group:
Local Public Sector Decision Maker

Case study:
Extension to East Pallant House offices in order to make council offices more energy efficient. Aim is to get all staff under one building, it will be a sustainable building in its own right. It has U.V. panels on the roof, an atrial atrium – which will retain heat in the winter, swift boxes on the roof and waterless urinals.

CEO of the local council has been major champion of the project and Property Services carried out the audit.

Timescale and future plans
Report will be submitted to local council.

Measures of success:
Success will be measured by the cost of the budget and energy bills being lower. Also through staff satisfaction surveys. At the last green awards they were short-listed for an award for the building.

Problems:
It has been very successful. No problems.

Learning points:
That you need to build sustainability into the project. You need to get your architect on board from day one in consultation and planning. Also staff seem to be more productive and healthier as a direct result of an energy efficient building.

There needs to be some statutory requirements on buildings – to build more sustainable buildings. They need a better supply of renewable energy. More funding support for people who want to do things in a more sustainable way.
**Phil Crockford**  
Deputy Team Leader Thames Valley and GOSE for Hampshire Isle of Wight and Oxfordshire

**Stakeholder group:**  
Local Public Sector Decision Maker, *transport*

**Case study:**  
‘Work Place Green Travel Plan’. The aim is to actively discourage staff from using cars and re do we encourage them to share. They also encourage staff to use public transport, cycle or walk where possible for work related matters.

Therefore aim to reduce the effect on the environment as much as possible, and to lead by example. This is done by reducing dependence on the car to conduct business.

The drivers and champions are the staff themselves who can also impact on local transport policy by demonstrating and show example by participating in this green policy that works.

They have worked with local authorities and AEA technology, who administer Department of Transport advice.

**Timescale and future plans**  
They launched the policy in 2000 –2001 and it is reviewed and added to every year to ensure that they’re keeping abreast of green policy and what’s available.

**Measures of success:**  
Initiative considered to be successful as most staff work together to achieve usage of the pool cars or to use public transport to reduce pollution and car congestion.

**Problems:**  
None, good take up among staff.

**Learning points:**  
Policies like ‘Work Place Green Travel’ are *expensive to set up but are quickly accepted*. Makes things easier for them if people apply these policies to their *everyday working life*. 
Peter Moore  
Environment Strategy Manager, Kent County Council

**Stakeholder group:**
Local Public Sector Decision Maker

**Case study:**
**Description:**
Peter is setting out the environment strategy for Kent. Currently this involves reducing carbon emissions and establishing baseline data to measure the Kent carbon footprint.

Their aim is to use energy more efficiently in public buildings and promote and encourage a shift to cleaner transport technologies. He has been working alongside South East Partnership, Natural Resources and the Climate Change forum on behalf of the Kent County Council.

**Timescale and future plans**
Started setting out the strategy for the county in June 2004, which will be presented in March 8th 2005 next year to the county and local and national bodies.

**Measures of success:**
They’re looking to assess national measurements of carbon imprint so that they can have a realistic view of how these growth and development issues are going to affect the carbon footprint here in Kent.

**Problems:**
No problems as yet.

**Learning points:**
It is necessary to make firm decisions to construct a policy as well as a strategy to complete this policy with particular individuals who are responsible with implementing and assessing this policy.

*Will have to lead by example if they want public to reduce car use.*
Robin McInnes  
Coastal Manager, Isle of Wight Council

Stakeholder group:  
Local Public Sector Decision Maker

Case study:  
Description: ‘Landslide Management Strategy’ – looking at the impacts of climate change on sea level rise and winter rain fall on the south coast and Isle of Wight. The aim of initiative is to reduce the impact of landslides on the community. Also aim advise developers and homeowners of the ways in which they can help minimize the effects of potential ground movement to their properties and avoid contributing to instability outside the boundaries of their properties. Presently they are preparing a landslide risk assessment and landslide advice for residents.

Timescale and future plans  
They are halfway through a 3-year environment project responding to climate change and preparing for the impacts of climate change. They are holding a conference in May 2007 on landslides.

Measures of success:  
Success will be measured through feedback from the stakeholders and an engineering assessment of rates of ground movement.

Problems:  
They’ve had a positive feedback from residents and received funding from the government for civil engineering projects to improve ground stability.

Learning points:  
They’ve learned a lot more about ground levels and also the importance of involving the stakeholders early on. Also by working together it’s possible to lessen the impacts of ground movements.
Stakeholder interviews with local opinion leaders

Sarah Wright
Waste Minimisation Officer, Chichester District Council

Stakeholder group:
Local Public Sector Decision Maker

Case study:
Description: ‘Twin Bins Scheme’ – Scheme where council provide 2 wheel bins. One for waste and one for recycling. Aim of the get people to recycle more waste as Chichester is running out of landfill space. Hopefully they’ll reach the government target to recycle 36% of waste.

Chichester Council have been the main instigators and champions of project and have also been supported by Hampshire County Council.

Timescale and future plans
The whole district will be online by 2005 and are just about to introduce phase 4 out 5 phases, which means another 10,000 properties.

Measures of success:
By the amount of tonnage recycled by the public.

Problems:
Just some public resistance to fortnightly collection.

Learning points:
Communication is important between the council and the public.
Stakeholder interviews with local opinion leaders

**Teresa Kinnard**  
Sustainability Officer

**Stakeholder group:**  
Local Public Sector Decision Maker

**Case study:**  
Climate Change Strategy – at the moment it just covers Winchester district and is in the early stages of collecting information on a wide range of environmental issues – i.e. reduction of CO$_2$ levels, car use reduction, energy efficiency, public transportation and waste. Currently in early process of gathering information at the moment.

The instigators and champions of the project have been the CEO of Chichester Council and his staff. Local businesses and organisations may get involved also.

**Timescale and future plans**  
No timescales have been laid out as of yet.

**Measures of success:**  
If they can get quantification of emission levels this will be the measure.

**Problems:**  
Too early to say.

**Learning points:**  
*There is a lot of information out there and trying to make sense out of it for the public is time consuming.*
Tom Day
Environmental Coordinator, Chichester District Council

Stakeholder group:
Local Public Sector Decision Maker

Case study:
The ‘Chichester District Council Climate Change Strategy 2004 – 2009 – It’s to raise awareness of climate change issues amongst the public and businesses. In particular looking at the council’s own activities by working with other organisations and encouraging them to reduce their greenhouse gas emissions.

They’re getting together a communications plan to target householders that aren’t being reached by the media and for schoolchildren. Also making people aware of the impacts and to be more energy efficient and alternative methods of travel.

Will be reporting back to managers and councillors at the councils. They are also working alongside the Carbon Trust with regard to emissions and with the Natural Light Partnership, housing associations and developers in publicity events.

Also involved West Sussex Sustainable business partnership (working with the business sector), Sussex Downs Conservation Board, Chichester Friends of the Earth and Harbour Conservation groups as well as schools such as Chichester High School for Girls,

Timescale and future plans
In 2 years time they hope to show leadership through changing their own activities. In the longer term they want to see a district that is more prepared for the impacts of climate change.

Measures of success:
They’ve set some targets for their own energy use and they plan to monitor the number of people coming to events.

Problems:
The problem is how to communicate issues of climate change to the public and try to bring it down to a local focus instead of a global one

Learning points:
That District Council is well placed to lead climate change issues but there’s a need to communicate to public that it’s not just a global issue but to focus on local issues that will affect them personally.

That taking actions on emissions is pretty straightforward and that possible climate change can affect many areas and the need to prioritise those areas. Yet difficult to judge measures of success when working on informing the public. On adaptation they would like to see more regional councils be bolder with issues such as coastal erosion instead of leaving it to central government. On mitigation they would like to see central government giving a clearer lead on sustainable transportation.
5. Hampshire County Council

Simon Ballard
Senior Environmental Protection Officer, Hampshire County Council

Stakeholder group:
Hampshire County Council

‘Local air quality strategy’: – project looks at air quality, public health and looks at targets that will benefit air quality and protecting air quality in partnership and through educating the public to alternative methods of travel. They hope to make public aware that prolonged car use will pollute the air.

Currently they have bits of work programmed in with Halcrow and the Sussex Air Quality Steering group who putting together a document on air quality. Environmental Health have also helped enable the project by the delivery of practical measures and designing the strategy.

Timescale and future plans:
Initiative will run from 2003 through to 2008 and will be reviewed after that. They hope to have it aligned with the Council’s Climate Change strategy.

Measures of success:
Success will be gauged through reporting back through their members on our delivery against the targets we set ourselves.

Problems:
No problems as yet.

Learning points:
Would be useful if it bore more weight with the councils and had an umbrella document regionally for more coherent strategy. More work needed to embed air quality into local processes by supporting and promoting it.
Stakeholder interviews with local opinion leaders

Alan Inder
Coastal Manager, Hampshire County Council

Stakeholder group:
Hampshire County Council

Case study:
‘West Hayling Key’ area - looking at all the issues of climate change in that area. The overall objective is to find a sustainable strategy for coastal management to balance the county council services and budget. They’ll be looking at the issues of climate change and what options there are.

They are hoping for a practical solution for climate change and coastal defences. The work is going to feed into 2 plans – a shoreline management plan and local development framework. A public consultation will concentrate on helping the local community along the coast to change their lifestyle. Currently at the initial stages and are just gathering information at the moment. While Hampshire CC and English Nature have championed project local community groups have also helped such as like the Hayling Island residents association, in carrying out a survey.

Timescale and future plans:
There will be public consultation and a conference in January and 3 meetings booked for strategy. A report to committee in April 2005, with outcome of approved strategy starting in middle to late next year.

Measures of success:
Difficult to say how to measure success.

Problems:
No problems. It has been successful so far in that the county council and English Nature are on board.

Learning points:
To involve the public at an early stage.
Andrew Pitt
Assistant Environmental Officer, Hampshire County Council

Stakeholder group:
Hampshire County Council

Hampshire Water Partnership addressing issues of water sustainability – fresh water for the community, how much water is used, as well as flooding issues and adapting to climate change.

Basically the objective is to ensure the long-term future of Hampshire’s water, looking at the overall drying effects of climate change and on more extreme events such as flooding. Also getting people who work on farmland to be more water efficient. Also lobbying partner, the Government for the South East England, for water efficiency and the government for building regulations.

Currently they’re just about to order the first annual report. The Environment Agency and Hampshire Wildlife Trust have been champions of project along with Hampshire CC and bodies such as the National Farmers Union, Southern Water, Hampshire Association of Parish Councils have helped to enable the project.

Timescale and future plans:
Project started in March 2004 and a yearly report is expected with a review in 2006.

Measures of success:
Success will be measured by how much water is being used by the public and whether they have cut down or not so it will be difficult to measure. But we are talking to 6 or 7 water companies about it.

Problems:
No problems so far.

Learning points:
That the partnership approach is definitely the way to go although originally the action plan aimed very high and the partnership can’t really achieve those goals.
Stakeholder interviews with local opinion leaders

**Ian Trip**
Strategic Planning and Improvements Team Leader,
The Hampshire and Isle of Wight

**Stakeholder group:**
Hampshire County Council

Hayling Island:
The objective is to try and reclaim some grazing marsh in the area that was eroded by the sea. The grazing marsh is designated for protection and the sea wall is costing more and more to maintain. They want to stop maintaining the current sea wall and build a retreated sea embankment to maintain the remainder of the farm. It is hoped that the salt marsh will develop in a few years as the salt marsh is already developing in areas where small breaches have occurred in the current sea wall.

Funding support for flood defence will hopefully be received from DEFFRA and English Nature work with them on consultancy basis. Currently talking to the farmers about feasibility studies and most are in agreement. They have applied for grants from DEFFRA and have investigated what other grants are available to farmers.

**Timescale and future plans:**
They hope to conclude an agreement in the 2005 and to take on the lease this financial year and to have the engineering works in place by 2006.

**Measures of success:**
In a few years they expect to see the salt marsh develop which they will measure the number of square meters involved.

**Problems:**
The main problems encountered, are persuading the farmers, whose ancestors won the land back, that they have to go along with managed retreat of the sea.

**Learning points:**
They have learned whom to work with, who has the expertise in this area, how to work with the local people and where to get the funding to implement the process. It is a long process that will hopefully come to fruition with completion in 2006.
Jane Creagh-Osbourne
Senior Transport Planner, Hampshire City Council

Stakeholder group:
Hampshire County Council

A325 Bus Lane – from Camberley to Aldershot – A bus lane has just been completed 6mths ago. It involved taking a lane for general road use and making it into a bus priority lane. Objective is to reduce the use of cars and get people to use public transport.

The instigators and enablers of this initiative have been Hampshire county council, Surrey County Council and Stage Coach Hants and Surrey

Timescale and future plans:
It’s an ongoing initiative.

Measures of success:
Bus patronage, bus frequency and bus user satisfaction will all be looked at.

Problems:
There has been some driver resistance in pocket areas – they don’t like having to sit in a queue instead just being able to use another lane. But other then that it’s been successful.

Learning points:
Working in partnership has been successful. Parking should be reduced in town centres and also businesses should stop giving incentives to their drivers – like company cars and fuel credit cards.
Lee Porter
Assistant Transport Planner, Hampshire County Council

Stakeholder group:
Hampshire County Council

‘Community Streets Audit’ – looking at access to the town centre/ So far the object of scheme in Hampshire is to get people out of their cars and make centres more pedestrian friendly. Initiative will look to reclaim public space for the pedestrian and to make town centre environment more biodiverse.

Council has seen involvement from local civic groups, the police and disabled groups. Gauging their views on how to make it more pedestrian friendly.

Timescale and future plans:
It’s essentially ongoing over the next 10 years.

Measures of success:
Measure of success will probably be seen by reduced crime levels and better air quality.

Problems:
No problems, has proved popular.

Learning points:
That it can be tricky to get past corporate thinking on what public transport planners should and should not be getting involved in.

Would be good to see a sustainable plan put forward or an idea of what is sustainable and what is trying to be achieved with hard facts.

A program that can win support by emphasizing the broad positive outcomes it will achieve (social and environmental improvements).
Mike Long
Principal Environment Officer, Hampshire County Council

Stakeholder group:
Hampshire County Council

Flood risk management for area of Hampshire – A policy developed in a local development framework. Helped to build planning and professional advice given to local authorities on flood maps. Objective is to promote flood risk management across the county.

‘Catchment Flood Management Plan’ which is led by the Environment Agency, looking at what factors influence floods and flood risks within a river catchment. The outcome would be to ensure that there will be flood defences by looking water habit and water.

Environment Agency along with Halcrow have been main instigators of project.

Timescale and future plans:
October 2004 was when the inaugural meeting took place. Timetable-wise planning to do all the consultation and prepare the report in about 18 months.

Measures of success:
Success will be measured by a greater understanding of catchment areas, awareness of the performance of the flood defences and awareness of gaps in their knowledge and finally a programme of action.

Problems:
None as of yet.

Learning points:
Too early to say but there is more information than first thought and more accurate information then we had initially.
Stakeholder interviews with local opinion leaders

Richard Coles
Environment Planner, Hampshire County Council

Stakeholder group:
Hampshire County Council

Case study:
Description ‘Natural Light Partnership’, which is centred on East Hampshire, and looks at how sustainable energy could be applied to an area of outstanding natural beauty which is part of the South Downs National Park. Objective will be to see how communities in that area can become more sustainable in their use of energy. They would like to get 10% of its energy use from renewable sources.

Currently working in partnership with local and district councils, town councils and local housing associations. Also working with the South Downs Conservation Board, Chichester County Council, Petersfield town council, East Hampshire AONB, Government Office for South East and funding from SEEDA.

They have an active website with partner areas that have all the documents and reports on it and downloadable leaflets. They also attended the DTI conference in October 2004 and members of the partnership have spoken at various conferences.

Timescale and future plans:
It’s an ongoing project that started in 2001 and has a national timescale to 2010.

Plan to get some more real projects off the ground like the wood fire boiler at the County park and install solar power for the swimming pool. Also install a solar street in Petersfield.

Measures of success:
Success will be measured by the amount of installed renewable energy capacity.

Problems:
Well the South Downs are against wind energy. They want less wind turbines on the landscape.

Learning points:
Local council and community involvement is important, it’s important to let them come up with the solutions and issues.

Getting people to think that small changes are important if a lot of people do them. Also clear information on what clean energies are and what the costs and benefits are.

To select local strategies that are practical, is not all about meeting government targets.

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6. Business

Eddie Street
Fleet Support Manager
First Group – the largest bus operator in the UK

Stakeholder group:
Local Businesses, Transport industry

Case study:
Professionally involved in dealing with environmental issues within his company. As part of ISO 1401 status, which they acquired in 2003, the company segregate waste whether oil or vehicle by-products or general waste. They have considerable amounts of waste from vehicles consisting of mineral waste, oil waste and anti freeze waste etc, which they segregate and dispose of through approved disposal companies.

They have been forced to use sulphur-reduced fuel by London Transport. They have been using ultra concentrated sulphur free diesel fuel for a couple of years. They also have to reduce consumption and monitor and measure emissions. This can involve switching off lights and a general policy to reduce and control energy consumption.

Learning points:
One of the leading motivators is the need to comply with the legal regulations or international industry standards.

Other projects:
The company runs an energy monitoring prize fund for their utility providers to encourage them to reduce and monitor emissions for their gas electricity and water supplies.

The company has a policy of monitoring their own vehicles to reduce pollution and consumption.

The company takes part in the CUTE programme, which is a worldwide fuel cell hydrogen programme. They are testing fuel cells that use hydrogen and convert it to electricity using an electrical drive. This scheme has twenty buses in the world, which are run using Government funding.
Colin Ralph
Director, Summerfield Coaches – local bus company

Stakeholder group:
Local Businesses, Transport industry

Case study:
The person is not officially involved in any environmental project but the company implements many measures aiming at mitigation of climate change. As a minibus operator they pick-up children from school and take them back home again. Group transport allows lower fuel consumption and pollution per person than individual transport.

The buses use diesel fuel as it is the cheapest and it is sulphur diesel, which is more environmentally friendly. They make sure that drivers don’t leave the vehicles ticking over when they are waiting to pick people. This has an impact on the environment but they do this to save money not to mitigate climate change.

In their offices they do keep the thermostats as low as possible, this is to save money but does have an effect on the environment as they do use as less fuel. Similarly they do turn the lights off when they are not needed in offices, to cut costs, again this does have a beneficial effect on the environment as they are consuming less energy.

The company is metered for water use, for this reason they try to keep the use as low as possible and ensure that the drivers are using as little water as possible to wash the mini-buses. Again this is consuming less water and indirectly has a lesser effect on the water supplies locally due to monitoring consumption to save costs.

Learning points:
For commercial organisations keeping cost down is the main determinant of behaviour; therefore promoting low-energy practices as cost effective is crucial in this area.
**Simon Chapman**  
Chief Economist for the Freight Transport Association

**Stakeholder group:**  
Business, transport

**Case study:**  
Simon Chapman is not involved professionally in any specific climate change initiatives per se, but he is responsible for the Freight Transport Association’s environmental policy. On a day-to-day basis he is responsible for implementing measures to reduce members’ journey times with the aim of reducing emissions also. The main objective of these measures is to reduce empty running on freight vehicles and increase efficiency from 5% to 15% by reducing journey times.

**Timescale and future plans**  
Time scales are not applicable as the initiative is part of his day-to-day job. He hopes to deliver more savings on emissions with the Kyoto agreement coming into force. Mr Chapman works on about 10 to 20 discrete projects a year.

Generally most of his work is with commercial clients. They also have a public authority network, which is the mechanism for addressing transport issues nationally.

**Measures of success:**  
The success of this initiative can be measured by a series of indicators such as fuel consumption, route mileage, costs and key performance indicators. However he only aims to communicate results internally and to the clients. It’s mostly about companies’ willingness to change their habits.

**Learning points:**  
One can consistently achieve savings through route optimisation. Also he has noticed that these measures make good business sense. Implementing the measures is a question of a cohesive strategy. For example, encouraging operators to make deliveries at night when there is less traffic is far better economically and environmentally than allowing them to run their trucks during the day when the roads are at their busiest.
Andrew Dyer
MD, Stagecoach South

Stakeholder group:
Business, transport

Case study:
He is involved in the ‘Winchester Miracles Project’, with the aim of reducing vehicle emissions. Their short-term goal is to re-equip 20% of buses with more environmentally friendly engines. The long-term goal depends on the results of the short term. Only then will they have a clearer view of the long-term objectives.

At the moment they are in the implementation stage and have various groups or bodies involved in this project. Hampshire and Winchester Councils are the main instigators of this project are responsible for making the bid and getting E.U. funding. The drivers and champions of this initiative are the senior officers of these local authorities, along with a number of bus companies and others from technical suppliers and other industries being the enablers and implementers of the project.

Currently the vehicle refitting is in progress as we speak. Also marketing initiatives aimed at the public have been launched to get people to leave their cars at home and make them aware of the alternatives.

Timescale and future plans:
Their projected outcome is to increase the number of people using local transport by 10% in 5 years. They hope to complete the work they are currently doing by 2005 with an evaluation period for 12 months and then a review in 2006.

In the near future they hope to complete the vehicle modification and have an enhanced marketing phase in 2005 followed by an evaluation period.

Measures of success:
There are two quantifiable measures. One is the exact output of emissions from the vehicles. Another is the change in the number of people who travel by local transport.

Problems:
They have had delays to equipment from the vehicle and equipment manufacturers, which is to be expected with new equipment.

Learning points:
The importance of working together as a team. Also being realistic with targets and not being too ambitious when working with new technology.
Elaine Fletcher  
Partner, Blue Line Builders

Stakeholder group:  
Business

Case study:  
She runs a building and construction firm who do all kinds of work from roofing to drainage. The work she is involved with deals with the adaptation of buildings to deal with effects of climate change.

A lot of buildings have flood and structural damage as well as subsidence slip due to climate change. Currently the foundations are built on 1m of concrete. However in the South a lot of buildings are built on flood plains so one way of dealing with effects is to build deeper foundations, increasing them from 1m to 5m. This is to allow for subsidence that will occur with drier conditions in summer and wetter conditions in winter.

Timescale and future plans  
In the near future they expect they will need to install air-conditioning as well as central heating in all houses and large extensions. This will happen in five to ten years time.

They also aim to adapt flat roofs that have more problems due to heavier rainfall leaking into cracks. However it will be another 15 to 20 years before these changes are made.

There will also be increased building on stilts over the next 15 to 20 years. This will be due to building on flood plains and having to put buildings on stilts to counteract the effects of flooding by raising buildings off the ground. As there is increased flooding the drains will also be under more pressure due to the ground being overloaded with flood water so this will need to be re-assessed.

Measures of success:  
One measure of success would be a reduction in structural damage to buildings caused by flooding.

Learning points:  
More cohesive strategy in implementing preventative measures to effects of climate change in structural design of new buildings.
Mandy Wright
Partner, Haroway Organic Gardens

Stakeholder group:
Business, rural economy

Case study:
Haroway Organic Gardens is made up of a group of organic farmers and as suppliers to the food industry they are not involved in any adaptation measures or mitigation measures with regard to climate change. If there were any climate change this would only affect what they grow and how and when they cultivate it. If the seasons are longer and warmer they may be able to sow earlier and they will have a longer growing season. Also they would only see a pattern develop over 3-4 years, if indeed there is one. If the winter seasons are wetter they will cultivate later. If temperatures increase they may be able to grow different crops. If the period of winter wetness is extended and they have very wet summers they will experience problems and may have to go under glass to control the growing cycle, as the fruit crops would rot in the ground. If the conditions are wet and hot they may have lots of fungal problems and water logged land.

Timescale and future plans
They would react to changes after they had seen a pattern after 10 years. She believes climate change is here to stay yet it will be another 3-10 years before she can make an informed decision to change the crops they produce or the way they cultivate them.

Measures of success:
N/A

Problems:
N/A

Learning points
Organic farming – which entails planning to change with any change in climate rather than e.g. to irrigate heavily in response to drier conditions– can be considered an adaptation strategy. It is interesting that she doesn’t make any such connection herself.
7. Local opinion leaders

Dr Derek Clark
School of Civil Engineering and The Environment /Southampton University (Lecturer)

Stakeholder group:
Local Opinion Leader (rural economy)

Carrying out research into the rising water levels of the Solent and the situation with tidal floodgates. Most closely involved with the River Meon Water Management Scheme in the south of England- The environment Agency wants the river Meon’s water resources better managed. There are competing demands for the water e.g. to supply Portsmouth with drinking water, the fishing lobby want the water left for fish to move freely along the river, farmers have licences to pump water for irrigation of soft fruit and small vegetables and greenhouses. English Nature also wants to reinstate ancient water meadows.

Timescale and future plans
His research looks at the competing demands for the river in the short term. Moving from relatively low value crops like spring wheat, to high value ones like grapes and soft fruit and vegetables are a way forward to get a better yield per unit of water. He states that we now have research methods that will enable us to look in detail at river valleys and the projected rainfall and evaporation, dependant upon various CO2 emission profiles in the future up to 2080. They will be able to make decisions as to what crops would be appropriate to grow depending on the irrigation and rainfall patterns for a similar river valley with different CO2 emission profiles.

Measures of success:
He has created a methodology for studying irrigation patterns, evaporation and annual rainfall to assess the appropriate crops to grow when there is limited water, also when river water catchment’s areas are affected by climate change. The Environment Agency now has the information to make the decisions as to how to manage the water resources in the catchment area of the Meon valley.

Learning points:
The most efficient way to deal with water management, present and future when the climate is not only changing, but when different parties have their own interests to bear.

There is a lot of persuading necessary before farmers will accept validity of longer-term estimates.
Stakeholder interviews with local opinion leaders

Richard Wright
Reporter

Stakeholder group:
Local Opinion Leader, *(education)*

Concerned with Agenda 21, to do with climate change, renewable energy targets, fossil fuel emissions and environmental issues. Reporting on stories to do with coastal defence e.g. the life span of sea walls and structures looking at the fact that they have to have a 50-year life span to cope with rising sea levels. He has been looking at what the council is doing and what DEFFRA are insisting upon and the cost of it. There are several multi million pound schemes that have been built and have to be more comprehensive because of global warming.

The council have had to apply for funding to central government to build these schemes, while the Isle of Wight council deals with maintenance. The main issue on the island is the areas that are to be left to managed retreat; this is causing controversy on the Island. The question is whether nature should be allowed to win or whether structures should be put in place to *protect property and industry*. The main affected area is St Helen’s, which has been designated for managed retreat, which could affect houses and businesses. The main push to allow this managed retreat is coming from English Nature, to create enhanced marsh land to create habitat for birds. The local debate is as to *whether it's mankind or birds that should come first.*

Timescale and future plans
New sea defences have been built to minimise the impact of waves. English Nature weren’t particularly keen as it would alter coastal drift. The Isle Wight Council had to come to a compromise with English Nature, and got involved in environmental mitigation for the marshland behind it. This meant that the Isle of Wight Council footed the bill to improve the marshland habitat behind in return for being allowed to alter the coastal processes on the seaward side. St Helen’s had local people objecting and the St Helen’s parish council objecting to managed retreat.

Measures of success:
Defences have been created which should permit protection for the next 50 years. Elsewhere, the council purchased land which it left to fall into the sea, a substitute for an area that had been bastioned in order to protect property. This was a compromise with nature groups who wanted to preserve the habitat of certain local wildlife.

Learning points:
He feels that local parties have learned to accommodate environmental issues that arise and *include all the interested parties, such that they do not require costly public enquiries.*
Michael Wylie – Harris
Journalist

Stakeholder group:
Local Opinion Leader

Case study:
Description:
A journalist who researched and wrote a piece concerning the high rate of forest fires in 2003 with assistance from the Alice Holt Forest Research Centre. His aim was to make people aware how the change in climate could be seen on a local level – drier summers making the local forest tinder-dry, leading to a record high in forest fire incidences in 2003 in Waverley.
Stakeholder interviews with local opinion leaders

**Attachment: Stakeholder interview discussion guide**

These will be telephone interview of 20 – 35 minute duration

**INTRODUCTION: Explanation and objectives of study:**

Good morning/afternoon. I am ……………, a consultant from Rosslyn Research in London. We are working on behalf of Hampshire County Council as part of the European ESPACE project on Climate Change. Are you familiar with the ESPACE project? If not, explain: “ESPACE stands for – European Spatial Planning Adapting to Climate Events in which Hampshire County Council have a leading role.” As part of the project, we are talking to stakeholders at national, regional and local levels. This is to understand their involvement in projects, initiatives or adaptation measures that are designed to minimise the impacts of climate change and/or address the causes of climate change.

**CHECK THAT THE PERSON HAS GENUINELY HAD SOME SORT OF INVOLVEMENT IN ANY INITIATIVE THAT IS INTENDED TO EITHER:**

- DEAL WITH THE EFFECTS OF CLIMATE CHANGE *(ADAPTATION)* – E.G. SEA LEVEL RISE, FLOODING, STORMS AND FREAK WEATHER, ETC.
- OR ADDRESS ISSUES THAT CAUSE CLIMATE CHANGE *(MITIGATION)* – E.G. CLEANER ENERGY, ENERGY EFFICIENCY, REDUCTION OF EMISIONS OR VEHICLE USE, GREENHOUSE GAS REDUCTION, ETC.

**IDEALLY, THESE INITIATIVES SHOULD HAVE SOME SORT OF LOCAL LEVEL INVOLVEMENT**

Is it convenient to talk now? I will need up to 30 minutes of your time. Unless you give us permission to associate your comments with your name, everything you say will be treated as strictly confidential.

Name of respondent:

…………………………………………………………………………………………………….

Contact number/ e-mail:

…………………………………………………………………………………………………….

Function:

…………………………………………………………………………………………………….

...
Stakeholder interviews with local opinion leaders

1. Are you personally involved in any projects, initiatives or adaptation measures that are designed to minimise the impacts of climate change and/or address the causes of climate change? What are these?
   [LIST AND SHORT DESCRIPTION - PROBE FOR BASIC OBJECTIVE AND WHAT WAS INVOLVED]

2. Are you personally involved with any groups in relation to these initiatives? Which groups and which initiatives do these relate to?

3. Are you professionally involved in any projects, initiatives or adaptation measures that are designed to minimise the impacts of climate change and/or address the causes of climate change? What are these?
   [LIST AND SHORT DESCRIPTION - PROBE FOR BASIC OBJECTIVE AND WHAT WAS INVOLVED]

4. Of the initiatives you are personally or professionally involved in, could you select one that is particularly ‘close to your heart’ and which we could use as a case study. This could be an initiative at any stage – just an idea, just started, in progress or completed. Ideally, there should be some sort of local level involvement in the initiative.
   [IF MORE THAN ONE SELECTED, PRESS RESPONDENT TO FOCUS ON ONE OF THEM ONLY – PREFERABLY ONE WITH INVOLVEMENT AT A LOCAL (COUNTY) LEVEL RATHER THAN JUST AN INTERNATIONAL OR NATIONAL INITIATIVE]

4.1 Could you give me the ‘official’ name of the initiative, its geographical coverage, a short description and its current status (i.e. is it just an idea, just started, in progress or completed)?

4.2 What are the objectives of the initiative in the short term and longer term? Is this more for climate change adaptation or mitigation?
   [IF NECESSARY CLARIFY: By adaptation we mean the initiative deals with the effects of climate change and by mitigation we mean the initiative addresses issues that cause climate change in order to reduce its effects.] PROBE FOR THE SPECIFIC OBJECTIVES – BOTH PRIMARY AND SECONDARY

4.3(a) IF CURRENT/FUTURE: What is the projected outcome of the initiative? Are there any expected behavioural changes and in what part of the population?
   IF PAST: What was the outcome of the initiative? Were there any behavioural changes and in what part of the population?
4.3(b) IF CURRENT: How is the initiative progressing towards this outcome? IF PAST: And how did this compare to the expected/projected outcome of the initiative and with what behavioural changes were initially expected?

4.4(a) IF CURRENT/FUTURE: How will you measure the success of the initiative? Will these measures be communicated to others? IF PAST: How did you measure the success of the initiative? Were these measures communicated to others?

4.4(b) IF CURRENT: Has the initiative been successful to date? To what degree? What problems have been encountered along the way? IF PAST: How did you measure the success of the initiative? Were these measures communicated to others?

4.5 What are/were the timescales of the initiative? [Probe for: first idea/ start/ project time period/ expected end point]

4.6 What is the current status?

4.7 Who are/were the individuals, groups or bodies involved at the different stages of the project? And how were they involved?

[a] instigators:

[b] drivers/ champions:

[c] enablers/ implementers:

4.8 What other groups, bodies or authorities are/ will be involved in the initiative – now, in the past or future? And how were they involved? [Probe: Local/ regional/ national/ Hampshire County Council involved]
Stakeholder interviews with local opinion leaders

4.9 Were there specific pressures/pressure groups - for or against the initiative? Who and why were they for or against?

4.10 What has been learned from the initiative? [Probe on the headings below]

[a] on the process in general
[b] outcome or projected outcome
[c] behavioural changes:
[d] strategies
[e] measures of success:
[f] best practices:
[g] anything else:

4.11 Have any arrangements been made to share results with other groups or to ‘transfer best practices’?

4.12 What are the next steps?

5. Irrespective of the initiative we have discussed, what [else] would you really like
   to see being done on a local or regional basis? These could be ideas for adaptation
   or mitigation for initiatives to minimize the impact of climate change.
   [Record a
   short description.]

6. Are there any other people you feel we should talk to either about the above case/initiative or about the subject of climate change in general? [Note name and contact telephone number/ e-mail]

On above case:

In general:

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Stakeholder interviews with local opinion leaders

7. At a later stage of the project, we may want to talk to you again to get your reaction to some possible strategies. This would be most likely in late December or early in the New Year, and will again be by telephone. Are you willing to take part in a further discussion? If ‘no’, ask for reason. If ‘yes’, are there any time periods when you are not available?

No Reason: ........................................

Yes Not available: ....................................

8. Do we have your permission to associate the comments you have made with your name? If ‘no’, ask for reason.

No Reason: ........................................ Yes
Appendix C
Interviews with ESPACE partners

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Interviews with ESPACE partners
Interviews with ESPACE partners

**Background and Methodology**
In February 2005, Rosslyn Research conducted 9 telephone interviews with ESPACE partners, with the aim of contributing to the development of a set of case studies for the next phase of the project, and of assessing the nature of ESPACE as a transnational project.

Interviews covered the following areas:
- Description in the respondent’s own words of their own organisation’s involvement in ESPACE, and the purpose of this involvement
- Description of the social landscape in which the project operates – nature of the stakeholders involved
- Projected outcome in terms of stakeholder behavioural change
- Methods of engagement with stakeholder groups
- Measures of success
- A full copy of the discussion guide can be found in Attachment 1 to this report.

**Nature of this research**
The ESPACE project exists on many dimensions and contains its own reporting mechanisms. These interviews can only be seen as supplementary to the official Activity Reports submitted during the course of the project by the partners. Conclusions drawn from the interviews can only amount to suggestions as to how one might schematically interrelate the various parts of the project.

With these caveats, a clear picture does emerge in these interviews of how the partners’ various perspectives and contributions are complementing one another. Different partners come to the project with different national traditions of spatial planning in general and water management in particular. Also, the issue of climate change has a different place within planning, policy-making and popular consciousness in the various partner countries. Because the ESPACE partners are coming from very different places in every sense, the outcome of their collaboration promises to be more comprehensive and more robust than anything that could be achieved at a national level.

**Overall conclusions**
Climate change is expected to present two kinds of pressing challenges for planners in north-west Europe:
- the accelerated hydrological cycle will make it harder for dense human populations to thrive amidst larger and more violently fluctuating volumes of water
- rising sea levels will challenge the viability of many coastal settlements and economic enterprises

In addition to these two core challenges, there is a host of other ways in which expected climate change will have some impact on spatial planning. Farming patterns may become less long-lasting; people may need to live nearer their place of work. The list is by its nature open-ended – there can be no firm predictions from our standpoint of how our own societies will respond to climate change and how therefore planners will have to plan.

All of these might be called “hard” planning problems – they are simply-stated physical challenges. But since any adequate responses to these challenges will involve great expense and great disruption to many people’s ways of life, there is also a social/political challenge for planners. In order to meet the physical challenges posed
Interviews with ESPACE partners

by climate change, it will probably be necessary to change the social space in which planning occurs.

In sum, there are four great challenges posed for planners by climate change. As well as the two grand problems of water outlined above, there are the facts that:

- the type and severity and distribution of impact are all unknown, and planning mechanisms will have to take this very uncertainty into account in a systematic way
- any successful response will have to overcome inertia or even resistance on the part of policy-makers and the general population

Any contributions to challenges 1 or 2 are also indirectly contributions to challenges 3 and 4. 1 and 2 relate to questions of immediate physical survival; and to the extent that they are successfully addressed there will be some gains in our understanding of the wider planning implications of climate change (challenge 3) and in the general acceptance that a lot needs to be done (challenge 4).

Also, contributions to 3 are indirectly contributions to 4. The more that planning decisions are seen as systematic but flexible, the more likelihood they have of winning acceptance or support.

Using this four-part schema of the challenges posed by climate change, one can see that the different national traditions which the ESPACE partners draw on have their own contributions to make.

- Challenge 1 is most directly addressed by the VROM/WRVL collaboration. Drawing on the Netherlands’ centuries-old expertise in maintaining a complex high-density society in the midst of great volumes of water, the project provides a pointer for neighbouring countries which are only now - in the face of climate change - having to put water-planning right at the centre of spatial planning. In particular, the social aspect of planning-around-water (especially the need to take housing, leisure and farming into account simultaneously) is elaborated in the Guiding Models project in a way that other partners (e.g. SEERA in the UK) regard as exemplary.

- Challenge 2 is most directly addressed by WSCC’s Manhood Peninsula project. But there are wider lessons to be drawn from this localised experiment in engaging an affected community. Although it is bound to be easier to achieve on such a small scale with such a directly-affected population, it can provide some pointers to how to tackle challenges 3 and 4 on a wider scale.

- In different ways, challenge 3 is addressed both by LFW and by much of the UK contribution to ESPACE. LFW is working towards achieving a fine-grained mapping system, which will integrate with systematic planning. This will provide crucial guidance on how to address local, regional, international and global climate change at the appropriate geographical scale. This in turn will provide a platform of uncontested observation and prediction on which sometimes painful planning decisions can be made with a maximum of informed consent from those affected. Without good maps there will be no justice; and without justice there will be no consensus.

The UK contribution to ESPACE is thoroughly infused with the knowledge that the effects of climate change go far beyond the core problems of water (challenges 1 and 2). In particular the SEERA plans to push for legislation for both lower-water-consumption and lower-energy-consumption housing design are one direct example of this broader perspective.
• Challenge 4 is directly addressed by WSCC and RLZZZ, but as argued above it is indirectly addressed throughout the entire ESPACE project.

The UK emphasis on engagement with the general population, which other partners agree to in theory but do not prioritise to the same extent, can be justified both tactically and strategically. Tactically, because time is running out and it is essential to move climate change to the centre of political debate. Strategically, because this is anthropogenic climate change and therefore we need collectively to examine our ways of life with a view to changing them and ourselves.

The strategic argument seems undeniable; but it is at the tactical level that there may or may not be lessons for other countries to draw. In fact, it may be that each side can learn from the other. Certainly, non-UK expert groups need to appreciate more deeply how systemic and all-pervasive the phenomenon of climate change is. But at the same time, perhaps, the UK partners can draw some lessons from the widespread assumption elsewhere in Europe that the general population is a much less important stakeholder than the policy-makers and commercial interests. Only in the UK does it appear to be a given that every piece of planning needs to have the informed consent of everyone affected.
Interview 1: Climate South East, UK
Name: Mark Goldthorpe
Function: Programme Manager, Climate South East
Stakeholder Group: ESPACE Partner

Case study:
CSE see their role as brokers rather than instigators. They are a regional partnership who provide a model of how stakeholders can come together and have transferable information that can be shared by the partners for their mutual benefit. CSE are members of SEERA and advise them on policies and strategies for managing climate change.

Specifically in the case of ESPACE they are involved with West Sussex CC with the Manhood peninsula case study. Mark Goldthorpe personally manages this liaison, attending their events. ESPACE is seen as a structure through which local, regional and international climate change issues and policies can be coordinated.

They also work with Hampshire County Council on:
- a newsletter to increase local and political awareness regarding climate change
- developing a toolkit to help planners to develop strategies to deal with flooding and its impacts.

Whilst in general there is a greater commitment to widening public awareness and engagement amongst UK ESPACE partners than non-UK, CSE are an exception to this rule. As a body set up to coordinate and inform other bodies, they see themselves as not having any remit to engage directly with the public. Their stakeholders are local/regional government entities, regional/national NGOs, and utility companies.

Measures of success:
Their aim is not directly to effect behavioural change but to enable it; to ensure that their stakeholders - policy-making organizations - understand the impact of climate change. Aim is to help stakeholders adopt new policies which address climate change issues.

Success is not regarded as measurable.

What can be learnt from this?
CSE are experts in the coordination of experts and policy-makers. They have a clear vision of how ESPACE fits into the wider context: what sort of project it is, amidst what sorts of similar projects.
Interview 2: Environment Agency, UK

Name: Tim Reeder
Function: Regional Climate Change Project Manager, Environment Agency
Stakeholder Group: ESPACE Partner

Case study:
Tim Reeder is the lead consultant on a project that raises awareness of the impact of climate change and develops future strategies for managing climate change. He is personally involved in producing a newsletter, informing people of the ESPACE partners’ activities and updating the information on the partner’s website. He is also very much involved in producing decision-making tools or computer models that simulate climate change scenarios. The main objective of producing climate change computer models is for climate change adaptation. It is thought that in producing a computer model, one can input various climate change scenarios and then obtain results in 3D, simulating climate change in the future. The projected outcome is to produce models and guidelines that are transferable to other areas of Europe that have similar problems. In identifying climate change patterns and their implications one can influence spatial planning with regards to water management with their European partners. Computer modelling is important as Tim Reeder identifies strategies for adaptation to climate change as part of various other contingency plans such as Flood Defence Strategies, Shoreline Management Plans and Catchment Flood Management.

He is currently in consultation with Waterschap Rivierland (WSRL) and other Dutch partners in drafting up guidelines for water storage. WSRL who are a water board based in the Netherlands, are responsible for assisting in policy development, water management and flood control in the Netherlands. Whilst German partners, Bayerisches Landesamt fur Wasserwirtschaft, are responsible for providing high technical and scientific knowledge for water management in Bavaria, Germany. Other partners include Belgium partner Regional Landschaap Zenne Zunn en Zonien, the South East Climate Change Partnership, the Dutch Ministry of Housing, Spatial Planning the Environment and the South East England Regional assembly amongst others.

Partners generally already knew each other while other parties expressed an interest at environmental project fairs and submitted proposals that were accepted.

In the UK the project is at various stages. Tim is currently collating information on climate change issues for public dissemination. He is also researching, identifying and reviewing current adaptation strategies.

Measures of success:
Raising awareness amongst the public in itself is seen as a positive step as it raises the profile of climate change issues. Also giving stakeholders the opportunity to make more informed decisions that take into account climate change issues is seen as specific indicator of behavioural change. One example is the Manhood Peninsula Project in West Sussex where they are involving the local community in the decision making process. This is seen as a measure to make a step ‘own’ issues related to climate change and make it relevant to them as well as get them involved in decision making process.

What can be learned from this project?
It is beneficial to work with European partners who contribute a different viewpoint and can offer their expertise. For example, the Dutch tool has been very useful as they are more experienced in dealing with water issues and produced guiding models that are useful.
Interview 3: South East England Regional Assembly, UK

Name: David Payne
Function: Regional Planner, SEERA
Stakeholder Group: ESPACE Partner

Case study:
David Payne is currently working on the Regional Spatial Strategy for the South East, which is currently out for consultation. His team are part of the ESPACE spatial planning building project, which looks to incorporate adaptation measures into building plans. The main objective of the initiative is to produce a spatial plan for the South East. Modelling of the water resources is an aspect that has a great effect on the decisions made.

The projected outcome will be a planning system that will allow local authorities to make informed decisions about water management, including flood plain management, flood control and housing stock specifications. Currently the plans have gone to the Government for consultation on 24th January 2005. They also want to plan for new housing that has water savings in the region of 10% using devices such as energy saving boilers and washing machines.

David has been keen to involve the local community of which there 8 million residents who will be affected by the spatial planning strategies. They have looked to engage the public through radio advertising and leafleting thousands of households on the issues and details of spatial planning. They have also mailed 1500 businesses with invitations to spatial planning/flood management workshops. He has also worked closely with the local councils, the water boards and the Environment Agency.

He also goes to workshops run by other county councils in the region and presents the South East plan to interested parties.

Measures of success:
The Regional Spatial Strategy has been effective in that that the Environment Agency are looking at their plans and will conduct a climate-proofing exercise for them to ensure that they work in a way that addresses the scenarios presented by climate change.

In terms of behavioural change, more efficient use of water supply usage in new housing development will be a good indicator of success. The target they have set is an increase by 8% of water efficiency, which will be measured by metering new buildings. Also if fewer flooding incidents are reported this would also be a good indicator.

What can be learned from this?
They have learnt a lot from the Dutch environment agency on how to model and keep housing issue in perspective. They have learnt that if you set aside wetlands up-river of a major town, this prevents flooding of that river.

They have also learnt that there is a problem in that there is no legislation in place as to how to manage water and that in new housing development there is no requirement for any certain level of water efficiency.

They regard the main lever for behavioural change to be a system of financial incentives, to residents and house builders. Regulation is seen as the second lever. Communication with the public comes in at a distant third. In connection with this ranking, it should be noted that they do not regard themselves as having prime responsibility to inform or engage the public. Their leafleting and other communications campaigns are seen as the discharge of their duty to the population as ultimate stakeholders. But they regard other agencies – in particular local and national government – as having the prime duty to inform and engage.
Interview 4: Surrey County Council, UK

Name: Phil Sivell  
Function: Project Manager, Surrey County Council  
Stakeholder Group: ESPACE Partner

Case study:  
Phil Sivell is involved in raising awareness amongst partners and stakeholders, and producing briefing papers on topics related to climate change issues affecting the area. He is also a member of the UK International Steering Committee for Climate Change. Phil helps to produce two papers a year pinpointing issues raised by partners to examine the ways that climate change will affect the environment. They get case studies from the partners in order for them to be used as evidence for the impact of climate change in the papers that he drafts.

The main objective in the short term is to raise awareness across the partnership. Not only does he want to look at the impact on water but all other areas of the environment as well. It is hoped that they will be able to take the UK practices and methods to European partners through the ESPACE project. There is the feeling that Europe is concentrating more on the effects on water management while more attention should be paid to wider environmental issues.

It’s a four year project during which two papers are produced a year covering aspects of climate change. At present only the first of two papers have been presented; this is due to difficulties in obtaining information from all the partners. The project has now been rescheduled to ensure that they produce the 8 papers within the ESPACE timescales. In the long term they aim to get the information to the partnerships in order for them to make informed decisions in their strategies. The partners they have worked with include Regional Landschap Zenne Zunn en Zonien in Belgium, Waterschap Rivierland in the Netherlands, the South East Climate Change Partnership, the Environment Agency and the Dutch Ministry of Housing, Spatial Planning and the Environment amongst others. The stakeholders have generally been organisations that already know each other although other parties expressed an interest at various environmental project fairs and submitted proposals that were accepted.

There are also national workshops that take place where the different stakeholders can exchange information and keep in touch.

Measures of success:  
In terms of behavioural change Phil is looking to consult more and more with stakeholders so that they can make more informed decisions when assessing how climate change will impact on any decision making processes. The project is currently gathering momentum in Europe and thinking is changing from just focusing on water issues to wider climate change issues.

It is difficult to quantify success but would be interesting to see how spatial plans would look if partners involved had not participated. He is not really been set up to measure success of his project, only in that he has produced the reports he is required to.

What has been learned from this?  
Learned that people have a perception, especially in Europe, that climate change only affects water and people must realise that is not the case, there are much wider issues. They have also learned that there is also less press scepticism and people are becoming more aware of issues.

Workshops are a good way of getting to know people in partnerships and help people to better understand each other which leads too better communication.
**Interview 5: West Sussex County Council, UK**

Name: Fran Wallington  
Function: Manhood Peninsula ESPACE project coordinator, West Sussex County Council  
Stakeholder Group: ESPACE Partner

**Case study:**
The Manhood peninsula is a low-lying area on the south coast of England, with two long stretches of coast. The peninsula is faced by imminent sea-level rise. This is exacerbated by sinking due to tectonic plates rising in Scotland and the south of England sinking into the sea.

The Manhood Peninsula Project is intended as a demonstration case study to look at engaging the residents to develop adaptation strategies for CC. West Sussex County Council work with the local people to develop suitable and accepted strategies, involving the residents in the decision-making process.

The Manhood Peninsula Partnership (which pre-exists ESPACE) are seeking to develop local action plans to implement adaptation locally. They are in the process of developing these. Long-, medium- and short-term action plans all look to reduce vulnerability of the peninsula to CC.

Intend to work to identify the strengths and weaknesses of their suggested action plans through CC workshops, involving the local community.

**Measures of success:**
The ultimate aim of the project is quite easily identified: to develop action plans in consultation with local residents which are scientifically and economically robust and which have the support of the local population.

In terms of behavioural change, there are two elements, which might be called change with regard to policy-making and change with regard to climate change:

During the course of the project, the aim is to engage and consult with all interested parties in the course of developing action plans. This naturally involves bringing about some behavioural change especially amongst those who are less ready to get involved at the outset.

If the project aims are achieved, part of what will have been achieved is a change in people’s behaviour towards adaptive strategies.

**What can be learned from this project?**
It is a geographically-limited project with an explicit aim of raising awareness through encouraging engagement in policy-making. The Manhood Peninsula project, therefore, is set to provide lessons in how to bring the issue of climate change into the democratic process. On a note of caution, though, it is clear that awareness through engagement is much more easily achieved on the very small scale at which this project operates. So all positive lessons that may be drawable from the project will need to be very carefully drawn.
Interview 6: WRVL, Netherlands

Name: Niels Nijmeijer
Function: Communications, WRVL
Stakeholder Group: ESPACE Partner

Case study:
Niels Nijmeijer is the leading technical and communications officer for two projects. One of the projects is guiding models: creating water storage models and planning for future control of rainfall for storage and multiple space use in the Dutch area. The other project is the Norm Study: analysing problems of water management from rainfall. This involves researching the main water system in the Gelderse Rivierengebeid (the main river area of the Dutch province of Gelderland). The aim is check water systems to determine where they require information from, and to understand the water management task and how much water to store. The overall objective of both projects is translate information obtained into a working manual or set of guidelines that is practical on both a national and international level.

In the long term they hope to designate certain areas of land for water storage and approach land owners with logical and coherent plans that demonstrate the reasons and thinking behind their strategy. Currently research has been completed on the Guiding Models and results have been obtained from the Norm Study. In three months time they plan to have final workshops to discuss the results. From there they intend to implement these water storage plans with the help of the landowners.

The stakeholders include a range of central, regional and local government bodies or authorities such as the National Government Province of Gelderland. They also include landowners, interest group, market parties, landscape mangers, water boards and civilians who will be affected by the water storage strategies proposed.

Workshops have been used to integrate organisations or parties involved. This has taken on an interactive form where experts in the field sat down with various organisations explaining and discussing with them the mapping and the plans and the impacts of climate change. They have also had various public bodies working together on media campaigns under the same logo ‘Nederland lives with water’.

Measures of success:
It is hoped that the central and local government will find new ways to manage changing rainfall patterns caused by climate change and water management issues related to this. One positive foot forward is more dialogue between interested parties.

Difficult to judge as success can only be measured when land use changes have been implemented. These will be conducted from now until 2015 but have not started yet. However no barriers have been recorded to date as it is believed that all organisations involved have participated in discussions and the planning process.

What can be learned from this?
It has been learned that the missing link is with landowners, who have not been included in workshops so far.

The use of IT modelling at the workshops has been constructive and helped the various organisations involved to understand the issues. By including all the interest groups in the discussion process they have been able to get feedback on how the system should work as well as the groups giving them indications of how they would work with them in implementing the plans.
Interviews with ESPACE partners

Interview 7: VROM, Netherlands
Name: Nynke Uiterweer
Function: Administrative Assistant, VROM
Stakeholder Group: ESPACE Partner

Case study:
As partners of the ESPACE project they are producing guiding models and working on the Normstudy in the Netherlands. In particular they are looking at water management and raising awareness of climate change adaptation methods. The aim of the project is to come up with methods for spatial planning to manage water. Vrom is also working to change the behaviour of the public through increased publicity campaigns to raise awareness. The overall objective is to work with central government to get spatial planning to include water systems that will adapt enough to keep security levels by reducing flooding. Vrom are looking to have infrastructure, spatial planning and flood risk addressed by retention areas and broadening the rivers.

Nynke Uiterweer organises workshops with provincial government, local government and various water boards. The aim of these workshops is to engage central, regional and local governments in a dialogue to ensure regional and central water management systems can be co-ordinated.

Vrom are working in partnership with provincial government, local government, water boards, municipalities, the Dutch Ministry of Water, Alterra (consultants examining green issues) and RIVM (consultants on environmental issues).

The Regional National Accord to make water system adapt to climate change goes on to 2015. The National Administrative Government water accord has 2 more years to run.

Measures of success:
The initiative has been effective in that climate change and spatial planning are increasingly getting on the agenda. However there have been no visible behavioural changes as of yet but they are looking to see more cooperation amongst the parties involved.

What can be learnt from this?
There is a need to delve deeper as the issues are complex and climate change is already here.

The water boards and the Ministry of Water need to incorporate water management with spatial planning. So far it has been quite difficult to get the water boards and spatial planners to work in partnership. There is need to make them aware they are working on the same problem. Also the technical solutions of the past are not working any more.

There is also the difficulty in that there is no spare land in the country so it’s hard to move around. Also there is very little room for water to be managed without affecting the population.
Interview 8: RLZZZ, Belgium
Name: Ms Ann Gaeremynck
Function: Project Manager, RLZZZ
Stakeholder Group: ESPACE Partner

Case study:
Ann Gaeremynck is heading a case study in the Congoberg, which is in the Vollevelte region. The aim of this case study is to raise awareness about the impact of climate change on water management and how a change in behavioural patterns can help to mitigate the impact. Also looking to see how they can treat water from rainfall in a more ecological manner. i.e. pumping water around a region or holding water for storage in certain areas for longer in order to prevent flooding caused by rainfall further down the river.

The main long-term objective is to change policy related to water treatment in Belgium. However there is a feeling that they can’t do all of this in the ESPACE timescale. As principally involved in communications Ann is responsible for addressing and engaging the public and the politicians.

A pre-campaign survey with the public was carried out prior to a campaign informing them more accurately on climate change. Over 200 street interviews were done in five local towns and rural areas and using the same survey format as West Sussex County Council. An independent market research company was recruited to carry this out. They are currently preparing brochures with which they will disseminate climate change information. The project overall is to be completed by 2006/2007. The pre-campaign survey is also being carried out in cities and towns in other countries and in term the local governments will be consulted on what are best strategies to use.

Ann has worked particularly closely with Horteco School, whom her team is funding for the Congoberg project. They will be measuring rainfall levels and planning strategies to mitigate the effects of climate change, in particular flooding.

Measures of success:
Amongst the public they are conducting surveys to determine the public’s level of awareness of climate change issues. So in effect the measure of success will be to determine the best way to affect people’s behaviour, in terms of water management, and increase their knowledge of climate change issues. At the moment it is too early to say how effective public dissemination of information on climate change is as pre-campaign survey has only recently been completed. At present there is no monitoring of stakeholders but they feel it is something they need to look into.

What can be learned from this?
Difficult to say as they are about to embark on a publicity campaign but they do know that public perception is formed via the media, as in the case when the Federal Government and public changed their attitude towards climate change after a TV programme was aired.
Interview 9: LFW, Germany

Name: Dr Thomas Beckmann  
Function: Project Manager, LFW Bayern  
Stakeholder Group: ESPACE Partner

Case study:
Dr Thomas Beckmann is mainly involved with raising awareness of planning for flood management systems. He communicates with stakeholders and then formulates ideas and decides what strategies are to be taken. Two case studies he is working on are the river areas of Goldbergsee and Frankische Saale. In both he is looking at the boundary conditions and flood protection.

These projects have two main objectives:
- to produce hydrological and meteorological information to produce strategies and models for managing climate change that can be used in other areas of Europe. It is hoped that models can be produced that can cover climate change scenarios in Europe for the next 30 years;
- to produce information for public dissemination and help the local community to understand how to manage and/or adapt to climate change.

Working alongside the Potsdam Institute for Climate Change, he has produced information that can manage climate change issues within areas of 500 square kilometres. Not only does he want to gauge the feasibility of developing strategies for such small areas, he also wants to look at the effects of 15% higher flood protection and the costs involved in management and adaptation.

The stakeholders who were involved are local bodies responsible for management of water and also regional environmental agencies who know areas of flood plains and who have responsibility for areas which will be affected. He also worked in partnership with Baden-Wurtemberg (BW) and Bavaria who drew up a list in order of rank of climate change adaptation methods.

Currently they are still in process of conducting measurements that will enable them to go ahead with the planning process. This will give them tools to look at possible scenarios and make informed decisions. A lot of information is shared with partners through the websites on the Internet and via email.

The idea of a dual objective – part hard science, part engagement with the non-scientific public and policy-makers – is common to all ESPACE partners. But it is very interesting to note how differently the dual objective is interpreted here from how it is interpreted elsewhere, especially in the UK. In Germany there is a definite planned sequence: only once objective 1 is achieved, and the hard science is improved, will it be appropriate to address objective 2. It is hard to state so succinctly how most other ESPACE partners see the relationship between the two objectives; but certainly they for the most part don’t see the awareness-raising as quite so starkly secondary to the science. Compare in particular the FloodRanger project overseen by UK EA, which aims to become an educational tool on the one hand and a modelling tool actually used by planners on the other.

Measures of success:
As they have not monitored the activities of the stakeholders or gauged public perception it is difficult to say whether the project has been effective. However a survey of both the public and stakeholders will be done in 2006 to see if the public’s attitude...
Interviews with ESPACE partners

has changed and if the stakeholders have made informed decisions on managing climate change.

**What can be learned from this?**
Different groups of people can learn how to work together and take responsibility for this area of regional planning. This has been aided by fact that it is possible to obtain data that can aid in climate change adaptation methods. More international cooperation with European partners and the UK, Belgium and Netherlands need to work closely to produce the best guidelines and models.

This part of the ESPACE project addresses most systematically the aim of broadening out from water management to spatial planning in general.
Attachment: ESPACE partner interview discussion guide

These will be telephone interviews of 20 – 25 minute duration and need to be written up as fully as possible [typed if at all possible].

INTRODUCTION: Explanation and objectives of study:

Good morning/afternoon. I am ……………, a consultant from Rosslyn Research in London. We are working on behalf of Hampshire County Council as part of the European ESPACE project on Climate Change. As a partner in the ESPACE project, we want to talk to you about your own part of ESPACE and about other case studies in your country that are relevant to effecting behaviour on Climate Change issues.

Is it convenient to talk now? I will need up to 20 minutes of your time. Unless you give us permission to associate your comments with your name, everything you say will be treated as strictly confidential.

Name of respondent:
Contact number/ e-mail:
Function:

1. Could you please briefly describe the part of the ESPACE project your organisation is involved in? [short description of project]. Could you give me the ‘official’ name of the initiative, its geographical coverage and short description?

2. What are the objectives of the initiative in the short term and longer term? Is this more for climate change adaptation or mitigation?

3. What is your personal involvement in this specific project?

4. We are particularly interested in the projected outcome of the project run by your organization. In a few words, what is that projected outcome?

In your project, what part of the community are you working with? What are the key stakeholders or stakeholder groups? What is the nature of each group’s stake in the project?
### Interviews with ESPACE partners

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5. How were these stakeholder groups / parts of the community defined or identified?

6. In the projected outcome of your part of the project, are you looking for specific behavioural change? What, if any, change to individual, organisational or corporate behaviour do you expect to see as a result of the project, or was required to make the project happen?
### Interviews with ESPACE partners

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7. How effective, do you feel, has this part of the project been? What barriers have you experienced in this respect?

8. How will you measure the success of your project? How will these measures be communicated to others?

9. What are the timescales of your project? [Probe for: first idea/start/project time period/expected end point]
Interviews with ESPACE partners

10. What is the current status?

11. What other groups, bodies or authorities are/ will be involved in the initiative – now, in the past or future? [Probe: Local/ regional/ national/ ESPACE partners]

12. Were there or are there any specific pressures/ pressure groups - for or against the initiative?

13. What, in your opinion, has been learned from the initiative specifically in relation to behavioural change? What, would you say, has helped or hindered behavioural change?

14. How are you involving the different stakeholder groups in your project? Are you developing / have you developed different channels/methods of communication?

15. More generally, how do you feel behavioural change can happen? How can groups of people or organisations be encouraged to change their behaviour? What works and what doesn’t work?

(prompt with examples: drink-driving, smoking, recycling, corporate corruption...)

16. Are there any projects or initiatives that you know of which focus on behavioural changes in particular

especially if in your own country/region and if related to climate change?
Interviews with ESPACE partners

Are there any people that we should talk to? [Note names and obtain telephone numbers]

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<th>Description (inc. behaviour-change aspect)</th>
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17. At a later stage of the project, we may want to talk to you again to get your reaction to some possible strategies. This would be most likely in late February and will again be by telephone. Are you willing to take part in a further discussion? If ‘no’, ask for reason. If ‘yes’, are there any time periods when you are not available?

No Reason: .................................................

Yes Not available: ...........................................

18. Do we have your permission to associate the comments you have made with your name? If ‘no’, ask for reason.

No Reason: ................................................. Yes
Appendix D
Bite sized theories: moving to action on climate change

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Note: These reports are in a format that is open to others to add to if they wish.
1: Three levels of awareness of climate change

Levels of awareness

‘Awareness’ of climate extends over a vast range, from the most basic level of recognising phrases such as global warming and understanding simple causal relationships to detailed understanding of the inter-relationships of natural processes and of the limits of human action in the natural world. Evidence shows that virtually every adult in the UK has at least some awareness; it is clear that nobody can possibly know everything. What levels of awareness matter, and why?

Level 1: Awareness of the basics of climate change

Description

This covers basic awareness that there is an issue known as ‘climate change’ or ‘global warming’, ‘the greenhouse effect’, etc. It also covers basic knowledge of the causal relationships: e.g. that using fossil fuels contributes to climate change, that driving cars uses fossil fuels, that planting trees can be helpful.

Awareness at this level may be technically sophisticated. For instance, it would extend to the importance of methane gas emissions from landfills.

Why is this important?

If people are not even aware of climate change, it can be hard to raise it with any legitimacy. Without basic awareness of the causal relationships – e.g. that it is helpful for us to avoid flying or to use our cars less – people cannot respond appropriately.

How much awareness is there?

Research by DEFRA in 2001 showed that in the UK, 99% of people have heard of climate change under one of the names above, 85% agree that it is happening and 71% agree that humans are causing it. This is a level of ‘brand awareness’ that even companies like Coca Cola would envy!

Knowledge of causal relationships is also relatively high, with DEFRA finding in 2001 that public knowledge of contributors to climate change had markedly improved since earlier surveys. There is still room for improvement, with nearly 70% incorrectly identifying ozone depletion as a key cause and with understanding of the importance of energy use in the home at only 20%, despite its being a major cause.

Level 2: Awareness of urgency and importance

Description

This aspect of awareness addresses people’s understanding of the likely scale of climate impacts, the urgency of required actions and the relevance of climate change to their daily lives, whether at home, within organisations, or as citizens.

People with this understanding appreciate why the UK’s Chief Scientific Officer said in 2004 that climate change is the most important issue facing the planet today, outranking even the threat of terrorism. They also appreciate its great urgency: reductions in global carbon emissions of 60% are needed by 2050 to stabilise atmospheric CO2 at the top level that scientists regard as conceivably safe.
Why is this important?
Awareness of scale, urgency and relevance might be expected to motivate people to act urgently. There is evidence, however (see Papers 2 on agency and awareness and 6 on balancing internal and external factors) that this is only the case up to a point and that too much awareness of the importance and scale of the issues can at first be overwhelming.

How much awareness is there?
Relatively few people recognise that climate change is an urgent problem that concerns all of us. Although it is clear that people think that it will be an important issue in the future, ranking second overall as an issue that people will be worried about in 2020, it is ranked only 9th as an issue that people worry about today (DEFRA survey, 2001). A 2003 survey for the Energy Saving Trust was consistent with this: most people (as many as 85%) wrongly thought that the effects of climate change will not be experienced for generations.

Level 3: Awareness of the structure of the issues.
Description
Structural awareness of climate change covers how its various elements interact and affect each other. This is extremely complex with many feedback loops, often delayed, both within the natural world and when we include humans in the analysis. As a simple example, global temperatures are not directly affected by changes in carbon emissions but are modified by the level of carbon already in the atmosphere, which acts rather like the air held in a bagpipe, disconnecting cause and eventual effect by some decades. Policymakers’ capacity to change carbon emissions is significantly affected by the existing stock of buildings and other infrastructure.

Why is this important?
Structural understanding provides an intellectual basis to understand urgency and scope. Unless policy-makers have it, they are very unlikely to be able to conceive of meaningful programmes to address climate change. Unless journalists and other critical voices have it, they cannot be expected to hold policy-makers to account.

How much awareness is there?
Very few people have this awareness, leading many people to overestimate the responsiveness of the climate system to human actions. Research in 2002 in the USA shows that even postgraduate students with top level scientific degrees mostly cannot understand key delays in the climate system, even when they are given the necessary information. One possible explanation for this is that the capacity to think in terms of systems structure develops slowly and that most people have not yet developed it.

Conclusion
The ‘recognition’ level of awareness of climate change is not a problem: indeed it is rather high. There are huge issues with awareness, however, in terms (a) of understanding of its importance and urgency and (b) in understanding its structure in a way that would be adequate for policymaking or for skilfully targeting responses.

Source documents
2. Agency and awareness

a) What is the theory?
A qualitative study of public reactions to sustainable development, which includes climate change, was undertaken in 1995 among the general population of Lancashire. Its conclusions are straightforward but important:

A majority of the population is in principle very receptive to ideas about sustainable development and can easily understand them when they are explained to them.

However, people’s inclination to attend to information about the environment is affected strongly by their sense of ‘agency’ – that is whether or not they feel a capacity to influence events associated with that information.

People see issues such as climate change as being so immense that they believe that there is indeed nothing that they can do that is meaningful: they have no sense of ‘agency’.

The result is that people actively suppress awareness of global environmental issues such as climate change on a day-to-day basis.

Since ‘agency’ is so important, action by institutions such as governments is essential if individuals are to be expected to act themselves. They can offer large programmes that can indeed offer meaningful agency. However, people also strongly mistrust government and business organisations at all levels and this limits their willingness to attend to information from them.

The Lancashire researchers made a further observation. There is significant evidence that governmental officials at all levels hold an inappropriate model of the state of knowledge on issues such as climate change. They take this issue as being adequately understood based on ‘objective’ science and think that this clear understanding should then be enough to identify clear policies that simply need to be implemented. The researchers argued that this is not the case and that exploring the social, cultural and political dimensions of the issue is absolutely essential.

b) How is this relevant to climate change?
The work suggests that attempts to build awareness absolutely must be carried out in parallel with work to build agency – to develop responses that are seen as meaningful – if they are to have any chance of success.

On a huge issue like climate change it is indeed hard to find mitigation responses that are meaningful. Each family can directly influence around 10 tonnes of carbon emissions and might reduce these by 6 or 7 per annum; at a global level, reductions of approaching 4 billion tonnes per annum are required to stabilise atmospheric CO2 at a level considered at all safe: small wonder that people feel that they lack ‘agency’.

Oxford University’s Professor Steve Rayner believes that agency can be discovered more easily through the adaptation agenda: people can make houses, schools and hospitals much safer against climate impacts for several generations with careful forethought. He thinks that this can support the growth of awareness. Once awareness is raised, mitigation measures will follow more easily.

c) What is the evidence?
Virtually all researchers (see, for instance, Paper 6 on balancing internal and external approached to change) agree with the view that attempts to raise awareness do not lead to changed behaviour. The Lancashire study was carried out by trained qualitative researchers, which allowed them to explore underlying reasons more than quantitative
research could permit. Only two of the groups (young men, young Asian women) significantly differed from the main conclusions, both valuing environmental actions less than other groups. There is some experience to suggest that Steve Rayner is right, that adaptation work does provide a gateway to deeper awareness.

d) How does this link to other theories?
The Lancashire researchers’ conclusion seems at first sight to be at odds with Swedish research that shows that awareness of the New Environmental Paradigm 2, a measure of broad environmental awareness, is high among the general population. However the NEP2 scale does not explore perceptions of the urgency of the sustainability crisis in any depth, but rather measures understanding of some of the underlying concepts of environmentalism. In the terms explored in Paper 1 on levels of awareness, the NEP2 scale measures the first level of awareness but not the second and third.

The issue of different groups’ cultural and other perceptions of climate change is addressed in the papers on cultural theory (no 4) and on cultural perceptions of risk (no 5).

e) Conclusion
Attempts to build awareness will only work if the issue of ‘agency’ – meaningful actions in response to climate change – is addressed. People may of course differ significantly in what they regard as meaningful.

What does this mean in practice? Any awareness programme needs to lead to ‘agency’ or it will fail. The evidence is that most people will not be inclined to discover agency for themselves. The difficulty with a large institution doing it is that it will be hard to discover agency that is meaningful to a diverse group. So beginning with awareness does not look like an encouraging route. If it is followed, the adaptation agenda probably provides the best way forward.

On the other hand, it is possible to begin with agency – the opportunity to do something significant – and to develop the awareness of those who have it. In this case, the problem will be finding the moments of agency. For instance when people plan a new building, or change the equipment in a factory, they have agency but probably neither recognise it nor believe that climate change is a relevant issue.

f) Further reading
The 1995 Lancashire report (‘Public Perceptions and Sustainability in Lancashire’) was written by Philip Macnaghten, Michael Jacobs, Robin Grove White and Brian Wynne of the University of Lancaster. It can be obtained from Lancashire County Council (£10.00, 1995).

Steve Rayner’s views on agency and adaptation are outlined in an interview he gave to David Ballard in 2002. Copies available from david@alexanderballard.co.uk.
3. Technology ‘lock-in’ as a barrier to low carbon behaviour

a) What is the theory?

The carbon emissions of a household are significantly affected by its owners’ choice of car, boiler, glazing system, etc. Once people make a major decision, they have to live with the consequences until they come to replace whatever they have bought.

In a business similar issues apply, often in a more complex way. Commercial buildings, for instance, can be designed in a high-carbon way, with lots of electric heating and air conditioning, or can take a much lower carbon route by using significant ‘thermal mass’, passive solar gain, etc. Once the decisions have been taken, a lot of the options are ‘locked-in’ for a long period, perhaps even for the life of the building.

If larger-scale changes are being considered, the barriers to change multiply. New systems need support from technicians, a supply of spare parts and may have unforeseen effects on other parts of the organisation, etc. Technological systems, including back-up services, are therefore a significant factor in changing organisational and personal behaviour in response to climate change.

An example of how a background technological shift enabled rapid changes to environmental behaviour occurred when the duty on lead-free petrol was significantly reduced in the late 1980s. Literally overnight the queues at the lead-free pumps lengthened considerably. This is largely because the background technological infrastructure had already been provided: manufacturers had offered cars for some years with the capacity to use lead-free petrol and petrol companies had ample supplies and facilities on the forecourts. These preparatory steps were not sufficient – sales did not shift until petrol duty shifted – but they were certainly necessary.

Unfortunately there is considerable evidence that it is hard to change technologies, even when there is a significant financial incentive for companies to do so and where there are few background issues to address. Research shows that companies regularly ‘leave money on the floor’ by neglecting even small-scale (and hence relatively low-risk) and highly cost-effective measures to improve energy efficiency. Researchers have identified common ‘barriers’ to such ‘small-scale’ energy efficiency measures. These include:

- Limited time. Companies often prefer to ‘stick to the knitting’, concentrating their decision making on what they regard as core issues.
- Organisational failures. For instance, incentives to invest in energy efficiency may not be seen as a priority when energy costs are hidden in an overall rent charge, or when energy costs are not broken down by profit centre but rather centrally allocated. In addition, the energy function may have limited access to decision makers, etc.
- Market failures, such as the wider economic benefits of environmental improvements not accruing to organisations but to society at large.

‘Complementarities theory’, a new approach to strategic change, argues that it is actually easier and cheaper to undertake major changes than piecemeal ones. When a technological system changes a whole host of issues arise, such as those above, any one of which might derail the process and each of which will certainly add cost. If a whole series of changes are undertaken at the same time, the ‘complementarities’ that keep the system locked into place can be identified and then addressed in a carefully planned way.

In identifying ‘complementarities’, there is no substitute for careful observation of real-life examples.
b) How is this relevant to climate change?
Since technology is closely related to carbon emissions, technological lock-in will often be a key barrier to change. The key assumption behind economic instruments (carbon trading, etc) is that companies and individuals will quickly be able to shift to less carbon-intensive technologies and that they will do so when they perceive economic rewards to doing so. ‘Lock-in’ shows that this assumption may be unfounded. If this is the case, the effect of economic instruments on the business sector will be entirely negative: costs will rise but carbon emissions will not change much if at all. The same would be true for householders. For instance energy taxes risk increasing the incidence of fuel poverty without achieving energy reductions.

c) What is the evidence?
The research into barriers was undertaken in a major study carried out in several industries across several countries by Sussex University between 1998 and 2000. The background work on complementarity theory was undertaken in a series of industrial case studies over recent years, for instance in BP.

d) How does this link to other theories?
This paper links to learning theory (Paper 7) in that barriers may be both external (e.g. supply of spare parts and trained technicians) and internal (e.g. mental models about which functions are of value within an organisation or on how to design a building).

It also links to Learning Network theory (Paper 12) in that (given the significant learning agenda associated with new technologies) insufficient spread and depth of learning may limit transformation.

e) Conclusion
Dealing with ‘technological lock-in’ is likely to be a key aspect of any change to low carbon technologies. This may be at the level of the household, of the firm or of the market. If a change to lower-carbon technology is planned – for instance to install solar panel heating in a number of dwellings – a trial is probably needed, aimed at identifying what is needed for the change to be successful (e.g. training of technicians, supply of spare parts), ensuring that they are in place and only then followed by a roll-out.

f) Further reading
Reasons for lack of investment in profitable small-scale energy efficiency measures were published in September 2004: The Economics of Energy Efficiency: Barriers to Cost-Effective Investment by Stephen Sorrell et al.

4. Cultural theory

a) What is the theory?

Many social scientists are opposed to the idea that there is a single social worldview, or that it would be good if there were to be one. Michael Thompson and his colleagues have identified what he regards as an irreducible minimum variety of worldviews that need to be respected in any social initiative. He differentiates between these in terms of ‘group’ (either strong or weak ties to others) and ‘grid’ (whether or not people perceive significant externally imposed constrictions on their choices). From this he has identified the following five positions:

The Hierarchist (strong group, externally imposed constrictions). ‘A place for everything and everything in its place’. Bounded social groups such as bureaucracies, with orderly and ranked relationships with each other. More concerned with proprieties than with outcomes. An extreme might be old fashioned conservatism.

The Egalitarian (Strong group, few such constrictions). ‘Tread lightly on the earth’. Communal orientation typical of civil groups such as the Greens that strive for egalitarian and voluntary relationships. Long on purity and short on power. Resists hierarchy and differences of wealth, and so are concerned with critiquing such differences. An extreme might be old-style socialism.

The Individualist (Weak group, few such constrictions). ‘It’s the bottom line that counts’. Autonomous individuals with freedom to innovate and create enterprises and to bid and bargain with each other. More concerned with outcomes than with the niceties. An extreme might be the free-market right.

The Fatalist (Weak group, externally imposed constrictions). ‘It doesn’t matter who you vote for, the government always gets in’. Typical of people at the margins, trailing from one unsuccessful encounter with the system to another. There may be rules, but these cannot be influenced. Concerned with enjoying or enduring the moment, if possible. An extreme might be the socially excluded.

The Hermit Sees the affray between these mutually dependent positions and remains aloof from it. Not greatly concerned about anything, but rather prefers a relaxed self-sufficiency where this is possible, whether as a taxi driver, an academic or indeed as a seeker after truth.

The first three of these positions are socially active: the other two will not participate. According to the theory, each of the three ‘active solidarities’ are attracted to institutions that reinforce their point of view: hierarchists to bureaucracies, egalitarians to NGOs, individualists to the market. Each has part of the truth but none can approach truth by itself. The interplay between these positions is necessary.

Political alliances can be formed that include all the three active solidarities, but these do not last. Despite, perhaps because of, their differences, the hierarchist and individualist positions can form strong and stable alliances that will tend to marginalise the concerns of the egalitarian until these become overwhelming. This would be the centre right coalition that dominates many governments.

The egalitarian position, however, does not easily combine with others. Moves to ally with wealth (individualist) or with power (hierarchy) are quickly seen as treachery. So the egalitarians and their concerns remain outside the ‘system’.

b) How is this relevant to climate change?

The idealistic egalitarians are most likely to be concerned about issues like climate change, but they cannot respond without working with the other positions (which they
may see as unethical). The weakness of egalitarians in allying with the market or with hierarchical power helps explain much of why the environment remains under-addressed by the mainstream.

The theory provides a framework for identifying different types of stakeholder for an issue: stakeholder work on climate change needs to ensure that all three active solidarities are involved (cynics would say that the fatalists won’t show up unless there is a free lunch). It also provides a structure for thinking of how a management initiative (e.g. legislation, market instruments, community initiatives) might be perceived from various positions and so for working through difficulties.

c) What is the evidence?
There have been few attempts to quantify the cultural theory solidarities. They have a strong face validity and have been shown to work better than the straight left : right analysis in explaining political processes.

d) How does this link to other theories?
Cultural theorists claim that people’s views of nature are largely determined by their cultural positions, although the evidence suggests that the link is less strong than they claim (Paper 5).

There are clear parallels with Spiral Dynamics theory, which is one of the personal development approaches described in Paper 9. In this context, the cultural positions are all healthy in moderation and sick if they dominate.

Double-loop learning (Paper 7) is the process of seeing and amending one’s limiting frames of reference. This would suggest that cultural positions can be seen and changed, also that this process is hard for most people. Some cultural theorists would deny that such learning is possible.

e) Conclusion
Cultural theory is highly relevant to environmental and related issues. While developmental theories see greater potential for changing worldviews, they concur in the view that most people will not change their underlying worldview much if at all. The positions of cultural theory will often be relevant and need to be worked with.

This theory does seem richer than a simple political duality, with the 'right' embracing the individualist and hierarchist positions and the 'left' the other two and it does describe the extreme forms of such behaviours well.

The theory advocates necessarily imperfect and messy interactions between the various positions, stumbling towards workable if less than ideal responses. It offers a useful reminder not to seek too much perfection but to accept the inherent unsatisfactoriness of human process.

Above all, cultural theory reminds us that there is no one perfect answer that will suit everyone but that it is still worth working with people in their differences to try to find ‘good enough’ responses to the challenge of climate change.

f) Further reading
*Cultural Theory* by Michael Thompson, Richard Ellis and Aaron Wildavsky
5. Cultural perceptions of ecological risk

a) What is the theory?

Sociologists have long argued that ‘risk’ is not an objective phenomenon but is conditioned by what people around us think. For an example, consider how much some people worry about the safety of air and rail travel yet how little they worry about the much higher death rate in cars. What implications does this have for people’s perceptions of environmental risk?

While studying the work of organisations who were responsible for managed ecosystems like forests, fisheries and grasslands, a leading ecologist noticed that their approaches varied greatly. Some, for instance, would respond to similar problems by using more herbicides, others by using less. It was as if each institution had a strong and unchallenged mental model of the natural world that governed how they should intervene in ecosystems (Paper 7).

What were these models, or ‘myths of nature’? The ecologist, C.S. Holling, linked them to the four phases of ecosystem functioning: renewal after catastrophe, when the ecosystem behaves in an unpredictable way, exploitation, when growth takes off, a time of creative possibility, conservation, a time when the ecosystem has become established and there is stable order, and a final phase of creative destruction, when nature is very fragile. Using this approach, they found that they could ‘map’ the different responses reasonably easily onto the four primary ‘solidarities’ of cultural theory (Paper 4).

The myths are often explained by a ball in a landscape (pictures can be seen in ‘Cultural Theory’ – see section f) on Further Reading below): ¹

- In ‘nature capricious’ (renewal), the ball is on a flat landscape: the slightest movement will send it in an unpredictable direction. There are no rules: anything can happen. We cannot learn from experience: nature is a lottery so there is no point in worrying about it. This is the position of the excluded Fatalists: the theory claims that this myth will not be found in policy-making or other circles.
- In ‘nature benign’ (creative possibility), the ball is in a bowl: whatever we do, an ‘invisible hand’ brings it back to the optimum position: we can afford to take risks because nature will forgive. This is the position of the market-oriented Individualists: the theory claims that this will be the myth of business people.
- In ‘nature ephemeral’ (creative destruction), the position is precarious. The ball sits on top of a hill. Once a small amount of resistance is overcome, any move will be for the worse: great caution is needed in our interactions with nature. This is the position of the communally-minded Egalitarians: the theory claims that this will be the myth in NGO circles.
- In ‘nature perverse / tolerant’ (conservation), the bowl sits on top of the hill. Nature is only benign within defined limits; outside these limits, any move is for the worse. Properly qualified and duly appointed experts are needed to advise on where the limits are so that they can be avoided. This is the position of the rule-oriented Hierarchicals: the theory claims that it will dominate in governmental and other bureaucracies.
- A fifth myth is sometimes described: that of the disengaged Hermits: from this position all of these myths are sometimes valid, so one should desist

¹ They can also be seen on http://www.okcupid.com/tests/take?testid=12739459022562516006

from the vulgar squabbles and watch things evolve. While this is partially true, the four myths are all also false for much of the time, so this position is potentially as limited as the others.

All of these myths are partially true over the life of an ecosystem, none captures the whole truth. Cultural theory claims that all are needed but that, being deeply culturally embedded, none (except the disengaged hermit) can understand the others.

b) How is this relevant to climate change?
If this theory is valid (and it is certainly plausible), we cannot assume that people will interpret the same evidence in different ways and we should expect that people will begin from different base assumptions or mental models about the state of the natural world. If this is the case, then there would be no point in trying to advocate (for instance) emissions trading (an individualist or commercial proposal) from the perspective of the risk to the biosphere (an egalitarian position); it would be better to argue it as a way of making lots of money. Similarly there would be little point in expecting egalitarians (such as NGOs) to support a proposal for emissions trading, which they might see as immoral. All positions are needed, and they will never agree.

c) What is the evidence?
Quantitative evidence broadly supports the existence of different views of nature and some limited correlation with people’s cultural preferences. However the connection is much less strong than has been claimed: although people do differ, they can understand each others’ positions, which disproves the claim. People are quite capable of holding views that are mutually inconsistent! They can also modify and change positions: ‘nature ephemeral’ is now the most commonly held view.

d) How does this link to other theories?
This theory is strongly linked to cultural theory (Paper 4) and is sometimes seen as central to it. The myths of nature are examples of ‘mental models’, which can be uncovered and addressed through ‘double-loop learning’ (Paper 7).

e) Conclusion
The theory is a useful reminder that people may differ significantly in their underlying models of nature, also that it may be worthwhile to surface one’s own model and not assume that others will necessarily share it without question. While the evidence is that these models can be discussed and modified, this may not always be easy and in some cases it might be better to interpret a policy to suit different views of nature.

f) Further reading
*Cultural Theory* by Michael Thompson et al, especially Chapter 1 and references. See also [www.carnegiecouncil.org/media/711_thompson.pdf](http://www.carnegiecouncil.org/media/711_thompson.pdf)

*Cultural Myths of Human and Physical Nature: Integrated or Separated* by G. Grendstad and P. Selle, (Risk Analysis Volume 20, No 1, 2000) disproves the claim that myths of nature are completely explained by cultural solidarities.
6. **Balancing internal and external actions**

**a) What is the theory?**

Anje Kollmuss and Julian Agyeman of Tufts University, USA, undertook a review of the various models of what influences pro-environmental behaviour, aiming to illuminate further the gap between environmental attitudes and behaviour. They noted that almost all of the research has merit under certain circumstances, which (they say) implies that the subject is very complex. Nonetheless they proposed their own model, which looks at internal and external influences on change.

Here is a quick summary. Internal factors, including personality traits, personal value systems and what they call ‘pro-environmental consciousness’ are important elements of an individual’s propensity to ‘pro-environmental behaviour’. Pro-environmental consciousness is made up of a person’s knowledge about environmental issues, their specific values and attitudes to the environment and their feelings about the environmental crisis – for instance fear or emotional involvement.

Although they are clear that it does not determine behaviour, they do see environmental knowledge as important: if someone does act, there is no guarantee that their actions will actually benefit the environment unless they have appropriate knowledge. However knowledge is not necessarily important in making the first move to action.

Set alongside these internal factors are some very important external ones. These include infrastructure (whether recycling facilities exist, for instance), organisational or wider cultures and whether they support or discourage pro-environmental behaviour, the general economic situation, political measures such as taxation policy, etc.

Internal and external factors interact. If the external constraints are too great, people will become discouraged no matter how pro-environmental they are in themselves. For instance, if one lives in a rented house that is very wasteful, it may be very hard indeed to make it fuel efficient.

On the other hand, people may try to influence the constraints. For instance, in some circumstances there may be an attempt to influence the landlord of inefficient properties to improve fuel efficiency. Kollmuss and Agyeman call this indirect environmental action.

The barriers to pro-environmental behaviour that are highlighted by their model include lack of knowledge, emotional blocking of new knowledge, blocks to learning, difficulties with external factors, lack of feedback about behaviour and, above all, habits.

The model is at root a learning model of change, with changes in behaviour feeding back into attitudes and, potentially, into the external factors.

On the other hand, work on Change for Sustainability carried out by Dexter Dunphy et al. shows that few if any organisations are at ‘Phase 6’ of environmental work, where the organisation’s context is routinely addressed.

**b) How is this relevant to climate change?**

Although their model is a general one, it is particularly relevant to climate change. This is because the external factors influencing pro-environmental behaviour in this field are so pervasive, including locked-in technological systems, many political constraints, and social constraints such as the dispersal of families because of cheap travel. Indeed the authors, Germans working in the USA, acknowledge that despite their own strong environmental attitudes they still fly to and from Europe: their family relationships are too important for them to abandon.
**c) What is the evidence?**
These two authors were not carrying out primary research in this instance but rather seeking to offer a general theory. Nonetheless, they offer solid evidence from other researchers to support their analysis. Their work is supported by the other writers whom we have read and by our own experience.

**d) How does this link to other theories?**
External factors are explored further in Paper 2 on agency and awareness and in Paper 3 on technological lock-in, in Papers 4 and 5 on cultural theory, and elsewhere. Internal blockages are explored further in Paper 1 on Levels of awareness, Paper 10 on emotions and climate change, in Paper 9 on personal development theory and elsewhere. The need for a linking-pin organisation in co-ordinating work on external barriers in covered in Paper 13. Learning theories of change are explored in Paper 7.

**e) Conclusion**
The authors make a strong case for balancing actions across both internal and external factors and offer a clear guide to what is required. They also present overwhelming evidence that linear models of change, typically aimed at plugging an information gap, do not work. They do not aim to explore in detail how to unblock change but have offered a useful guide to where attention should be focused. However the unlikelihood of organisations addressing context without help needs to be recognised.

**f) Further reading**
Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behaviour by Anja Kollmuss and Julian Agyeman, Environmental Education Research Vol. 8 No 3 (August 2003).
7. Learning approaches to change

a) What is the theory?

Work for significant change can often be seen as beginning with a question – for instance, ‘How might we...?’ In the case of climate change, this question might be very challenging, such as: ‘How can we cut global carbon emissions by 60% or more by 2050 in the context of likely much greater energy use in the South?’

Faced with such a question, we identify something to change, then we act, then there are consequences of our actions (and perhaps other things that happen) and so we discover things. This might lead us into further questions and actions, and so on.

This is known as ‘single loop learning’ or as ‘1st order change’. Until we act, we cannot learn and so cannot improve. It is often shown as a diagram:

![Single Loop Learning Diagram](image1)

However sometimes change does not seem to progress as we might expect. We try harder but things do not improve, and may even get worse. This is a good signal that underlying ‘frames’ or ‘mental models’ may be part of the problem, perhaps leading us to limit the actions that we consider. An example of this would be the stressed executive who takes up jogging to relax but is soon training hard to run a marathon: while his or her competitive and goal-driven mental models predominate, all attempts to relax are likely to suffer the same fate!

In such cases, we should reflect deeply to identify what our frames are, and then consider whether they serve our purpose. We can then consider changing them so that we can conceive of new ways of acting. This is called ‘double loop learning’, sometimes known as ‘2nd order change’.

![Double Loop Learning Diagram](image2)

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2 Diagrams adapted from Strategic Management and Organisational Dynamics, Ralph Stacey, 1993

This is why reflection is often seen as extremely important in significant change initiatives. In double loop learning, what we are interested in is both external (what happens when we act) and also internal (how we think). Uncovering our deeper frames or assumptions is often seen as a hard, but a very important, thing to do. It is hard because most of us take them for granted – it is hard to ‘see’ them. It is important because our whole approach to a problem is ‘framed’ by the way we see it. If we can see an issue differently, then we can be much more creative about it.

While 2nd level learning is adequate for ‘frame-shifting’ to achieve a given purpose, and so is necessary for good strategy, it does not explain how people come to identify the deeper ‘purpose’ of their lives. This is sometimes known as 3rd level change, and can be stimulated by close encounters with death, with other cultures, etc.

b) How is this relevant to climate change?
Responding to climate change is one of the biggest change challenges in human history. It is therefore likely to be a challenge both to the ways that we behave and to the ways that we think about our actions. In addition, despite all the efforts since the late 1980s, there is little evidence that the responses are yet working. This is a common signal that 1st order change is not working. Indeed there is considerable evidence (see paper 1) that for many people not much learning is taking place at all.

c) What is the evidence?
The theories of double loop learning come from extensive work on the sociology of scientific revolutions by Thomas Kuhn: his models of change accord well with the evidence. There is very strong empirical evidence that the capacity for double-loop learning does exist in a proportion of humans and that it can be developed over time.

d) How does this link to other theories?
It links to the influential cultural theory approach (Paper 4) and the associated ‘myths of nature’ (Paper 5) in that it explains why many people will be unable to conceive of responses out of their socially-conditioned frames. It differs from cultural theory in that it proposes that it is possible to transcend these limiting mental models.

This theory links to the theories of personal development (Paper 9). The need for reflection is critical, and this may be constrained in the field of climate change by issues of psychological pain and denial (Papers 2 and 10).

Deep ecology work and the like (Paper 10) seems to be capable of helping develop the capacity to lead 2nd order change.

e) Conclusion
Although this theory predates climate change as an issue, understanding different levels of change is likely to be crucial to any successful response to climate change. Many of our society’s taken for granted assumptions are deeply bound into the way that we use energy. This theory raises questions as to how an institution, or its leaders can demonstrate reflective practices in their own work and how they can support others in 2nd and higher levels of learning.

f) Further reading
Steps to an Ecology of Mind by Gregory Bateson, especially Form, Substance and Difference and The Logical Categories of Learning and Differentiation
Organizational Learning 2 by Chris Argyris and Donald Schon
8. Action and reflection approaches

a) What is the theory?
Action Research is one of a family of action and reflection approaches to change that has been recommended as particularly relevant to work on sustainable development issues. It is a process in which people research how to change behaviour, first acting and then reflecting on what happened in order better to direct their efforts in future cycles. A key element of action research is that actions are best seen as experiments. Typically a question (such as ‘how can we encourage people to save more energy’) is taken into active experimentation rather than into a planned roll-out to a pre-determined plan. People decide what they want to do, have a go at doing something (often quite small-scale), see what happens and make sense before trying again. At a certain stage enough will have been learned to make larger-scale change appropriate.

It is therefore a particularly suitable approach to transformative change, where there is no prior experience that can be researched ‘objectively’ and where something new needs to be created. Action researchers are immersed in real-world issues, aiming to create valid and actionable understanding.

Action researchers look at their own assumptions, thoughts and feelings as well as at the external outcomes of what they do. This allows them to change their approach as work on their projects progresses. Action researchers do not only attempt to understand what to do intellectually (for this misses the link to action). They also learn how to embody that understanding in practice, in methods that work, and how to relate their own felt experience as they act to conceptual models of what is required.

b) How is this relevant to climate change?
There is little if any practice that is sustainable in carbon terms in the ‘developed’ world and there are certainly no examples of sophisticated economies that operate on the levels of carbon emissions that are said to be necessary. This is why action research approaches are so relevant to climate change.

A number of leading writers regard action research (and related action and reflection processes such as action learning) as central to management for sustainable development. These include Michael Carley and Ian Christie (Managing Sustainable Development), Tim Jackson and Laurie Michaelis (Report on Sustainable Consumption for the Sustainable Development Commission) and Dexter Dunphy, Andrew Griffiths and Suzanne Benn (Organizational Change for Corporate Sustainability), who list the action research skills that they regard as necessary.

c) What is the evidence?
Researcher Kersty Hobson did intensive research with participants in the Global Action Plan (GAP). These were not all self-selected, some being nominated through their employers, so they are likely to be more representative of the general population than some other GAP participants may be. She identified considerable changes in personal behaviour despite the initial scepticism of some participants. These changes happened when people took environmentally negative behaviour (e.g. leaving the television on standby, leaving lights on, wasting water etc.) out of habit (what she called ‘practical consciousness’) and into what she called ‘discursive consciousness’ where thought and conversation takes place. When something moves from ‘practical’ into ‘discursive’ consciousness there is a loss of overall efficiency (because thinking time is spent on things that were previously taken-for-granted) but the possibility of change opens up.
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line with one model of change, habits have ‘unfrozen’ and so can change before eventually ‘refreezing’ as the new habits hopefully become habituated. One way of looking at the GAP process is that it engages participants in an action research process, opening up (in this case) single loop learning at least. For instance, the process involved regular reviews between participants and facilitators in a way that is typical of action research ‘cycles of inquiry’.

A second example of change based on action and reflection is quoted in a study of local sustainability projects. Researchers found that participants in local projects were able to gain an understanding of global environmental issues and a commitment to address them that might not have been possible had they started from theory.

A third example of change of using action research comes from the innovative MSc programme in Responsibility and Business Practice at the University of Bath. This is a ‘landmark’ degree programme that uses Action Research approaches to explore organisational responses to issues such as climate change, AIDS and human rights issues. Issues relevant to sustainability are raised and encountered in action (for instance by talking about issues such as climate change with clients and colleagues) with opportunities for deep reflection. Students (who are from professional backgrounds, typically aged between 30 and 50 years old) regularly report that the programme is a life-changing experience, with many reorienting their lives towards sustainability-related issues. Even those who come with the express intention of changing direction often report that the learning was greater than they ever expected. One world-renowned external examiner reported that this is the most transformative degree programme that he had ever encountered. Much of the change is ‘double-loop learning’ (Paper 7) as graduates move into work areas that are new for them and for society. The Carbon Disclosure Project, for instance, was started by MSc graduates.

d) How does this link to other theories?

There is a strong link with theories of single- and double-loop learning (Paper 7). Action research is a particularly good approach to developing higher levels of consciousness (Paper 9 on personal development) and can be used within Action Networks (Paper 13).

Action research is particularly strong at investigating and addressing the crucial internal and external barriers to change, such as ‘technological lock-in’ (Paper 3) or taken-for-granted assumptions, for instance about environmental risk (Paper 5).

e) Conclusion

Action Research is a highly relevant methodology for change for sustainable development and may be particularly relevant to developing leadership capacity. It is even questionable whether significant change is possible without some form of action and reflection. On the other hand, it is a process that requires facilitation, which means that effort needs to be put into developing a core of skilled learning leaders.

f) Further reading

Any of the books and reports quoted above provide a brief overview. Other good introductions include:

Concise Advice for New Action Researchers by Jean McNiff can be downloaded free of charge: www.jeanmcniff.com/booklet1.html.

Action Inquiry: the secret of timely and transforming leadership by Bill Torbert (Berrett-Koehler, 2004).
9. Personal development theory

a) What is the theory?

The American Bill Torbert has written extensively on transformational leadership and on
how it can be developed. Building on a huge amount of empirical data from other
researchers, he identifies three main stages of leadership. The first, known as the ‘Pre-
Conventional’, is outgrown by most people during childhood and adolescence, though it
can again become dominant in stressful situations.

The second, or ‘Conventional’ stage of leadership, includes three sub-stages, The
Diplomat, the Expert and The Achiever. The Diplomat is very concerned with behaving
according to the proper group norms. Taking a ‘golf club secretary’ approach, such a
person is rarely found in senior roles. The Expert (normally 50% or more of the
managerial population) is more concerned with doing things right than doing the right
things, and so is well suited to management of functions where expertise is at a premium.
On the other hand he or she may be hard to convince that their ‘right way’ may not be the
way that others see things. The Achiever can take account of different perspectives and
can take responsibility for an organisational system. He or she has therefore developed to
the level required for community or departmental leadership. The overwhelming majority
of people in organisations, and in society at large are at one of these stages. This is
perfectly natural, for there is a clear developmental path through these stages and most
people are not exposed to roles that require ‘Achiever’ consciousness before their 30s.

A relatively small proportion of people, well under 15%, goes on to develop ‘post-
conventional’ awareness, at which there are four main sub-stages. The Individualist (a
transitional stage) and The Strategist can be found in small numbers in most
organisations, but the very rare Magician and Ironist (well under 1% of the population)
are mainly found outside them (though their influence can be very great). Fully-fledged
post-conventional leaders at the Strategist level and beyond have:

- a moral span that extends far beyond the immediate group and time and so can
  consider distant stakeholders and far away consequences;
- a clear sense of higher purpose;
- the capability to lead ‘double loop learning’ without external help (see Paper 7); this
  is because they have become more practiced at seeing their own mental models and
  evaluating them against purpose;
- they can easily adopt different frames of reference in different settings, so facilitating
  cross-group communication.

Torbert claims, with some evidence, that change programmes almost always fail
unless two people in the leadership team (ideally including the leader him-/herself) are
at the ‘Strategist’ stage at which these qualities become mature.

The process of developing post-conventional consciousness is sometimes called a
'momentous transition', often being triggered by major life events such as bereavement or
sickness. There is some evidence that a strongly felt connection with a global crisis such
as climate change may itself help promote such shifts at the appropriate time in a person's
life.

b) How is this relevant to climate change?

The American commentator Ken Wilber has written, 'Gaia's main problem is not
pollution ... it is that not enough human beings have developed to the post-conventional,
worldcentric, global levels of consciousness, wherein they will automatically be moved
to care for the global commons.' Why might he say this?
Most people (Paper 1) rate local problems such as air quality and food safety as much more important to them than global issues such as climate change, despite the much more serious nature of the latter. This is explained by personal development theory. This requires that global issues be translated into terms meaningful for different groups, a task that requires Achiever and higher levels of consciousness.

Climate change poses a huge change challenge. If post-conventional qualities are needed for successful major change initiatives, particularly where significant learning is needed, it is likely that they may be needed in climate change programmes. This implies either that such people need to be found, or that they need to be developed.

The clarity of purpose of post-conventional leaders may explain how some people find the necessary resources to engage with a cause – bringing the planet back within limits – that is greater than they can accomplish alone and than can realistically be completed in their lifetimes.

Note that Wilber did not claim that everyone need be at second level consciousness, which would in any event be impossible. His point was that not enough people had evolved to this level. The evidence is that only a small proportion of any team need be at this level for the team’s performance radically to improve, provided that they are trusted by colleagues.

c) What is the evidence?
A considerable amount of primary research supports the validity of distinct developmental stages for the adult. Post-conventional stages have been researched in detail at Harvard University. Different researchers recognise similar developmental processes, and these are recognised in a wide variety of cultures.

d) How does this link to other theories?
As noted above, this links strongly to the theory of learning levels (Paper 7). It also explains the observation (Paper 1) that most people find it extremely hard to connect with global environmental issues. It also explains why the solidarities of cultural theory (Paper 4) usually find it hard to work together. Action and reflection processes (Paper 8) are often seen as a strong method for developing from conventional to post-conventional levels of consciousness.

e) Conclusion
If climate change is seen as a major change issue, then development of the personal capacities to engage with it needs to be central to any programme. Having said this, it is not realistic to expect all to wish to develop, or yet be capable of developing, to post-conventional leadership: the need to recognise, match and engage the different perspectives that people hold is at least as important.

f) Further reading
There are many relevant books. Here are some of the more accessible ones:
- Personal and Organizational Transformations through Action Inquiry by Dal Fisher, Bill Torbert et al., Edge\Work Press, 2000
- Spiral Dynamics by Don Beck and Chris Cowan, Blackwell, 1996
- Integral Psychology by Ken Wilber, Shambhala, 2000
10. Emotions and climate change

a) What is the theory?

Research summarised in Paper 2 shows that people are aware that sustainable development issues such as climate change are very disturbing but feel that there is nothing that they can do. They therefore avoid thinking about them. This shows that the emotional aspect of climate change behaviour is already likely to be significant.

There is a strong argument that people who become strongly motivated to act on climate change often, perhaps even usually, do so as a consequence of allowing themselves to be touched emotionally by the subject.

The deep ecology approach of the Norwegian philosopher Arne Naess provides an explanation for this. Direct experience of the natural world is quite central to deep ecology’s ethical dimension. One is said simply to come to know that it is wrong to destroy nature to serve humanity’s non-vital needs. If we become aware of ourselves as participants in Nature, then we naturally become disinclined to harm it. In the process articulated by Naess, deep experience (of the natural world) leads to deep awareness (of the awesome nature of life), then to deep questioning (of one’s own part in its destruction) and to deep commitment (to healing and to enhancing life’s processes).

Joanna Macy, a systems thinker and another deep ecologist, claims that avoidance of the scale and urgency of issues such as climate change is a key difficulty in work on sustainable development. Rather than skirting around this issue, she invites us to face it directly and shows us how to do so skilfully. She offers the prospect of a significant increase in our capacity to respond if we do. She suggests five principles:

Feelings of pain for our world are natural and healthy; any private pathologies are not sufficient explanation for such pain, they are additional to it.

These feelings are morbid only if denied. Repressed pain seeks scapegoats, turns inwards in depression, abuse, addictions (including consumerism) and suicide. Nonetheless most people routinely repress such feelings.

More information is not enough - we need to process emotionally as well as intellectually. To do only the latter can indeed worsen the repression of feeling and so intensify the problem.

Much energy is blocked in repressing these feelings - their release immediately empowers us.

The feelings that we experience are clearly connected to feelings in others and hence also empower us through the networks of relationship that may result if we work with others.

A number of people have noticed a parallel with bereavement, on which much work has been done drawing on the experience of hospice and hospital staff and the bereaved and dying. This work has been shown to be relevant in other contexts, including organisational change. In the theory, people regularly first avoid awareness, acting as if nothing has changed. They then move through anger to bargaining to grief and depression and sometimes to acceptance. This is perfectly normal: the problems come when the process is interrupted. The guidance for staff involved with the dying is not to resist the difficult feelings of other people but rather to allow them to be expressed when appropriate.

b) How is this relevant to climate change?

If non-environmental behaviour is the result of people not facing their emotions, and if leader are often those who do face them, there is a clear implication for people who work
in the field. Not only should they be prepared to face their own emotions, but they should be prepared to help (or at least not resist) other people facing their own.

c) What is the evidence?
There are many personal stories that people may share verbally but we know of relatively few in print. One inspirational campaigner on climate change has told of how he was unable to answer when his young daughter asked whether the world would be alright when she was older. He went into a significant crisis that lasted for some time. When he recovered he changed his career radically and – without any formal qualifications in the field – became a leading force in climate negotiations.

One researcher, Paul Maiteny, found that self-motivated leaders (that is, people who are not just in that role because of their organisational position but who have a strong personal commitment) had a strong emotional connection with the issues. This sometimes came from childhood experiences in nature, sometimes from an encounter as an adult with injustice or with the natural world.

Professor Judi Marshall of the University of Bath leads one of the most renowned degrees in the field of sustainable development. She writes, “(The degree) involves engaging with potentially disturbing and upsetting issues, such as stark information about ecological degradation and global poverty, doubts about mainstream business assumptions and challenges to people’s mindsets and lifestyles. Most participants find their learning unsettling at some time. How do we ‘contain’ and work developmentally with such learning experiences?”

She goes on to say that “many graduates report that the degree has been a life-changing experience”.

d) How does this link to other theories?
The crucial role of emotional avoidance is shown in Paper 2 on agency and awareness. There are some grounds for thinking that facing fear or other difficult emotions might itself be a trigger for personal development for some people, as discussed in Paper 9.

e) Conclusion
Deep ecology ideas are convincing and seem effective in practice in our own somewhat limited experience. However they are well outside the mainstream and may be controversial to some people.

Whether or not one accepts deep ecology approaches, however, there can be little doubt that dealing with difficult emotions is a key issue for leaders in the climate change field, as indeed it is well-known-to-be in other major changes. While it would almost certainly be inappropriate to force people to face such emotions if they do not wish to, even were that possible, the cost of backing off them is far from trivial. We conclude that programme leaders would be well advised to ponder Judi Marshall’s question, how do we contain and work developmentally with these difficult emotions?

f) Further reading
Coming back to Life by Joanna Macy (New Society Publishers, 1998) is an excellent summary and includes many practical exercises.
11. Tipping points

a) What is the theory?

The recent ‘Tipping Point’ ideas of Malcolm Gladwell suggest that ideas and behavioural changes can spread like social epidemics: very quickly indeed. AIDS, for instance, reached its ‘tipping point’ in 1982, when it went from a rare disease to a global epidemic. Like diseases, Gladwell suggests that people can ‘catch’ ideas and new behaviours. Crime in New York reached its ‘tipping point’ in the mid 1990s, when the murder rate fell very sharply and suddenly, as did other serious crime. This is counter to the common-sense notion that very big changes should happen very slowly and ponderously.

Gladwell suggested three rules for rapid change. In Rule 1, The Law of the Few, he suggests that a small number of people can be quite crucial in bringing about change – provided that we can find them! Innovators, who come up with transformative new ideas, are often quite disconnected from wider society so three types of people are needed to make their ideas mainstream. The first of these is the Connector. These are people with huge and well-thumbed address books. They form social relationships easily and are good at staying in touch with the people they meet, though paradoxically they may not necessarily be very close to anyone. A connector may know literally hundreds of people well enough to be comfortable spending a couple of hours over a coffee or a drink with them. They spread ideas easily and put people in touch with each other. The second of Gladwell’s types, whom he called Mavens would have a well-earned reputation for helpful expertise. These might be people whom one would trust to help with the choice of software or a good hotel or restaurant: we would just know that they know what they are talking about; they save us from doing the research. The third is the Salesman, who might have an infectious and persuasive personality. Such a person can persuade the doubting few whose doubts might otherwise be infectious. If one wishes to begin a social ‘epidemic’ it is unwise to wait for these people to come along: we need to go and find them and find ways of engaging them in the programme.

In Rule 2, The Stickiness Factor, the rate of spread of the behaviour or idea must be greater than its rate of attrition, much as the transmission of a virus is greater than the rate of recovery in the early phases of an epidemic. If there is an outbreak of a virus that is only infectious for 24 hours, for instance, it will spread if the average sufferer infects more than one person per day; if exactly one is infected per day then it will stay the same; if less, then the virus will soon die out. It is not enough to get a new idea tried out: it is also necessary for changed behaviour to stick.

Rule 3 is The Power of Context: our behaviour is not just a question of our genes and upbringing, the specific context is also important. For instance, Gladwell claims that improvements in the physical environment of high-crime New York neighbourhoods were crucial in achieving rapid reductions in crime: people just behave worse in surroundings that bring out their worse aspects. He tells the tale of priests who were asked to give a talk on the subject of ‘The Good Samaritan’. When they thought they had lots of time, they mostly stopped to help an actor playing a person in distress on the sidewalk on their way to the lecture; when told that they were late, they mostly ignored his pleas for help! If we want to create a wave of behaviour, he suggests we make it easy for people to behave in the way we are encouraging.

Under the Power of Context, Gladwell also mentions The Rule of 150. People can only deal with about that many relationships in any social system, he claims: beyond this, there is little chance of people knowing what the effect of their actions on others will be. He quotes the example of Gore Inc, who make Gore-Tex fabrics and who have an outstanding corporate reputation; every time a group exceeds 150, it is broken up. He
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argues that initiatives aimed at groups of greater than 150 will not ‘take’; below that number, groups can take up an idea and make it a reality.

Gladwell’s message is a strategic one: these factors need to be thought through if we want an idea to ‘take’. We also need to think which area shows the most potential for change. With teenage smoking, for instance, he argues that adults have little or no prospect of challenging teenage peer influence, so the ‘Law of the Few’ is not likely to work. Addressing the ‘Stickiness Factor’ by reducing nicotine content is much more likely to work. This needs to be thought through each time. Hopefully, there is a lot of scope for learning from experience, for instance by changing things again and again until we find an approach that works.

b) How is this relevant to climate change?

Tipping point theory offers intriguing possibilities for considering very widespread changes in behaviour of the type needed for climate change responses.

However tipping points do not always work as we would like them to! The theory helps us to understand how the car and out-of-town shopping have taken off so strongly: a car is much ‘stickier’ than a bicycle!

The theory can potentially help us both to understand what is going wrong and in deciding how we might create alternatives that might work.

c) What is the evidence?

Gladwell is a journalist and his book, although persuasively written with many case examples, is light on statistical evidence. However his work is extremely consistent with ‘Small World Theory’ and other recent developments in the complexity sciences that are supported by very strong scientific evidence.

d) How does this link to other theories?

Gladwell’s emphasis on the small group (the Rule of 150) is consistent with the Paper on Action Networks (no 13). The paper on Learning and Network Theory (no 12) introduces some important questions on when it may, and may not be, appropriate to encourage a ‘tipping point’: when significant learning is needed, there is a strong argument that ‘tipping points’ are well avoided until the lessons have been learned.

e) Conclusion

Tipping point theory offers an exciting direction in thinking about behavioural change. Questions that it raises include i) why are so many ‘tipping points’ going the wrong way, and what might be done about this? ii) when is it appropriate to seek a ‘tipping point’? iii) Who are the key people that might spread change and how might we get them involved? iv) What is the ideal group size for change initiatives? v) How might ‘stickiness’ be increased? vi) what changes in the context might make a difference? The theory particularly encourages a learning-by-doing approach.

f) Further reading


12. Learning, networks and small worlds

a) What is the theory?

Network theorists (who map people in social systems and the relationships between them) are beginning to understand that, under the right circumstances, learning at the individual or small group level can sometimes swiftly turn into much larger social change. When this happens, information moves both between and within social groups (for instance organisations, action networks or communities) very quickly, leading to much more rapid and widespread change than might at first seem possible.

For this to happen, two types of relationship are necessary. The first is ‘strong’ relationships of the type that often apply within an organisation, a community or an action network. People have a good understanding of the other people who might be involved in a decision, probably know them personally, and find it easy to approach them to seek their views. The vast majority of relationships will be of this type. Such relationships provide a setting within which people can turn new ideas into action.

However these relationships are not enough for change to spread widely. ‘Weak’ relationships are also needed. Such weak relationships are ideally almost random and may amount to little more than a brief meeting on a aeroplane or at a conference. These are Malcolm Gladwell’s ‘Connectors’ (see Paper 11). Their function is to spread ideas and behaviour to completely new groups where they might take root.

Both a small proportion of ‘promiscuous’ weak networkers and a much larger proportion of ‘steady’ strong networkers in a wide variety of groups is required if widespread change is to occur quickly. What is sometimes called a ‘small world’ then emerges, being a wider network within which everyone is only a small number of handshakes away from everyone else although they may never actually meet each other. Such ‘small worlds’ can change extremely quickly.

However this may not always be a good thing! It is very possible for ideas to spread too quickly, particularly when there is a heavy learning agenda. It may be, for instance, that a good idea requires extensive work to make it possible but that a relatively poor idea can be implemented quickly. In this case the better idea would never get the time it needs to develop and would remain unrealised. It has been shown that when a network is too connected, the end result will always be suboptimal when there is a strong learning agenda.

There are alternative network approaches. For instance, in a ‘hierarchical’ network, small groups might all be strongly connected to a central organisation, which has a major influence on what they do, and barely connected at all to each other. Alternatively, a group might be connected to a nearby group (for instance a group in Southampton might be connected to one in Eastleigh but not to others in Alton or Andover, or a group of civil engineers might be connected to electrical engineers but not to foresters). These approaches are better suited to changes where there is a significant learning agenda.

In practice, people do not belong to a single network but to many and it is impossible to ‘control’ how networks work. However strong action networks do require resources and there are choices as to their orientation. As a network is structured, a more useful approach might be to consider whether the primary need is learning, and if so how to stimulate it and protect it, or the dissemination of lessons learned, and if so how to promote it.

b) How is this relevant to climate change?

Network theories reassure us that it is completely unnecessary to reach everybody directly if we wish to stimulate large-scale behavioural change of the type that is needed
in response to climate change: work in small groups is quite capable of spreading much more widely, perhaps irrespective of attempts to manage it. Indeed without considering network effects it may be quite inconceivable that change of the magnitude required can happen quickly enough.

c) What is the evidence?
The original article on Small World Theory was published in Nature Magazine, a top-level peer reviewed journal. Many of the original empirical studies focused on populations of insects etc in the natural world but there have been many uses of the ideas in the social sciences.

The interaction between learning agendas and network approaches has recently been researched by Andrea Masini and Michael T. Pich; their paper will be published in ‘Management Science’ sometime in 2005.

d) How does this link to other theories?
There are clear links to action network theories (Paper 13); these can form effective nodes for wider networks in a county or more widely. ‘Tipping Points’ (Paper 11) are closely linked to network theory.

e) Conclusion
Network theory provides a fertile ground of ideas when devising strategies for large scale change as required for climate change responses. Key questions include how significant the learning agenda in a project is, how and when learning should best be disseminated, whether this process needs to be managed or can happen organically, what this implies for how groups work with each other, and how ‘linking pin’ organisations (such as a County Council) might support both the learning that needs to take place and its dissemination at an appropriate time.

f) Further reading
Small World theory is a branch of complexity science, which is a very new and powerful approach to understanding change processes and which will probably yield insights for decades to come. Some references are:


http://www.cs.virginia.edu/oracle (to experience the small world of movie actors in action!).

13. **Action networks and the key role of a central organisation**

a) What is the theory?

A group of Norwegian researchers undertook a study in 2001 to identify what predicts environmentally responsible behaviour. They found that by far the most important predictor of environmental behaviour was participation in environmental networks. They summarised their main finding as follows: 'Social participation in environmental networks was more important than any of the other correlates of environmental behaviour (its effect being) roughly equal to respondents’ environmental attitudes or the whole battery of sociodemographics (i.e. age, gender, social class, education, etc). They also found that environmental knowledge was positively but not strongly correlated with environmental behaviour;

The researchers speculated that this might be because of social pressure for conformance among group members. However their research was not primarily dedicated to testing their conclusions but rather to finding out which if any social factors were key to environmental behaviour.

Michael Carley and Ian Christie identified ‘action networks’ as being crucial to work on environmental and linked issues. Such temporary alliances of different groups set up to address a particular issue are a helpful and perhaps necessary response to a fast-moving and complex agenda that crosses organisational boundaries. Unlike looser alliances, environmentally oriented task networks would meet the definition of the Norwegian researchers in that they are highly task-oriented. Examples might include Local Agenda 21 groups, energy saving partnerships, adaptation working groups, etc.

Drawing on the experience of a variety of action networks, Carley and Christie were clear that there is a clear role for a central ‘linking-pin’ organisation in such situations. This organisation would have the following functions:

- Serving as a communication channel between nodes and stakeholders within the network and with the wider world;
- Linking parties to each other by transferring resources, information, clients, etc;
- Securing resources for the network;
- Directing and catalysing activities of participants towards the network’s task and objectives;
- Encouraging different nodes of the network to develop specialist expertise for the benefit of the network as a whole.

In addition, and partly because of their inherent diversity, action networks provide a place within which powerful organisational and personal learning can occur. The linking-pin organisation is most likely to have the potential to resource the learning processes without which this is unlikely to occur.

b) How is this relevant to climate change?

Although not explicitly addressing climate change, the above theories are clearly relevant to work on climate change issues. In particular, climate change is one of the ‘wicked’ issues that cannot adequately be addressed at the level of any single institution, and so action networks are likely to be key.

c) What is the evidence?

The study quoted covered about 4000 people in Norway in 2001. We are not aware of it having been repeated in other countries since that date. While we obviously cannot
assume that it will apply equally in the UK, there are strong reasons why it might, as summarised below.

Carley and Christie’s work quotes experience from eight case studies of environmentally-oriented action networks, both in the UK and more widely.

d) How does this link to other theories?
In social construction theories such as cultural theory (Paper 4), ‘normal’ behaviour is defined and reinforced by social groups. Usually, perhaps because of low awareness of the seriousness of climate change and other environmental threats, social groups implicitly define pro-environmental behaviour as abnormal. When a different social context is provided that is specifically pro-environmental it is to be expected that individuals’ ideas of normal behaviour would shift to become more ‘environmental’.

This also overlaps with the evidence on ‘agency’ and awareness (Paper 2). Agency is likely to be significantly larger in groups, and this is likely to reinforce awareness in its turn.

Groups such as action networks provide a central element of network theories of change. Networks organised around a central organisation have a potentially much greater potential to develop transformative learning than looser networks, which are much more likely to lock-in suboptimal practice in a situation where the learning need is considerable (Paper 12).

The management of learning processes, which can be at several levels, is particularly relevant to linking-pin organisations. This is explored in Papers 7 and 8.

e) Conclusion
Participation in groups is likely to be very important to behavioural changes in response to climate change and may be a necessary condition for most people. In addition, many problems related to climate change require the inclusion of diverse groups. Action networks are therefore likely to be key to any behavioural change strategy. There is a vital role for linking-pin organisations. Whether or not these are set up within local authorities, or at arm’s length from them (the better to include different stakeholder groups), local authorities are likely to play a key role in setting up and directing such organisations.

f) Further reading

Managing Sustainable Development (2000) by Michael Carley and Ian Christie (who is now Climate Change Officer within Surrey County Council) examines the key role that action networks need to play in change processes for sustainable development.
14. Starting locally

a) What is the theory?
A review of local actions for sustainable development funded by the Joseph Rowntree foundation in 2002 aimed to explore how links between environmental and social action might be enhanced so that they might contribute to the broader sustainable development agenda. 17 diverse local projects were examined in detail, with some starting from an explicitly environmental agenda (e.g. LA21 projects) but others starting from a social perspective (e.g. a rural development trust).

The researchers conceded that the individual impact of the projects on the sustainability agenda was negligible, though they contended that in aggregate it might be significant. However they claimed that this was by no means all of the story: ‘Local projects have important effects over and beyond these immediate impacts. One of the most important of such effects is the successful building of environmental awareness and engagement, and the encouragement of individual and collective action that supports sustainable development.’ They claimed that this influence extended beyond those directly involved to embrace policy-makers, especially at the local level, and to the creation of new and innovative services and ways of working that support the goals of sustainable development.

They identified a number of common learning points:

Start from where people are. Terms like ‘sustainable development’ and ‘climate change’ are too far removed from people’s lives. It is better to start from something that they regard as important – often the local environment – and show that change is possible.

Start simple and build on success. Don’t complicate things early on: there is every opportunity to develop awareness of the broader agenda later and the evidence consistently shows that this can be done.

Make awareness raising a planned outcome. A majority of the projects reported that they had raised environmental awareness.

Help provide access to the solutions. Broader contextual issues stop many people acting environmentally: the projects need to address these constraints by, for instance, providing cheap organic food to a community where it would otherwise not be available.

Engage policy-makers through positive local action. Politicians and officials are often initially sceptical but they too respond to initiatives that they can see make a difference.

The authors strongly disagreed with the notion that people in disadvantaged communities are not interested in environmental issues. The key is to find out what they mean by ‘environment’ and make the links from there.

In every case, support had been offered by an outside agency. The authors concluded that the well known phrase ‘think globally, act locally’ is wrong. The movement is rather the other way around: think locally, act nationally (to provide support).

b) How is this relevant to climate change?
The point at which climate change mitigation and adaptation agendas meet the concerns of the average citizen is crucial. This is not just a question of thinking of what they ought to care about but of finding out what they do care about. For instance, they may be wasting money on energy at home but be so busy that they have no time to improve things. They may care more, however, about saving money for their local school, which might be short of money. Again, they may be more interested in protecting their gardens
against climate change than in protecting their house from flooding, which might be too painful to think about.

c) What is the evidence?
The evidence in the report is more indicative than conclusive, partly because of the small number of trials and because of the inevitably anecdotal nature of some of the evidence. On the other hand, these findings are completely consistent with other research findings.

d) How does this link to other theories?
This is completely consistent with cultural theory (Paper 4), with the research evidence on awareness (Paper 1) and with personal development theory (Paper 9). It also marries well with learning approaches to change (Paper 7, Paper 8) and with the need to address both internal and external factors for change (Paper 6).

e) Conclusion
The importance of starting from the perspective of the person whom one is trying to engage is crucial, as is the slow rate of change implied by the research. Particularly important is the need actively to plan for the development of environmental consciousness once the project has become established.

f) Further reading
Thinking locally, acting nationally: Lessons for national policy from work on local sustainability by Chris Church and Jake Elster, Joseph Rowntree Foundation, 2002. (Can be downloaded from Joseph Rowntree Foundation website).
Appendix E
Case studies: Learning in detail from experience

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Notes:

a) This list represents 12 “in depth” case studies out of a possible 16 for which material was gathered. We chose to include these because the points we can draw from them are particularly relevant to Hampshire’s stated interests.

b) Case Study 12 is one that David Ballard had already written up in a report to the UK Government’s Sustainable Development Commission. We decided to include it unchanged, because we think that it provides useful insights, especially as regards the role of networks and of champions.
1: *Intelligent Metering, Leicester City Council.*

**Name and geographical location**
Don Lack, Head of Service, Energy Manager, Leicester City Council.

**Brief description**
Since 2000, Leicester City Council has been installing automated and intelligent metering systems into the city’s buildings. 550 buildings now have them. These meters read energy and water consumption on a half hourly basis so it is possible to pinpoint in real time any extraordinary shifts in patterns of resource use and diagnose the underlying cause. Behavioural adjustments can then be made on the basis of reliable evidence and successful change can be measured. In this respect it is like a bio-feedback mechanism.

Since becoming a unitary authority, Leicester has been installing meters in all its schools. Local businesses are voluntarily joining the scheme. Leicester is now running a pilot with Severn Trent Water on 50 houses. Through registration with the Energy Centre they have access to 92,000 homes which may in time be persuaded to sign up. Incentives on offer to householders are free TV digiboxes, the front page of which will display the monitoring information so participants in the scheme can see for themselves how much money/energy/water they are saving/wasting.

**Objectives**
To demonstrate the need to monitor buildings energy and water use in real time, to identify real data and to learn from the opportunities this gives to make significant energy and water savings.

- To use this data to capture the benefits of behavioural changes in people’s use of energy and water within buildings following awareness-raising (awareness in this case being awareness of consumption patterns and costs) action or changes in operation of systems.
- To utilise the lessons learnt by Leicester City Council energy management team to identify the benefits for other energy managers for their buildings and to create a network of shared expertise across Europe.
- Identify new tools and procedures for today’s energy managers and move towards a reactive, proactive real-time solution.
- Long term reduction in Leicester’s energy consumption with consequent financial and CO2 savings, and understanding and improvement of poor performance buildings.

**Agenda and expected behavioural changes/ projected outcome**
- Identification of buildings with high base loads that have been hidden by monthly or quarterly historic data in the past.
- Shorten reaction times to wastage with same day analysis of problem. New kind of auditing system.
- Behavioural change and its effectiveness in the workplace can be monitored by the Energy Centre.
- Provides proof that energy saving installations deliver, and if not keeps them on track. Paybacks can be validated and real carbon savings credited to each project.
- Data collection at source can be fed back to utility company for more accurate billing.
Case studies: Learning in detail from experience

Planned measures of success
- Local Authorities and Energy Managers start specifying the need for intelligent metering which under deregulation they have a right to.
- Exponential growth of scheme based on savings reinvestment in further energy efficiency measures.

Current status
The four year project is well underway. Meters continue to be installed because Leicester Energy Agency has a license to install them from Transco.

Role and involvement of HCC
Hampshire is invited to become involved and Leicester offers a consultancy service to other local authorities based on their successful experience.

People
Don Lack is organisationally well positioned. Through his work at the city council he can pioneer the approach for council stock, as director of the City’s Energy Agency he pioneers it in the business sector and by managing the Energy Efficiency Advice Centre he reaches the domestic communities.

Instigators/ enablers/ drivers

Local involvement/ support
Partnership with Water Authorities. SMEs

Achievements/ “what have we learned”
- Achieving over a million pounds of savings across the City.
- Even installing the best equipment for achieving energy efficiency does not necessarily perform unless used effectively.
- Previous information from utility companies has been poor and unreliable which could only provide “guessimates” of building performance.
- Various organizational changes that do away with energy managers leave in-house teams with no expertise to monitor billing.
- Lack’s research shows that many local authorities are paying around 20 per cent more for energy they have not used.
- Organisations like the Energy Savings Trust base their reports of savings on an assumed model rather than robust verifiable data.
- It has cost £800,000 to install intelligent metering on all sites but it is saving £1.4 million each year. For every million spent on water and energy the organization should have one person in an energy/water management function.
- “If you don’t practice what you preach, as I do when giving away low energy light bulbs, you’re lost.” Positive feedback about changes creates a feel good factor.
Transfer of best practices to other initiatives
As yet there is poor take-up by other local authorities. Don gives presentations in different regions, offers consultancy service and is part of a European energie cities initiative aiming to spread this good practice across Europe. The learning and case studies from the Leicester experience are used in the Buildings Research Establishment’s Foundation courses in the UK.

Next steps
More of the same. Over time the Energy Centre will accumulate a huge database of building performance data.
2. Integrating residential carbon management and fuel poverty reduction.

Name & Geographical location
Dave Pickles, Energy Agency Manager, Newark & Sherwood Council.

Brief description
In 1985 Newark and Sherwood District Council developed an Affordable Energy Strategy that was “property based.” Since 2001 it is assumed that a vulnerable single pensioner will occupy every dwelling sooner-or-later. If a dwelling is affordable to a vulnerable pensioner then it is affordable to all other vulnerable householders. The same standards have been applied to all tenures of housing, a Newark & Sherwood Council ‘Local Best Value Performance Indicator’.

To effectively and efficiently monitor and manage a strategy to eradicate fuel poverty from the local housing stock needs a 100% Residential Energy Performance Database. This database also supports HECA activities, and has the potential to support a local residential carbon management agenda.

Objectives
- Achieving the 100% Residential Energy Performance Database.
- To eradicate the risk of fuel poverty from Newark & Sherwood’s housing stock.

Agenda and expected behavioural changes/ projected outcome

Tackling Fuel Poverty:
Using April 2003 data, 98.4% of Newark & Sherwood’s Council owned stock is capable of delivering affordable energy to a vulnerable single pensioner. The current version 2001 SAP is 70.4. This has been achieved by investing in
- the basic “cost effective” energy efficiency measures, including oil heating to non-gas areas
- dealing with energy design defects (flat roofs, half-brick external walls, dropped eaves etc) but no widespread wall insulation to the 14% harder to heat dwellings.
- marginalising costs by integrating into 'improvement & maintenance' life-cycle asset management programme

Planned measures of success
The EEC relevance of this property based energy strategy is that the theoretical CO$_2$ emission savings are 41% 1990-2003. Mindful of the 2003 Energy White Paper, and with existing policies (includes Grade A boilers), the Council stock’s 2020 projection is for an average NHER 9.1, with theoretical CO$_2$ savings of 55%, 1990-2020 (40% CO$_2$ after betterment).

Timescales
All house types were energy audited in 1988 using Energy Auditor, a software package that was the precursor to NHER. This desk top audit of all house type drawings established that the Council’s Strategy and Action plan could deliver affordable warmth target to all its 7,500 dwellings. A 20-year programme was scheduled, and costs were estimated at £16.4m. A database of all energy efficiency investments is held by the Architect’s team, and is currently within a Microsoft Access database. On 31st March
each year the contents of this database are exported to MAXIM for updating and analysis using NHER software.

**Current status**
Ongoing

**Role and involvement of HCC**
Project documentation and CD Rom provided for HCC and may prove to be highly relevant for climate change strategy.

**People**
Involves behavioural change by architects, energy experts, householders, those holding and managing data.

**Instigators/ enablers/ drivers**

a) **Warm Homes Act 2000.** To eradicate the risk of fuel poverty from Newark & Sherwood’s housing stock, all dwellings of a reasonable size need to be capable of delivering affordable energy to a vulnerable householder. This is on the basis that sooner-or-later all dwellings will be occupied by a low income householder.

b) **The Home Energy Conservation Act 1995 (HECA).** Tackling Fuel Poverty in a systematic manner means that all dwellings need a fuel poverty risk assessment. Hard to Heat studies have established that basic cost effective insulation and a Building Regulation standard central heating system will deliver affordable energy to vulnerable householders. To eradicate fuel poverty from the housing stock the authority has to deliver the local Home Energy Conservation Act target of 30.3% reduction 1996-2010.

c) **Residential Carbon Management.** As a HECAplus this involves monitoring additional dwellings built after the Home Energy Conservation Act, monitoring extensions / conversions of dwellings that increase the volume of the housing stock, and the assessing the take up of renewables / green tariff electric.

d) **‘Councils for Climate Protection’ Project.** A DEFRA-IDeA project, software trailed for UK Local Government during 2000-2002, and likely to be rolled out 2003. Enables inventory of local Green House Gas liabilities and the modeling of ‘what-if’ scenarios. The software has a “municipal corporate” GHG inventory and a “community” GHG inventory.

Integrating the delivery of these 4 issues marginalizes the costs attributable to any one task. The sum of the whole is greater than the sum of the parts.

**Local involvement/ support**
Gaining support particularly from pensioners.

Lack of support from energy suppliers who will not provide data because of cost of extraction software.

The Energy Savings Trust has also refused to release data under the Data Protection Act even though English Heritage will provide data of grants provided.
Achievements/ “what have we learned”
Statistical returns have limited value. To efficiently affect progress at a local level a front line practitioner needs “address specific” residential energy performance data.

All Local Authorities are completing their Address Gazetteers, and these address databases are largely being linked to electronic GIS maps. This provides the basis for comprehensive local Residential Energy Performance Databases.

Tackling Fuel Poverty and Residential Carbon Management are each ‘joined up’ agendas and need ‘joined up’ information to efficiently manage the progress to a lower energy and low carbon residential sector in England.

The lessons that have been learnt from 6-years of undertaking DIY householder surveys are:

- A covering letter from the Council increased take-up of responses. The envelope should also indicate that the letter is from the Council – postal frank.
- Our return for the BRE’s HECAMON postal survey was 37%. The Council undertaking an in-house postal survey was cheaper than commercial telephone surveys. However we were looking for opportunities to marginalize the costs of the BRE-HECAMON. The standard HECAMON proved to be frustrating in as much as we could not readily provide follow-up advice, nor estimate the percentage of Newark & Sherwood householders in fuel poverty; nor establish the percentage of dwellings not capable of delivering affordable energy should they be occupied by a vulnerable household. A NSDC-HECAMON has been devised using NHER software to facilitate multiple outcomes.
- For mass mail-outs of unsolicited DIY surveys, a simplified form increases returns.
- To our surprise the DIY Survey returns have been found to be reasonably accurate when compared to the same dwellings professionally surveyed. (see below)

The outcomes that are being accrued from the one survey are:

1. An energy educational message to the householder of a ‘Global to Local’ nature piggy-backs the covering letter to the DIY survey
2. 43% return rate of surveys (some areas as high as 50%), each of which gets a basic Newark & Sherwood energy advice pack turned around within 1-working day. Of the surveys returned 44% are from pensioners.
3. Warm Front referrals identified with details forwarded by post – those that do not then contact the Council’s Energy Agency have a follow up telephone call.
4. Retuned survey forms are converted into electronic format. They are entered into the Residential Energy Performance Database, and also
5. Electronically re-arranged into a format needed by the local EEAC, who then provide an additional, though more authorative, energy advice pack to the householder some 2 weeks after the Council’s response
6. HECA progress analysis (additional questions are included in the annual random postal HECAMON survey)
7. Housing Investment Programme questions: stock average SAP and % dwellings less than SAP30
8. Take-up of renewable electric / energies will be fed into the Newark and Sherwood District residential carbon liability analysis
9. with an increase in sample size to 3,500 private sector surveys sent out, a fuel poverty analysis is now possible annually to supplement the quinquennial Stock Condition Surveys
Transfer of best practices to other initiatives
Newark and Sherwood District Council has beacon status. Dave Pickles runs workshops to disseminate best practice. He uses his own personal experience of reducing emissions as a starting point. Can advise on the least investment for biggest CO2 ceiling.

Next steps
Local Authorities also need to capture information from additional sources.

- There should be an obligation for RSLs to provide energy performance data to ECAs
- There should be a “contractual obligation” for Warm Front grant energy performance data to be passed onto the Energy Conservation Authority (ECA)
- Similarly address specific EEC & Utility investments associated with residential energy performance data should be required to be passed onto the ECAs, as with EST, Carbon Trust, or any other publicly co-funded projects should be a required to pass on any associated energy performance data to the ECAs.
- NHBA new-build energy performance data needs to be required to forward to the ECAs
- Natural gas availability by postcode
- Boiler replacements – address list of new boilers fitted
- Reglazing records required by Building Regulations – Fensa information
- The EU Directive on the Energy Performance of Buildings, now to likely commencement 2007, will require energy performance certificates to be produced when a dwellings is either built, sold or rented out. The energy performance data behind these certificates needs to be made available to ECAs.

For all the above client Data Protection Statements need to be worded accordingly – property details only needed, no names required.

Initial thoughts are that this database should be Local Government collectively controlled and managed by a centralised clearing house that would collect data, undertake basic analysis and forward to individual Energy Conservation Authorities. ECAs then have the option to undertake further local analysis. Local Authorities already have a duty to keep their Address Gazetteers up to date. They will need to link their Address Gazetteers to any LGA clearing house.
3. DEMOCS and The Herefordshire Partnership (a multi-agency approach.)

Name and geographical location
Geoffrey Perrott, Environmental Co-ordinator of the Herefordshire Partnership’s Environmental Ambition Group and Richard Wood, Local Agenda 21 Officer at Herefordshire Council, both closely involved with the Climate Change Working Group which aspires to be cross cutting across all 10 ambition groups which comprise the Herefordshire Partnership. “No other topic has the same promise of knitting together the different ambition groups striving for integration.”

Brief description
Herefordshire is a predominantly rural county and is therefore putting more emphasis on the role of Methane and Nitrous Oxide in climate change. They are trying to enlarge general understanding of greenhouse gases. 36% of greenhouse gas emitted by the county is methane and nitrous oxide, though this is reducing as the number of livestock goes down. 80% of land area is managed by farmers who adapt quickly to financial stimulus. However, “It’s a nightmare getting through to people in urban areas. Few people are changing their lightbulbs.”

There is not an awareness of urgency in the county, as evidenced by hostility to wind turbines. They have little data on how individuals respond to climate change but they want to diffuse awareness through 123 secondary schools and the voluntary sector in a long term process described below. The county tends to perceive change through its own weather patterns, e.g. very hot summers and wetter winters or through an unusual event such as the Danube drying up. When they have sampled people’s awareness they find they tend to know about global effects but not about local effects. Most people think they can’t do much about it. People know little about their own emissions.

Objectives
They are pursuing behavioural change across a number of areas starting at the strategic level as a top down driver. The approach is to bring an understanding of climate change into all partner organizations using the New Economics Foundation’s Democs game on climate change as a vehicle in the first stage of the awareness-raising process.

Agenda and expected behavioural changes/ projected outcome
Use Democs as a consultation tool with major stakeholder groups, (The ten ambition groups which comprise the partnership), policy partners such as police and health service, “playing 20 games as high up the organization as we can get, to director level if possible.” They also want to play it in all parishes. The idea is to raise awareness of climate change prior to the five year rural strategy programme.

The second stage would involve using Democs as a tool in all education authorities and to stimulate local parishes to assess likely impacts on local areas. “If people have a mental map of the variables they might make better informed decisions.”

Planned measures of success
- If the game becomes both a pre-climate change strategy tool and part of the strategy in its own right.
Case studies: Learning in detail from experience

- If the game informs people of the issues and facts so that after an hour and a half they know more than they did before.
- If consultation becomes two-way. They give out technical information and receive back information they would not have thought of.
- The number of people who get to play.

Actual measures of success
Although it’s early days, Geoff has been impressed by the level of engagement with the game. Conversations about it have continued after it has finished. People seem to be extending their thinking out of the Herefordshire context into the wider world. The voting at the end of the game can now be correlated to give some idea of how people in Herefordshire want to respond, what sort of policies they are prepared to support.

Timescales
Three games played so far. One with Herefordshire’s Managers Forum and two with MSc students. At least two more games are scheduled to play at the Partnership’s conference plus one informally in someone’s house. Next year they are arranging for 1000 people to play as part of the council’s consultation group, Herefordshire Voice.

Current status
Ongoing

Transfer of best practices to other initiatives
- Herefordshire Council has been selected to be in the Carbon Trust’s Carbon Management Plan (2nd Group).
- It already buys 100% renewable energy for all council activities but is not necessarily energy efficient so a sub division of a Common Purchasing Consortium is being set up which will be a limited liability company to buy equipment such as condensing boilers as well as energy. The council will then be in a position to provide energy services to housing associations, schools and so on. An individual will be able to buy services as a package deal, for instance, CHP on a fixed price for maintenance and insurance. It would become the largest energy services company in the country. Herefordshire is capped and has a five million pound deficit. Taking the Energy services route would save two and a half million if it became a part owner, by law 35-40% or less. It would be able to set of 6,000 items of equipment against tax liability.
- 6,000 hectares of orchards are at risk of development and 40,000 tonnes of apples are surplus. Another market is needed or trees are ripped up. There is now a plan in place to make low carbon bio-ethanol to supplement petrol. (Think the Bulmers Foundation is involved) A local charity will license this to an organization and royalties will be recycled into local sustainable regeneration.

People
Instigators/ enablers/ drivers

- Central government financial incentives linked to tough targets for reducing emissions and in other initiatives such as the apple plan, the rural regeneration agenda.
- The Home Energy Conservation Act which requires councils to distribute grants from utility companies.
- Emissions trading scheme which is CO2 up to 2008 but may then expand to include methane and nitrous oxide. State of farming. Dairy reducing dramatically as a result of TB and slow restocking after the foot and mouth epidemics. Farmers are looking for other opportunities. Preparing for future methane trading may be an incentive.
- Flooding could be a main driver of awareness and change but connections aren’t yet being made. People are aware of more flooding around Wye and other rivers, particularly with the revamping of part of the Wye’s bank, a new supermarket even got planning permission requiring the building of flood barriers but the connection with climate change still isn’t made.

The Herefordshire Plan is described as another example of a missed opportunity. “It is an excellent thumbprint for getting different agencies to do something but flooding is not mentioned once.”

What Hinders?

- Systemic disconnects, e.g. Solar heating available through private sector only, housing associations left out of the equation.
- Bitty support, need more help for implementation of strategies.
- Have to apply for funds out of county.
- More inspiring examples of what works are needed.
- Political short-termism. Herefordshire Council has a five million pound deficit, which threatens the Environment Department’s budget.
- It doesn’t work talking about climate change in terms of rain forests and flooding in Bangladesh. People want to make a local connection but even though Herefordshire has had two class 1 floods in the past 2 years which might be an indicator of climate change no-one can say so with certainty.

Pressure groups for or against

There is growing opposition to wind farms in the county.

Achievements/ “what have we learned”

People have consultation fatigue and a game sounds like more fun. The game seems to be able to overcome the difficulty of getting interest from any senior managers who do not yet see climate change as their problem.

Next steps

As well as facilitating more games, explore opportunities presented by the processes which involve ambition groups such as health. Intend to use an understanding of heat stroke and cold weather related deaths as the focus for thinking about climate change impacts, to try to get climate change into that group’s next funding proposal.
4. GREEN RESOLUTIONS (Promoting sustainable lifestyles with home visits)

Name and geographical location

Brief description
Although based in Southampton, Stephanie, funded by the Energy Savings Trust, works on domestic energy issues with 14 local authorities across Hampshire including Portsmouth and Southampton. One of her projects, Green Resolutions, has succeeded in Eastleigh and Southampton but failed to get started in Fareham where it was initiated by Mark Harrison-Jones.

Ten families volunteered to take part. Every three months each family was visited by a “green” advisor for a session lasting an hour and a half. They have been given free gifts such as low energy light bulbs, and an organic vegetable box linked in with the visit looking at food miles. The project has been explicitly about behaviour change rather than spending money and the families have been monitored with follow-up phone calls.

People originally self-selected because they wanted to live a greener lifestyle. In Fareham no-one other than “greens” applied and had to be discouraged because the project could not offer them anything. It was designed for people who were motivated but wanted support because they did not know where to start. Money off fuel bills as well as freebies was probably a good motivator.

Objectives
Stephanie and Mark’s overall objectives include awareness-raising of the need to reduce energy consumption to help mitigate climate change.

They have a common strategy to encourage behavioural change for people involved in one of their projects whilst generating mass media attention in the hope that if people see it on television they will change too. Mark, in particular, is exploring a broad range of marketing and communication strategies and his authority wants to develop more hands-on ways of working with residents.

Timescales
Green Resolutions has been running since January 2004. The initial idea was to encourage commitment in a fun way and to encourage people to analyse their own actions.

Current status
The project is still running and the visit in November 2004 will involve the families in filling in a questionnaire to find out how much greener they have become. A prize or prizes to reward change are likely.

Measures of Success
For awareness-raising in general monitor how many people phone the energy efficiency advice lines and how many fill in home energy surveys. The Energy Savings Trust which manages the surveys says that between one in five and one in ten people do get the suggested improvement work done.
In a specific project like Green Resolutions the initial idea was to measure success through reduced energy consumption. Meters were read at the start but as the price of gas and electricity went up it was difficult to know what exactly might cause a decrease in consumption. It has been difficult to compare like with like.

**Is it working?** Some families have gone beyond the advice given and are trying to do more such as fitting thermostatic valves on their radiators and growing more of their own food.

**Is the scheme going to be continued?** Having appeared on regional television, local radio and local papers, the scheme has reached media saturation point so there are no plans to run it again. The tendency is to move straight on to the next project. However, one of Southampton’s Housing Associations now wants to run something similar for 50 of their tenants.

**Involvement of HCC**

Hampshire and other authorities help in terms of referrals to the home energy efficiency advice line, people trust that advice. Local Authorities contribute good ideas and Hampshire provides a good network. Resources are shared.

For events and seminars on things like renewable energy or winter road shows, Hampshire County Council provides good support in terms of match funding for some joint initiatives.

**People**

Good links with Hampshire’s Sustainability Officer, Richard Coles.

**Drivers/Instigators**

Frustration was expressed about the government putting money into promotional campaigns about waste but less effort on energy efficiency.

**Achievements/Learning**

From Stephanie: “The hardest thing is getting media attention. If there is no fresh angle they do not cover the story.”

“I practise what I preach but sometimes I don’t know what the most sustainable choice to make is, so providing information and hand-holding is the most important thing. For instance, recycling is much better where there is the ease and convenience of kerbside collection.”

“Marketing and publicity hasn’t been as full on about climate change as it has about smoking and drink-driving. The stuff on energy is not hard-hitting enough. Climate change is scary. If people thought about it they might be prepared to take action. Not scare tactics but a reality check.”

From Mark: The timing of project promotion is important. Trying to promote Green Resolutions in Fareham so close to Christmas did not work. In general communication needs to be more strategic, for instance, targeting the message at the right groups of people is important. Experiments placing road shows at different locations and different times have not attracted enough people. The “Keen to be Green” event at Bursledon Brickworks did however attract 700 people so use the lessons from that.
Case studies: Learning in detail from experience

Transfer of best practices to other initiatives
Colleagues at EEAC use postcards of local places, such as Southampton Civic centre underwater. They put on road shows and theatre in schools with energy efficiency police picking on energy guzzling appliances.

Next steps
Application in for clear skies funding for a Solar Streets project. Conference for Housing Associations underway.
5. **CRED, a regional, university-led initiative.**

**Name and geographical location**
Public Relations officer, Matt Taylor and External Relations Officer, Marcus Armes, The Community Carbon Reduction Project in East Anglia

**Brief description**
CRED was started by its current director, Trevor Davies who is now Pro-Vice Chancellor at the University of East Anglia, where it is run out of the Environmental Sciences Department. The core of their work is a website where individuals or groups can sign a pledge to reduce their greenhouse gas emissions and be given practical advice and support, if needed, to fulfil that. The website provides a platform for showcasing initiatives, case studies and the learning from them.

CRED also goes into communities, for example during Energy Efficiency Week because they look for different ways to connect to people.

CRED are trying to act as a signposter. For instance, although they can’t endorse a particular product they can provide information about it, such as a new gadget which turns electrical equipment off standby.

**Objectives**
To make the region the leaders in Carbon reduction of 60% over twenty-five years.

**Agenda and expected behavioural changes/ projected outcome**
They encourage people to make an online pledge. They contact 10% of those to find out how they are getting on and whether measures to reduce energy consumption are working. They take an all encompassing approach, not just concentrating on home energy but looking at transport and what goes on at work as well. They are trying to get villages to do self-auditing and sort out benchmarking to get some sort of starting level.

**Planned measures of success**
If reduction target is met.

**Timescales**
CRED has been going for a year and they are in the process of reviewing what has worked and determining their future direction.

**Current status**
Ongoing

**Instigators/ enablers/ drivers**
- Financial incentives. As energy prices rise and bills go up, habits change
- For Matt personally, documentaries of impending gloom had compelled him to do his bit and having changed to a green energy supply himself he felt it was easier to tell other people how it works.
- CRED’s own agency as a five-star rated research establishment
- Despite the difficulty of making sense of climate change in tactile terms, people are troubled by direct experience such as seeing a clutch of ducklings so late in the year.
Local involvement/ support
- Support from MP Charles Clarke and Ian Gibson, Chair of House Of Commons Science and Technology Committee, and East of England Development Agency.
- Strong support of local/regional media.
- Academic involvement from Tyndall Centre, Climate Research Unit, Centre for Social and Economic Research on the Global Environment.

Achievements/ “what have we learned”
The website claims that over a thousand people have signed pledges resulting in four and a half thousand actions saving 688 tonnes of Carbon Dioxide a year.

Staff say one of the most successful ways of engaging around the issue of climate change is face to face contact when people can share their experiences and ask questions of CRED team.

People want to do something in response to climate change but do not know where to start. CRED helped by encouraging them to take the first steps by using low energy bulbs and/or switching to a renewable energy tariff.

They learn by chatting with people who don’t see why they should do anything to better understand that position.

Awareness of the need to put their own house in order to gain credibility. Not many universities have energy efficient buildings.

CRED has good track record on publicity. They have been involved in mainstream TV projects.

Difficulty of measuring success of actions taken as part of the pledge without base line data.

Transfer of best practices to other initiatives
- Possibility of CRED initiative extending to the South.
- Star of the East; landmark project for Expo 2010 in Shanghai. Creating a visitor feature out of a biomass power station.

Next steps
CRED plans to speak to Kate Moore at The Environment Centre, Southampton with a view to setting up a similar programme in the area.
6. **Eco Teams & Eco Champions, Global Action Plan UK**

**Name and geographical location**
Sarah Hayden-Binder, GAP rep in the South West, Suzy Jesperson, GAP Business Development Officer, Penney Poyzer, former eco team leader in Nottingham.

**Brief description**
This international charity is running a series of projects in the UK. Of particular interest are Eco teams and Environment Champions.

**EcoTeams** are groups of six to eight people who each represent their household or club or workplace. The EcoTeam meets once a month for approximately 3-4 months. At each meeting EcoTeam representatives share experiences, ideas and achievements on the environmental actions that they have taken. Each team is supported by a coach and/or a workbook.

**Environment Champions** involves employees in large office-based organizations in reduced resource use and improved environmental performance. Results of behaviour change are measured and fed back as achievements. Employees carry out before and after audits and set their own improvement targets.

**Objectives**
Both projects encourage change in lifestyles/business practice to more environmentally sustainable behaviour through awareness-raising, dialogue and team building. Mitigation is the main aim, though water savings arguably meet an unspoken (?) adaptation agenda.

**Agenda and expected behavioural changes/ projected outcome**
- **Environment Champions**: Stage one is to seek support from senior management. GAP then works with employees on a wide range of practical initiatives, giving training and keeping motivation alive.
- **Eco Teams**: After initial set up meeting, each member monitors their household’s gas, electricity and water consumption and weighs their household waste on a weekly basis. Members are supported with practical ideas and tools to help achieve results. The measurements are collected and sent to GAP for analysis after which individual and joint achievements are fed back to the Eco Teams.

**Planned measures of success**
Demonstrable resource/financial savings

**Timescales**
3-4 month time span per project. Each month has a topical issue to work towards such as energy efficiency, reducing water consumption, or waste minimisation.

**Current status**
Ongoing

**Role and involvement of HCC**
HCC have been invited to take part in the Eco Teams@work programme
Case studies: Learning in detail from experience

People
Anyone can get involved. GAP has worked with a wide variety of people including retired people and young people in both urban and rural areas.

Instigators/ enablers/ drivers
- GAP believes it is easier for a charity with a desire to tackle environmental and social problems to involve people than it would be for an internal employee.
- The Corporate Social Responsibility Agenda.

Local involvement/ support
GAP currently seeking more support from Local Authorities.

Achievements/ “what have we learned”
Some Examples of Environmental Champions Achievements:
- Transco saved £84,000 on their electricity bill in the first year.
- Nationwide Building Society cut energy use from part of their Swindon HQ by 22%

Examples of Eco Teams achievements:
Results from 11 teams in 2002, resource savings:
- Just under 50% on waste
- 27% savings on gas and electricity combined
- Around 17% savings on water use (where meters are fitted)

The House Of Commons Audit Committee endorsed the project in 2003: “We were very impressed by the EcoTeams project which is successfully promoting behavioural change at household level. We recommend the expansion of this programme to operate on a trial basis across diverse communities…”

Transfer of best practices to other initiatives
GAP believe they have a successful model and want to find ways of involving more people in different regions of the UK and elsewhere.

Next steps
Find more funding partners.

NB: Please also consult Appendix D §8c) for a researcher’s favourable perspective on the GAP in action.
7. Llanidloes Energy Solutions a): Community Response

Name and geographical location
Gwen Prince lives in Llanidloes, a market town of roughly three thousand residents in Powys, Mid-Wales.

Brief description
Gwen was inspired by a lecture at Machynlleth given by Sir John Houghton, ex-Joint Chair of working group 3 of the Intergovernmental Panel on Climate Change. Having spent most of her life in Africa and time in Sri Lanka, her own move to take more action was triggered by hearing of the likely impacts of climate change on her friends in developing countries. She decided not to take Sir John’s advice and write to her MP about her concerns because she felt ordinary people might be better trusted to respond than the government.

Objectives
As an individual, Gwen did not plan her strategy. As a practising Quaker she prayed for inspiration, and looked for support, initially from environmental and development NGOs suggesting that they joined forces in a climate change campaign similar to the successful Jubilee 2000 movement on third world debt. However, this idea was rejected. She then took her concerns with a friend to her Quaker meeting and was able to contribute to raising the profile of climate change among Quakers nationally as well as locally.

Measures of success
This particular case study illustrates how difficult it is to attribute success to a particular individual or action because change often happens as the result of many aggregated small initiatives. For instance, Gwen and a friend wrote a letter to Tony Blair and Bill Clinton which was then sent from their local Quaker meeting; a minute of the local meeting’s concern was sent first to the regional and then to the central Quaker body, and may have helped to tip the balance in favour of getting “caring for the earth” on the agenda of the yearly meeting of British Quakers. The discussions at this meeting generated a call to action and strengthened an existing idea for a testimony to the Earth. Although there is not yet consensus on this, it has been described as an emerging testimony in Quaker literature.

Current status
Through Gwen, Quakers have also become involved in a campaign “Operation Noah” (more below) which is hoping to achieve for climate change what other campaigns have achieved for Fairtrade and third world debt, realising Gwen’s original idea which the NGOs rejected.

People
“Operation Noah” is a project of the Environmental Issues network of Churches Together in Britain and Ireland. It is being developed by Christian Ecology Link. The World Council of Churches which is also very active on climate change supported the launch of Operation Noah with a letter from church leaders in Africa articulating their concerns.
Instigators/ enablers/ drivers
The way Quakers organize their meetings, which allows people to speak openly about their concerns when moved to do so in a supportive and inquiring community, and the history of the Quaker movement which has previous and continuing involvement in the field of social justice, such as notably the abolition of slavery (see §12 of this Appendix), provided a conducive setting for issues of this seriousness to be taken on board. The Living Witness Project, funded by the Joseph Rowntree Foundation, which involves Quakers in practical actions to lead a more sustainable life also provides a context in which a concerted response can take shape.

Transfer of best practices to other initiatives
Although Gwen did not consciously analyse her success within the Quaker movement, it may well have encouraged her and her friend to suggest that their town, Llanidloes, become an energy conscious community. The story continues in the next section.
8. Llanidloes Energy Solutions b): An energy conscious community

Objectives

Once again (see §7 above), Gwen Prince and her growing number of associates did not act from a formally designed strategy. Their main aim was for Llanidloes to become a beacon of light for others. After an initial public meeting in 2001 a core of five formed a committee with the aim of raising consciousness of climate change and of saving energy in the community. They initially called themselves, Llanidloes Energy Savers or LLES and are now known as Llanidloes Energy Solutions. They identified three aims:

1) Raising awareness about the problem of climate change.
2) Saving Energy in the community
3) Promoting Renewable Energy

Measures of Success

LLES has held a series of public meetings which have attracted attention and have been well attended. Their first public meeting was addressed by Sir John Houghton and was well attended as was the second one on renewable energy. Another meeting on wind was addressed by Peter Harper from the Centre for Alternative Energy. Another meeting is scheduled for the end of November 2004 on wood energy. Representatives from the Forest Stewardship Council, based in Llanidloes, will be speaking. There are now 100 people from mid Wales on the LLES mailing list. Gwen puts this down to inspiring speakers and relevant topics. One attendee said, “At each meeting I go to, I feel inspired to take one step.” However, Gwen also acknowledged that she had no idea how to measure the success of the meetings in terms of awareness translating into behavioural change.

However, a suggestion from the Energy Savings Trust has led to a high school student designing a questionnaire which will survey the town’s attitudes to and support for renewable energy and to explore the gap between intention and action.

LLES has also been successful selling low energy light bulbs from stalls in the local market and promoting solar energy. They also initially formed Solar clubs to take advantage of grants for the installation of solar hot water panels. However, this initiative has dwindled, largely because the grants are not as good as they were and because the Chairman of LLES, a solar water heating installer, was overwhelmed with demand. This showed there was a need for more employees with the requisite skills. A spin off from LLES is the formation of a community owned organic fruit and vegetable shop which encourages local growers and a community supported agriculture scheme.

Instigators/Enablers/Drivers

At the level of Gwen as an individual, initiatives have been taken in collaboration with a supportive Quaker friend and her husband, who have both become progressively more involved with further community initiatives which have grown into action which we would recognize as pro-environmental behaviour change.

Achievements/ “what have we learned”

Reflecting on the process of change, Gwen felt that it would be a mistake to expect an instant reaction. She felt it was only a minority who took action straight away and that we should therefore not expect any change too quickly. She believed people needed to be gently encouraged rather than made to feel guilty.
Gwen also felt that Llanidloes already had a high awareness of green issues so the ground had been prepared for a relative outsider like herself, she only moved in four years ago, to catalyse action.

She believes in involving people capable of inspiring change and empowered to do so. She has therefore persuaded Sir John Houghton to be president of LLES. Peter Harper from CAT and Mick Bates, a member of the Welsh Assembly are patrons.

Interestingly, Gwen said that the West of Britain was perceived as a node of consciousness on sustainability and that they therefore had a duty to export that to the rest of the country.

**Further Learning during the drafting process**

Gwen challenged my perception of leadership during the drafting of this case study. I had originally described Gwen as a “self-appointed champion” because I saw this case study as relevant to an exploration of the notion of “climate change champions”. This made her heart sink. She explained that the idea of a charismatic leader who spearheads things is anathema to Quakers. Instead they see the role of individuals more as catalyst: an individual plants a seed or provides inspiration which energises other people to come up with initiatives of their own. She felt that energy from the heart or the spirit was catching and that preaching or prescription were not. She felt people were more likely to take initiatives for themselves if they felt personally involved and free to be creative. She described this as a generative rather than a top-down approach. However, she also said that within the context of her local community she had found her tenacity was needed to keep initiatives alive.

**Next steps**

As interest and support continues to grow, LLES has realised that volunteer effort is not enough. They have applied for charitable status in order to apply for funding for a development officer. The idea is to get a survey done of the community’s energy needs and where there is room for reduction and then to carry out a feasibility study into the development of their own community owned renewable energy project.

Name and geographical location
Kate Moore, Business Division Manager, The Environment Centre, Southampton. Carries out projects throughout Hampshire.

Brief description
Kate described a success her team had with a cargo-handling company which was under pressure from their supply chain to get ISO 14001. Although she did not go into detail about the process, the outcome was a complete change in practices around waste minimization and other sustainable behaviours. The actual immediate working environment, both materially and in terms of morale changed for the better too.

Planned measures of success
Achieving ISO 14001 and hitting targets.

Current status
Completed.

Role and involvement of HCC
HCC provides direct and indirect support for several of the projects which The Environment Centre is involved in. There is a question about whether the balance of support should shift from waste minimization in favour of reduction in energy consumption.

Instigators/enablers/drivers
Environmental reporting. Legislation. The Environment Centre advice line is getting more calls from businesses wanting help and advice because they are worried, for example, about a letter they may have received from the Environment Agency and don’t have enough information to respond.

Achievements/“what have we learned”
At the start of the process the dock workers saw the initiative as “a pain” or a “management thing” but a measure of success was seeing their enthusiasm grow as the whole workforce became involved. A measure of that change in attitude has been the pride with which their certificate is displayed on the wall. Positive feedback for their actions has helped. They got recognition with a commendation award from the parent company and now come and speak of their experience at events.

Kate reckons two factors other than the pressure to get ISO 14001 were instrumental in changing behaviour. Firstly one of her colleagues painted a vivid picture of why they needed to do something in the first place which scared them and secondly the manager, who was “one of the boys” was very enthusiastic. He spotted an advantage and went for it. Other measures of success are money saved by business and feel-good factor.

Transfer of best practices to other initiatives
Kate says it’s difficult to know how to repeat that success because other companies can be negative and unenthusiastic. She believes a lot depends on management attitude.
The SIENA green business club has involved a small core in spreading ideas of best practice. She is also keen to get training on what is involved in being a sustainable business into enterprise agencies right at the start. They are wondering about using a “Green Resolutions” model (see previous case study) with businesses and are looking into taking up the CRED initiative (see previous case study) in the South.

**Next steps**

Kate Moore is in dialogue with CRED (§5 of this Appendix) and others.
Case studies: Learning in detail from experience

10. Excelsior Holdings, adaptation in the construction sector.

Name and geographical location
A well known UK construction company which provides public infrastructure such as schools, hospitals, bridges and roads under PFI throughout the UK. To maintain commercial confidence we have called this company “Excelsior Holdings.”

Brief description
Excelsior Holdings is involved in building bridges, roads, hospitals and so on. Its involvement in climate change adaptation came as a result of organizational change which led the parent company to carry out an environmental benchmarking exercise at subsidiary level. The consultants called in to help were able to persuade them of the need to engage with climate change, and its impacts at all levels of its operations. This work was carried out in Excelsior Holdings because of its market facing nature and because of the strategic nature of the company’s activities.

Objectives
To respond profitably and creatively to the challenge of sustainable development both through adaptation and mitigation. Because of the importance of climate change, the project came to focus on that area in particular.

Agenda and expected behavioural changes/ projected outcome
The project was carried out as a ‘collaborative inquiry’ action research project, where participants and external consultants investigated the above issue over six cycles of action and reflection, framed it as ‘how can we respond …? ’ ‘Action’ phases worked in a number of ways, often with several streams running in parallel. For instance:

- Small changes to everyday practice, for instance seeing what happened when participants raised sustainability issues in a meeting.
- Focused action in current projects. For instance, ‘Gary’ invested time in generating more creative energy options on a major schools project (a considerable effort of will during the pressures of preparing a bid); ‘Jeannette’ looked at steel vs. concrete issues on a naval project; ‘Sam’ raised issues of energy management with the client during the operations phase of a community hospital; and ‘Sandrine’ applied Natural Step principles in proposing sustainability indicators for a road lighting project.
- Structured conversations with clients, intermediaries and colleagues to share issues, find out their views and plans, identify what help they needed, etc. in particular, their understanding of climate change and its impacts was discussed in detail.

A great deal of attention was paid to the dynamics of the group, with effort being put into building mutual trust and confidence. The process of dialogue as described by William R. Isaacs was used to assist with the reflective process during the project. Participants were not used to listening and to reflective processes but greatly increased their skills in these areas.

The group visited the Earth Centre in Doncaster, which was later seen as a highlight of the project. This included practical examples of low carbon and other sustainable engineering, also an impressive Audio Visual display.

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Planned measures of success
At the project level, the group wished both to identify cost-effective savings in energy and other resources and to increase the likelihood of winning bids. At the company level, basic processes and procedures should be improved to bring the issue under management control. In addition, the company should identify a credible market position.

The consultants and the Excelsior Holdings Director, who jointly initiated the project, also wished to find ways of contributing to UK and wider responses and to experiment with use of the adaptation agenda as a way into mitigation activities.

Timescales
The ideas behind the project were first discussed at Group Board level in January 2001, at which point Excelsior Holdings first became involved. The initial work was very slow, with a formal business process review in late 2001 which was fed back to a meeting of managers in April 2002. The project began in September 2002 and membership was oversubscribed. This is not an unusual time lag for a project of this type. The project completed with a report to the subsidiary Board in November 2003 and the recommendations began to be implemented in February 2004, when a manager to take part-time responsibility for implementation took up their position.

It should be noted that there was a significant change in the attitude of the group to the issues in April 2003. At that point, the group ‘got’ issues of urgency and scale of climate change and the sceptics in the group put aside their positions. This moment was not planned by the consultants, although they had predicted its likelihood and had taken a great deal of care to make the group ‘safe’ enough to accommodate it when the time came.

Current status
Completed.

Role and involvement of HCC
N/A. However Portsmouth City Council were consulted on their adaptation strategy (and proved to be rather better informed that other public bodies because of sea level rise).

People
Some participants joined because of an environmental interest, others did so because it ‘looked like an interesting project’. Some care was taken to stress that those with sceptical positions were as welcome as those who held pro-environmental views. Care was taken to include a wide variety of levels, functions and markets from the company in the project.

Instigators/enablers/drivers
The public procurement process has a sustainable development element, which gave some credibility to the project. The primary motivation came from group level in the first instance, supported by a growing mutual respect between the consultants and the Excelsior Holdings Director, who came to agree with them that climate change significantly affected the company’s financial viability and trading model. There was absolutely no pressure from clients, who were completely ignorant of the agenda.

Local involvement/support
The Director was highly respected within the company and was probably vital in gaining permission from his Board colleagues. Unfortunately he retired for reasons of ill health.
Case studies: Learning in detail from experience

towards the end of the project. A new Director took over without the background in the issues and without having taken part in the Group’s learning journey. The project’s conclusions and recommendations were well argued and easy to accept. However the learning edge of the project was not maintained.

Pressure groups for or against
Some team members started from a sceptical position both in terms of their belief in climate change, but these had changed their position by the end of the project with both moving to an advocacy position, in one case very committed.

Achievements/ “what have we learned”
Participants stressed how much they had enjoyed the project (though their incredible action orientation meant that they sometimes found the pace slower than they were used to). One commented how liberating he found letting go of the idea that he needed to be an expert himself. He did need access to expertise but found it more creative to position himself as a co-inquirer trying to help clients come to terms with a complex agenda.

What else did the group discover?
First, that this issue is of huge strategic importance to the company and its clients. Second, that its customers, almost entirely large Governmental agencies, are almost totally ignorant of this, which means that there is no easy marketing advantage to be gained in the short run at least (a conclusion reached in parallel by the Building Research Establishment). Third, by beginning with climate impacts, we found that it is possible to talk with each other about these issues in their enormity and yet find the resources to act. Fourth, that when ordinary people talk together about this, they can indeed either improve things or at least can often reduce the system delays: while expertise is needed, action need not be left to ‘experts’. Fifth, that the public procurement process works against these issues being looked at seriously. Sixth, that there are many internal issues which can be addressed to make this issue more manageable and lead towards more profitable and creative responses, resulting in lower emissions and buildings that are more resilient to climate impacts.

The group also realised that this issue will not be resolved quickly. But it also realised that the fact that many of the issues (for instance the public procurement process, the wider group culture, or the working relationship with partner organisations) are not yet ‘in play’ does not mean that nothing can be done, rather that it is up to ordinary people like those in the group to bring them into play.

In terms of the project’s objectives, the group did identify a realistic and sustainable market position, internal procedures were addressed and feedback on the bids completed during the project was positive, though it was clear that the clients mainly paid lip-service to these issues. Opportunities to improve performance at the level of particular projects were identified, though these were quite modest.

The evidence of the project was that ordinary people can be brought into a strong felt relationship with these issues and that some – perhaps an unpredictable few – will go on to take a more active role. Adaptation did appear to be a suitable route into the issue since it was more directly relevant to the issue in the short run. However participants’ responses extended to mitigation as well. As one of the initial sceptics said, ‘This is too important an issue to leave to others.’

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Transfer of best practices to other initiatives
One of the two ‘sceptics’ became very actively involved within another group company. The other became involved in presentations internally and in the continuation of the initiative under the new Director, as did other members of the project team.

The more strategic learning was carried by one of the consultants into a research proposal to EPSRC which looks likely to be funded. This will explore how moments of potential ‘agency’ at moments when technological systems are replaced (a direct parallel with the replacement of a large building) can be opened up to make significant changes possible.

Next steps
As above.

Note: A paper on this project was published in the journal Action Research (Volume 3, issue 2) in June 2005.
11. Humber Estuary, long-term coastal adaptation strategy

Name and geographical location
George Munson, Yorkshire and Humberside Climate Change Co-ordinator and Tony Edwards, Environment Agency.

Brief description
The Environment Agency in partnership with a steering committee of around 25 other organisations such as English Nature, English Heritage, the RSPB etc have been working together for some years on a long-term (50 years) coastal management strategy for the Humber Estuary.

Objectives
Adaptation by raising flood defences to protect industrial concerns, managed retreat of residential areas/business still at risk from rising sea-level/tide surge and restoration of inter-tidal habitat.

Agenda and expected behavioural changes/ projected outcome
The Environment Agency aims to purchase 1000 hectares of land over 20 years on the banks of the Humber.

Planned measures of success
Reduced flooding risk.

Timescales
The first completed realignment took place in September 2003 when 80 hectares of land were returned to inter-tidal habitat.

Current status
Together with English Nature, the Countryside Agency and others the Environment Agency is currently working on the restoration of a 400 hectare site.

People
Project formerly managed by Tony Edwards at E.A. but now Phil Wynne 01709 312962

Instigators/ enablers/ drivers
- Rising sea level of 6mm a year threatening huge economic assets (oil and gas infrastructure) on banks of Humber.
- Regeneration of local communities initiatives.

Local involvement/ support
The success of this ambitious strategy depends on inter-agency, inter-organisational working and the support of stakeholders in the affected communities.
Achievements/ “what have we learned”
One of the most difficult aspects has been dealing with tenants and landowners. Where possible the Environment Agency has tried to keep residents informed on a one-to-one, face-to-face basis. They have set up drop-in centres and a help-line.

Learning: Much fear and stress around the experience of flooding. Can evoke same feelings of intrusion as burglary.

Transfer of best practices to other initiatives
Integrated coastal zone management project on Holderness coast which has some of the fastest eroding coastline in the UK owing to the type of shale and muds. Land management plans include helping tourist ventures such as caravan parks to “roll back” and increasing the holding capacity of land by planting in flood plains. Wood from plantations can be used as biomass.
12. Large-scale behavioural change: The end of the slave trade in the UK

The end of the slave trade in the UK may give useful lessons and inspiration as we look for meaningful ways of awakening the will to respond to climate change. The story is characterised by efforts over decades by people, often operating at the fringes of respectable society, who may have considered their diverse efforts to have been largely in vain and yet who seem, looking back, to have played important roles.

From the first Portuguese voyages in the mid 15th Century to about 1700 there was no significant questioning of the morality of the trade from Christian or early enlightenment sources (e.g. by John Locke).

The Quaker sect was in principle hostile to slavery, yet many American Quakers owned slaves. Indeed many actively promoted slavery. A few ran slave ships, some were plantation owners, but mainly they made their – often very large – fortunes by providing the support trade for the plantations. Quakers were a marginal group in society, fairly respectable yet (in the UK) unable to stand for Parliament.

An early figure in opposing the slave trade was the radical and very eccentric American Quaker, Benjamin Lay (1682-1759). Usually living wild, he travelled between meeting houses and once even (temporarily) kidnapped the child of a slave owner: "Now you know what a horrible thing it is to lose your child. Possibly this will give you some idea what it's like for African parents whose children are taken from them in order to be made into slaves." He was thrown out of meeting after meeting and seems to have had few successes for all his efforts.

A more respectable American Quaker was John Woolman (1720-72). He “spoke frequently to slave-owners about the evils of slavery, but so gentle was his personality that he convinced without offence. Always his hearers felt that he appealed to consciences rather than giving blame.” He would not wear dyed cotton because it had been produced by slaves. Again, his successes appeared to be few.

A more obviously influential figure was another American Quaker, Anthony Benezet (1713-84). He taught both black and white children in Philadelphia. When he died over 400 black people turned out for his funeral. A prolific antislavery pamphleteer and correspondent, he wrote to Benjamin Franklin and many others in America and also to many people in the UK, persuading them to do as he was doing.

One of his UK correspondents was Granville Sharp (1735-1813), another highly aligned man who had fought a lawsuit to free a slave whom he had seen ill-treated by his master and who also took freed slaves into his own house. Friendly with many Quakers (though Church of England himself), Sharp was well connected through his family in London, including to the court of George III. Despite this, he was seen as unsound by the establishment, including later and more mainstream anti-slavery figures.

With Benezet and John Wesley, Sharp produced the first sustained campaign against British slavery. After a long campaign to show that slavery was unconstitutional under English law, he extracted a landmark judgement from Lord Chief Justice Mansfield in 1772, which was taken to mean that slaves became free the moment their feet touched English soil.

Sharp probably knew three freed African slaves: Ignatius Sancho (1729 – 1780), Olaudah Equiano, (c. 1745 – c. 1797) and Quobna Ottobah Cuguano (dates unknown). These men shared their experiences and became known in London society: Sancho was known to the actor David Garrick, probably to the artist William Hogarth, and also at Court. They exemplified African humanity, which was still denied by many.
A critical mass of awareness seems to have developed. Then came the shocking incident of the slave ship Zong. There was sickness on board during the middle passage. There was no recompense from insurers for death from sickness. Most of the slaves were not expected to die, but the master threw many of them over the side anyway, just to be on the safe side from the insurance point of view, drowning 133 people on and around 29th November 1781. The owners claimed against their insurers for the loss of their cargo on arrival, but the latter refused to pay. The owners sued the insurers – and won.

The outcome caused shockwaves through society. Deeply affected by it, the Vice-Chancellor of Cambridge University set an essay competition on the morality of slavery, which was won by an undergraduate named Thomas Clarkson (1760 – 1846). Clarkson became a correspondent of Benezet and Sharp and came to feel ‘called by God’ to the work of ending slavery.

Following the stir caused by the Zong incident, Clarkson undertook research which influenced William Pitt, the Prime Minister. In 1787, Pitt had a conversation with William Wilberforce (1759-1833) ‘under an old tree in Croydon’. From 1789, Wilberforce introduced an Abolitionist Bill virtually every year and these were argued with ferocious passion.

The bill almost passed in 1792. However an opponent, Henry Dundas, introduced the word 'gradual’ in an amendment and calls for ‘more evidence’ blocked abolition. The bill finally passed in 1807: (Wilberforce) “sat with tears streaming down his face… Members stood and cheered him (Romilly, the Solicitor General, who gave a key speech) tumultuously”. The 1807 victory completed one of the most significant of all political attempts to overcome suppressed awareness of (and blocked responses to) a moral outrage. Another very religious man, Wilberforce died praising God in 1833 shortly after the complete abolition of slavery in all the British dominions.
Case studies: Learning in detail from experience
Appendix F: Desk analysis of selected areas for possible action

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Desk analysis of selected areas for possible action
1. **Work areas**

At a meeting on 13th December 2004, as agreed in the project plan and building on the results of earlier work, we agreed with Hampshire County Council seven work areas for further desk research in Phase 4. The selected areas were as follows: Farming, Biodiversity, Construction, Coastal impacts, Education, Transport, Domestic energy saving.

2. **Purpose of this Appendix**

We consulted many websites, research reports and spoke to many experts during our research. This may well be of use to future practitioners, whether within HCC, within ESPACE or perhaps more widely. The purpose of this Appendix is to share in summary form what we have discovered so that others may later build on what we have done.

An overview is provided in §10 of the main report, with results of testing specific concepts being in §11 (education) and §12 (farming, construction and coastal impacts). We wish to stress, however, that our work was more comprehensive than could possibly have been summarised in the main report, or indeed adequately tested. We hope that those who wish to look further for pathways to behavioural change in the future will find the contents of this Appendix of use.
3. Area a) Education

Desk research undertaken
We looked in detail at the education sector for a number of reasons. The sector emerged from early discussions with Hampshire County Council managers as having potential: people in Hampshire are busy and ‘time poor’; the area is also affluent. This suggests that cost-based motivation to save energy is likely to be less strong than in other areas. On the other hand, a) there was evidence from case studies (Appendix E interviews) that money can be saved in school and there appeared to be potential motivation to contribute in this way from the Head of Property Management in the Architects Department. Primarily, schools are at the hub of communities, fulfil many of the conditions for network effects to take place (Appendix D §11). Parents’ concerns about the future might be expected to be centred around their children and there is considerable anecdotal evidence a) that children can play an important role in stimulating action by adults (pester power) and b) (not surprisingly) that there is considerable worry – even resignation – about the future about young people, who see their elders as abdicating on this issue. For all these reasons, schools seemed a good place to start an initiative. But can realistic practical options be identified?

A considerable body of work has been done in this area and this opens up a realistic prospect of using schools, in particular PTAs in primary schools (but with possibilities also at secondary level), as a route into community action in a variety of areas. This possibility was tested in greater detail with teachers in Hampshire: this is in Appendix G, which shows that they gave it a very positive response.

Experts consulted
a) OFSTED Inspector, Leszek Iwaskow, author of “Taking the first step forward… towards an education for sustainable development”
b) WWF Learning Officer, Anna Birney.
c) Director, The Council for Environmental Education, Libby Grundy
d) National Curriculum Officer, DfEE, Andrew Davidson. He sent us a copy of the “Sustainable Development Action Plan for Education and Skills.”
e) Biology Teacher Crispin School, Somerset, David Heath.
f) Millbrook School Environmental Education Centre, Southampton, Ian Limbrick
g) Michaela Rhind, Science Teacher, Redmaid’s School, Bristol.

Web trawl
From the Qualifications and Curriculum Authority website we downloaded case studies of Crispin Comprehensive School in Somerset and Canon Burrows CE Primary School and Nursery Unit in Tameside. We followed a link to Durham’s Cassop Primary School’s excellent website built around the fact that it has become the first wind powered school in the UK. Links to other school case studies are available from these sites.

We also downloaded WWF Scotland’s advice on a review of initial teacher education guidelines (January 2004) by Donald de Voil which emphasises the necessity to introduce the idea for a whole school’s approach to sustainable education in teacher training.
Desk analysis of selected areas for possible action

Following advice from Libby Grundy, we downloaded a report, “Energy Education Hitting Home” which evaluated the Centre for Sustainable Energy’s education programme, “Energy Matters.”

Summary of findings

a) There are almost certainly energy savings that can be made and there are also adaptation measures that are relevant to ensuring school safety and comfort in a changing climate. Limiting vehicle traffic is an issue for many schools, as is childhood health (obesity and asthma etc) and safety (parents’ traffic, but also cycling and walking to school).

b) The HCC buildings department has relevant expertise to assist with energy management and early interviews (see Appendix A) suggest that it has some enthusiasm to contribute. The shift to the County Council acting as landlord rather than as education leaders might be helpful, in this respect at least.

c) There are some excellent examples of work at the school level, including in some Hampshire schools. However in general teachers are very busy and can easily resent being used as – in their eyes – agents of social engineering. Perhaps as a consequence, the success of curriculum initiatives targeted at teachers has been limited. Teachers need more support and real rather than virtual collective networks in this area. They are too busy to take it on alone.

d) Parent / teacher associations are the bodies that normally fund raise for the school (but this may vary between schools). They will often have good links into the local community.

e) Parents care about their children’s schools’ thriving and are used to being asked to support PTA initiatives. There is research evidence that involving children in energy auditing transfers to behaviour change at home. (“Energy Education Hitting Home,” Centre for Sustainable Energy.)

f) There is evidence that small behaviour change, such as “switching off the lights”, reinforces larger scale change.

g) The community around a successful PTA seems likely not to exceed 150 in primary schools, though this may be different in secondary schools and sixth form colleges. This is very close to the ideal number from ‘tipping point’ theory (see Appendix D: § 11). Primary schools are probably more suitable in this respect than Secondary schools.

h) Climate Change is included in the Education for Sustainable Development (ESD) remit. ESD can be subsumed within or enhanced by citizenship education. Success in ESD seems to breed success in all areas (OFSTED is carrying out research into this).

i) A whole school approach achieves most. However culture change is required in most schools and this takes time. There us more potential to achieve change by working within the school than by taking classes out.

j) The starting point can be at any level of the system.

k) The New School Building Programme could be a golden opportunity, where a) it seems likely that local authorities can play an important role, and b) there seems to be scope – a necessity – to build capacity now in response to Duty of Care implications of enforcing new (2005) Building Regulations (C), which relate to climate impacts on buildings. However early signs suggest that this opportunity might be missed.

Available from www.cse.org.uk. Tel: 0117 929 9950

Desk analysis of selected areas for possible action

Summary of concept developed

What is the concept in brief?

The PTA sets up a group of parents to take energy efficiency measures in the school, using advice from the County Council or other experts to identify and then do simple measures, organising working parties for somewhat bigger jobs and helping the Council to prioritise capital spend. After each initiative, the PTA promotes the idea being taken up by parents, with the school taking a referral fee for each successful ‘sale’. These ‘sales’ could range from low energy light bulbs to insulation measures. The project would be promoted as offering both financial benefits to the school and climate change benefits.

The initiative can be extended to cover metering in homes, adaptation (schools being made safer in high winds, cooler in high summer temperatures, using less water) and to travel planning. In due course it might be extended to other sustainable development agendas, such as waste reduction and recycling. Apart from setting up and supporting the initiative, the county council can in due course extend the programme to provide a competitive element (e.g. the best school in each ward, in each District, in the County) with extra prizes for the funds of successful schools.

The county council would take a facilitation role behind the scenes. This would involve, for instance, helping source teaching materials for the school and for those involved among the adults (thereby introducing awareness after action), facilitation services, by project management and by procurement activities on behalf of the school. It would also provide training and support for ‘champions’ at the school level.

In due course, a competitive or other aspirational element could be introduced. It would also be possible to roll the programme out to other community ‘nodes’ such as churches or sports facilities.

What is the potential payoff for those taking part?

a) School
- Cost savings from improved energy efficiency;
- Income from initiatives taken up by parents or the wider community;
- Safer schools in the light of likely future climate impacts (we know of three children who were killed at school in high winds)\(^2\);
- Support with travel planning;
- Possibility to involve students if they are concerned about these issues;
- Possibilities to make links to the curriculum;
- The chance to win a bigger prize (if there is a competitive element).

b) Parents
- Contributing to the income and other aspects of the well-being of the school (and hence their children’s future) through the initiatives (either as PTA member or as supporting parent);
- Saving money themselves (through rolled out energy efficiency initiatives); and possibly …

Desk analysis of selected areas for possible action

- … not looking weird when they do environmentally-beneficial things.

c) Environment
- Energy savings in the school (and other pro-environmental benefits);
- Energy savings in the wider community;
- Spreading of key enablers of wider change (especially meters) through the community;
- The possibility of wider ‘tipping-point’ adoption of energy saving and linked practices;
- An opportunity to identify and share best practice (e.g. through a blog-type website supported by the Council);
- Identification and training of potential ‘champions’ (who would tend to gravitate to the co-ordinating group);
- Opportunity to experiment with group processes that are ‘sticky’, that can potentially stimulate wider change and that can be adopted more widely.

d) Potential and actual ‘champions’ and other committed environmentalists
- Support and development opportunities;
- ‘Agency’ – there are possibilities for good actions to spread very widely through the community and a process for key contextual issues to be identified and brought onto an agenda with validity;
- (For existing bodies such as Global Action Plan, the Environment Centre) A route into community action;
- An opportunity to participate in groups with wider social acceptance than most environmental groups.

e) County Council
- An opportunity to promote other relevant policy initiatives (e.g. waste reduction, fuel poverty, travel control) through the initiative;
- A potentially creative relationship with schools at a time of devolved responsibility;
- An initiative that may attract sponsorship and hence the involvement of the business community – e.g. for prizes.
- A cadre of champions for future initiatives.

f) Supporting businesses (e.g. suppliers of energy efficiency equipment, sponsors)
- An opportunity to promote their products or services through schools (e.g. by offering a fee for each lead from the PTA that they convert), thereby generating extra sales without committing initial advertising to the area;
- An opportunity to support the community or the environment or both as they wish for PR purposes;
- An opportunity to pursue key policy aims – e.g. (utility companies) smart metering for water, electricity, gas – at relatively low cost by offering a fee to the PTA for each lead converted.

Summary of results: a credible and exciting possibility
This concept tested extremely well, with considerable enthusiasm among those interviewed and with them going so far as to build ideas with Rosslyn Research’s interviewer. There was considerable support for the idea of integrating this idea with the curriculum and this was seen as possible both at primary and at secondary levels. Although the project in some ways fits more easily into the primary sector PTA system, the possibilities from involving students at secondary level are also seen as exciting. Interviewees took it for granted that capital expenditure would be required but saw
possibilities to involve local sponsors in this, to sit alongside discussion with the County Council as to how its capital budget might be prioritised.

The project provides strong monitoring, ironically through the use of money, rather than CO2, as a measure (although the latter could easily be provided as well). Most people believed that students would welcome the possible project. There is little doubt that this concept could work extremely well and that it has the capacity to achieve wider shifts in behaviour in the community. It would require careful planning. In our view, the greatest danger would be that of over-enthusiasm leading to the project not being given proper foundations before wider roll-out.

A full analysis of the stakeholder interviews is at Appendix G.
4. Area b) Farming

Desk research undertaken
We downloaded HCC’s own web pages on current agricultural characteristics and historic trends in the county. We also consulted Defra’s report on agriculture in the South East region and its map of dominant farm types at Parish Scale.

We researched Forestry Commission Trials in Alice Holt Forest written up in “Short rotation single stem tree crops for energy in the UK- an examination with Eucalyptus” by John Purse and Keith Richardson (Aspects of Applied Biology No65, 2001 Biomass and Energy crops 11)

We looked at the South East’s renewable energy targets as outlined in the NATTA Journal: Renew Sept-Oct 2003.

We read a Case Study about the Waitrose owned Leckford Estate near Stockbridge.

Other
We filled our own car with 5% biodiesel supplied by Tesco in Baldock, Hertfordshire. (No noticeable difference in performance. 5% reduction in CO2. Premium 1p a litre.)

Experts Consulted
The Farming and Wildlife Advisory Group, FWAG, both Hampshire and Wiltshire.
Roger Tiller at Sparsholt Agricultural College.
The Hampshire Chair of the National Farmer’s Union.
Myc Riggulsford, Devon Farmer.
Hampshire Young Farmers.
Dave Cockcroft, Biodiesel advisor.
Rothampstead Crop Research Institute

Findings
Following leads from some of Rosslyn’s phase two interviews and the desk research above on Hampshire’s agricultural profile we focussed on Biomass and Biodiesel as ways into conversations with representatives of the farming sector.

It quickly became apparent that the county’s farmers do not readily take concerted, or strategic action at anything other than individual farm-scale. Unlike smaller, family farms in the West Country, they do not even set up machinery sharing schemes or share labour for tillage. Therefore although the policy/planning and biophysical conditions in Hampshire seem ideal for diversification into biomass (wood fuel for CHP, for instance), farmers themselves would not be co-operating to initiate this option. However, if infrastructure were already in place with a guaranteed demand over some years for their product, individual farmers might reconsider biomass as a viable diversification option.

Instead, farmers representatives, such as the NFU, are lobbying for the necessary economic drivers to transform the market for bio-fuels. They are more willing to produce this from wheat and other crops. This was felt to be a win-win deliverable because it would boost falling wheat prices, (locally and globally) not involve too much change in
practice, and be seen as a major contribution by the farming industry to mitigating climate change.

There was no indication that farmers, although having to adapt to climate change in their agricultural practices, were persuaded by science or experience to change their personal behaviour.

**Possible pathway**

A pathway might be forged were a proposal for a bio-ethanol plant in Southampton to attract investment from a company such as BP, and a supermarket chain operating in Hampshire were prepared to sell the product at their pumps. If the county had an economic or even rural regeneration officer, this is the kind of project we would be suggesting s/he investigate. No major attitude change could be expected in the farming sector but the outcomes of such a project (lower carbon motoring, locally-produced fuel, better news for the rural economy) could support changes in consumer attitude and behaviour.

**Concepts identified for testing**

We passed this concept over for testing but the results are inconclusive. Several other concepts were explored at the same time which may have caused merged results. We recommend that this be reconsidered at a later date.
5. Area c) Construction

Desk research undertaken
Town and Country Planning Association’s Policy Statement on Climate Change
Office of the Deputy Prime Minister News Release on new rules for better and safer buildings (June 2004)
Building Regulations, Section C

Other
Attended a UKCIP risk and cost of subsidence workshop
British Geological Survey scientists share latest research with Susan Ballard in media training sessions.
Our work in this area is also significantly informed by David Ballard’s three years work on this issue in the UK Construction Sector, 2001-2004. See Appendix E, §10.3

Experts Consulted
DfES Building Schools for the Future (BSF) Construction Engineer
HCC’s Education Department, Strategic Planning Team
Chris Sanders, Building Research Establishment

We see two key areas for activity: public buildings (especially schools, because of the Government’s BSF programme and private dwellings. The former gives more opportunity to spread change into the broader community than the latter, where the objective would be to change the context of people’s everyday actions rather than to intervene to change behaviour directly.

It seems clear that a significant window of opportunity is opening up, but there is a strong risk that the opportunity could be missed unless action is taken to build capacity now and to make the issues concrete for people responsible for commissioning, design and construction. The Duty of Care implications of enforcing new (2005) Building Regulations (C), which relate to climate impacts on buildings, potentially give designers of buildings pause for serious thought. We speculate, for instance, that an exchange of letters about the potential personal and corporate liabilities of building collapse (an outcome seen as entirely possible by Sanders) could create an audit trail that would leave people who ignored the issue feeling very uncomfortable. Having learned of three deaths of schoolchildren caused by roof collapse in strong winds, we think that HCC’s own liability might be considerable.

We wonder whether this might impact upon the conveyancing process within the county and upon surveyors. We note that all agree that the work of Building Inspectors is crucial, and that all agree that the profession is generally under great stress and finds it difficult to meet the high demands placed upon it. We also recall from Phase 2, and from other work, that organisations often respond well to offers of support that follow a change in the regulatory framework.

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Desk analysis of selected areas for possible action

Pathway
We envisage a campaign targeted at, *inter alia*, Architects, Solicitors, Surveyors and Construction companies working in the County and to major public purchasers, including HCC’s own Education, Social Services and Buildings Departments (where Phase 1 work suggested that impacts thinking is still at an early stage). This might tactfully point out the public liability consequences of collapse in the context of the changes to Building Regulations, especially in the context of all the work in the public domain from UKCIP, SECTORS, etc. This might be followed by a series of workshops to brief on how to assess whether climate impacts have been adequately considered. This might in turn move on to the existing housing stock.

However, key to this would be the role of the Building Inspectors and how their time could best be directed, indeed whether there are other potential ways of ensuring that the new Building Regulations translate into action.

What we need to know
We do not regard ourselves as sufficiently well-informed on potential options open to Planners or on Tort law in this area. Who is involved in each step of the decision making process which results in a new school building? At which points in this chain does awareness of climate change impacts and adaptation strategy need to be realised in action. What have Espace partners learnt about climate change adaptation and mitigation in relation to building and building control?

Summary of result of testing of the concepts
Rosslyn Research found that building regulations are seen as primarily influencing mitigation responses, for instance through progressively enforcing lower heat loss, though not as strenuously as in other Northern European countries. This is exactly in line with the critique by Sanders and Phillipson,\(^4\) which showed extremely poor awareness of impacts in the construction sector. Some feel that there is a limit to the effectiveness of energy-reduction regulations because materials manufacturers have too strong a say in the drafting of Building Regulations and their interests lie in keeping lower-cost, less energy-efficient methods and materials in place.

Adaptation comes through the planning process – especially there is an expectation that there will be increasingly rigid refusal to allow construction on flood plains. There is some expectation that the existing regulations in Scotland about strength of roofs will be extended to the rest of the UK in response to expected greater frequency of extreme weather.

Major capital-intensive projects, especially PFI projects, are thought to be the area where climate-proof construction will become best entrenched most quickly. But the main driver is expected to be the insurance and finance industry, rather than direct regulation. And insurers will be promoting adaptive buildings more for reasons of cost than directly in order to avoid liability.

HCC could go further than the building regulations in encouraging sustainable construction. But it is widely acknowledged that there is no point in developing a policy

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Desk analysis of selected areas for possible action

unless it is enforced and known to be enforced; and that the only way to achieve that is to promote it vigorously, thus ensuring that infringements are rare, and to penalize those infringements rigorously. There is a consensus that local authorities can lead by example; that with their huge purchasing power they can make a significant impact on common practice. This is particularly stressed in the case of residential construction, which is less directly regulated under statute.

Overall, respondents were doubtful whether it would be useful to use the danger of liability as a lever to enforce better practice in construction.

Conclusions
In interpreting these disappointing results it should be borne in mind that research in this area was a relatively low priority in this project, since we had agreed with HCC that the education concept should be prioritised. It is also very likely that the research process will itself have been influenced by the blindness of the sector to impacts referred to by Sanders and Phillipson. We therefore interpret the results as showing that there is no ‘quick win’ here: nonetheless we think that the area should be kept under constant review.
6. Area d) Coastal impacts

Desk research undertaken
We identified interesting case studies in Ulysses (Venice), the SLIM project in Italy (not specifically climate change), Tuvalu in the Pacific Ocean, and in Stockbridge, Yorkshire. In some of these cases, communities were able to make a shift to collective action despite facing or experiencing significant impacts which might be devastating in some cases. What the case studies point to is the need to break down the barriers between ‘experts’ and members of the public so that they become less entrenched and move towards collaborative inquiry.

From a conversation with an HCC officer, supported by a number of the interviews carried out by Rosslyn Research in Phase 2, it seems likely that South Hampshire residents are not yet ready to engage in this way and that they resist creative dialogue, probably because of strong emotions.

Possible pathway
In the light of the above finding about the difficulty of citizen engagement, it was harder to propose a clear pathway without first discovering what might motivate citizens to come into dialogue in the first place. We can identify tools to generate dialogue and project participation including Democs (a board game used in Herefordshire), participatory GIS (non-expert involvement in activities such as mapping, data-gathering and deliberation of findings), Ulysses (a project used in Venice to demystify scientific modelling and so empower citizens) and theatre for social learning. However, further stakeholder interviews were needed in phase four to identify a focus for engagement.

Summary of stakeholder testing
Further interviews by Rosslyn Research suggested that an initiative developed around coastal footpaths could be key to citizen engagement.
7. Area e) Biodiversity

Experts consulted

The following experts were consulted:


b) British Trust for Conservation Volunteers, Emily Cluer

c) The Woodland Trust Phenology Network, Programme Leader, Jill Attenborough

d) The Earthwatch Institute, Assistant Science Officer, Esther Ball

e) The Environmental Change Institute, Oxford University: Administrator, Ian Curtis and Senior MONARCH Researcher, Dr. Pam Berry (Hampshire Case Study)


g) Terra Firma Consultant, Gavin Saunders.

h) Open University Lecturer and Ecologist, Andrea Berardi

i) RSPB, Ollie Ward

j) Treesponsibility, Penny Eastwood

k) Soil Association

l) University of Bath MSc graduates in Responsibility and Business Practice, who have attended deep ecology workshops at Schumacher College

m) We attempted on a number of occasions to speak to a biodiversity officer from Hampshire County Council but were unable to make contact.

Web trawl

Visited many biodiversity organisation’s sites, some research downloaded but hardly anything connecting behavioural change with biodiversity projects. We downloaded a policy brief, “How biodiversity and climate change interact” by Hannah Reid, Balakrisna Pisupati and Helen Baulch (Feb 2004) from the Science and Development Network. We also consulted the Natural Environment Research Council’s publication on Scientific Certainties and Uncertainties concerning Biodiversity.

Summary of findings

- Many conservationists still focus on habitat/species protection. They tend to ignore opportunities for wider citizen participation. Expert mind-sets often exclude the bigger picture. One exception to this, was the Campi Flegri project led by Open University’s System’s lecturer, Andrea Berardi. He involved lay people in evaluating and recording features in their landscape which challenged scientists to reassess the adequacy of their data collection methodologies.

- Phenology projects involving amateur recorders or “Nature Detectives” seem too long term to connect climate change and human behaviour but a Woodland Trust Survey completed March/April 2005 suggests otherwise. Half of those who took part claimed to have changed their behaviour in response to what they learned about climate change.
Desk analysis of selected areas for possible action

- Message incongruence may be undermining efforts. For example, the RSPB magazine has articles on climate change, but advertises exotic holiday destinations by plane.
- Successful projects to engage people in valuing their natural environment can be transformative but need careful development with a specific and deliberate climate change remit. The Earthwatch Institute is beginning to involve volunteers in projects with a climate change remit.
- A joined-up, whole organisation approach works best. Some “nature” organisations recognised that they were not doing well enough at raising awareness of climate change and supporting human change, either internally or externally. Even those that were, WWF, notably, still expressed a concern to do more.
- Although many champions identify a passion for the natural world as key in their own change process, in practice it seems hard to catalyze this for others. Several initiatives designed to engage citizens with the natural environment nearby had failed for lack of interest and commitment.
- Wildlife Trusts and similar organisations could still be a vital link in an overall strategy. Wiltshire Wildlife Trust, for instance, was working to connect awareness of and action on energy saving with climate change and wildlife conservation. They were taking leadership in many communities.
- A perceived conflict of interests often arises around protecting wildlife, versus “social interests” This was a factor in the coastal research as well. Some coastal inhabitants were reported to have felt that “managed retreat” was about protecting birdlife rather than homes.
- Surprisingly few organisations facilitating hands-on experience of natural environments make an explicit connection to climate change. An excellent exception is Treesponsibility, a tree planting initiative which started in Calderdale.

Conclusions
It seems clear that many people are transformed by experiences in nature. However agencies do not expect this, do not plan for it, and have little or no idea of how they might support people who have been affected in this way.

Despite carrying out considerable research, we have found little evidence that people make the connection between work on preserving nature and their own behaviour from most climate change-related biodiversity programmes at present. Worse than this, and perhaps even contributing to it, we have found very little evidence of an attempt being made to do so. The area seems to be dominated by experts who do not see it as their responsibility to engage with the public in making the connections with climate change.

An honourable exception is the work of the Wiltshire Wildlife Trust. It is not yet far enough advanced to draw any robust conclusions. Another is the work of the Woodland Trust Phenology network, which, as quoted above, has found that half the respondents to a survey of their nature recorders were changing behaviour in response to new awareness of climate change impacts.

A small scale community project, Treesponsibility, mentioned above was very successful in making the link between hands-on tree planting and climate change in
Desk analysis of selected areas for possible action

Calderdale\textsuperscript{5} and could provide the template for similar community initiatives in Hampshire.

A limited amount of desk research, mainly into citizen participation case studies, such as those illustrated by the Open University’s SLIM and Virtu@lis research, showed evidence for changing environmental mindsets which could be applied at a later date in the context of biodiversity work in the county.

Research for the Education Project also indicated that involving children in the natural environment was an important contribution to their ability to engage with sustainability issues. Hampshire-based “Learning through Landscapes,” the national school grounds charity would be an interesting initiative to build on.

**Recommendation: maintain a watching brief**

We identified one possible pathway for the future: From case studies there is evidence that it is possible to awaken interest in scientific studies of local areas, if the experts involved in those studies are prepared to experiment with facilitation, dialogue and citizen participation. Since Hampshire is the site for more than one study of biodiversity with a specific climate change connection, (Monarch, BRANCH and Dragonfly project), there is a potentially rich route into wider engagement. However, researchers would need to initiate this and may not see the immediate benefit to their project.

We think that this may be worth pursuing as a strategy, but that it would take considerable time to awaken the necessary interest. As a consequence, we recommended that Rosslyn Research not devote time to carrying out stakeholder interviews in this area but that the time would be better used in other areas.

\textsuperscript{5} A pamphlet about the project is available. Tel: 01422 843222
8. Area f) Transport

Desk research undertaken
We have accessed a major research study ‘Smarter Choices: Changing the Way we Travel’ on the impact of ‘soft’ transport interventions on transport demand. This was carried out by the ESRC Transport Studies Unit at UCL (now disbanded) and summarises learning from a wide variety of cases. The report is available from: http://www.dft.gov.uk/stellent/groups/dft_susttravel/documents/page/dft_susttravel_029722.pdf

We also consulted an independent review of the success of the London Congestion Charging Scheme.

Experts Consulted
Transport 2000 (Vicky Carnegy)
The Countryside Agency (Conversation with Head of Transport)
The Department for Transport (unnamed official)
The ESRC’s Transport Department.(Oliver Moss)
We also interviewed John Bucket from HCC during our introductory interviews (see Appendix A).

What we found
A consistent picture is emerging. ‘Hard’ measures (pricing of roads and parking, reduction of road space, and public infrastructure provision) do work (spectacularly so in the case of Congestion Charging). However, they do cause controversy and not many politicians have the nerve, or perhaps the solid popular support, of Ken Livingstone when he introduced the Charge. However soft measures also work reasonably well, usually costing far less than the savings. There may, however, be an issue as to how the costs and savings are distributed. Soft measures include workplace, home and school travel planning, information campaigns on public transport, home teleworking, car sharing, teleconferencing, web-based shopping, etc.

Possible pathway
There seems to be some evidence that ‘soft’ measures may help to shift the climate to one in which ‘hard’ measures become conceivable. In other words, we are seeing evidence that transport is more responsive to policy instruments than we had feared at our Phase 2 meeting.

Conclusion: continue as at present; consider links to education concept
HCC has tried many of these measures already. The issue that we see is that – in isolation – they do not contribute to a wider shift in attitudes and behaviour: more time is needed. On the other hand, we think that they fit well within the Schools concept discussed above, and that this could be rolled out to other hub institutions in due course.
Desk analysis of selected areas for possible action

9. Area g) Domestic energy saving

Desk research undertaken
We covered many case examples in Appendix E and summarised research on this in Appendix D. That work identified an important enabler, which is high quality feedback on energy use. The purpose of work in this area was to look in more detail and the likelihood, and feasibility, of radically improved metering at the household level.

Experts consulted
We interviewed:
- Don Lack, Energy Manager, Leicester City Council (again)
- George Marshall, Co-Executive Director, Climate Outreach and Information Network (COIN)
- Transco’s Head of Metering
- Thames Water’s Sustainability Department;
- We have looked at the Carbon Trust’s Local Authority Energy Finance Scheme and the Government’s Energy Efficiency Best Practice Programme’s Good Practice Guide 312 “Invest to Save”.
- Jane Horton, Homeowner and Sponsor of DEMOCS Climate Change and Carbon Watchers.
- Liz Reason, Energy Consultant and Director, Reasons2bCheerful.

Summary of findings
- Feedback from intelligent meters changes behaviour in industry and commerce
- Metering is at the edge of regulation
- Meters have to be pulse enabled to transmit information. Most domestic meters are not Automated Reading Meters (AMRs)
- The installation cost of domestic AMR doesn’t match the revenue stream (currently a 5-10 year pay back).
- A costly monitoring infrastructure would be needed to manage the data streams
- However, the National grid bought 1 million data loggers last year.
- A company called Elster manufacture meters and loggers
- Compulsory water metering is still resisted by consumer groups
- A school in Cheltenham estimates it can save £30,000 a year by reducing waste and energy/water consumption.
- Hampshire could apply for a grant of up to £500,000 from the Carbon Trust to finance an energy saving project.
- Energy efficiency measures at home can have perverse consequences. For instance energy saved when a new boiler is installed is then wasted by increasing the number of hot baths (sometimes known as the ‘happy hour’ effect). Often behaviour and attitudinal changes are needed as well, and feedback is certainly needed before reduction in emissions can be claimed.
- No-one denies the huge potential for emissions reduction through the domestic energy efficiency route.

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6 www.elstermetering.com

Desk analysis of selected areas for possible action

- Leicester is experimenting with feeding back energy and water meter readings through domestic television screens via a digi-box.

**Conclusion: incorporate within education concept**

Installing intelligent meters in the domestic sector would require a concerted effort and financing to overcome inertia. It is still worth further exploring how they might help SMEs in Hampshire.

Therefore, we think it is better that the schools concept be extended further into the community in due course. We have explored how this might occur in the section on that concept. Christine Seaward has, for instance, suggested using the Council’s Care Homes as a possible future hub, though the very different role of these in the community does make this appear to be more of a challenge.

Susan Ballard is involved in two projects for other clients/contacts currently exploring the potential for street/community champions and existing community action groups to organise themselves around home energy reduction and other mitigation measures. Key elements are self-help associations in neighbourhoods across the UK and buddying; DIY projects such as installing loft insulation; information exchange; mentoring and mutual support. The development of this approach in Hampshire would require formal champions for whom a tool-kit/process of engagement is currently being designed and trialled in Ledbury, Herefordshire.
Appendix G: Focused stakeholder interviews: education

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Focused stakeholder interviews: education
1. Background and Methodology

In February and March 2005, Rosslyn Research conducted 13 telephone interviews with stakeholders in the education system, with the aim of determining attitudes and responses to climate change, and attitudes to possible further programmes aimed to support adaptation or mitigation.

The interviewees were:

<table>
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<tr>
<th>Name</th>
<th>Position</th>
<th>School</th>
<th>Location</th>
<th>Type of school</th>
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<tr>
<td>Caroline Carter</td>
<td>Head Teacher</td>
<td>Braishfield Primary School</td>
<td>Romsey</td>
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<td>Brenda Sullivan</td>
<td>Governor</td>
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<td>Jane Pratt</td>
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<td>Chiltern Community School</td>
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<td>Ann Beresford</td>
<td>Head Teacher</td>
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<td>Science Teacher</td>
<td>Eggars School</td>
<td>Alton</td>
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<td>Finance Manager</td>
<td>Hurst Community College</td>
<td>Tadley</td>
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<td>Melanie Jay</td>
<td>Assistant Head Teacher</td>
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<td>Neil Dewhurst</td>
<td>Head Teacher</td>
<td>Nevill Lovett Community School</td>
<td>Fareham</td>
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<td>Elisabeth Webb</td>
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<tr>
<td>Paul Cope</td>
<td>Head of Geography</td>
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Focused stakeholder interviews: education

The particular focus of the interviews was to determine attitudes to a possible energy-saving programme sponsored by HCC, which would start with an energy audit of the school and would aim to deliver three kinds of result:

- definite, measurable cost-savings
- raised awareness of climate change amongst students
- raised awareness in the wider community, and adoption of energy-saving measures

Overall, interviews covered a wide range of topics:

- nature of the school and respondent’s role
- types of school projects that involve the wider community
- success factors for school projects in general
- dangers and pitfalls to avoid
- most wanted type of project
- projects undertaken, if any, which address climate change – aims, scope, outcomes expected, especially behavioural change
- response to proposed energy audit and energy-saving project –
  - who would be involved
  - how best to win support for it
  - help needed from outside bodies
  - possibility of rolling the project out into the wider community
2. Summary
The proposed plan was extremely well-received. This is seen as an exemplary idea for a school project:

- An energy audit would systematize some of the measures already being undertaken in schools, so it would be easy to integrate into the current way of operating
- It would save money
- It would fit very well into the curriculum, so the time taken to run it and follow it up would not be time lost from regular schooling
- It would have the support of the wider community
- Most important of all, it would have the support of the students, who are the most important stakeholders in any school

Most respondents are also optimistic about the possibility of its having a positive effect amongst parents and the general community.

At the level of detail, there is a wide range of attitudes to the proposed project, with many reservations of many sorts expressed. But it cannot be too strongly emphasized that the basic suggestion has met with great enthusiasm from teachers and governors alike.

The main recommendations that follow from the interviews conducted are that:

- As far as possible, students should actually do the auditing and save the energy themselves
- At inception there should be explicit targets for energy reduction and cost-saving within a prearranged time-period
- The ongoing project should involve actually changing the fabric of the school in a noticeable way, and not just changing behaviour
- The project should be explicitly presented as a response to the challenge of climate change
- HCC should provide expert help with initial auditing (using independent consultants rather than energy company employees), should plan educational materials to accompany the project, and if possible should co-fund any energy-saving improvements to the fabric of the school
- HCC should set up a “Healthy Schools” award scheme for schools on the lines of the “Investors in People” awards

Rolling out the project so that it involved parents auditing their own homes would need to be done with somewhat different emphases in primary and secondary schools. Contact with parents is much closer in primary schools, so there the rollout would happen more directly: parents would have to be involved in the school’s own initial audit. In secondary schools, the students themselves would ideally run much of the project, and any rolling out to homes would have to happen through them.
3. What makes a successful project?

The schools interviewed manage a huge variety of projects, and of course there are limits to any generalizations that can be made. Nevertheless, certain common themes emerge when respondents talk about what works and what doesn’t. At the most abstract level, one could say that a successful project needs energy and structure: on the one hand people striving to bring it to success, and on the other a clear and publicly-known definition of what this success actually will consist of.

Sense of meaning

Any school is full of potential energy, which constantly needs to be managed if it is going to turn into achievement. Especially with younger children, there is a need for structures which can give their activities meaning and can sustain their initial enthusiasm. Of course a project has to be fun, but also it has to have meaning if it is going to endure. It is absolutely essential for successful projects to involve the whole school and ideally the wider community – because that gives the social context which creates meaning. A successful school project is a collective exercise in building a sense of purposeful selfhood:

“It works best when they can see the benefits of the project to the school and the community”
“It’s their school and they need to have ownership of it, realize that every day matters and know that learning is exciting and we are all learning all the time.”
“Projects that work the best are ones that give the students a sense of place and that they are important part of the community. They help the children to have a feeling of belonging to the community and they do feel more part of the area.”

These are all comments from primary schools; the secondary school respondents also emphasize that the project itself needs to be owned and managed as far as possible by the students themselves:

“It has to be relevant to them”
“They tell us what they want and are interested in”
“The school council which the pupils run would look at this. They are involved with the teachers and non-teaching staff to assess what they want in the school, and this motivates them”

In order for a project to have meaning, it needs an objective context. Students need to see what is being achieved, in concrete, measurable, publicly acknowledged ways. As an absolute minimum, there is a need for recognition within the school:

“They are motivated by rewards, they need to see a purpose to what they are doing and what benefits they will achieve. The fact that we recognize what they do well.”
Supported by the students themselves

Secondary school respondents in particular emphasize that a project has to relate to what young people care about and are prepared to devote time to. Ultimately, it’s for them; and immediately, it needs them because they have the time and energy that are the two most precious resources for any communal activity.

Integration within the school’s activities

Time is precious. If an activity sits starkly outside the recognized curriculum, or if it demands a huge investment of teachers’ time, it is harder to justify. It is invaluable if students’ and teachers’ time expended on a project can be accounted as time spent learning within the confines of the curriculum.

“There are constant demands to increase and change the curriculum so it is easier to link projects to the existing curriculum."

“It’s important from teachers’ point of view that projects involve educating the children, that they fall within the school curriculum."

“It’s hard to introduce new approaches to things. It’s hard to embed things into the school as there is a very busy schedule and high standards. Finding time to drive issues is difficult... We have got to prioritise and not to spread ourselves too thinly. If projects fundamentally develop the school it’s easier. If you have a good view of what works and what doesn’t, it’s easier.”

More freedom has been allowed schools in recent years to interpret the curriculum creatively, and thereby more space is opened up for large-scale projects:

“The government has said that we can now drop things and put things we want onto the curriculum if we feel that it would be relevant.”

Structure within the project

Planning is essential from the start. At the strategic level of organization of the project, it’s important to fix timings and responsibilities.

“Basic planning needs to be practically communicated to the people involved, so that they know how and what they need to do. Get the project done in phases which are well planned for so you can see results in each phase of the project”

Most, but by no means all, tie in the need for strategic planning with the need for a single, energetic champion of the project.

Involving parents

There is a distinct divide between primary and secondary schools in the day-to-day level of contact with parents. In primary schools they are often involved in all sorts of activities, and in many cases help to run some of the core functions of the school. Crondall School is a notable example of this, where parents are involved in cooking the school meals, keeping the accounts, and marketing. But at all levels, it is important to have parents involved if a project is to be sustained in the long run. The main way to ensure this is to make sure that their children are motivated in the first
Focused stakeholder interviews: education

place. But parents need to understand for themselves how a project is beneficial to their own children and to the school and community more generally.

**Money as a measure of success**

Everybody needs to know what success consists of. Objective, public outcomes are essential for the project to sustain enthusiasm. And ideally the outcome should be as public as possible – the audience should include the wider community beyond the school perimeter.

Money is objective and public. That is why successful projects often involve fundraising. Everyone can see what the target is, and how close it is to being reached. It creates a clear, simple story with a beginning, middle and end, and widens the size of the audience that give recognition to the students. Fundraising is one of the classic ways of involving the wider community:

“Our ‘Buy a brick’ campaign was supported by BUPA, local pubs, CSA and the general community. There was £18,000 outlay raised by the local community and 2000 local inhabitants to raise these funds for the building and the furniture.”

“Fundraising goes down well generally, we have a big community that can raise funds for the school.”

**Physical improvement as a measure of success**

It is tremendously valuable for a project to have a concrete, physical aspect. For one thing, like a pot of money in a fundraising project, a physical improvement is something that everyone can see developing. It is easier for the wider community to have a sense of the overall shape of the project when there is a physical element to it. And often, of course, fundraising is undertaken in aid of a physical improvement to the school:

“We got a great response to this. There was a definite improvement to work for and this motivated the locals.”

“If there is a physical aspect this is more motivating for the parents as they can see it.”

“Absolutely - we have covered the quadrangle and the children have raised £18,000 towards this. We have great fundraisers.”

It also motivates the students, especially boys:

“It can give the children work experience. The children got involved with renovating a classroom. They interviewed the caretaker and determined how to do it properly and decorated under his advice.”

“Motivating boys is difficult, they need to get more stimulus, more touchy feely things. To see the end product and the physical purpose of things motivates them”
4. Responses to the suggested project

The central purpose of these interviews was to gauge reactions to a potential HCC project for schools. The programme would involve actual energy saving within the school and linked ‘learning for change’ initiatives. The school would get an initial energy audit, which would provide the basis for a plan to reduce energy consumption. The original energy audit would also provide a baseline for future measurement of energy saving.

With one partial exception – Mr Bishop, who as a finance manager expresses great interest in the energy-saving but doesn’t see any wider educational relevance – the proposal was received very enthusiastically. It is universally regarded by teachers and governors as a very promising idea. Described by some as “wicked”, “brilliant” and “marvellous”, it also gets some detailed and nuanced praise. These comments come from a secondary teacher:

“This is excellent, this will work provided there is good information available to schools. This would appeal to sponsors and there is a huge target audience who could get involved. If it is well planned and delivered this is a project that we could get sponsorship for...

“This could fit into the school as it integrates with inequality, conservation and energy use which are all areas we are looking at in our curriculum at the moment.”

These from a primary teacher:

“I’m all in favour, as we are very conscious of the changes we need to make to the environment. We need to get the children aware and to change their lifestyles to maintain our planet as a sustainable place to live...It would work in a logical manner and we would take it on board comfortably. This would integrate with conserving water and plants and would integrate with our curriculum.”

In short, the suggestion hits the spot. It would be redundant to show how the concept captures every single characteristic of a successful project as outlined above. It’s more useful to consider how best to develop the concept in the light of what teachers and governors had to say about actual projects and this possible new project. There are plenty of interesting recommendations as to how such a concept can best be realized.

Although the suggestion that was put to them is not explicit on the subject, nearly all of the teachers and governors assume that a fundamental part of the project would involve quite major structural improvements to the school – new boilers, new heating systems, new insulation or cladding, etc.

Many of them remark that it would be very worthwhile to tie together physical improvements with teaching about climate change. At the moment, many schools are trying to inculcate ideas about responsible energy use in buildings with uncomfortably hot interiors, or in one case with toilets that flush with hot water! So what the school says is at odds with what the school building shows. This is a very important problem felt by many teachers; any gap of this sort makes them look hypocritical and is bound to weaken the school. One of the strongest points of appeal of this project is that it would enable schools to practise what they preach.
5. **Balance of money and meaning**

After commenting on how beneficial the project would be to the school in general terms, respondents then go on to mention money. The money-saving aspect is seen as very attractive, and especially important as a hook to get the project embedded in the school in the first place. But the educational aspect of the project is unquestionably seen as more important.

For such a programme to work effectively, the money-saving and the educational aspects will need to be very carefully integrated. On the one hand, a proper, painstaking and objective audit is vital; in every sense this will be what gets the whole project going, in that it will give a surety of money-saving and will at the same time provide a quantitative structure for the project. On the other hand, this must always be an educational project that is actually owned by the students:

“As long as health and safety is adhered to the children should be involved with the actual audit. The audit would need to be child-friendly so the pupils could get involved in it.”

A quick once-over from an expert independent consultant would not be the best way to fire the enthusiasm of the school.

Respondents are excited by the dual aspect of the project. It should lead on the money aspect when first submitted to the governors, and to the parents – money-saving is thought by most respondents to be the best way to get parents interested. But to its core stakeholders the project needs to be explicitly shaped from the beginning as a communal response to climate change:

“Climate change is an important message to get across, it’s got to be more than energy savings. Energy savings have been done quite a lot and climate change is topical and would motivate pupils better than energy savings would.”

“Youngsters are very interested and this would fit into the citizenship area and this could easily be covered. Climate change is very high profile and youngsters are very clued up and aware of it. This is an issue that would motivate the children.”

One head teacher points out that climate change is also a good issue to involve parents with as it’s topical without being divisive:

“People don’t attach blame with climate change”

This ties in with another head teacher’s remark about basing projects around a topical issue:

“This can appeal to the community and everyone wants to raise money for this. If it’s an issue that could split the community this could be quite divisive.”

And in the longer term, once the project is up and running, parents will support the project out of concern for the future of their children:

“It is the children’s future that we are dealing with and we are running out of time and you must get involved.”
6. No half measures

Respondents have quite an exact picture of how the project must work. As noted above, the initial audit must be at once accurate and participatory. The money-saving aspect needs to play to certain people at certain times and the climate-change-adaptation aspect needs to play to others at other times.

It is seen as a dual-aspect project, with the two aspects completely interdependent. If it’s going to work, the measurement of savings and the communal educational activity will have to be thoroughly integrated. The project needs to be a major success if it is to work at all: although this was not suggested to any of the respondents, almost all of them take it for granted that:

• expensive physical improvements to the school will be part of the project
• the money will have to be found, at least in part, from the community – even if there are long-term money savings from saving energy, there will always be a lump sum needed up front
• therefore the project will need the wholehearted commitment of the students themselves, because that’s a prerequisite for fundraising

But on the positive side, it has all the hallmarks of a project that would raise funds successfully:

• it addresses a subject that young people are keenly concerned by
• it saves money, at least in the long term
• it has measures of success built into its foundations
• it fits into the curriculum
• it involves physical improvement to the fabric of the school

If a programme is set up by HCC to initiate such projects, the programme will need to provide very good and copious educational materials and plentiful expert help.
Focused stakeholder interviews: education

7. Who should be involved?
At base, the project should be run as far as possible by the students themselves – especially at secondary level. But of course a wide range of others would need to contribute.

At inception, HCC should have supporting educational materials and should help to provide expert help for the energy audit. Also, many respondents want some advice on contractors. Difficulties with contractors are widely cited as a regular problem with projects that involve the fabric of the school, and one interesting suggestion is that local contractors are most reliable as they have their reputation at stake:

“When contractors get involved with us they don’t realize that the budget is not a bottomless pit and that return visits cost money. We would prefer to employ local people to ensure they do a proper job as if they don’t do a proper they lose their reputation and future work. I feel very strongly that local firms doing work within the school can be put under pressure to do better work as the word gets around.”

So a spin-off benefit of this project could be that it would put some money into the local economy.

There is somewhat of a divide over parental involvement between primary and secondary schools. Naturally, when respondents are asked who should get involved they will tend to bring out a pretty exhaustive list – almost all respondents expect head teacher and other teachers, the PTA, the governors and the education authority to be involved. What is interesting is the order in which the list comes out. Roughly speaking, the PTA is one of the first groups that comes to mind for primary respondents and one of the last for secondary. The reasons for this are obvious:

- ties with parents are much closer in primary schools
- in secondary schools, this would be much more of a project run by the students themselves

There is general agreement that the project would see quicker and easier impacts on parent’s energy usage at primary level than at secondary. Also, teachers at the poorer schools, where most of the parents are in housing association accommodation, think that there could only be limited inspiration for parents. They could pick up some of the energy-saving ideas that involve behaviour change, but would not be in a position to try out any major physical improvements.
8. Similar project ideas

Projects of a broadly similar sort were also suggested, but involving water use, waste, and transport. In each case there would be an audit of the school’s activities which would hopefully be a catalyst for parents to address their own behaviour.

These ideas were not rejected, but the energy-based project was received with far more enthusiasm. These are all live issues, which nearly all the schools are addressing in various ways, but it wouldn’t be possible to construct such a powerful project around them. There are all sorts of reasons for this:
- energy usage is more of a financial problem for schools
- transport physically takes children away from each other – it is harder to build a communal activity around the issue
- none of these other areas can be addressed so much by actually doing something, making something new
- none apart - perhaps from water - can be the basis for a project that gives measurable results
- none tie in so intimately with a high-profile issue that young people are interested in and that is central to the curriculum

9. Conclusions

All of the teachers and governors we talked to are extremely keen on the idea. If it is to be piloted, some of the schools involved in this research would be very interested in early uptake of the project.

Most of them had a much more vivid and detailed image of how the project should work than the brief sketch that was outlined to them. In particular, nearly all saw this as something that would involve
- some substantial physical upgrading of the school and therefore some quite hefty upfront expenditure
- thorough participation of students
- thorough integration into the curriculum

In other words, the programme as they interpreted it is bigger, more difficult, and potentially more rewarding than what we suggested to them.
-focused stakeholder interviews: education

10. Summaries of interviews

1 Caroline Carter

Braishfield Primary School is a rural Victorian primary school, with 3 full time teachers, and 1 part time teacher. The school has 94 children aged 4-11. The school covers a broad curriculum and also has a sports coach who covers games, PE and dance.

As head teacher Caroline Carter’s job is to ensure the children’s needs are met and that staff are happy and able to perform their roles. She is also a professional teacher for years 5 and 6.

The school tries to hold different social events in order to reach out to the wider local community. For example, the children sing to the OAPs at their Christmas lunch. Also a local person has turned a field into a meadow and the children help with the development and planting of this meadow. They also have the local farmer and firemen give talks about their jobs. The firemen also show the children their fire truck and give them talks on fire safety. There is a book called the ‘Braishfield Memoirs’, which Braishfield Primary School got involved in. The staff and pupils all got dressed up as a Victorian school and lots of photographs were taken. This was a fund raising exercise and the publishers are making a donation to the school from the proceeds of the sale of the book. This was a highly enjoyable educational exercise that the community and parents all got involved with. Also Hillier nurseries are a local business and who have excellent educational facilities, which the school uses for science, geography, history and environmental work.

The projects that work best are ones that gives the pupils a sense of place and that they are an important part of the community. The staff are motivated if it benefits the children.

The non-teaching staff have been at the school a long time and are very much involved with the children and their work. They enjoy seeing the parents enjoying the children’s development and this makes it more enjoyable for them. Parents who donate money are also a valuable resource and are motivated when they see the precious time given up by the school staff. The Tsunami Appeal is a good example of how a topical event can appeal to the local community. Everyone got involved in raising money for this.

One of the main problems facing the school is the falling birth rate. This means there are fewer children in the locality, which makes it hard for the school to maintain their numbers. Therefore the school has to get involved in a lot of PR to get the community to spread the word about the benefits of the school. Dwindling numbers can lead to the school losing its status within the community and if school numbers plummet quickly and the school could close. As Braishfield Primary School only has an intake of 14 pupils every year they need to ensure that the school’s profile is high. Also they need to improve the Design and Technology shed and have an outdoor classroom built for the reception children who need cover more than the older children.
Caroline Carter would welcome an initiative such as the energy saving project. It would be easy to incorporate these measures into the school curriculum, as the school already focuses on electricity in the science classes, examining how to save energy. The school is informally audited for energy use regularly. Reducing energy consumption would be quite a challenge for them. The school is an old Victorian building with rotting window frames and Hampshire County Council are reluctant to install double glazing due to cost.

The initiative would help make the school curriculum more enjoyable for the children and the staff would be eager to take energy saving on board if financial assistance was given and it was feasible to implement measures. From a practical point of view it would help to run a project where the school committee would have an initiative to turn off lights and close the doors. Caroline Carter would like to see some form of recognition such as a ‘Healthy Schools Award’ for schools who show good energy efficiency. It would help if there were a national energy standard that could be a Magna Carta Charter of energy usage. This could involve showing that Victorian buildings can be energy efficient. There could be an emblem like the “Investor in People” badge, which could be displayed in schools. She would like to get all aspects of the school, like the teachers, the PTA, the governors and Local Education Authority involved, as well as the wider community such as the local fire and police departments.

If the school were to undertake an energy audit, it would be necessary for it to be done by an outside organization not the school staff. The school is too small to take on this work themselves in terms of manpower. They would need someone to run the audit and put together a plan in partnership, possibly with the local council, with support for the school to get signed up to an audit. This would also be dependent on the projected financial savings from energy saving initiatives, feeding directly into the school budget. In terms of drumming ‘energy awareness’ home the school try to work with the community through their electricity-teaching unit, where the children take energy saving measures home.

In order to launch these initiatives, Braishfield Primary School would need Hampshire County Council (HCC) to appoint a manager or person responsible for climate change and co-ordinate initiatives. The main problem facing the school is that they don’t have the time or the amount of staff to take on measures themselves. Also they would need assistance in filling out any application forms for funding these projects, as they have very few staff.
Focused stakeholder interviews: education

2 Brenda Sullivan
As school Governor Brenda Sullivan is responsible for the maintenance and development of the facilities on the premises of Crondall Primary School. She has developed a three-year plan to develop the quadrangle and furnish it. She will be getting the pupils, parents, teachers, and the school council involved in discussions with what is to be done to the school grounds.

In terms of the wider school community they are putting in hedging and fencing in collaboration with Parent Teacher Association (PTA) who have been very active in the funding of the project. Parents have also been involved in funding the building of the new extension and development of an outdoor classroom and play area for nature work through the ‘Buy a Brick’ project. BUPA, local pubs, CSA and the general community supported ‘Buy a Brick’ campaign. There was £18,000 outlay raised by the local community and 2000 local inhabitants to raise these funds for the building and the furniture. The parents also now cook the school meals as we opted out of the Hampshire County Council (HCC) scheme as they were not happy with the standard of the food, and HCC never did anything about it. The school meals have since gone up from 40-50 daily and now are 150 a day. The school now provides better quality home-cooked fresher food produced by local supplier, which is organic where possible.

One of the parents took over the local willow making plant and she gets the children involved in basket making. She has built a living willow arbor around the school to landscape the school grounds. It is the responsibility of the children to manage the willow arbor from day to day, pruning and shaping them. Furthermore Crondall Primary School is getting support from the woodland trust to get children to plant the gardens and to grow organic foods for them to eat at school.

Allowing the children to see the benefits of community projects motivates them and in a similar vein supporting the teachers and helping them feel positive about their jobs motivates them. If the parents see their children benefitting from community projects this will motivate them further. Most of the community projects help give funding for school projects such as ‘Buy a Brick’ in order to develop the school grounds.

The main things on the school agenda are securing the covered roof to the outdoor classroom, hedging to make the school boundaries safer for the children and the development of a nature walk as educational tool and use as recreational facilities. Also as previously mentioned, the quadrangle needs developing in order to cultivate organic plots for the children to tend and develop.

One of the main problems with the maintenance and development of the school grounds is that the contractors they hire assume they have a lot of money to spend and don’t realise that return visits costs the school money. Brenda Sullivan would prefer to employ local people to ensure they do a proper job. However she feels strongly that local firms doing work within the school can be put under pressure to do better work as the word gets around. One way of avoiding these pitfalls is to carry out the project in phases that are well planned for and assess the results in each phase of the project.
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As part of an environmental initiative Crondall Primary School want HCC to donate recycling bins to the school site for paper and cardboard and plastic bottles. It is envisaged that both staff and children will be involved. They are still in the process if obtaining the recycle bins from HCC so no behavioural changes have been noted.

Brenda Sullivan is in favour of any energy saving or energy efficiency initiatives initiated by HCC as she is conscious of the changes that are needed to make to the environment safer. However what would initially motivate the school to get involved would be savings made on energy bills so that more money could be allocated to the school curriculum. In terms of practical measures that could be implemented, thermostats could be installed in classrooms to monitor temperatures and help them to understand how to conserve heat and thus save on heating bills. Also a new boiler would have to be fitted as the present one has forced the school to shut down for half a day as well as draft proofing the building. Brenda believes it would be best to position the initiatives at first as energy saving measures, and to bring in the climate change angle once the project is up and running.

Initiative would have more impetus if the whole school plus the PTA, the Governors, maintenance staff, Local Education Authority and the Parish Council were involved. Publicity could be generated from local and regional press.

In terms of an ‘energy audit’ Brenda believes this is a brilliant idea that would require a competent heating engineer. She would prefer an independent heating and energy consultant who understood the practicalities of heating systems. It is essential that they understand the difficulties of old Victorian buildings, such as Crondall, and the issues involved. If any structural developments were required then the school would need access to grants to help them re-design and re-organise the heating system.

However it may prove difficult to spread out energy saving initiatives to wider school community, as locally people’s homes very are old Victorian houses without cavity walls, and no double-glazing.

The school would need practical and logistical help in implementing any energy saving initiatives. They would need help from HCC, electricity board, heating companies, gas board, water companies etc. She believes that using the school as a pilot project would really motivate the parents and the community who would be very proud to be in this scheme.
3 Megan Robinson

As head teacher of Crondall Primary School Megan Robinson’s principal role involves maintaining the standards of the school’s curriculum as well as managing the school’s budgets and ensuring that it gets value for money from the staff. She is also responsible for health and safety and ensuring that the school meets the school governors’ expectations.

In order to engage Crondall Primary School into the wider school community they regularly invite the local elderly people to come and eat with the children and subsequently get them to talk to the children about the village when they were young. The school also invites locals come to school assemblies and interact with the children through church links.

One method that helps to motivate the pupils is to make them aware that it’s their school and that they need to have ownership of it - as well as realize that every day matters and that learning can be exciting. Important for teachers to know that involvement in projects is necessary for the children’s development. They get parents involved in school projects through the Parent Teacher Association (PTA).

The parents are now involved in cooking the school meals as Crondall Primary School opted out of the Hampshire County Council (HCC) system as they couldn’t get the HCC to get reasonable contracts that fed the children good quality nutritious food. The PTA is seen as a good way of forging good relationships with the parents who in turn help the school in developing the children’s character and learning ability. Other parts of the school community include the Parish Council and the local newspaper, the Farnham Fleet, where information about local events is published.

Currently Megan Robinson is improving the school grounds to make them more useful and accessible in the education process. One of the main hurdles of this project is finding the money to sustain the projects over time. For example it may be that one needs to plant flowerbeds all year round to ensure that they look good all year around. The children and families get older so you have to appeal to the wider community. Projects need to be planned at least twelve months in advance whilst small events need at least a couple of months. Crondall Primary School is not currently involved in any climate change or energy saving initiatives - just involved in school projects such as “Buy a Brick”. This has recently completed with an aim of adding an extension to the school.

The overall aim of getting the school involved in the wider school community is to get the community and local businesses involved in the education of the children, to give the children the support they need and to develop the school resources. This enables the staff to develop the character and education of the children by providing funding, resources, talks, interaction and community links that work to keep the children’s interest and awareness of life’s possibilities.

Megan Robinson would be interested in any of HCC’s proposals through the ESPACE Project, although she has no idea of what specific areas need to be addressed or what initiatives need to be implemented. Also the staff of Crondall Primary School
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needs to be fully briefed and trained and given information and resource packs. Savings on utility bills i.e. water and electricity is a key area Megan would like to tackle, as she believes more money should be allocated to teaching resources. Any energy audits would have to go through the school Governors and if any light bulbs are to be sold to public for more energy efficient ones this would have to go through the PTA. Also cultivating an organic garden would be a good way to encourage and involve the children in environmental initiatives, as well as allowing them to produce their own food to eat.

She believes it would be good to promote proposals as climate change initiatives as it would help to promote citizenship among the children and taking responsibility for the environment. The pupils and the school can feel that they are participating in a plan that will have an effect on global warming. Also the school can get across to the children the various environmental reasons for eating healthy food.

In terms of arguments that can be put forward to parents and other households in the wider school community, HCC need to stress that global environmental issues can be addressed by the local community and also the wider environmental issues will have an impact on the local community. Crondall Primary School would need help from HCC to develop a strategy as to how individuals and schools can impact on the issue of climate change.

Dealing with waste through recycling would be the most successful extra measure as this is a project that is both simple and practical and everyone can get involved. Travel is a more difficult issue to address as Crondall Primary School is located between three villages and most of the children need to be driven to school.
4 Sarah Hamill

Chiltern Primary School is built on two sites with 258 pupils and 9 teachers. Sarah Hamill’s main role is to lead the school and focus on delivering good teaching services and developing the children’s skills. Currently she is managing the amalgamation of the two sites. In order to get the wider school community involved they are ensuring the community are informed regarding the new extension and amalgamation of the two schools onto one site.

The school is involved in fundraising charity events throughout the year. Their selected charity for this year is the ‘McMillan’ nurses appeal and the parents have been informed about this. Students will be motivated by the fact that there is a purpose to what they are doing and what benefits they will achieve. Teachers need support via positive feedback and a sense that their participation will help their professional development. Other parts of the community are kept informed by letters, leaflets and posters. The school also invites them to school events, festivals and church groups. The projects that tend to work best are the ones where the children are motivated, as the parents will come to see what the children have done. The charity fundraising works because the McMillan nurses are local. As they are the school’s selected charity this year it has been very well supported.

The main agenda for the school is that the children have access to up-to-date IT equipment. The main pitfall in this type of programme is the lack of parental support due to lack of understanding. The best way to avoid this type of problem is to review what has been done and consult with everyone as to what are the next steps to be taken.

Sarah Hamill believes that the energy-saving programme is a great idea as the staff and pupils would value the school mores. Also the improvements to the environment would make it a more conducive place to work and study in.

Also the energy audit would lead to a reduction in energy bills. Sarah Hamill herself and the governors have been nagging the Hampshire County Council (HCC) to do something about energy efficiency and this would allow them to save money within the school budget.

To conduct the energy audit they would need someone who knows the field, possibly some sort of energy body. The auditor would need to understand how to secure and save energy, especially in older buildings. School would need to have skilled engineer to do the audit. One suggestion would be a HCC management partner or someone other than the school.

School have looked at double-glazing and cladding the school in order to improve on heat loss. She would like to get HCC, the teachers, specific school departments, the PTA, the governors, the Local Education Authority as well as the wider school community involved in such measures. There could be a problem in extending energy saving measures to people’s house holds in to local community as most of the parents are living in housing association properties. It would be best to explain to parents the purpose of the energy saving project in a clear and concise manner, with structured
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assistance. This should be from experts available to help the parents and children to take the necessary measures to save and conserve energy in their homes.

Travel to school is an area that needs addressing. Due to the new building there is now no car parking space. There will be a lot of problems related to travel as area becomes more congested. Parents may have to think of walking the children to school.
5 Jane Pratt

Chiltern Community School is a primary school with a new building in the process of being built. The school consists of 258 pupils and 9 teachers. As chair of the governor’s curriculum committee Jane Pratt is responsible for training the new governors, as apart from her, they are all new to the job. She ensures that the children get a broad and balanced education and that they are achieving the education goals within the school. She is also on the personnel committee and responsible for recruiting the school staff.

The school has a community warden to develop links with the community and to help the children to attend school. This is an area that they want Basingstoke Borough Council to develop. It is easy to motivate the children in community projects if they are enthusiastic about it and they are able to motivate the teachers if it can incorporate the teaching curriculum, as there is a lot to do and the teachers are all very busy ensuring the children’s needs are met within the curricular time table.

Projects that involve nature work well, as the children can actually learn a lot from this. If a school project helps to improve the school environment or develops the school infrastructure in some way, this would be a good way of motivating people. Also a topical issue such as the Tsunami Appeal proved easy to get people involved, as everyone was moved by the tragedy and wanted to help.

The main thing on the school agenda is to launch environmental projects that will improve the school grounds and make them more attractive. They need to plant trees and do landscaping. This also involves building ponds. The school also needs to do insulation work, as the school can get too hot in summer. They also need to ensure that any external ventilation system installed, fits in with the school buildings. The main pitfalls are the lack of funding. Also if a development is outside the school grounds then they may have problems with vandalism, as the site wouldn’t be secure.

Jane Pratt would welcome the energy project if it benefited the children. It sounds quite exciting provided, there is funding allocated for this project. Above all, the initiatives must be seen to benefit the children’s education.

If they were able to make savings from any energy efficiency measures put in place, the school would see also this as an attractive idea. A benchmark of about 15% reduction in costs would convince the governors to take the initiative on board. The school needs measures that are sustainable and show improvement that can be measured regularly. Also the children being more environmentally aware would be another attractive feature.

It would help to promote any energy efficiency initiatives as climate change initiatives, as the children can get an idea of the bigger picture. Energy-saving matters have already been done, while climate change would motivate more people. The school would need professional advice and funding to install whatever measures the project determined should be put in place. Hampshire County Council (HCC) can do a lot more as school budgets are tight. Also it is costly to make older buildings more energy efficient.
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Parents can be encouraged to participate in any way if they understand that climate change will affect the children’s future. Also if HCC promoted it as part of their child’s learning and development, this would also be a good incentive. Another area the school needs to tackle is water usage. Jane Pratt believes people take water for granted and large quantities of it are wasted.
6 Ann Beresford

Anne Beresford is the head teacher of Bramley primary school, which consists of 340-350 children. Bramley School is a rural school in the north east of Basingstoke. The school consists of two sites. One building was built in 1959 and a new building built in 2001. Anne Beresford’s role is to manage the children’s learning and development. She also manages the staff and ensures they keep up the standards required.

Environmental projects they have been involved include the study of the AWE nuclear power station in Aldermaston. Bramley School also won £1,500 in an environmental competition to enhance a hedge and dig ponds on the school site.

Bramley School has meadowland in the school grounds, which they cultivate. They encourage the parents to get involved planting grass and cultivating the land. The school wants to encourage wildlife through the “Landscape for Schools” project. They look out for government grants and schemes particularly to provide funds to develop the grounds. Also they want to prevent rainwater run-off from their land. Bramley Frith, who are the local National Grid station, get involved with education schemes, particularly with regard to employment and the environment.

They also work in partnership with the local Anvil Theatre and get involved on various theatre and music development projects. Bramley School is also church controlled. The parish priest visits the school and they also hold a Pilgrimage Day where the children read the gospel. All the Hampshire schools participate in this.

In order to motivate the teachers they need to see a purpose and have access to resources so that the children can get involved. Also if they see any positive physical change in the school, this would motivate them. They motivate parents through the PTA and through sport, as they are a football charter school.

In order to get local businesses involved it makes its easier if the parents have a business connection that the school can utilize. They try to get the local community involved by holding fetes and fairs throughout the year. They also invite OAP’s to come and talk to the children and watch their stage productions. Above all Anne Beresford finds that the things that get people motivated most are the things that have a wider effect on the village.

The main things on the school agenda include cutting the expenditure on school transport by utilising a school travel plan scheme. Anne Beresford wants to get people to walk to school to cut down on congestion and pollution. They need to find ways to have the children cycling to school. Bramley School is to receive £5-5,500 from the County Council, whom they are consulting to implement this travel plan. Anne Beresford also wants to enhance the village play areas outside the school, develop an after-school club. The main pitfall is getting enough people to get involved in and supporting these initiatives. Usually it is the same parents who volunteer again and again. They need additional people to get involved with school initiatives.

Bramley School have been looking to install solar panels. The PTA has provided a weather centre for Environmental Studies in order to determine whether solar energy
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is good enough to take on. They also use the weather centre to monitor local and global weather patterns as part of Environmental Studies. They get the parents and governors involved with the county environmental people and AWE. This also helps to raise the children’s awareness. In studying the environment they hope people will become aware of the impacts of chemicals, plastic etc. on their world. Anne Beresford wants to encourage awareness of the issues involved so that people can make informed decisions about the role they can play.

If the energy project is planned carefully Anne Beresford believes this can work well. Bramley School will need carefully planned resources and support. Also the children will identify with this project to benefit their future. The proposals should include both the school and the community. Hopefully this kind of initiative would encourage a more cohesive support element from the local community, who would need to change their environmental practices.

Reducing costs spent on energy bills, as the school doesn’t have sole management of the energy budget. Money saved could be allocated to building indoor sports facilities, as the region where the school is located is experiencing wetter winters.

Car travel is an area that needs to be looked at Bramley School. They need to look at local access to buses. As they are a rural community people need their cars to get around. Cycling is difficult in the local country lanes as the speed limit is 60 miles an hour. They could encourage getting children fit by cycling and walking to school. Managing water is also proving very problematic, as the school needs to conserve more of it and reduce the costs of water usage. Currently they need their old pipes removed and new ones installed.

Bramley School is already doing an energy audit and are look at this carefully as they don’t want overlapping committees or projects. 2-3 yearly plans as to what improvements can be made to their energy consumption.

As well as using the pupils to encourage the parents, Ann Beresford would like to see an outside body helping the school to take energy efficiency measures to the wider school community.

Head teacher, teachers, specific departments, PTA, governors, and the Local Education Authority should get involved. Also the local community such as the parents, local businesses, Hampshire County Council, Brownies and Scouts groups, the Parish Council and Basingstoke and Dean Council.
7 Jill Sandeman

Eggars School is a secondary school with around 700 pupils and 40 teachers. The school building is a 1970’s reclad double glazed building with plastic exterior. As well as being a science teacher Jill Sandeman runs the Eco Centre and co-ordinates the Citizenship programme. As a senior teacher she is also involved in training the teachers assistants.

Eggars School has many community links including the Eco Centre, which they run with the local community. The school invite OAP’s to the school Christmas party and hosts quiz events for the local community and the parents. Learn Direct also use the school premises as a training centre. The school have ‘drug awareness’ projects where they work with various parts of the community and the parents to prevent drug abuse. Eggars School also has links with Pens Place in Petersfield, where the pupils work on environmental projects. The pupils come up with ideas for environmental projects and the council implement them if they feel they are appropriate.

It is easy to motivate the pupils in environmental projects, as they are already interested in the environment. They have the John Eggars award, which is like the Duke of Edinburgh Award, but it’s for the environment and the community are involved with this. The students give the staff feedback as whether they are interested in a project. If the pupils are interested the teachers will go along with what they want as they see the benefit of working with the pupils. Other school staff are expected to get involved in any initiatives within the school and they support each other to get things going.

When the school conducts projects that are of interest they take quality photographs and even get them produced professionally, showing what’s going on and send these to the parents. The head believes in using communication and they have a newsletter that gets circulated. Each child has a planner that they take home and this informs them and their parents as to what’s going on and what the child is doing every day. Eggars School even provides pastoral care if there are bereavements in the families of the children. PR is considered a very important tool and they ensure that there are entries in the newspapers locally every week. They even hold back events being mentioned if there are a lot of things going on in one week to ensure that they have something for a quiet week.

Jill Sandeman explains to the local press the studies and investigations that are being carried out at the Eco Centre. The Wildlife Trust work with Eggars School on the Eco Centre and they get groups of local people coming and working with them on it, instead of clearing wood etc. The Eco Centre covers a whole variety of subjects, not just environmental issues eg. having plant names in English and French etc. The children have made a motor using drainage water as the power source. They also write to Tony Blair to give him ideas for new environmental initiatives. The children have also built a volcano from the soil they dug out to make a very large pond. The volcano has space on its top, which is encased with intelligent plastic that senses heat and light and decides whether to deflect or absorb the sun’s rays. The school has many other similar projects the ECO centre can be used for.

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In order for projects to run smoothly everything needs to be driven by someone. Eggars School have a large management team of 5 individuals who have the time to organize whatever is relevant. If they agree to an idea they get back to us with a proposal to see when they can fit it in. Events that tie in with the school curriculum seem to work. For instance, the music department produces a lot of shows and this gets everyone very motivated and involved as they are enthusiastic about performing for the parents and the local community.

Whether an issue is topical or not Eggars School would still get involved. For example, one of the pupils was in a women’s refuge and had a very hard time. She’s now got a small property and is getting back on her feet. The pupil’s in that class who found out about this decided to support the women’s refuge and collected money and ran assemblies on domestic violence.

They have a summer fair so most fund raising will be for a charity although they host quizzes where part of the money goes towards the school. The issue to fund will motivate us more to get funding for charity.

One of the main things on the school agenda is motivating the boys, which is difficult. They need to see the end product and the purpose of the projects they undertake whether that be curricular or extra-curricular. Eggars School needs funding to get them out and about to see various things so they find motivation by seeing how things work. Jill Sandeman also wants to look at why rural communities break down and would like funding for this. One pitfall of launching community projects is the taking advantage of staff willing to work over and beyond the call of duty, and overstretching our resources. In order to take the burden off the staff the school should acknowledge that the children can be responsible for a lot and giving them their as much as responsibility to take the pressure off the staff.

Through the projects they run at the Eco Centre it is hoped that all the pupils and members of the community will be aware and equipped to face the challenges the world is going to face in the future in relation to climate change, and help to save the planet. Jill Sandeman wants people to realise that ideas come from anywhere and to think outside the norm to find solutions to the problems facing the community. She is looking particularly for the boys to use kinesthetic learning so that they can see the purpose to what they are doing and be more motivated. This will involve the whole school as they are able integrate all subjects into the Eco Centre in some way.

Jill Sandeman is in favour of the Hampshire County Council ESPACE Project on Climate Change, as she believes that young people are the future and the adults need to raise their awareness now and teach them while they are young. So much needs to be done for example they need to produce energy saving within the school, looking at school transport and finding out why the ladies toilets are flushing on hot water. The school would need the details sent to them first then the details and they will consider them and see whether it’s in the best interests for the children.

Energy saving initiatives, such as using wind power as an alternative energy source, and this would help the school to obtain quantifiable information to justify and develop this type cost saving on fuel bills. Although monetary savings are a good motivation to get people involved she believes that it is important to promote climate
change awareness as it gives people the bigger picture and is the bigger issue that the local community need to address.

An energy audit would be welcome, as they need to save on costs. The school needs to be insulated and this would be a prime example of showing the local community the way forward in terms of incorporating ‘energy efficiency’ measures into their own homes. Ideally they would like to get information and support from Hampshire County Council in order to make this programme work. She would like also to get quarterly reports as to how much landfill they had saved. This would motivate people and be a more concrete base to build on.

Another initiative that the school are considering includes having a water recycling plant installed as they need to use water more efficiently and recycle it.
Hurst Community College is a rural secondary school with 1000 pupils and 100 staff. As finance manager Martin Bishop’s role is to administer the budget for the secondary school and the leisure centre that is attached to the college.

The school actively recycle waste. Currently they are getting an external energy consultant to examine their energy systems. They will be looking at gas and electricity consumption. The school will also be looking at the benefits of light motion control systems, as energy price rises have meant that the school needs to reduce costs. This will be managed through more energy efficiency and management of energy costs. It is envisaged that the energy audit will give them options as to what the school can do to improve efficiency with regard to heating controls, gas, electricity and light motion controls, and what measures would be cost effective. They are currently trying to get hold of a consultant that has a relationship approved by Hampshire County Council (HCC). HCC also help and support the school with the recycling project. This involves the children emptying the bins, placing them in new bin liners and taking cardboard and paper to the skip. The Hampshire County Council ESPACE Project on Climate Change is also a good idea as energy is one of the biggest expenditures of the school budget. It is an area of expenditure that they could also save money on. This would allow them to spend more money on teaching within the school. The site manager will need to be involved, as he will need to use and maintain and monitor any new equipment that they utilise as a result of our energy audit.

In terms of more practical measures it would be good to see everyone turning off the lights to reduce our bills all over the school. Martin Bishop is not aware of the BREEAM (Building Research Establishment Environmental Assessment Tool project and doesn’t believe people would necessarily be inclined to follow their proposals. Teachers want to see financial benefits in their budgets before the getting involved in projects like this. Any behavioural changes as a result of energy efficiency measures would be of a technological nature i.e. new heating and electrical systems being installed. Site managing staff would need to be trained to use and run the new systems. They may also need to reinforce the turning-off of lights as an energy saving measure among the pupils and all staff.

HCC have suggested a consultant that the school can use for the audit and to advise them about the best ways to save money on the energy expenditure. Martin Bishop would prefer an independent person that has a relationship with HCC, as their views would be impartial and they would have no axe to grind.

One major quantifiable measure of success would be to have cost saving pay back period written down and agreed upon in order measure of the cost savings within a particular time scale. This would enable Martin Bishop to demonstrate to the staff and school management the actual cost savings over a particular time period.

School transport is also another area where work needs to be done. The problem is the school is rural so most pupils travel by car. School buses already drive pupils under the control of HCC, this could be increased to save on carbon emissions and reduce congestion. Also if someone were to convince the school that solar energy
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is cost effective he would consider this. His knowledge tells him that the initial cost of installation does not provide cost savings over conventional energy sources.
9 Melanie Jay

Hurst Community College is a rural school with 1000 pupils and 100 staff. It has 5 main blocks, with a separate gym and leisure centre attached to the site. On a day-to-day basis Melanie Jay manages the art department, which is also linked to the drama and music departments. She is the Key Stage 3 strategy manager. She also runs the school council and the environmental committee.

Hurst Community School set up an environment committee at Christmas as part of becoming an ‘eco-school’. They also wanted to become more energy efficient. The heating system needs revamping and they need to purchase energy saving lights. The school needs to cover energy saving measures during school assembly and have energy saving classes or seminars. Melanie Jay would also like to see 100% recycling all their paper. The school have already recycles of the plastic and glass bottles.

What would most motivate the pupils is if someone is enthusiastic about the project. The teachers are already passionate about the environment are already interested in taking part. The projects that work best in general are the ones where the children and the teachers can claim ownership of the project and be involved. Also something the school can get enthusiastic about and tie in with the school curriculum, through questionnaires and investigations in the humanities subjects, is also a good incentive.

One of the main environmental initiatives Hurst Community School need to look at is school transport and car journeys taken to school. The school needs to look at it from an environmental point of view, as well as look at impact on the pupils’ health and safety.

They also want to tackle building sculpturing around the grounds using living willow sculptures. This will improve the site and promote art around the school. The school also got involved in a national tree-planting project and the children have planted 90 trees around the school grounds. There haven’t been many pitfalls with these projects as the children are seeing the results quickly enough to keep them motivated. The children are getting the visual stimuli and are enjoying the fruit of their work. Fitting in projects into the school timetable is proving difficult but they will do things at lunchtime or after school if they feel it is worthwhile. Ideally the geography department would take these environmental issues on board as part of citizenship issues and work on the pupils’ public awareness.

The children need to be more environmentally friendly, especially regarding litter. The school has held assemblies where all the children participated in looking at these issues. This has had a positive impact, as the children don’t litter so much. They have become less anti-social and more proactive about their environment. Also the tree seed-planting project has made them more eco-friendly. The children are now starting to participate in projects on their own initiative and are asking about what activities they can do, as they are genuinely interested.

Melanie Jay welcomes the energy project and believes that this will help schools in the area to have access to information, resources and support.
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when they are in primary school with environmental initiatives also bodes well for the future. Hurst Community School are currently looking into energy efficiency such as turning the lights off and setting the temperature of the buildings correctly. Again this would be facilitated through the geography department and people would have to be motivated in an articulate way.

Cost savings achieved through implementing energy efficiency measures would be very beneficial as the school’s senior management team are more likely to take it on board. Any money saving is positive as the school are always needing to allocate funds elsewhere.

In order to get this kind of energy saving programme up and running Hurst Community School would hold tutor groups and assemblies addressing these issues. This would get the kids involved and keep their interest going. It would help to promote programme as a climate change initiative as it would give the pupils the bigger picture. Essentially the head teacher, the teachers, the specific departments, the PTA, the governors and the Local Education Authority would get involved.

The idea of an energy audit seems attractive as finance has already been set aside to invest in energy saving measures to sort out the heating system. She’d want to see outside speakers coming in to assemblies to give talks. This would give the school the bigger picture and motivate them more. Any measures of success would be seen by the savings on utility bills, the switching-off of lights by students and more efficiency with heat.

Children’s travel to school is the one initiative that would also be appropriate for Hurst Community School. They have got a member of staff looking at it now. There are congestion problems in the area and the staff car park is packed. This is a hot topic, as one bus recently hit one of the boys. Also waste recycling is something that the school is organizing and needs to be addressed. In order to motivate the students, the school could have recycling competitions where they recycle all the packaging that they use. Also the school could look into using crockery plates instead of disposable ones.
10 Martin Bentley

Robert May’s is a secondary modern school with 1200 pupils and 70 teachers. The intake is predominantly middle class. They have a main building and separate English and Maths blocks. They also have playing fields that are in the process of being expanded to meet a shortfall in facilities available.

Martin Bentley is the school foundation governor involved with the Odiham consolidated charity, The Robert May’s Trust, who provide some funding for the school. In his school Governorship role, he is chair of the Environment Committee. This means he is responsible for the fabric of the school, dealing with the upkeep of the school and the grounds. This involves the maintenance and development of the school. He also deals with pastoral care and finance matters in the school.

The school’s current projects include developing the new science blocks and lab buildings. Martin Bentley is also in the process of discussing with Hampshire County Council (HCC) the acquiring of additional playing fields, as there is a shortfall in this area. In terms of reaching out to the local area, Robert May’s have a community school hall in the school which serves as the community centre for the village. Both the school and community groups use this. As a special school they are expected to develop contacts with the community and they run adult training courses and plan to provide facilities for parents and to provide tea for OAP’s and include them more in community links.

If the community project can involve educating the children and incorporating the school curriculum, this would be enough of an incentive to motivate the teachers. If a project involves fund raising for the school this would definitely motivate people to get involved in school projects. They would be able see the improvement in the facilities, which could be used by the adults as part of our community links. The PTA is there to organize and motivate the parents to get involved in the school. To enable this it is best to have projects related to the children’s activities. At present it is very difficult to get other parts of the community involved. The school have got a charitable organisation that fund them and help them to contact local businesses that may wish to be associated with a high performing school. These businesses can support the school and help the school to teach the children about the world of work. Robert May’s School also deals with the charity’s trust, who are involved with the school, to assist them to gain special school status.

The main thing on the school agenda is the science building, which is to be upgraded this year. The school is raising funds to upgrade and improve the drama studios and need to raise £100,000 for this purpose. These facilities will also be available for the local community and parents, who already use them. One of the pitfalls of fund raising is that it can be very time consuming. There are a lot of after-school activities on the premises and teachers have to give up their free time for after-school clubs such as drama or art.

Robert May’s School are currently looking at saving energy, and therefore money from the school budget. It is a large school so it’s hard to control the energy usage and
Focused stakeholder interviews: education

conserves energy. This is also affected by the fact that the school opens in the evening for extra curricular activities and adult education classes.

Martin Bentley is looking to involve the school and the community in measures to save money from their large energy budget. This will commence in the next few months and will involve the whole school analysing the energy usage and determining what measures can be put in place to reduce energy usage. In future Martin Bentley hopes to see users turning off lights, closing doors to conserve heat and ensuring energy wastage is reduced when rooms are not in use.

He believes the Hampshire County Council ESPACE Project on Climate Change sounds interesting as not only is it promoting energy efficiency, it is of interest to the pupils. A project like this could fit into the curriculum as they cover some of the related issues in the curriculum already. This would enhance the existing curriculum. A project like this needs extra funding to develop further environmental initiatives but one way of working it into the school environment would be to incorporate it into the current school curriculum.

What would motivate Robert May’s School most of all is if they can save some money on energy bills. This would allow them to have further funds available within the school and would see the teaching budget increase due to the savings. Also if there is a scope to expand the curriculum they could look into reducing the waste within the school. This could be an interesting project for the children.

In order to get some of these environmental initiatives off the ground the school would need good quality resource material to use for teaching, as well as people who could provide specialist knowledge and understanding of the energy efficiency measures. They would need assistance in fitting these initiatives into the school curriculum.

It would be a good idea to promote these measures as climate change initiatives as ‘energy efficiency’ has been covered quite a lot already. Climate change is topical and would motivate people more.

An ‘energy audit’ would be welcome so long as it was conducted under the auspices of the site manager. Also Governors would need to look to see the outcome of the audit to determine what could be implemented as a result of the audit.

Ideally they would want the audit conducted by Hampshire County Council (HCC), whom they would expect to provide the materials for the curriculum. This could also involve an LEA or government education service to assist them in this project.

In order to monitor savings Martin Bentley would like to see benchmark marks for savings put in place from the energy audit, so that they would know how to spend the savings and budget for this. Children’s travel to school needs to be looked at, as there are a lot of pupils bussed into the school, which costs a lot of money. Mr Bentley believes there are savings that can be made in this area. HCC spend a lot of money on the travel budget and if savings were made here, these funds that could be allocated to the education budget.
11 Neil Dewhurst

Nevill Lovett Community School is a comprehensive school with 900 pupils (aged from 11-16) and 55 teachers. The school buildings were built with flat roofs in the 50’s, 60’s and 70’s. The school is open to the general public weekday evenings and weekends. They run adult education seminars and a summer school.

Theatre groups, artists, dance specialists also use the school, for health talks from local people from the Health Trust and Buddhist Community talks. They also hold parties for OAP’s, and have disabled facilities on site. The community users groups who use their premises give the school feedback if it directly affects them, and the school has links with them also.

What most motivates students to get involved in a community project is if the topic is relevant to them and has a purpose. It also helps if there is someone who is enthusiastic to push it forward. The teachers are motivated if they can see that it add to the children’s insight or provides specialist knowledge that is relevant to the curriculum. It’s not so easy to say how parents would be motivated but if they see their children involved this may motivate them.

Neil Dewhurst believes that the projects that benefit the school physically work well, as demonstrated when Nevill Lovett Community School became a special school and they raised £50,000. The response for this project was great and the school received a further 500,000 from the government for raising the money and winning the bid. If a project ties in with the school curriculum this can be a great motivator for the children and staff but he finds that the parents aren’t that interested in the curriculum.

Currently the main thing on the school agenda is a major building scheme that involves a new reception and foyer. One of the main pitfalls of projects like this is that it’s hard to introduce new approaches to things as there is a very busy schedule and high standards are expected. Finding time to drive issues is difficult. In order to avoid pitfalls like this they need to prioritise and not to spread themselves too thinly over several projects.

Nevill Lovett Community School have not been involved in any climate change or energy saving initiatives although Neil Dewhurst would be very supportive of the philosophy behind the Hampshire County Council ESPACE Project on Climate Change. This will be a big issue for the generation they are currently educating. He believes that children are very interested and this would fit into their learning about citizenship and could easily be covered in the school curriculum. This would be a key factor that would convince the school to get involved.

Also reducing costs as part of implementing energy saving measures would be useful as the school has an energy bill in the area of tens and thousands of pounds, so any opportunity to save money is welcome. As the school is planning to build a new reception and foyer area, an investment in energy saving measures in the new building structure would be an area the school could get started in.
Focused stakeholder interviews: education

It would help to promote such an initiative as a climate change issue. Climate change has a very high profile and youngsters are very clued up and aware of it. This is an issue that would motivate the children. Contributing to energy saving would also be a subject that would motivate the children and the staff. The PTA, the governors, the Local Education Authority, the teaching staff and the various school departments including geography, science and technology should all get involved.

Neil Dewhurst would welcome an energy audit but would need an expert, who has a vast with experience with energy auditing and efficiency, to come into the school in to do this. He supports the principle of spreading energy saving measures to the children’s homes. However the family link is greater within primary schools. Nevill Lovett Community School would have greater difficulty in reaching out to the pupils’ parents. In order to engage the parents in these initiatives it would be necessary to stress the savings on fuel bills as a result of being more energy efficient. The school could possibly use itself as an example.

Water conservation is an area they have not looked into this yet. He believes it is measurable, quantifiable and easy to monitor. Travel would make a lot of sense as the school need to encourage people to find environmentally friendly methods of travel. It would also be a good health initiative to encourage pupils to walk to school. However, you need to be careful not to have too many projects for the children.

The overall purpose of his school’s involvement any environmental initiatives would be to affect climate change positively and to show the impact of climate change. Energy conservation and energy efficiency are issues that can be ploughed back into the school and the community.
12 Elisabeth Webb

Nevill Lovett Community School is a comprehensive school with 900 pupils and a sixth form college, and 55 teachers. Elizabeth Webb chairs the board of governors, giving a critical eye where needed and supporting, listening and helping and working in partnership with the senior management team. It’s part of her role to see things differently for the school, as she isn’t there all the time. She can offer a different perspective.

In order to promote closer links with the wider school community they have a Home School Association to promote involvement with the parents. They also have a hearing impairment unit based in the school and the school is also used as a social services centre, a sports club and an after-school club.

In order to motivate the students in community projects the school council, which the pupils run, would look into this. They are involved with the teaching and non-teaching staff to assess what they want in the school and this motivates them. The teachers are already involved in community projects but are especially motivated if projects benefit the pupils.

It has proved difficult and a big problem trying to reach out to the parents. They do not conduct as many talks in secondary school as they do in primary schools. However they do get involved in questionnaires to gauge their views. They don’t have problems in getting other parts of the community involved with the school. For example, they get young engineers from IBM giving school talks. Also Vospers, the local ship builders, offer apprenticeships to the pupils while they are at school.

As a general rule the community projects that work best are the ones where the children are motivated and have got the staff interested. Nevill Lovett Community School mainly follow what the children want. They also look to projects that will involve the wider school community, that serve to improve the school in some way. For example, they are looking to improve the school alleyways and remove those areas where vandalism occurs. Nevill Lovett Community School is working with Fareham Borough Council with regard to this and the local residents. In order to make progress with such projects, it is best to be involved in as much as dialogue possible with the pupils and the locals.

Currently Nevill Lovett Community School are not involved in any climate change initiatives but would welcome Hampshire County Council ESPACE Project on Climate Change. Elisabeth Webb feels the school ought to be making pupils aware of the effects on the world of climate change. It would also fit into many areas of the school curriculum such as their citizenship classes. For this reason there would be no difficulty in motivating the staff or the pupils.

Any savings on fuel bills would be welcome as the school budget is very tight. If the school got involved, Elizabeth Webb would expect people to become more aware of their environment and get involved with more recycling and turning off lights and they would accept energy saving measures more easily within the school. Ideally she would like to see the school use more renewable energy and the pupils recycling materials at home and for local businesses.
Focused stakeholder interviews: education

She can see climate change being taken on board as it is easy to see its impact from the change in weather patterns and something needs to be done about it. The climate change moniker would make it easier to get people to take the important issues on board and to address sea levels rising and recycling etc.

Ideally it would be good if Hampshire County Council (HCC) did the energy audit. The school council, the teachers, and the pupils working with the wider community could also help to improve the school’s energy consumption. It would also be a good idea to extend energy saving measures to the wider community, as it would be useful to have some initiatives coming directly from the school. It would be easy for the children to persuade their parents to start energy saving at home if the children were passionate about it. Also it would encourage local residents to share their experiences of home energy efficiency and help each other out.

Elisabeth Webb would need to have all the information and resources on hand, as well as support from HCC in order to carry out the initiative doing properly. HCC would need to provide consultants and a list of contractors to give them support and conduct the energy audit. They would also need support from HCC to spoon-feed people to get them to take these issues on board.

As well as working out the savings from fuel bills another measure of success would be to conduct surveys in order to gauge the level of awareness and the practical measures people had taken since the launch of any energy saving initiative. It would be interesting to see the results of this more qualitative type of research to see if it’d tangible and workable.

School transport is an area that Nevill Lovett Community School need to look into. Also Elisabeth Webb also wants look tackle waste, which is an issue for Fareham Borough Council and something both parties could resolve together.
13 Paul Cope

Yately School has 1650 children aged 11-16, and they also have a 6th form centre. Paul Cope is the head of the geography department and coordinates 5 members of staff. He also monitors and develops the geography courses studied by the pupils. Yately is a pilot school for the new geography GCSE OCR pilot project, for thirty year 10 pupils. This is a three-year geography project looking at mountains, the environment and globalisation.

In order to engage pupils in a school project Paul Cope likes to make them fun and enjoyable. For example, in the past his department looked at the worldwide heroin trail. They developed a drug smuggling game to look at the ethics involved. Similarly from an environmental perspective, his department develops games for the children, to help them understand the issues.

Teachers like to get together, devise and share materials, share ideas, and interact with teachers from other schools. If they think it will motivate the pupils and fits in with the curriculum, they find it easier to get motivated.

Yately School keeps in touch with the parents through the children and PTA meetings. If it’s going to benefit their children the parents are more likely to get involved. The PTA has already provided a GPS satellite weather station for use in the school, which will be a great asset to the geography department.

Yately School can engage the wider local community if they produce good quality educational materials which can notify and inform the community. The geography department have access to materials from the Geographical Association conference, which are of excellent quality and can use them to inform the local area.

Projects that tend to work better are the ones that are about people. The school recently mapped hazardous points around the school site and looked at the area outside the school and examined traffic calming measures. They were also successful in stopping a mobile phone mast being installed locally. They look to the pupils’ friends and relatives, and see how they fit into the local geographic studies.

They also look at projects that can improve the school physically. For example, some children got involved with renovating a classroom. The children interviewed the caretaker and determined how to decorate the classroom under his instruction. Also topical issues are a good way of engaging the children. Recently the Yately School Tsunami appeal raised £5000 as the children, parents etc. wanted to help. They also used it as a way to motivate the children to learn about natural disasters.

One of the main things on the school agenda is the geography department’s study of how much land is released for housing development, despite planning restrictions on the flood plains. The Blackwater Valley, in which Yately School is situated, was not properly drained and this has caused even more problems.

The main pitfall of such an initiative is the lack of enthusiasm. This can cause problems as a lot of time and money may be invested but lack of enthusiasm can turn
Focused stakeholder interviews: education

into apathy. One needs funds to make people aware of what’s going on in order to get them involved. If a project is of interest they can fit it into school assemblies or tutor groups.

Paul Cope believes there is a need for projects like the proposed energy project, provided there is good information available to schools. This would appeal to sponsors and there is a huge target audience who could get involved. If it is planned and delivered properly, this is a project that Yately School could get sponsorship for. It would be easy to integrate it into the school curriculum, as issues of conservation and energy efficiency are already covered by the school syllabus.

A reduction in costs would be a good incentive, as each department needs money. If some extra cash is generated this will provide further funding for the school. He would like to see the children being involved with the planning of an energy policy for the school. This could be initiated by sending out information packs with examples of the aspects of climate change that can affect their lives now and in the future.

The head teacher, teaching staff, PTA, governors, Local Education Authority, businesses studies, science and geography departments should all get involved in this initiative.

As long as health and safety was adhered, he would some how like to get the children involved in the energy audit. The audit would need to be child friendly, so the pupils could get involved in it. Extending the project to the wider community could be easily implemented through study groups, looking at weekly projects. The children could easily get involved with projects within their own homes, getting their parents involved, as part of their course work or projects.

Yately School would need good comprehensive information packs with interesting projects for the teachers to involve the children in. They would want interesting projects to get the children involved that are also workable from a health and safety point of view. Ideally he would want the children actually involved with the audits of the schools energy consumption in order that they can claim ownership of the project. This would also be beneficial as the pupils could then explain the savings they had seen in the school to their parents. This would probably help the parents to go forward with measures to save the energy within their homes.

School transport is also an area that needs to be addressed at Yately School. It is an area where there is a lot of money spent and savings could be made. The more they can reduce the costs of the peripheral aspects of school education, the more that can be allocated to the teaching budget.
Appendix H: Focused stakeholder interviews: farming

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Focused stakeholder interviews: farming
1. **Background and Methodology**

In February and March 2005, Rosslyn Research conducted 8 telephone interviews with stakeholders in the rural economy, with the aim of determining attitudes and responses to climate change, and attitudes to possible further programmes aimed to support adaptation or mitigation.

The interviewees were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Industry</th>
<th>Position</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymous_1</td>
<td>Horticulture</td>
<td>Farm manager</td>
<td>Petersfield</td>
</tr>
<tr>
<td>Steve Gallimore</td>
<td>Horticulture</td>
<td>Farm manager</td>
<td>Hungerford</td>
</tr>
<tr>
<td>Chris Mason</td>
<td>Apples</td>
<td>Farmer</td>
<td>Swinmore</td>
</tr>
<tr>
<td>Mike Smales</td>
<td>Dairy, horticulture</td>
<td>Farmer</td>
<td>Landford</td>
</tr>
<tr>
<td>Anonymous_2</td>
<td>Horticulture, poultry</td>
<td>Farmer</td>
<td>Broughton</td>
</tr>
<tr>
<td>Michael Dolbear</td>
<td>Soft fruit, maize</td>
<td>Farmer</td>
<td>Beaulieu</td>
</tr>
<tr>
<td>Tim Brock</td>
<td>Hampshire Fare</td>
<td>Marketing officer</td>
<td>Winchester</td>
</tr>
<tr>
<td>Shon Sprackling</td>
<td>Beef/arable</td>
<td>Farmer</td>
<td>Petersfield</td>
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Interviews covered the following areas:

- Explanation and objectives of study
- Personal involvement in climate change initiatives/ specific groups
- Professional involvement in climate change initiatives
- List of initiatives involved in (personal or professional)
- Climate change impacts on the rural economy
- Biofuels development
- Local food distribution
- Water storage
- Responsibilities of public bodies for developing climate change responses
2. Introduction

The plan was to explore in a general way how attitudes to climate change had affected or might affect farmers’ behaviour, and how any programmes initiated by public bodies might best be put in place.

Two potential areas of interest were identified before the interviewing started:
- Biofuels production
- Enhancing local food distribution networks

The relevance of these two areas to climate change issues is straightforward:
- Biofuels as a replacement for fossil fuels would reduce overall carbon emissions
- Localised food distribution will reduce “food miles” and consequently reduce overall carbon emissions

As is often the case, these mitigation measures can also be seen as adaptation measures, in that they are both adaptations to higher fossil fuel prices. In addition, there is a secondary way in which localised food distribution can be seen as an adaptation measure. Long-distance transportation is sure to be adversely affected by the higher frequency of extreme weather events. So any move towards localising the food economy is an adaptation to worse travelling conditions.

A third area of interest emerged during interviewing in this phase, partly out of area 2 above and partly out of parallel work on education. This was the subject of food in schools, and specifically the idea of sourcing as much as possible from local farms. The last two interviews on the list above deal specifically with an existing project to supply Hampshire schools with locally-reared organic beef. Other farmers raise the issue in the course of talking about working towards a sustainable local economy.

All are ready to participate in any biofuels programme as long as there are clear financial incentives for them. The consensus is that biofuels should have been encouraged much earlier – that successful programmes already in place in Austria and Germany should urgently be studied and imitated.

If it’s simple and there is money in it, of course farmers will be interested. All they require from authorities is the bare bones of guidance when it comes to water-tank digging, and not much more when it comes to trying out new crops to suit new weather conditions.

In addition to the motive of immediate self-interest, most of those interviewed are strongly in favour of any measures that increase local self-sufficiency in food, water and fuel.

The picture is a little more complex when it comes to local food distribution programmes. All farmers are in favour; but it’s seen as a more complex issue with a lower probability of success. Furthermore, although all see the stranglehold of the supermarkets as the dominant problem facing the rural economy, not all see any climate change angle to this issue.
Focused stakeholder interviews: farming

This, though, is actually a strength and not a weakness. There are many strong emotional and financial forces that drive farmers in particular and the population in general towards the idea that food should be grown and consumed locally. There is another way of life that farmers themselves – and, to a lesser extent, the general public too – want to move to. Emotionally, culturally, it is much bigger than a narrow issue of climate change adaptation.

So, on the one hand there are various discrete and easily-achievable improvements, where only a limited amount of support would be needed from HCC or any other public body. On the other hand there is the vast prospect of turning the rural economy around towards local selling and long-term sustainability. And here HCC and other public bodies would have to lead on several fronts at once:

- Reversing the decline in the physical fabric of the rural economy
- Steering consumer demand away from visually perfect produce and towards locally produced food
- Sustaining a politics of local distribution that does not stray into protectionism

All of the farmers interviewed are well aware of the long-term crisis in the rural economy. And most of them see links between the crisis in farming and the fact of anthropogenic climate change. Tantalisingly, many of them feel that the general public is almost on the brink of shopping differently, valuing differently, and acting to regenerate of the countryside. There would of course be consequential climate-change benefits if we moved to a more sustainable food economy; but there are positive aspirations for a better way of life, as well as the fear of climate change, which can help people to make the move. Consumers are felt by farmers to be very close already to major behaviour change. Waving the prospect of climate change like a stick over their heads will probably not be the most effective strategy.

When prompted, farmers will tend to fall in readily behind the idea that breaking the stranglehold of the supermarkets will reduce food miles and therefore will contribute to mitigation of climate change. But this is never going to be a decisive argument for most people. In fact, the most effective way to bring climate change awareness into the equation may be to lead on unpredictability rather than temperature increase. Local distribution networks are more resilient. Maybe this point could be stressed in promotions of local produce; it isn’t just that it’s good to eat local food, it’s good not to have to rely on food from the other side of the world. Greater resilience rather than lower carbon emissions would be a more powerful way of bringing climate change into the promotion of the rural economy – it meets people’s actual concerns and resonates with their already strong feelings for the countryside.
3. Awareness of climate change

Farmers are close to the land and the weather. This direct and constant attention to climate sometimes leads into a passionate involvement with the more abstract and more political notion of anthropogenic climate change. One respondent in particular has been active in Green politics for 15 years. It has been a frustrating experience:

“I stood for elections, I’ve been an agent for others, supported others in standing for elections. But it was futile […]
“I’ve been and done it; I’m disgusted with the process. It’s a taboo subject: people look at you as some kind of freak, spoiling their fun. They just don’t understand, they think you’re a mad hippy”

At the other extreme there are a couple who say they really haven’t given the matter much thought. But largely the attitude is one of cautious concern:

“The information I receive on the news etc. is contradictory… some reports are saying that climate change is a serious issue, others that it’s not. I just don’t know what to think”

“I have a general understanding; whether I fully comprehend the size of the issue is another matter. I just don’t know whether this is a small or a large issue, ‘cause I get some saying one thing and others another.”

Most are sure that the weather is becoming warmer and drier, and are adapting accordingly (new crops and water storage – see next section). This isn’t mainly perceived in straightforwardly negative terms, though one farmer is sure that he’s getting lower yields because of climate change:

“the problem we are definitely facing in terms of climate change is milder winters, which causes earlier springs and earlier flowerings, which in turn causes more frost on the flowers and we’re ending up with a smaller crop… there is absolutely nothing that can be done about that”

Farmers will take whatever’s thrown at them – this is the prevailing attitude. They live with the unpredictability of the weather from season to season and from year to year. And for the most part they are already sure that they are seeing a long-term change in the local climate.

There is a glaring gap, though, in how climate change is conceived. It is simply a matter of higher temperature and less rain, as they think. Hardly any thought is given to the experts’ expectation of greater variation in temperature and rainfall. This gap in awareness needs to be urgently addressed, in the course of offering information about possible new crops. The message has yet to get across that we are heading into a period of greater uncertainty about the climate. At the moment, most Hampshire farmers seem to think more that it’s a matter of exchanging one stable climate for another – moving southern England to central western France, so to speak.
Focused stakeholder interviews: farming

4. Adaptations already undertaken
The adaptations they have made or are making are:

- Water conservation – either storage or new irrigation techniques
- New crops for warmer drier conditions

Other more minor adaptations are being made, all addressing scarcity of water. For example, moving orchards around.

In general, these measures are seen as simple and with little need for outside help. Water tanks are something that most farmers have already implemented; one of them put in a reservoir more than 10 years ago. All who have put in reservoirs think that more people should be doing it. So some information about how simple it is to store water, and how beneficial, would be useful. But basically, a reliable water supply is so crucial to the continuance of a farm that most farmers need little persuading.

Spatial planning is crucially about water – but for the moment it’s each farmer for him or herself, without any perceived need for planning by any public body. More complex water-storage planning isn’t seen as necessary at the moment:

“we are doing it and I know other local farmers who are doing it, it’s a very simple and self-sufficient way of preserving the water, you can do it on your own and it doesn’t cost you anything.”

Several do express the need for some advice and help on trying out new crops. Two kinds of advice are needed: agricultural and climatological:

“More research or assistance would be good if we want a change of crops to correspond to a drier climate. If we wanted to put some grape vines and other crops which prefer a drier climate – some help would be appreciated.”

“We’d need to be absolutely certain that climate change is going to remain consistent, over a 20 – 30 years prognosis [before we would think about trying new crops]”

Comments such as this latter remark suggest quite an important gap in the way that climate change is understood by farmers. Few of the farmers interviewed seem to realise that as well as an expectation of higher average temperatures and lower summer rainfall, there is an expectation of more extreme and unpredictable weather.
5. Biofuels

The consensus attitude is regret that biofuels were not promoted and supported earlier. Germany and Austria are cited as examples to learn from, where long-term support for a biofuels sector has led to a sustainable output.

At present it’s the bigger farmers and those who already grow crops not for human consumption who are developing biofuel production. Maybe some coordination between smaller farmers would be possible and would increase uptake. Maybe as fossil fuel prices continue to rise, it will simply become a rational choice for more and more farmers.

There is certainly a need for more information on the subject – some of those who haven’t explored the possibility just feel that they don’t know enough to consider developing biofuels:

“I don’t know the economics and availability of it to do it myself”

Biofuels have a more than purely economic appeal to farmers. Many of them are personally concerned about reducing carbon emissions. All are strongly eager to develop greater local sustainability. For both these reasons, there is more to biofuels than simply the bottom line:

“My farm might not lend itself to them, but if the plant was big enough, I’d do my bit”

“They are also local produce”

There is a concern across the board that rural life is becoming unsustainable, that a more self-sufficient rural economy needs to be established, and biofuels are widely seen as an important aspect of this:

“Communities need to explore the opportunities of becoming more self-sufficient, providing their own water, power and food.”

But money will always be the determining issue. In the current state of crisis in farming, nothing new is going to be tried out unless it brings in a direct economic benefit:

“Biofuels makes sense, but they’ve got to be cheaper, otherwise farmers can’t afford it. Farmers aren’t asking a lot, but they mustn’t be losing money.”

One additional point, not raised by any of the farmers interviewed, is that biofuels are timber – there is an added climate-change adaptation aspect in that woods will provide some lessening of the effect of storms.
Focused stakeholder interviews: farming

6. Local Distribution - supply

There is consensus that the rural economy is in crisis. Farmers’ relative wealth is declining, the rural population is shrinking, quality of life in the countryside is declining while cost of living rises (especially cost of housing). All the time, the rules of the market are being set to favour more and more capitalisation of agriculture, more mechanization, larger and larger scales of operation. As many of the people interviewed point out, this process is carbon-negative both because of extra unnecessary food miles and because the actual workers in the rural economy have to drive further to get to and from work.

Farmers are united in their criticism of supermarkets. They have captured the food distribution system in the UK and they take the bulk of the retail price. Most of the farmers interviewed see distribution at the centre of what is wrong with the UK rural economy. These remarks from a dairy farmer are characteristic of attitudes overall:

“Most of all we need the hypocrisy of the supermarkets brought to book. In the old days most of the food used to be distributed within 10-15 miles, not any more, you can’t do that, there are no milkmen any more. It’s bizarre that these days the milk is brought for extra miles when there’s milk on the doorstep...
“...The price we are currently being paid for our milk is very low. I’ve been shut out of the market by Tesco ‘cause I can’t bottle my milk in Birmingham.”

Of course, the ultimate driver is consumer demand. Many of the farmers interviewed state quite starkly that the biggest single challenge for the rural economy is to persuade people to value locally produced food.

Most see this being achieved partly by working with supermarkets – the crucial steps that supermarkets could take would be

- to steer consumers away from expecting and demanding visually uniform produce and towards a preference for local food
- to reduce the demand for bulky and complex packaging

But most also want to work outside supermarkets and to establish distribution networks of their own. Most have had some positive involvement with farmers’ markets, and see these as the best method of distribution – so the challenge, as they see it, is to get more people to shop in these already-existing institutions. More radical and capital-intensive structures such as distribution cooperatives are generally viewed with some scepticism:

“We’d have to spread our wings too far out in order to link up into a co-op. Farmers try and do their own thing... We’ve been involved in a farmers’ market, though, and that’s been very important. If it wasn’t for that, we wouldn’t be where we are now.”

Hampshire County Council have successfully initiated farmers’ markets and handed over their administration to a private business. Most farmers feel that HCC, and local authorities in general, should make a long-term commitment to building local food distribution networks. At the national level, they expect DEFRA to champion the rural economy against the supermarkets (some mention a forthcoming review by
Focused stakeholder interviews: farming

DEFRA which they hope will have a major impact); at the regional level, they expect HCC to lobby DEFRA and to continue providing practical support.

No concrete recommendations come through from these interviews; but there is quite a firm consensus that HCC needs not to run farmers’ markets but to support them and to plan strategically to promote local food distribution. Perhaps there are some vague ideas emerging of HCC helping farmers to get in touch with consumers directly:

“*They have the resources, the information, the databases, it’s easiest for them to do it*”

“*HCC should play an enabling role, but not a direct one.*”

From the specific angle of spatial planning, one farmer points out that farmers’ markets are a fragile institution in a damaged rural economy:

“*Local infrastructure is being lost – shops keep closing down, there’s a whole downwards spiral that sends people to the supermarket every time because more and more that is the only option.*”

“*Distribution is a nightmare*”

But that point only reinforces how absolutely crucial it is to foster local distribution. On the supply side, that has been done most successfully in recent years through farmers’ markets; in the longer term, spatial planning on a large scale would play a vital part in helping to make local food available to local consumers – most obviously, by weighting the planning system in favour of smaller independent outlets and away from larger supermarkets.

Neither the rural economy nor the fact of climate change can wait for the whole pattern of retail food distribution in the UK to change radically. For the moment, farmers’ markets are the supply-side support. At the same time, in the immediate term, there is also the issue of fostering demand.
7. Local Distribution – demand

Encouraging people to buy local food is seen to be just as important to the rural economy as any supply-side measures. And HCC is widely seen as very helpful in this respect:

“HCC really are helping to promote local food...They are probably the best council in the country when it comes to rural economy and rural issues, as well as climate change”

It’s taken for granted, and therefore not often explicitly raised in the interviews, that consumers will always tend to favour local food – principally because it’s fresher, but also because it brings a livelihood to local people, it is environmentally friendlier, it feels emotionally or spiritually right at a non-rational level:

“Local food to the local community – it’s not a difficult thing to promote, people are looking for it. It’s provenance, knowing where it comes from.”

So how can HCC or any other body best promote demand? Three things are repeatedly suggested in these interviews:

- Publishing some of the suppressed truth about supermarket food – in particular, forcing the carbon cost of produce to be published on packaging
- Informing consumers about how they can obtain locally-produced food
- Educating consumers about the benefits of locally-produced food

As has been noted already, the strongest case for local food will not directly involve climate change, but will appeal to deeper positive values of natural balance and community solidarity.

It is only through learning about food – where it comes from, how it is produced, who produces it, how it is cooked - that people will come to value fresh, local and unprocessed food. The rational choice tilts in favour of looking for fresh local food when the rational chooser becomes properly informed – sees for example that a ready meal is made up of that animal’s meat, these roots and tubers, these fats, these herbs (and all these alarming extras), or sees that this round and even fruit will be inferior to that one with its blemishes.

Food education, from cooking to farming to geography, could be the catalyst that revives a sustainable rural economy. As one farmer suggests:

“The best thing HCC could do would be to set up a local food centre where children would come on trips from school and they’d be shown the seasonal food cycles and how foods differ from region to region... and school meals could incorporate local food”

This suggestion, in fact, has already been taken up to some extent; in December 2004 Hampshire Fare (arms-length food marketing company set up by HCC but independent of them), HCC and Rother Valley Organics farm set up a contract to supply organic local beef to Hampshire schools.
8. Supply and demand – local food in schools

School meals could be a crucial vehicle for the delivery of sustainable development – they are where Government can intervene simultaneously in both food supply and food demand.

If so much hangs on a successful school-meals policy, then within the spatial-planning remit of the ESPACE project, it would be useful to look at how the physical details of different school catering facilities help or hinder any attempts to use local suppliers. Furthermore, it would be useful to look at how any local-purchasing initiatives might be extended from the school kitchen itself and out into the wider school community. If Government intervention in food supply and demand is to be most effective, it won’t just be a question of raising a new generation with more educated food habits than their parents; it will involve educating the parents through their children.

Any planning recommendations for school kitchens will have to integrate with the Government’s “Building Schools for the Future” programme. At the most ambitious, it might be worth exploring schemes where schools could become distribution centres for local produce going to parents. As a bare minimum, it should be mandatory to design school kitchens which

- are physically equipped to store and prepare local produce
- can be used for food education within the school

For all the current noise being made in favour of food education and better provision of food in schools, there is no evidence that central government intends anything so radical or expensive. The Education Minister, for example, reveals the lower aspirations of central government in a parliamentary debate on 24 Feb 2005:

“It is very important that students are able to study in the ways that motivate them in the places that motivate them. For example, if a student is taking a catering course, it is not right that they just learn about applied catering theory; it is right that they learn how to cook in a kitchen, taught by a chef. That is exactly the sort of course that I would like to see offered and made available to all our students.”

This is a very long way from an aspiration to make every ordinary school kitchen a place where any student can learn some of the basics about the nature of food.
9. **Summaries of Interviews**

1 **Anonymous: A**

Respondent is not involved in or aware of any initiatives relating to the rural economy or climate change. However, he is aware of problems faced by farmers, most notably milder winters, which cause earlier springs and earlier flowerings, which in turn causes more frost on flowers, ending up with lower crop. It seems there is absolutely nothing that can be done about this. As a fruit grower he has had to look to grow other crops as a result of climate change.

Climate change will definitely impact on his business practice and encourage the development of new skills, yet nothing can be done about mitigating the effects of climate change. The biggest long-term problem facing farmers like him is that no one knows exactly how the climate will change.

Development of biofuels such as growing timber as an alternative fuel source would be attractive if seen as financially beneficial— not as an extra cost. Water conservation and irrigation is something that also needs to be looked at.

Due to warmer weather fireblight, which affects apples and pears, is more prevalent. The most urgent short-term measure is to tackle pests and diseases. This would enable more farm products to be sold and the Horticultural Development Council and DEFRA would need to address this.

One of the biggest concerns is that if climate change is making it difficult to produce what is currently required in the quantity needed, this will inflate the prices of products. One way of relating issues in the rural economy to climate change is to point out that in order to meet the supermarkets’ specifications, more chemicals have to be used and fossil fuels burned. This worsens climate change. The five major UK supermarket brands have a stranglehold on the rural economy and dictate what food is produced. More should be done to boost the rural economy and support skilled farmers. Once the skills are lost they will be lost forever.

The National Farmers Union and the Horticultural Development Council should initiate the dissemination of information and DEFRA in partnership with central Government should do more to show how climate change affects the rural economy. He is due to retire in two years, so any consultations with Hampshire County Council will not affect him personally.

Supermarkets could be more ecologically efficient with less packaging and more efficient use of transport.

As a he participates in local farmers markets, he finds that that they can produce a lot more local produce and it is environmentally more efficient as no heavy goods vehicles are used. Also for the customers the product is fresher and there is more empathy with the local producers. Currently DEFRA are doing a study into supermarket practices and are probably the best equipped body to launch any initiatives or put any measures in place with regard to climate change.
2 Steve Gallimore

The seasons are changing so that crops are coming earlier and farmers are experiencing milder winters. However he doesn’t know what he can do about this. In terms of whether his own behaviour can affect climate change, he can only go on what he reads in magazines, but there’s nothing conclusive.

His knowledge of climate change has meant that crop covers that would have been thrown away after 12 months are now used for at least 2 years. As there is more pressure on the economic side the only reason that would convince him to change his business practice would be if it were economically viable.

As a grower of soft fruit and vegetables Steve Gallimore conserves water through ‘trickle irrigation’. This method of irrigation uses a very small hose drip-feed hose, which squirts about a litre and a half of water an hour. This turns out a steady overhead instead of constant heavy water. A lot of farmers in the Hampshire area use this method. The farm he runs can’t afford to conserve rainwater.

Hampshire County Council should promote more energy efficiency in the home and in business, such as recycling waste. He would like to see more done to combat pests during milder winters. Biofuels would also be welcome although there is little information available. The use of biofuels is of particular interest and he believes it could benefit farms, as the use of alternative fuels is a good source of revenue. He would need more time and staff to get him involved in initiatives, and help from Hampshire County Council (HCC).

The problem with the rural economy is the labour market has dwindled meaning there are far fewer farm managers and far fewer people working on farms. Farming costs such as buying and renting land have increased but revenue is very low. It is difficult to point out how state of rural economy is linked to climate change. He believes that the government should initiate any climate change awareness as it relates to the rural economy.

The farm runs its own shop but there are very few farmers doing the same thing in his area. Farmers tend to try and do their own thing, so actual cooperatives would be hard to organise. He himself is involved in the local farmers’ market. This has been very important, as they wouldn’t be where they are now without this revenue.

HCC should encourage getting local produce to consumers as they have the resources. Also dealing with local retailers or with a distribution co-operative, would give farmers an alternative outlet for their goods.
Focused stakeholder interviews: farming

3 Chris Mason

Respondent runs an orchard where he grows apples and makes apple juice. He has had to move orchards due to lower rainfall. Irrigation is in great demand amongst farmers now, as they are experiencing warmer and drier climates.

More research or assistance is needed if farmers are to change crops to correspond to drier climates. For example if farmers wanted to plant grape vines and grow other crops, which flourish in a drier climate, some help would be appreciated. He himself is currently planning to plant grape vines within the next five years because he feels that the climate is getting warmer and drier. Also if research were conducted that showed he could cultivate other crops that previously couldn’t be grown, he would consider this. If he wants to grow grapes he needs the knowledge of people who grow grapes for grape juice rather than wine. He would also need support from the local Business Link, and from HCC, through their Economic Development department.

A study of crops and products more suited for the new climate would be an ideal way of linking rural economy issues with those of climate change.

HCC should provide farmers with some incentives such as a grant aid or similar, to enable or encourage them to explore new product areas or initiatives. For example it’s both economically and environmentally efficient to conserve water, however there would have to be some kind of financial incentive for farmers to do this.

He doesn’t have enough acreage to produce biofuel crops but he would encourage other farmers to do so.

He hasn’t been involved in any climate change initiatives but he has implemented an added value business measure. Instead of selling apples he now makes apple juice, which means that a greater contribution has been made to the local rural economy. He has got support for this new venture from the Hampshire Fare and the local Business Link, as well as Hampshire County Council’s Economic Development department. Part of the aim of this new venture was to increase the purchasing of local food and drink. Consumers need to find local produce a more attractive alternative to supermarkets. What concerns him most about the rural economy is the viability of small-scale business. The many bureaucratic hurdles that need to be crossed are exactly the same as those for a large-scale business. Rural economy needs more help with crossing these barriers.

The issue of food miles taken by large supermarket chains is an environmental issue that needs attention. The amount of miles travelled for supermarket food to get on the shelves is not taken into account. Aside from the fact that supermarkets will pay the same price to a farmer for national deliveries as local deliveries, fuel used to transport this food damages the environment but nobody even knows to what extent. Foods in supermarkets should show their food miles on the packaging.

He has some general understanding of how climate change works but he doesn’t have a great deal of information as to the extent of its impact on the rural economy and the local area. He isn’t sure either as to the importance of climate change in relation to the local economy. What would boost local economy is if HCC helped to encourage
Focused stakeholder interviews: farming

people to buy local food, from independent local shops and businesses. Larger supermarkets should be discouraged from being built in local areas and shutting down small businesses. He would like the impact on smaller business taken into account when HCC considers any planning permission for large supermarkets.

It would be beneficial for local community and rural economy if a local food centre were set up, where children could visit on school trips. They’d be shown the seasonal food cycles and how foods differ from region to region. School meals could also incorporate local food produce.

HCC should play a larger role in enabling local produce being provided to consumers, but not directing distribution. Dealing with local retailers or participating in a distribution co-operative would mean increased sales and multiplied productivity within the local rural economy.
4 Mike Smales
Mike Smales’ farm covers 500 acres on the northern edge of the New Forest. He is aware of environmental initiatives such as water storage and biofuels and has been conserving water for a number of years. This has proved vital in hot and dry summers, as it is impossible to grow vegetables without water.

They grow their vegetables organically but he doesn’t know if this is ecologically efficient as sometimes more fossil fuels end up being used even though pesticides are not being used. It is a duty of Central Government to make farmers aware of how rural economy is linked to climate change. A more definitive explanation on climate change would motivate him to get involved in any initiatives, as he reads conflicting reports on the effects of climate change. He believes he understands some aspects of climate change but whether he fully comprehends the size of the issue is another matter. He just doesn’t know whether this is a relatively small or a large issue due to conflicting reports.

He isn’t sure of which projects to get involved in with regard to climate change – there are so many. In order to adapt to any possible effects of climate change he believes local communities need to become more self-sufficient i.e. providing their own water, power and food. One way of getting involved in an environmentally friendly initiative would be to grow his acres of biomass into a power plant if there was one big enough nearby, but he believes this is unlikely.

Specific programmes need to combat the threat of new pests. Recently a mite from southern Europe has come up on the undercarriages of airplanes and it’s surviving the milder winters. The warmer the climate in the UK, the worse the infestation will get. Although he has been doing it for years more should be looked at water conservation. His farm draws water in December and January and pumps it into a local reservoir.

As chairman if the Hampshire Farmers Market improved sustainability of local rural economy would be an important in convincing him to get involved in initiatives. Hampshire Farmers Market is a privately run business but he believes Hampshire County Council (HCC) should do more to get local produce to consumers. The benefits of dealing with local retailers are that you retain some of your local margin.

The business practices of supermarkets need to be examined. In the old days most of the food used to be distributed within 10-15 miles. Now you can’t do that. It seems bizarre that these days that milk is transported over longer distances when there’s milk available from local farmers.

Currently his farm runs 230 cows. The price he is currently being paid for his milk is very low. Tesco has shut him out of the market, because he can’t bottle his milk in Birmingham.
5 Anonymous: B

Respondent is a producer of vegetables, eggs and fruit. He sells his products in his own shop. He is aware that global warming is now a reality and that reduction in carbon emissions is something that needs to be taken seriously. Specific initiatives he would like to see taking place include home-generated electricity. The technology is there but it’s expensive and planning permission is needed to get it installed. There should be initiatives to install solar panels in new buildings also. These days there are only retro grants available, which are only given to those who have already implemented energy efficient measures. There should be initiatives to install solar panels in new buildings also.

Environmental concerns are close to his heart, as he has been involved in the Green Party for the last 25 years and competed in local elections. He has worked alongside Hampshire North Local authorities also and worked to push through local Agenda 21 which was a drive to change people’s attitudes to environmental issues. Particular attitudes that need to be addressed amongst local community are those of apathy, suspicion, hostility and ignorance.

The use of cars is of concern as carbon emissions are accelerating global warming.

One way issues within the rural economy can be more effectively linked to climate change is to put 5% bio-ethanol into petrol and local farmers could grow it. DEFRA are in a good position to inform farmers of impacts of this initiative on the rural economy and the UN government panel on climate change could help with linking these impacts to climate change.

Unfortunately interest in any environmental issues is perceived as a taboo subject. Also people don’t really understand the interactions of carbon dioxide with the sea and soil. Farmers don’t get the danger of methane.

Initiatives such as ESPACE are too little, too late. What is needed is a large-scale revolution on our approach to environmental topics. There needs to be more climatologists instead of lawyers involved i.e. employ people who know what they’re doing.

The development of biofuels is seen as a very good measure. Once oil production is shut down, an alternative energy source will be needed. We should move away from our dependence on oil as happened in 1973 when oil was scarce and the price of oil went up and people realized that they depended too much on oil. The National Farmers’ Union should get involved as well as DEFRA who could be on hand to offer technical expertise and advice.

He has been involved in the local Framers’ Markets initiated by Hampshire County Council. One of the main benefits of getting local produce to consumers is that food is transported over shorter distances. Also it is easier to trace.
6 Michael Dolbear

Michael Dolbear is not aware of or involved in any initiatives relating to the rural economy and climate change. However in response to his understanding of climate change he now farms maize and sweet corn instead of winter wheat in the hope of getting a better price for these crops. He has no idea what initiatives he would like to see implemented or how they would affect him personally.

Yet he does feel that the rural economy is in decline due to the high costs in producing food but low returns on revenue. Wage levels have not changed significantly since farming in the 1950s. He doesn’t see how the state of the rural economy is linked to climate change issues. Central Government and DEFRA should initiate the dissemination of any information of impact of climate change issues on the rural economy.

However he does believe that the big supermarket chains are one of the biggest polluters and ecologically inefficient in terms of fuel spent on transporting goods and the food packaging used, so they should be directly involved in issues relating to climate change. A financial incentive would encourage Michael to get involved in any climate change initiatives.

Not enough seems to be done in terms of development of biofuels, and this should have been done when quotas first came out. However he does not see how any of the issues raised in the Hampshire County Council ESPACE project could benefit the rural economy.

He is involved in the New Forest Friendly Farming project set up by New Forest Tourism, Hampshire County Council and DEFRA. The benefits of this type of initiative can be seen by the better prices farmers can get on goods they produce and also they can get feedback on how to improve food crops. Also the retailer gets a good idea of where product comes from and how it is grown.
7 Tim Brock

Tim Brock works for Hampshire Fare, the Hampshire County food group. They have 120 members of whom 80 are local food producers. The group provides subsidised training, promotion, management and marketing for all the local food producers. They have also been working with schools, trying to get Hampshire caterers and food distributors to get Hampshire organic beef on the school food menus. Hampshire Fare has managed to contribute £100,000 to the rural economy through this scheme.

He would like more attention drawn to the importance of local food producers. Also he would like to see a reduction in food miles used by supermarkets and use of simple food packaging. It is important to work on the procurement side of schools, farming industry, tourist committees, countryside access groups, primary care trusts, Hampshire County Council, and farmers on projects like this. Hampshire Fare pick set areas where they know there will be funding or distribution co-operatives like this. They also take children out to the farms and make it fun for them so that they can embrace the idea of consuming local organic food and they take genuine interest in how it’s grown.

What concerns him about the rural economy is the fact that there is very little money in farming. Farming is going through a transition period and there is increased pressure to grow the food that the customers want, in the way that the customers want, but the customers are not willing to pay more for it. Climate change issues can be more easily linked to the rural economy by crop changes being undertaken by farmers. For example, due to the longer and warmer dry seasons and there will be a need for more vineyards. It’s up to the Hampshire Fare to initiate the process of informing people of the impact of the changes in rural economy.

Two things are needed: finding an alternative to fossil fuels and buying food produce from local retailers.

Other issues that need to be addressed are pests that are becoming more prevalent due to warmer weather. It makes sense to look at producing biofuels, but costs are too high at present. Some farmers such as wheat farmers need help in getting their products directly to consumers. As they need to make bread from wheat, they would get a better market price if they had a mill and produced their own bread. This would help reduce food miles and fuel used in transporting goods.

Funding is an important issue and Chris Mason estimates that at least £5000 a year would be needed to get some of these initiatives up and running.

Hampshire Fare are already involved in a distribution co-operative at the Hampshire Food Centre. In partnership with Waitrose, who initiated the project, they are involved in product development, distribution and retail. They also promote local food produce through ‘Healthy Food and Farming’ workshops, as well as through school menus.

He believes that the local area would benefit from sustainability and more self-sufficiency through co-operative initiatives. Also it would be good for rural economy to have a variety of producers rather than one large landowner owning a commodity.
Shon Sprackling has been farming organic beef for the last 6 years. He hasn’t heard of any farming initiatives that relate to climate change but he does know that a lot of people are changing crops. For example, more and more people are growing soya and protein crops due to the warmer weather.

Through personal experience he has learnt that using pesticides didn’t work for him, and in the end he had to turn to organic farming. Also he recycles greenhouse waste and turns it into compost. Due to change in farming he now has a healthier livestock and doesn’t have to assist in calving. Farmers should be encouraged to sell their food to the local market as they are competing with cheap organic imports. Selling locally also means farmers reduce food miles. Animals need to have gone for 12hrs without food prior to transportation. This causes the animals a great deal of irritation. Transporting livestock locally means he doesn’t have any of these difficulties.

He sells organic beef to schools. They’ve been selling organic meat for 8 months. Initially there was a problem of selling the front cut of the animal and local schools proved to be the only market. Hampshire Fare were in discussion with Hampshire County Council (HCC) and then put them in contact with him. Together they were able to satisfy Hampshire Fare’s demands and provide them with the volume and a contract was signed in December.

Distribution of local produce needs to be sorted out but he has been able to participate in food events and talk to various people. One main concern of the rural economy is the impact of the cost of housing. This has inadvertently raised property prices. This had led to farmers living in the nearby industrial cities, like Portsmouth, commuting to their farms. This has a direct impact on climate change as more fossil fuels are being burned through miles travelled.

Defra and the Farmers Wildlife Advisory Group should initiate the process of informing people about issues like biodiversity. Hampshire County Council have duty when it comes to the link of rural business to climate change. They are already working hard on issues like this and are being very proactive.

The development of biofuels would be more attractive if they could develop an industry that is sustainable like in Germany. Also water conservation would be beneficial as there would be no need to draw water from the river. More information and training needs to be made available, as he is not aware of how he could see himself being involved.

His farm built a top of the range facility for cutting and processing meat with the view to marketing his own livestock. He aims to buy from local organic producers and pay them more than the supermarkets, subject to meat coming from a native breed. This would then be sold to the local restaurants and local shops with our brand cabinet. He initiated this venture as it made good business sense as well as getting help from Defra and working in partnership in Waitrose.

Above all, if people are buying food locally, they are supporting the local economy and the local environment.
Appendix I: Focused stakeholder interviews: construction

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Focused stakeholder interviews: construction
1. **Background and Methodology**

In March and April 2005, Rosslyn Research conducted 10 telephone interviews with stakeholders in the construction industry, with the aim of determining attitudes and responses to climate change, and specifically responses to a possible programme of awareness-raising through highlighting public liability implications of climate change.

The interviewees were:

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<th>Name</th>
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<td>Professor David Crichton</td>
<td>Chartered Insurance Practitioner</td>
<td>Scotland</td>
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<td>Andrew Diugolecki</td>
<td>Private Consultant (former Director of Aviva)</td>
<td>Scotland</td>
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<td>Neil Henderson</td>
<td>Architect</td>
<td>Chichester</td>
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<td>Noor Awan</td>
<td>Structural Engineer</td>
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<td>Richard Daniels</td>
<td>Construction Engineer Capital Design Team, DFES</td>
<td>London</td>
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<td>Tom Arnold</td>
<td>Quantity Surveyor</td>
<td>Southampton</td>
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<td>Beverly Stanley</td>
<td>Sustainability Officer, HCC</td>
<td>Eastleigh</td>
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<td>Gavin</td>
<td>Builder</td>
<td>Fareham</td>
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<td>Trevor Warwick</td>
<td>Policy Manager, HCC planning department</td>
<td>Andover</td>
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<tr>
<td>Steve White</td>
<td>Quantity Surveyor</td>
<td>Southampton</td>
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Interviews covered the following topics:

- Distribution of liability in construction, particularly as this relates to climate impacts
- Current place of Building Regulations and expectations of their future developments, particularly as these relate to climate change
- Current and predicted drivers of best practice
- General importance of climate change to the construction sector
2. Summary

Building regulations are progressively enforcing lower heat loss, though not as strenuously as in other Northern European countries. Some feel that there is a limit to the effectiveness of energy-reduction regulations because materials manufacturers have too strong a say in the drafting of Building Regulations and their interests lie in keeping lower-cost, less energy-efficient methods and materials in place.

Building regulations have more impact on mitigation issues. Adaptation comes through the planning process – especially there is an expectation that there will be increasingly rigid refusal to allow construction on flood plains. There is some expectation that the existing regulations in Scotland about strength of roofs will be extended to the rest of the UK in response to expected greater frequency of extreme weather.

Major capital-intensive projects, especially PFI projects, are thought to be the area where climate-proof construction will become best entrenched most quickly. But the driver is expected to be the insurance and finance industry, rather than direct regulation. And insurers will be promoting adaptive buildings more for reasons of cost than directly in order to avoid liability.

HCC could go further than the building regulations in encouraging sustainable construction. But it’s widely acknowledged that there is no point in developing a policy unless it’s enforced and known to be enforced; and that the only way to achieve that is to promote it vigorously, thus ensuring that infringements are rare, and to penalize those infringements rigorously. There is a consensus that local authorities can lead by example; that with their huge purchasing power they can make a significant impact on common practice. This is particularly stressed in the case of residential construction, which is less directly regulated under statute.

Overall, respondents are doubtful whether it would be useful to use the danger of liability as a lever to enforce better practice in construction.
3. Climate Change and Construction

The biggest perceived impact of climate change is the increasingly stringent requirement for low heat-loss in new buildings. This properly speaking is an indirect impact: policy-makers concerned by climate change have imposed new regulations on the industry, and it’s the regulations themselves that have the direct impact.

There are also perceived direct effects of climate change: for example, increased danger of flooding, increased likelihood of subsidence, increased frequency of extreme weather. But these do not at present loom as large as the indirect impact through regulation.

The main impact of regulation is the forcible reduction of heat loss. There is general support for this use of regulation; it is seen as an appropriate use of legislation to rig the market in the direction of mitigation. Many would like to see an extension of the carrot-and-stick use of grants and legislation working together:

“All these measures lead to energy saving in the running cost of the building which would reduce the effect of climate change. These factors need to be linked to climate change through legislation as there is no realistic payback period for the investment. People don’t want to spend money unless they have to. There needs to be government funding to encourage people to incur the costs of these energy-saving measures."

Some help from HCC, in the form of information and guidance that could help to sell more capital-intensive energy-reducing construction methods to sceptical clients, would be appreciated:

“We as Quantity Surveyors could have the cost implications made available to us through HCC”

All mitigation measures, such as reduced water use through recycling or use of grey water, are seen in much the same light. There is only so much that market forces will dictate; government is right to rig the market and enforce better standards through regulation; some carrot in the form of grants would help along with the stick of regulation; beyond that there might be some possibility of encouraging good practice through awareness-raising. But further compulsion is the only way to get anywhere significant:

“We can’t go to a client and say ‘you should do this to a higher standard than the government requires’”
4. Liability in Construction

Liability is an openended concept, and as it is actually applied, after things have gone wrong, it is filtered through the question of whether various explicit criteria have been met. In other words, better practice can’t necessarily be achieved through directly raising the issue of possible liability for loss through inadequate weather-proofing. What the courts will deem adequate is always determined by what is in the building regulations.

“I can’t say there would be a significant change if there was more emphasis on liability. The penalties for not meeting criteria are pretty onerous now when things go wrong. We have to comply with new regulations as they are developed.”

“In practice liability is defined through design codes which are robust enough to take extreme events into account’’

All in all, liability is too blunt an instrument to be used directly to enforce better practice:

“Usually the insurer takes the path of least resistance and pays up”

In other words, the fact that liability is admitted in one particular case isn’t by any means taken as a sign to the construction industry that the “liable” party did anything wrong. Only a large number of similar liability decisions could shift the insurance market so as to have any effect on the construction industry. So any positive effects would filter down to the construction industry through a very slow and indirect route.

Many respondents, especially architects and insurers, want to see more stringent regulations in relation to weather-proofing. Protection from water damage is felt to be the most in need of strengthening. There is a spread of opinion as to whether the regulations are yet strong enough with regard to protecting roofs from high winds. Many want and expect the UK-wide regulations to come into line with those currently in place in Scotland; but some think the recent changes mean that regulations are already sufficient for England and Wales.

There is clearly some gap in enforcement of the regulations, which concerns insurers because it hurts them financially:

“The problems come from poor construction, buildings not built to specification by the workers. The work force is not that well motivated. The local authorities are not able to inspect enough. There is a need to inspect before the situation is closed up.”

But there is no concern at all that the current level of regulation is grossly inadequate, or that regulations are flouted systematically.
5. Liability in Development and Planning

Liability is more directly relevant at the strategic level of planning and development than at the tactical level of actual construction:

“If the construction industry follows the rules of construction there is very little chance of them being sued. It is more likely that a local authority will be sued for giving permission for a scheme to be built. The builders will say, ‘We applied for permission, we built to specification, what did we do wrong?’”

Insurers are systematically pressing the government to reform planning law in the light of anthropogenic climate change, especially in the light of increased risks of flooding. In general, the felt need and expected development is in the direction of putting explicit liability on to the planning authority. Scotland is ahead of the rest of the UK in this respect:

“In Scotland the liability is a statutory feature of the Housing Act and local authorities have to liaise with flood liaison advice groups. These groups cover the whole of Scotland, and they have powers within the Housing Act to allow building on flood plains or not. There needs to be a system like this in England and Wales also.”

There is not felt to be a need for the issue of public liability to be disseminated in any kind of awareness-raising programme. Rather, liability needs to be put on a more explicit statutory footing. Insurers are keen for the government to follow the Scottish example with regard to flood risk, or even to follow the Swedish example and make council officers personally liable for building permits that they issue. But this would have to go hand in hand with a simplification of the UK planning system so that a council could not be overridden by central government: no local permit, no possibility of building, no exceptions.

More widely, there is some support for the idea of putting in regulatory requirements for climate-change risk assessments; but it’s felt that the scientific advice would have to be tightened up considerably, that at the moment there is so much imprecision in climate change predictions that any statutory risk assessments would in present circumstances have only limited effectiveness.
6. Conclusions

Liability does not look like an issue around which any information campaign should be built. Although respondents predominantly favour hard measures – tougher regulation, a more explicit statutory basis for liability – there are hints of a possible educational/informational campaign that could have some effect especially in the residential sector. If there was a voluntary best-practice scheme under which builders could show that:

- the existing regulations have been properly understood and implemented by a properly trained workforce
- the regulations have been more than complied with, they have been surpassed
- all of this has been inspected (and the inspection report is accessible in every sense of the word)

then housebuilders would have a powerful marketing tool to use on their own clients, namely housebuyers.
Appendix J: Focused stakeholder interviews: coastal

Contents:

1. Background and methodology ........................................................................................................3
2. Summary ...........................................................................................................................................5
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Focused stakeholder interviews: coastal
1. **Background and methodology**

In February and March 2005 Rosslyn Research conducted 13 telephone interviews with residents around the Manhood peninsula and Hayling Island. These are low-lying coastal areas where rising sea-levels and increasing frequency of storms give an immediacy and urgency to questions of climate change.

The aim of the interviews was to ascertain:

- how residents perceive the challenges raised by climate change in their own locality
- what they think of measures undertaken to respond to rising sea-levels
- personal involvement in planning or consultation
- personal involvement in environmental management
- how they relate concerns about their immediate locality to wider questions of climate change
- how they perceive the efficacy of action and interaction of the many organisations involved, how well these address the competing interests in the area and the different timescales and physical scales
Focused stakeholder interviews: coastal

Those interviewed were:

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anonymous_1</td>
<td>Selsey</td>
</tr>
<tr>
<td>Peter Hogden</td>
<td>Selsey</td>
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<tr>
<td>Robert Hutton</td>
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<td>Jean Fitchew</td>
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<tr>
<td>Louise Chater</td>
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<td>Trevor Tupper</td>
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<tr>
<td>Chris Heasman</td>
<td>Donnington</td>
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<tr>
<td>Julian Cloaky</td>
<td>Hayling Island</td>
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<tr>
<td>David Sheppard</td>
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<tr>
<td>Austin Zachery</td>
<td>Hayling Island</td>
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<tr>
<td>Eric Bamford</td>
<td>Hayling Island</td>
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<tr>
<td>Audrey Atterbury</td>
<td>Hayling Island</td>
</tr>
</tbody>
</table>
2. Summary

All of the respondents from Manhood claimed to be very well informed on the topic of climate change. This was often stated with a note of exasperation: they had participated in a lot of meetings, they personally felt a responsibility to the land, they composted and recycled and tried to minimise their car use. What exasperates many of them is that they feel that the rhetoric of climate change is being used to suppress their local concerns.

This attitude is also present with one of the Hayling Island respondents; he disputes the idea that the sea-level is rising and insists that all of the erosion is caused by human activity, most especially dredging. In general Hayling Island respondents are concerned about dredging; many of them are sure that it is at least in part the cause of recent changes around the island.

Even in this small number of qualitative interviews, some deep divisions emerge. The concept of “climate change” is pulled into various unusual shapes by different respondents. It is hard enough for anyone to think coherently about global climate change whilst relating it to their own particular neighbourhood and their behaviour patterns. But when there is an imminent prospect of the neighbourhood being reshaped or even obliterated by the sea, the general concept tends to get viewed from the perspective of the particular urgent issue.

The local issue is quite simply what to do about the encroaching sea. The official policy is thought to be one of managed retreat, and people’s interpretation of climate change is fundamentally shaped by their attitude to this policy.
There isn’t a simple divide between those who accept the policy and those who reject it. The divide is more between those who believe that there is a coherent rational policy, reached through a proper scientific and economic analysis of the situation, and those who believe that there is no proper planning, and that they are at the mercy of special-interest groups and an indecisive and cost-obsessed central government.

Between Manhood peninsula and Hayling Island many of the concerns are the same; but the emotional intensity is markedly lower on Hayling Island. Hayling Island respondents tend more to see their situation as one where nearby interests (especially the dredging industry and the yachting interests in Chichester Harbour) are overpowerful and some redress is needed. The level of trust in public authorities is higher on Hayling Island, although there is exactly the same general frustration with the vagaries of the planning process and specific grievance against English Nature.

Everyone knows that in the long term the area will be submerged; tectonic movements are sinking the South-East of England and there’s nothing that can be done about that. More immediately, almost all respondents believe that sea levels are rising and are certain to continue rising because of global warming. So no one believes that the area can be protected forever.

The question is: is there now the right level of protection, in terms both of geographical spread and of timescale? And secondarily, is the managed retreat being properly managed? The issue of coastal footpaths is particularly relevant to this second question. This research strongly suggests that if a new policy can be found for the footpaths – a policy of maintaining them whilst the coast erodes – then residents will come to accept the difficult situation in which they find themselves. What is recommended is, in spatial planning terms, a small investment. In terms of adaptation to climate change in this particular area, it could bring huge benefits.
3. Climate change as a global issue

Respondents were asked for their attitudes to a suggested awareness-raising programme on the general topic of climate change. There is a stark divide on this matter. Those who basically accept the policy of managed retreat, and the way in which it is being implemented, are basically in favour of an awareness-raising programme. Those who do not are extremely sceptical. They have lost trust in central government, and feel they have been fobbed off many times before with projects full of ideas but empty of funding:

“We are all aware of what happens if we do nothing. We want to hear what you are going to do to stop flooding locally.

“ESPACE has no democratic mandate and are just another talking shop. We have had many initiatives locally to examine the issues involved and none of them have produced any action and I don’t believe ESPACE will be any different. They will produce a report but the money won’t be spent to implement the suggestion from the report by the government.”

For some respondents, the whole topic of climate change is questionable – there is fundamental doubt about whether there is a rise in sea levels, or that this supposed rise is caused by climate change. For others, there are fundamental doubts about how the global issue of climate change is being used to justify a local planning policy which they oppose. Such attitudes lead people to resist engaging with the general topic of climate change: they insist that they know plenty about the subject, and that the general topic is not of prime concern to them anyway. It is not their issue; it’s something cooked up by outside agencies who do not have their interests at heart. This kind of attitude is found in both areas, and is voiced most Authoritatively by a Hayling Island resident who is himself a marine biologist:

“There simply hasn’t been a 20cm rise in sea levels. Coastal squeeze is propaganda, not science. Climate change has led to a rise in pH of sea water, but not a rise in sea levels.”

The watchword for this group of respondents is the need for a coherent planning process, where scientific research, democratic consultation and funding are all properly integrated. However, it’s easier to call for coherent planning than to describe what coherent planning would consist of. The notions of coherent planning that they put forward are, themselves, incoherent.
Many of the people who live on the Manhood peninsula and Hayling Island are suffering from the effects of climate change – not as severely as many people in other parts of the world, but still they are suffering. This report tries to strike a balance between engaging with their arguments and empathising with their lives. The arguments are sometimes faulty, but it would be inadequate just to rebut them.
4. Local challenges of climate change

Overwhelmingly, the local issue is encroachment of the sea. Nearly all respondents do see this as a climate-change phenomenon. However, one is sure that climate change is a minor factor and that it’s more due to tectonic shift. Others express scepticism about the scale of the problem, though they do accept that it is real.

The consensus, though, is that:

- climate change is causing the sea levels to rise, which is causing greater flood risk
- climate change causes the tides to be higher and rougher
- both of these factors are leading to the shoreline being steadily eroded and eventually the area will be completely submerged
- what is needed is a managed retreat of the populated area to maintain the existing communities in a reasonably safe manner for as long as is feasible

Several local concerns fall within this framework. Most notably there are worries about whether local economic assets and amenities (especially caravan parks, Hayling Billy and East Head harbour) are sufficiently protected, and concerns about the coastal footpaths.

The issue of what is protected, and how well, is seen in either of two ways. Again the divide is between those who broadly accept the idea of managed retreat and those who don’t. The acceptors express the concern that East Head defences are adequate, or that shingle needs to be put down along the west coast of Hayling Island. The rejectors want comprehensive sea defences in the whole area.

Rejectors have little to say on the subject of climate change that does not directly impinge on the question of sea defences.
Focused stakeholder interviews: coastal

Acceptor
tors are concerned by what they see as incoherent planning in the region, which causes congestion and excessive CO$_2$ emissions. There are two sides to this concern: in general, that there is a lack of public transport which forces people to use private cars; and specifically, that new housing developments are built with none of the standard amenities nearby:

*The new developments are all removed from facilities, no public transport, shopping, schools amenities etc. This means that the residents have to travel and use their cars to get to day to day amenities. The nearest shops to the new development are 1·5 miles away. People should walk more but they don’t, this means that CO$_2$ emissions are increased in the area which is over populated anyway."

With one exception, Hayling Island residents feel less concerned about the global issue of climate change; open to learning more, concerned in a general way, and concerned that their local issues are not inaccurately subsumed into a general climate-change discourse.

The generally lower emotional intensity of Hayling Island respondents’ attitudes comes out in the different language they tend to use. Where Manhood residents overall talk in terms of flooding – recent floods, the threat of worse floods to come – Hayling Islanders talk about erosion. They feel that the edges of the island are shifting in a way that worries them, but not that the whole place is in danger of being submerged. Natural defences – shingle beds - are disappearing on the West side of the island, and they generally expect that these will either be physically replaced or that a halt to West-side dredging will solve the problem.

Maintenance of coastal footpaths is a major concern, discussed in a later section. This is an issue with a lot of emotional resonance and high visibility, and the perceived rigidity and clumsiness of the planning process on this issue seems to cause a great deal of unnecessary friction.
5. Sea defences

On the big local issue, as noted above, opinion is starkly divided. The Manhood residents who oppose what is happening – or rather, as they see it, what isn’t happening - naturally have far more to say. They want invisible sea defences – either rock burnms or tyre emplacements (such as exist around Portsmouth). As a bare minimum, they want the recommendations of the consulting engineers Posford Duvivier to be implemented – to modify and strengthen some of the existing sea defences. But, as they see it, every constructive suggestion is

- blocked by English Nature, and/or
- shelved due to lack of funding

The official response is seen by them as at best incompetent and at worst malign. At the most extreme, there is a suspicion that the planning process has been subverted: instead of research being commissioned and a solution being found on the basis of experts’ recommendations, it is felt that the solution has come first – to protect East Head and nothing much else – and the research is then invented to back up this decision:

“most reports are funded by particular bodies or organisations with particular axes to grind. There are very few research projects that give an independent view”

As noted above, similar opinions can be found amongst Hayling Islanders, though expressed with less intensity. Several make a connection between the idea of accepting a managed retreat policy and the idea of getting unbiased research on the effects of dredging:

“If there’s to be retreat there should be a levelling survey of the effects of dredging in this area. There needs to be concise comparable research based on good mathematical models, which is independent and has no axe to grind.”

“Offshore dredging just goes on apace and there’s no one who isn’t a government employee with the mathematical brain to make sense of whatever data there is.”

The general suspicion amongst the rejectors is that there is an unholy alliance between central government, whose motive is to avoid spending money on anything, and certain special-interest groups, who would benefit from allowing the land to become
Focused stakeholder interviews: coastal

unfarmable. Government and lobbyists exaggerate the scale of predicted sea-level rise, and exaggerate the cost of doing anything to prevent erosion and preserve farmland. The biggest culprit is the RSPB, which is seen by two respondents as mounting a positive land-grab. They see this as not only dishonest but also, in the long run, pointless:

“The RSPB are too powerful, they are currently insisting that 1500 acres of land should be inundated from the sea for the use of birds from Selsey to Chichester, at their say so. This is grade one and two land, which is farm land with a large caravan site with a £15 million turnover and this will disappear if the sea inundates this area. The salt marsh will make way for birds, who if the climate is changing will go further north anyway.”

The other culprit is English Nature:

“English Nature have far too much power, they have the last say when it comes to patching the sea bank. It is put to them whether to patch particular parts of the sea bank or not and it’s up to them to say yes or no. They are not accountable to anyone as they are a quango who get Government and European mandates from the Countryside Act and other legislation.”

Many respondents feel that there should be an honest broker to oversee planning decisions; that at the moment the nature conservation bodies and the nearby business interests have stitched them up. Usually the call is for a planning Ombudsman.

6. Coastal footpaths

A coastal footpath is literally a front line. It marks the limits of the human world. It is a source of both pleasure and reassurance: walking along the path, you can enjoy the sea and at the same time patrol it. And as well as a personal limit it is a social tie: you can feel with every step that there is organised human activity maintaining this valuable resource. Where part of the path falls away, there is a lot more lost than a route from A to B. Three other things are in danger of being lost along with the path itself:

- enjoyment of the sea
- trust in the sea
- trust in the authorities

Most of the respondents, even those who are not fundamentally opposed to what is
Focused stakeholder interviews: coastal

going on in the area, want the coastline to be shored up in order to preserve the paths. This may sound like refusal of the inevitable – the paths were defined by the coastline and now they want the coastline to be defined by the paths. But it is wrong to describe this as an absurd refusal of reality. The people affected know that nothing lasts forever, and that nothing can stop the sea in the long term. They simply want to be able to walk by the sea. What is absurd is that this isn’t enforced as their right.

At present the law of the land stays rigid while the coast erodes:

“We have constant footpath erosion. There are a number of landlords on the footpaths who are not allowed to protect the paths by English Nature. When the paths get eroded some of the landlords say ‘you’ll just have to walk along the shoreline’, which can only be done at low tide.”

HCC Coastal Manager confirms that the legal and administrative complexities of negotiating changes to rights of way are so great that HCC along with all other local authorities has a policy of passivity. If a campaigning group such as the Ramblers’ Association puts enough pressure on them to contact landowners in order to renegotiate disappeared pathways, then and only then will they act. It is so expensive and cumbersome in practice to redraw a right of way that HCC regularly resorts to other solutions. On Hayling Island, for example, HCC has been systematically buying up the land to the East of Hayling Billy so that as the historic path disappears into the sea the Council doesn’t have to find itself uncomfortably squeezed between recalcitrant landowners and people who want a coastal path.

English Nature comes in for a lot of criticism on this point. But the criticism is somewhat misdirected. There are very good reasons for not shoring up every bit of coastline; and in the long run, of course, the path should follow the coast and not the other way round. The question is, though, what is the long run? That question goes to the heart of spatial planning.
7. Conclusions

It would be ruinous, and ridiculous, to keep the current coastline in order to keep the current coastal paths. But it would be easy to change the law so that the coastal paths continue while the coastline changes. All that would be needed would be to oblige the landowners to move their boundaries and the local authority to remake the path along its new line. Compensating the landowner for moving a fence would be a tiny cost compared with the cost of propping up a stretch of coastline.

In the long run, as Keynes said, we are all dead. In the short run we have to live as well as we can. And some of the action or inaction on the Manhood peninsula and Hayling Island is not enabling residents to live as well as they might. There is no reason why any stretch of coastal pathway should be unusable for more than a few weeks.

If the path is maintained, trust is maintained. If people see their daily walk, their access to the beautiful but dangerous sea, their surety of a watchful local government, all of it washed away and nothing done, how much can they trust in a programme of partial sea defence and partial abandonment of the land? Those who call for a complete coastal defence that would preserve the current coastline for the next 200 years, and dismiss the policy of managed retreat as a conspiracy, have some right on their side.

What the dissatisfied residents say they want is a planning process that is democratic and scientifically based. But they are talking from a position of mistrust of government and experts, and their call for democracy collapses into a call for local autonomy – the people by this bit of the coast should determine what happens with the coast. Similarly, independent scientific research collapses into research that confirms what they want to hear.
Appendix K: Project Terms of Reference

BEHAVIOURAL RESEARCH

CONSULTANTS BRIEF

INTRODUCTION / BACKGROUND

An important area of work that Hampshire County Council is committed to is the production of a “Climate Change Strategy” (CCS) that will deliver mitigation and adaptation measures. This Climate Change Strategy will be developed as part of Hampshire County Council’s activities as a partner in the ESPACE Project (www.espace-project.org). It will also fulfil our commitment to both the Nottingham Declaration and Carbon Management Programme. Through the development of this strategy a consistent and cohesive approach to mitigation and adaptation will be delivered across Hampshire by providing recommendations on new policies and activities, engaging relevant stakeholders and raising awareness.

Effectively targeted “action” so that Hampshire County Council can address its mitigation and adaptation objectives successfully, while also fulfilling its wider public service responsibilities to the community, is the goal of the CCS. Stakeholder involvement will be key to this and it is likely that appropriate awareness raising will be required. It is our intention to build a strategy that responds to stakeholder needs and which attracts maximum acceptance and approval of its content. However, we do not want to assume that information necessarily leads to raised awareness, nor that raised awareness necessarily leads to action. To this end we wish therefore to:

• understand more about the types and style of information (with respect to climate change issues) we should be sharing with key stakeholder groups (in both directions) and about the best channels and methods for doing this.
• identify the most appropriate and effective methods of stimulating involvement in climate change issues
• identify how we can best influence public and political behaviour to address climate change mitigation and adaptation

The development of an “Stakeholder Involvement Strategy” aimed at engaging relevant stakeholders throughout Hampshire and the region will form the backbone of this work. The aim of the Stakeholder Involvement Strategy is to develop a climate change involvement toolkit that equips Hampshire County Council with the knowledge of how to present information and/or opportunities for action on climate change issues that targets an agreed range of stakeholder groups.

1 The word “groups” refers to the different groups found within the range of relevant stakeholders and includes community groups, public sector decision makers, local businesses, NGOs, Hampshire representatives, Regional representatives, and European Union representatives.
Project Terms of Reference

Hampshire County Council is seeking a competent contractor to undertake a piece of work that will review the current state of knowledge on methods of (for instance) persuasion and influence that can result in positive changes in behaviour with respect to climate change issues at both a political and community level. This piece of work will then go on to give us an understanding of when, where and how we should use our resources to target communication and other actions on climate change issues. The language we should use for different stakeholder groups is also of great importance to us. The end result will be a set of recommendations on how Hampshire County Council should carry out its climate change stakeholder involvement campaign in order to have maximum impact on influencing political and community behaviour.

As the ESPACE Project has a strong transnational component it is important that this piece of work has considerable transnational value. We would like to take all reasonable opportunities to involve ESPACE partners (in Belgium, Germany, the Netherlands and elsewhere in the UK) in this work, for instance by drawing on their expertise and contacts. In addition, we would like to offer them a model process for work on this issue, seeking their feedback on its design where realistic. The actual process of determining the recommendations for Hampshire County Council is therefore as valuable to the ESPACE project as the recommendations themselves.

Case study analysis of relevant stakeholders is a necessary component of this piece of work and will provide essential supporting evidence to support the recommendations that are developed. Consultants submitting proposals for this piece of work are encouraged to recommend relevant case studies (preferably with a climate change theme). However, it is appreciated that until recommendations have been developed, it may be premature to identify particular case studies. In which case, it must be clear within the proposal that the consultant has considered possible outcomes and can demonstrate their ability to effectively conduct relevant case study analysis. It would be beneficial if case studies include a Hampshire or SE England example.
AIMS & OBJECTIVES

The overall aim of this commission is to:

“develop recommendations as to how Hampshire County Council can maximise its influence on organisational, private and political behaviour in response to climate change through awareness-raising and/or other stakeholder involvement activities”

These recommendations should be capable of being used within the Climate Change Strategy. Bearing in mind that this commission must have transnational value to the ESPACE partnership, the objectives of this commission are to:

- Review existing state of knowledge on what influences people to make responsible lifestyle, social and organisational choices
- Review existing state of knowledge on how to help people make such choices responsibly
- Undertake stakeholder analysis to identify relevant stakeholders and their needs within the Hampshire Community, Hampshire local Authorities, South East England Regional level, National government level, and at European level
- Based upon stakeholder analysis, prioritise stakeholders to identify those that should be a particular priority for action, bearing in mind that influencing political behaviour may be as important to this piece of work as behaviour in other areas.
- Develop recommendations on how Hampshire County Council can support people in making responsible lifestyle, social and organisational choices. This will form a major component of Hampshire County Council’s climate change awareness-raising strategy, and will be specific to identified stakeholder groups
- Undertake relevant case studies that can demonstrate the effectiveness of these recommendations (sharing experience with ESPACE partner countries wherever possible)
**SPECIFIC TASKS:**

- Undertake review of existing state of knowledge on what influences people to make responsible lifestyle, organisational and social choices in this context
- Undertake review of existing state of good practice on how best to help people make such choices responsibly
- In conjunction with the client, undertake stakeholder analysis and prioritisation to identify groups that can best help Hampshire County Council achieve its climate change objectives and any that need support from the Council for other reasons.
- Develop innovative and comprehensible recommendations on how Hampshire County Council can encourage specific target stakeholder groups to make responsible lifestyle, organisational, social and/or political choices
- Undertake case study analyses that can be used to support the eventual recommendations
- Produce a concise and comprehensible draft report detailing the above tasks for comment by client
- Produce a final report that contains amendments in response to client’s comments and suggestions in a form suitable for inclusion in the eventual strategy.
- Give a short presentation of findings to selected Hampshire County Council staff

**OUTPUTS:**

- 2 x Bound copies of final report/s
- 1 x Electronic copy of final report/s
- Presentation on the findings of the report/s to selected Hampshire County Council staff

**TIMETABLE**

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<td>Thursday 23 July 2004</td>
<td>Invitations to tender sent out</td>
</tr>
<tr>
<td>by Thursday 12 August 2004</td>
<td>Deadline for tender submission</td>
</tr>
<tr>
<td>Monday 16 August 2004</td>
<td>Consultant debrief (Hampshire County Council Offices, Winchester or as otherwise agreed)</td>
</tr>
<tr>
<td>Tuesday 17 August 2004</td>
<td>Consultant appointed</td>
</tr>
<tr>
<td>by Wednesday 12 January 2005</td>
<td>Deadline for submission of draft report</td>
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<tr>
<td>by Monday 31 January 2005</td>
<td>Deadline for submission of final report</td>
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</table>

2 Any difficulties with this location, perhaps because of holidays, should be flagged at an early stage so that suitable alternative arrangements may be identified
ROLES & RESPONSIBILITIES

The Client - Hampshire County Council

- Briefing
- Overall supervision of the project
- Supervision of the consultant
- Overall financial management / budgetary control

The overall client officer is Hampshire County Council’s Environment Director. The direct contact is:

Doogie Black
ESPACE - Hampshire Project Officer
Environment Department
Hampshire County Council
The Castle
Winchester
SO23 8UD

Tel: 01962 846237
Fax: 01962 846776
E-mail: doogie.black@hants.goc.uk
Website: www.espace-project.org & www.hants.gov.uk

Consultants

- Undertaking all works as indicated in the brief
- Review first drafts of reports before presentation to Hampshire county Council
- Attending and supporting regular project management meetings
- Internal quality control
## Appendix L: Project plan

### Schedule of work agreed

Our work fell into phases as follows:

<table>
<thead>
<tr>
<th>Phases of work &amp; actions in each phase</th>
<th>Key outputs</th>
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<tr>
<td><strong>Phase 1 – Mobilising</strong></td>
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<tr>
<td>- Discussion of detailed work programme with HCC, including agreement on key stakeholder interviews and case studies for Phase 2.</td>
<td>Agreed work plan and timescales</td>
</tr>
<tr>
<td>- Briefing meetings on context of project with representatives of HCC client system – e.g. Chief Officers, members, etc.</td>
<td>Greater understanding of client system needs and perceived constraints – e.g. on what action can be taken by HCC</td>
</tr>
<tr>
<td>- Desk research and consultation to ‘profile’ the county (e.g. nos. within 5 metres of sea level)</td>
<td>Background note for use in later work on agenda for county</td>
</tr>
</tbody>
</table>

| **Phase 2 – Broad Research** | |
| **Understanding the move to responsible action** | Brief summary of research with references. |
| - Undertake literature review of research into the process of moving from ‘unawareness and inaction’ to ‘awareness and meaningful action’ | Summaries of cases suitable for final report. |
| - Undertake critical review of what actually works in moving from ‘unawareness and inaction’ to ‘awareness and meaningful action’ | Short draft on enablers and pathways. This will be used in Phase 3 to prioritise later work. |
| - Develop synthesis of case study and literature review to identify key ‘enablers’ of responsible action and likely ‘pathways’ to them. | |

| **Consultation** | |
| - Carry out around 60 discussions with agreed stakeholders to identify priorities, actions in hand, contacts, expectations of project, etc. | Summary of issues as perceived by stakeholders. Links to later case studies. |
| - Interview ‘experts’ to identify key issues for stakeholder groups in the county and identify best practice examples of how these are being addressed. | Summaries of issues to inform choice of stakeholders in Phase 3 & (in Phase 4) to enable critical engagement with them. |
### Phase 3 – Focusing
- Review and agree ‘enablers’ and ‘pathways’ in move from unawareness/inaction to awareness/action (including network aspects).
- Review/agree key issues for county
- Assessment of state of mobilisation of county
- Agree stakeholder groups and 2\textsuperscript{nd} stage case studies (to provide relevant external perspective on stakeholder studies)

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### Phase 4 – Focused research
- 6 to 8 detailed (multi-perspective) ‘deep’ stakeholder reviews to investigate specific needs, test initial conclusions, review support required, etc.
- 10 to 12 parallel focused case studies, relevant to stakeholder reviews, for investigation of key issues (generic and stakeholder specific)
- \textit{(If required)} Focused literature review into any outstanding issues from earlier research.
- Synthesis of the above to identify process ‘differences that make a difference’ and key issues for HCC and for stakeholders.

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### Phase 5 – Concluding & recommending
- Summary of findings, of conclusions and of recommendations
- Opportunity for feedback from HCC and other stakeholders as agreed
- Final summary of findings, conclusions and recommendations.

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Presentation and review of conclusions with HCC. Focused action plan for Phase 4

Short review of findings with HCC representatives.

Draft report. This will address both generic ‘process’ and the content relevant to HCC.

Final report & presentation to selected HCC officers.
Appendix M: About the authors of this report

The overall Project Team consisted of 4 members as follows:

- From Alexander, Ballard & Associates, David Ballard and Susan Ballard.
- From Rosslyn Research, Joe Seydel, International Research Director and Humphry Smith, Senior Projects Manager.

**Alexander, Ballard and Associates** (ABA) specialises in social and individual responses to the sustainable development agenda. We have particular expertise in network building, systems thinking, individual and social learning, communication, and change strategy.

Our continuing involvement with and influence in the field of social and organisational learning and personal development enables us to reappraise and revision our approach in response to the change and complexity we encounter in client work and more globally. We work within the tradition of action research, a way of working which emphasises stakeholder participation in research projects, cycles of inquiry, action and reflection and the interweaving of theories and practices.

Past and present clients of ABA’s principals, Susan and David Ballard, come from a wide range of sectors and include the UK Department of Environment, Transport & the Regions (DETR), Balfour Beatty PLC, Cable & Wireless PLC, 3i PLC, Belfast City Council, Sheppard Moscow Ltd., The Royal Mail, Balfour Beatty Capital Projects Ltd., The British Antarctic Survey, Rutherford Appleton Laboratory, Oxford University’s Environmental Change Institute, several of the Research Councils (ESRC’s Science and Society Programme, BBSRC, PPARC, EPSRC, and NERC), The Institute of Physics, The Wiltshire Wildlife Trust, The Open University’s Systems Department, the Environment Agency and the New Economics Foundation (NEF).

**Rosslyn Research Limited** has conducted many projects broadly similar and relevant to this, including a number of recent strategic Public Sector Projects for the Driving Standards Agency, the UK Passport Service, Criminal Records Bureau, Manchester University, HM Land Registry FLOWS and ESPACE. Apart from the directly relevant work on the ESPACE project in West Sussex, this included surveys on Environmental Control Issues and in areas liable to frequent flooding.

Rosslyn Research has been involved in generating data for a number of anti-trust cases before the European Commission and directors have appeared as expert witnesses in such cases.

A particular strength of Rosslyn Research is the central planning and coordination of large scale social, consumer and business-to-business research projects and the analysis of complex data. This includes the interpretation of results to produce strategic overviews, the presentation of such data to all levels of management and the recommendation/ development of specific strategies based on a thorough analysis of the data.
About the authors of this report

About the authors of this report

David Ballard
Strategic Change Adviser, Sustainable Development
Alexander, Ballard & Associates

David was the lead consultant on this project and was the main author of the report. David’s strong background in business strategy, his understanding of change at the personal, organisational and social level and his prolonged experience working in the sustainability field gives him a unique command of the issues inherent in developing strategic processes to address climate change.

David’s early experience derived from mainstream roles with the Royal Mail, Esso Europe Inc. and THORN EMI, which he consolidated with an MBA from the London Business School. He worked in senior Finance, Strategy, Project Management, Organisational Development and Marketing roles, where he was responsible for income of £500m per annum.

In 1991 he became Quality and Environment Adviser for THORN UK having become interested in environmental issues through the Chernobyl disaster in April 1986 and as a Friends of the Earth committee member and campaigner. Besides other successes, he was acknowledged to have played a central role in THORN EMI’s gaining national awards for its environmental reports in 1993, 1994 and 1995. He sat for some years on the British Retail Consortium Environment Committee, was a founder member of ICER, the Industry Council for Electronic Equipment Recycling, and produced papers for publication by various parliamentary committees.

On leaving THORN he worked as an Environmental Consultant until 1995 when he was invited to become a Director of Bath Consultancy Group, one of the UK’s most respected organisational learning and strategic change consultancies. During this period he worked with the Round Table for Sustainable Development to produce a 1998 report for the Deputy Prime Minister on the role of reporting on sustainability. He was a Director of the Swindon and Marlborough NHS Trust from 1993 to 1997.

Since 1998, David has devoted his professional life to the challenge of sustainable development, with a particular interest in human responses to issues such as climate change. As a sustainability consultant, he worked for several years for one of the UK’s leading construction companies and for several other companies. This has given him considerable practical experience of working with people as they come to terms with climate change in particular.

He is a Visiting Fellow at the University of Bath, where he teaches on its innovative MSc in Responsibility and Business Practice and where he is completing a doctorate on strategy, change and learning processes for sustainable development.

Working alongside his wife, Susan Ballard, he has undertaken a number of interesting projects on sustainability-related issues. Most notably, he worked with her as Joint Founding Editor of an acclaimed climate change website project at Oxford University.
About the authors of this report

Susan Ballard
Communication and Social Learning Consultant, Sustainability
Alexander, Ballard & Associates

Building on a successful career as a BBC programme maker (three national awards, two in the field of sustainability) and political researcher, Susan helped to launch the consultancy, Alexander Ballard and Associates with a high-profile climate change web project for Oxford University.

The success of this initiative to stimulate a more effective and co-ordinated response to climate change has led to a succession of related strategic projects with clients who include:

- The New Economics Foundation, developing a climate change game.
- The Open University’s Centre for Complexity and Change, researching online initiatives to move citizens from awareness into action on climate change and other global sustainability issues.
- Wiltshire Wildlife Trust, developing communication material to connect biodiversity loss with climate change and energy consumption.

Susan is in a unique position to marry the scientific information she gains through her work at the Natural Environment Research Council, The British Antarctic Survey and The Institute of Animal Health, among others, to systemic processes for behavioural change based on a solid grounding in psychology, learning theory and mass communication. Her command of the climate change issue and range of contacts across all sectors of society is exceptional.

Susan’s interest in social responses to climate change has grown from a long term practice advising senior scientists how to communicate to the public and a now interrupted training in psychotherapy. Alongside her consultancy work she is pursuing doctoral action research which draws on psychological theories about identity, collective will, destructive addictive behaviours and creativity to develop more effective responses to climate change.

Susan was born in Hampshire and lived there for thirty years, where she was a teacher and where she began her journalistic career with the BBC at Radio Solent. She is a member of Southampton University’s Forum for Crisis in the 21st Century.
About the authors of this report

**Joachim E Seydel**  
International Research Director  
**Rosslyn Research Limited**

Joe was born in Germany in 1944 and educated in Berlin and London. He has a Degree in Economics. He has worked in research agencies and industry, both in marketing research, new product development and business development. His last position in industry was as Marketing Development Manager of Unigate Foods.

Joe has worked in Marketing Research for nearly 35 years, and was a founder of Rosslyn Research Limited in 1980. Rosslyn Research is an independent agency specialising in the more complex social, business-to-business, industrial and consumer research, especially on an international basis.

Rosslyn Research has conducted surveys in 170 different countries worldwide in the past three years. Joe has been the director responsible for the worldwide implementation of these projects. He has created new customer research techniques and is currently working on new methods to measure customer loyalty and retention. He travels extensively in Europe, North America and Asia.

Joe is a marketing and market research specialist with experience across many industrial sectors, especially IT and related industries. He has successfully worked with major transnational companies as well as small and medium sized enterprises.

As a skilled focus group moderator and IDI interviewer, Joe works in both German and English. The extensive experience covers a wide variety of industries including IT and healthcare, with respondents ranging from CEOs, directors and senior executives to ‘hands-on’ operatives, and from Senior Medical Practitioners and nursing staff to patients.

Joe has supervised many multi-country qualitative projects, covering as many as 18 countries in a single project. Rosslyn Research has conducted a very large number of qualitative and quantitative surveys covering most countries of the world. Joe is Chairman of AIMRI, the Alliance of International Research Institutes and a frequent speaker at ESOMAR and AIMRI conferences and seminars.

Joe was one of the lead consultants on the West Sussex ESPACE project. He has handled extensive Public Sector work over a number of years.
About the authors of this report

**Humphry Smith**  
Senior Projects Manager.  
**Rosslyn Research Ltd.**

Humphry was born in London in 1966 and has a BA in philosophy from Cambridge University. Prior to working at Rosslyn Research he worked as an analyst in the BBC News Analysis and Research department. He has also worked in Moscow and London as communications director for two investment funds.

Humphry has wide-ranging experience and interests in marketing, commercial and social analysis and research. He was one of the lead consultants on the West Sussex ESPACE project and was the consultant on recent projects relating to Flood Control in the UK. He has recently conducted an extensive research programme on perceptions of high-impact/low-probability risks as part of the transnational FLOWS (“Flood Plain Land Use Optimising Workable Sustainability”) programme.