

Rural Futures Project:

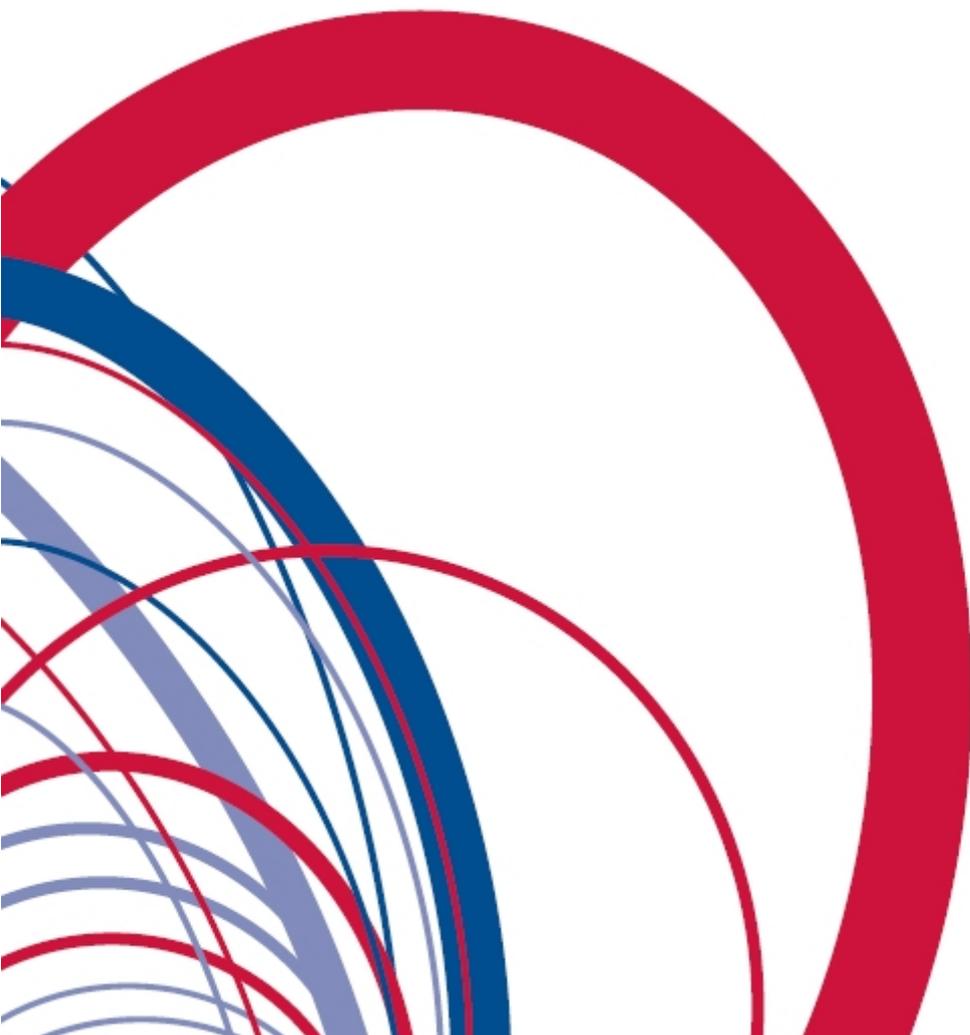
Scenario Creation and
Backcasting

Summary report and
recommendations

Prepared for Defra

Project SD0303

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Executive Summary

Possible rural futures

The project used scenario techniques to create possible futures for rural areas. Three twenty-year scenarios were presented that represented a different balance of types of area within a rural Britain in which different types of rural area develop – from commuter belt to remote peripheral. Four fifty-year scenarios defined alternative social, employment and lifestyle futures that either rural Britain as a whole, or more likely, individual areas, could choose to aim for. All scenarios were consistent and reasonably feasible with appropriate policy mixes introduced in the next few years. They therefore highlight realistic choice possibilities rather than being extreme scenarios with low probabilities of occurring.

The main factors in determining which scenario is a more likely trajectory for the country or a particular area were found to be, first, the balance between a generally protectionist approach and a more laissez faire planning and policy approach, second the degree of conservation and protection of particular groups and traditional occupations within rural areas and third the relative importance given to ecological sustainability or economic dynamism and the balance between visitors and the economic activity of residents in new industries (see diagrams locating the scenarios in section C of the report).

The scenarios for 20 years were 'The Rurbs', 'Consumption Countryside', '21st Century Good Life' and for 50 years were 'Vibrant Variety', 'Garden and Guilds', 'Preserved Heritage' and 'Fortresses and Fences'. Their characteristics are summarised in section C.

Use and extension of these Scenarios

The Scenarios are designed to help policy makers and local communities clarify their objectives for the future and what needs to be done over the next few years to ensure that they are on a trajectory towards a desired and feasible scenario. The Backcasting workshops in Surrey and Newcastle showed that they can be successfully used to help rural communities understand more fully the trajectory they think they could and should be on – and to understand the implications. The process could be extended to the point where stakeholder commitment to policy changes is obtained and it also needs extending to include national policy makers and experts.

For the purposes of actual policy formation, expert views and the perspectives of rural policy-makers need to be applied to the backcasting process (essentially backtracking from desired outcomes to determine what policies are required). It was not possible to do this within the time-frame and resources of this project.

For the purposes of risk analysis and determining possible responses should they occur, policy-makers need to be engaged in an exercise that alters the relatively conservative assumptions on matters such as economic growth or ecological carrying capacity to create more extreme versions of the scenarios. Where these are undesirable contingency plans can be made. Similarly, the effect of various wild

cards – such as alien species – can be tested on the scenarios to see which are altered to an undesirable extent and in which way. Some such wild cards are identified in the 'Blue Skies' report that forms part of this project.

A number of key assumptions/trends have been identified that need to be monitored so that policy-makers can intervene as necessary to try and keep the country or areas on a desired trajectory:

- Changes that will affect the carrying capacity of areas on different trajectories, particularly in relation to land-use, housing, transport and communications technology, health and social services and cultural/social capital. Ecological issues, outside the scope of this project, need to be integrated here.
- Localised housing supply and price issues that are so severe they directly impact on migration of different groups
- Migration flows, looking particularly at young people, families and older people as separate groups, in particular picking up trends that suggest rural areas becoming less relatively attractive for families or older people.
- Economic growth and income distribution trends at a macro level
- Leisure activities and particularly any change in trend between growth in outdoor, active pursuits and home-based activity
- Policy changes by other departments in areas such as planning policy, urban (or rural) regeneration, health and social services provision, location of public bodies etc.

The reverse of the risk analysis will be to find a mechanism for thinking through creatively how, in the context of each scenario, one can enhance outcomes by being less constrained by current stereotypes. For example, describe ways in which older people might be an asset rather than just recipients of services, describe ways of enabling businesses that are driven by social and civic entrepreneurs, or describe ways of describing 21st Century farmers that have more diverse attributes than at present.

Making explicit the balance between policy objectives for the country and for different areas

At no point was a consistent scenario found that simultaneously and fully met all of the 2004 Rural Strategy Objectives. Policy-makers therefore need to define more precisely, at a level below the generalities in the strategy, what balance of objectives is acceptable. Is there a minimum requirement within each objective that has to apply everywhere? To what extent is it acceptable to have a different balance within different areas – and are there any limits to how many areas can go in a particular direction from the viewpoint of the balance in the country overall? The scenarios can be used to clarify this – what balance does each represent? Can they be altered to increase the degree to which they reach a particular objective? If so do they remain internally consistent and feasible given trends? And would they remain desirable to local communities aiming for them?

It is likely that such an approach will clarify the degree of differentiation that policy wishes to enable between different areas. However, more thought is required by policy-makers on whether this should be done in isolation of what is happening in urban areas. This project has shown that the trajectories of many rural places depends on what is happening in nearby urban areas. Would it be better to think of a 'differentiated' Britain in ways that encapsulates urban areas too - particularly as in many rural places the mix of occupations and activities is becoming not dissimilar to that which occurs in many urban areas?

Other substantive issues for rural policy-makers to consider next

A number of other specific issues have emerged for policy-makers to consider at this point:

- The degree of subsidy implied by any trajectory and whether this is likely to be sustainable in the political environment expected over the next 20 years – and to what extent different scenarios and hence trajectories will be affected by a change in political environment or the economic growth necessary to support subsidy.
- The role of innovation and enterprise in diversifying the economic base of rural areas and integrating them into nearby urban and global economies. It is unlikely in any scenario that traditional rural activities will generate economic growth without the multiplier effect of new occupations and/or large subsidy.
- How to maintain the aspects that potentially give rural areas a competitive advantage in attracting visitors, residents and economic activity. Particularly important, apart from infrastructure issues, may be how to ensure that the social and cultural capital associated with rural settlements is maintained as the economic and population base changes.
- Thinking more creatively about what can be positive assets of rural areas – such as older people – and what mix of services and support is necessary to support and develop those assets.

Next steps for Horizon-scanning

This project suggests that a useful future process that is feasible would include:

- Examining the interaction of ecological factors, economic growth and income distribution on the scenarios (see grid in section G.3) and adapting if necessary to ensure that the scenarios are realistic in terms of carrying capacity economically and ecologically.
- Involving technical experts and national policy-makers in a back-casting exercise to determine more precisely what policies are necessary next steps for each trajectory. Particular attention needs to be given to the carrying capacity of communications, transport and housing policy as well as service provision for the population and employment mix that each scenario involves.

- Identifying the different income distribution and social exclusion risks implied by each scenario. Most unease with generally desirable scenarios in the backcasting workshops revolved around concerns about particular groups being economically disadvantaged, socially excluded, or without key services.
- Using the fuller scenarios from the above stages with regional development and planning bodies and with local communities to have a plan for a region that identifies the scenario(s) that are possible and desired and that are consistent with national policy objectives.
- Setting up a system for monitoring the trends that particularly impact on these trajectories – including particularly those identified in paragraphs 2 and 7 above, together with those that the risk analysis in paragraph 6 would identify.

Introduction

The purpose of this report is to summarise the process, outputs, insights, key lessons and recommendations arising from a year-long project conducted by the Future Foundation with the Centre for Rural Economy at Newcastle University on behalf of Defra's Horizon Scanning Programme. The project examined the process of scenario creation and backcasting for a range of alternative future scenarios for England's rural areas in 2024 and 2054 and has been made up of many iterative components and stages to which it is not possible to do justice in the course of a short report - these are fully described in separate reports that are available as appendices to this summary.

Our aim in this section is to provide a concise overview of the main lessons from the project in terms of the process pursued and the insights that are relevant to Defra, especially with respect to its Horizon Scanning activities. The project's Steering Group has indicated that they wish this summary to highlight the lessons arising from the project process that can help inform policy decisions without making actual policy recommendations, although in subsequent drafts, more emphasis has been placed on how the scenarios might be better used to guide policy making. It is worth emphasising that the scenarios had a strongly social focus and that part of their value to policy makers is to ensure that they are used in conjunction with other types of developing knowledge about the future to create an holistic and realistic picture of the future world.

The overall objectives of the project were:

1. To build a 'futures' knowledge base to support a participatory process of scenario building and predictive forecasts
2. To conduct a backcasting process to discuss what policy interventions might be required to make the desired scenarios (or aspects of a scenario) a reality
3. To assimilate the learning into a set of clear insights and strategic recommendations
4. To conduct an appraisal process to assess the success of the scenario-building and backcasting techniques

The activities delivering objectives 1 and 2 have been written up elsewhere, although we revisit these activities in order to draw out key lessons for the project as a whole. This report effectively delivers the 3rd objective. Whilst we have conducted an appraisal process amongst the project team that is reflected in our analysis in this report, there is still a final iteration in the appraisal process - of which seeking reactions to this report and the accompanying material forms a part.

The full project and the first draft of this report has been subject to a full peer review and a re-evaluation by the new head of Horizon Scanning in Defra. As a result, we have added an executive summary and additional sections at the end of the report. These propose an approach to dealing with uncertainties; further ways in which the scenarios and backcasting outputs can be made more useful to policy makers and some potential next steps for Horizon Scanning activities within Defra.

Report structure

The report is divided into sections as follows:

1. General insights arising from the project
2. Brief description of the project process
3. Summary of the scenarios
4. Lessons from the project outputs
5. Lessons from the project process
6. Wider implications for Governance
7. Specific implications for the Horizon Scanning Programme

1. General insights arising from the project

The project is distinctive in two ways: *Firstly* it is the first time, as far as we are aware, that a central government department has specifically employed backcasting techniques as an integral part of futures analysis. This has created specific challenges in terms of defining and implementing a robust backcasting methodology, particularly in the need to select desired outcomes from the range represented by the scenarios. *Secondly*, it is focussed on the social dimensions of rural futures, whereas to date many rural futures studies have been dominated by environmental and ecological dimensions. The scenarios can provide a socially led perspective on rural change which can be integrated with more environmentally-determined views to create a sustainable and holistic vision of the rural future as a basis for policy making. We recommend further steps towards effective integration for the future.

During the course of the project, we have been struck by a number of general points concerning this kind of work, and the benefits of this approach to exploring the range of possible rural futures. More specific insights are covered later. These general insights include the following:

- **The value of interdisciplinary teams in futures work.** The team encompassed a range of academic and commercial skills, rural specialists and futures analysts. The project benefited from combining the deep knowledge and insights of the academic rural sociologists with the more pragmatic, process-orientated skills of commercial consultants. The project was also greatly enhanced by the involvement of designers and illustrators from the Royal College of Art in developing visualisations of the scenarios. In the future, further benefits can be derived from engaging more specifically interdisciplinary teams for Horizon Scanning work, particularly in combining natural and social science skills.
- **The insights available from academic rural sociology.** The planning, implementation and analysis within the project has benefited from the application of a number of key rural sociological concepts. These have provided powerful explanations for current trends in rural community formation and the way in which people, across the spectrum, have responded to the challenge of considering alternative rural futures. These are:
 - **Counter-urbanisation:** this refers to the way in which flows of economic prosperity and social values are spreading through the countryside as a result of the dispersal of population and expansion of commuting from major urban and metropolitan centres. This is impacting on the nature and functioning of an ever-growing number of rural areas in England.
 - **The differentiated countryside:** this describes the degree to which the development of rural England and Wales over the post-war period has resulted in a more diverse and differentiated rural environment. There are marked differences between areas in economic, social and land-use terms, forcing the acceptance that there is no one overarching definition or view of what constitutes the 'countryside' now or in the future.

- ***The power of symbolic 'rurality':*** Society's reaction to the countryside is strongly affected by prevailing concepts of the 'rural idyll'. This is a powerful social construct like 'family' or 'community' and exerts a powerful symbolic and emotional pull, irrespective of whether or not we live in the countryside or have direct contact with it.
- **The influence of rural stereotypes on thinking.** Accepting the view that what is considered 'rural' is socially constructed now and will be in the future, creates an important challenge to received views and both professional and lay assumptions about the countryside that are widespread in society at every level. There are many strong stereotypes about the nature of rural residents and rural life that colour thinking and prevent creative assessments of different parts of the rural community. The tendency for current debates about the future of the countryside to be dominated by the articulation of environmental concerns and more conservationist elements can also mitigate against the development of innovative solutions and approaches.
- **Interest in the rural future has a very wide constituency.** The levels of interest and engagement inspired by the project amongst contributors, participants in the consultative stages and more generally, pays testimony to the fascination of the debate about the future of the countryside across the whole of society, amongst both urban and rural dwellers. This suggests that the constituency for such debates is potentially wider than previously thought and that every member of society, now and in the future, can be seen as a stakeholder in the future of the countryside. Understanding the reality of our individual and collective 'symbolic ruralities' and how these might change creates an important platform for engaging society in the need to create and protect an authentic and accessible countryside for future generations - irrespective of the precise nature of Defra's future role. It also points to an opportunity for engaging citizen-consumers in the development of more sustainable solutions.
- **Rural perspectives need to be brought into mainstream policy making.** This wider interest than previously narrow definitions of rural constituencies would suggest, also chimes with our view that the project demonstrates the benefits of integrating the rural perspective into wider socio-political thinking and policy making. Generally policies are articulated by other central government departments and subsequently 'rural-proofed' but this is only one form of integration. Rural futures do not exist in isolation of key trends that affect the rest of society: views about the nature and purpose of the countryside could help shape policy and decisions about a wide range of public services and investment. Throughout the project, the need for a better understanding of urban-rural linkages has been raised – this is just one part of this wider point but a very important one. Part of conceptualising rural futures depends on the relative attractiveness and merits of an urban lifestyle. At present the rural idyll exerts a tremendous pull – over half of us would prefer to live in the countryside, whereas in reality only 10% of us actually do. In the future this balance may shift but whatever happens, these spheres cannot be best understood and planned for in isolation.

2. The project process

The project comprised a number of iterative stages. The main activities and outputs are described in detail in the appended reports covering: The Knowledge Base; The Scenario Building Process; the Blue Skies Inputs and The Backcasting Report. These should be read alongside this summary to get a full understanding of the project work and outputs.

The key features of the process that are worth highlighting in the context of this summary report are as follows:

- A Rural Futures Knowledge Base was created, summarising existing data and knowledge of key drivers affecting the countryside now and in future. This covered chapters on rural and regional governance, the differentiated countryside, rural economic trends, rural employment, urban-rural linkages, the future of rural agriculture, new farmer identities, social capital in rural areas, citizen and consumer values, tourism and leisure, individualisation, counter-urbanisation, population trends in rural areas, income and class structures in rural areas, educational patterns and the future of the rural landscape.
- A map of the differentiated countryside was created through a statistical analysis of the 1991 and 2001 Census. This created 7 rural 'typologies' at local authority district (LAD) level in England and Wales, giving a view of the land mass and population living within each.
- 20 year scenarios were created using a multivariate modelling of most influential drivers of change (selected by the project team and vetted by the Steering Group). The modelling allowed us to explore the possible outcomes of these drivers in terms of their impact on the geographical extent and nature of the rural typologies. One 'central scenario' of most likely outcomes was created, and two further scenarios developed by changing the policy assumptions going into the model. These were then enriched by a range of qualitative deliberations in a one day workshop bringing together futures experts and rural specialists, aided by a wide range of visual prompt material and projective exercises.
- The 50 year scenarios were created through a further day's workshop to which Blue Skies experts provided a view of change over a 50 year time horizon in a range of fields including: infrastructure, climate and values, global trends, robotics, work, technology, building, communities, and alien species (another Horizon Scanning project). Possible outcomes were hypothesised. Four scenarios were selected to fit certain criteria and were then developed through visualisation and projective techniques.
- The 7 scenarios - three for 20 years ahead and four for 50 years - were then visualised, creating three composite images for each scenario.
- A meeting with Defra's policy making teams was planned at this stage to identify which aspects of the different scenarios would be considered desirable and achieve policy objectives as a basis for the backcasting stage. Unfortunately, this never happened due to pressures on time for the senior teams at Defra. Therefore we proceeded to the backcasting

stage without the benefit of this further sifting and evaluation of the scenarios. (This in itself has provided some important learning for the project, in terms of the need to ensure policy makers are able fully to own and shape the findings from this kind of work.)

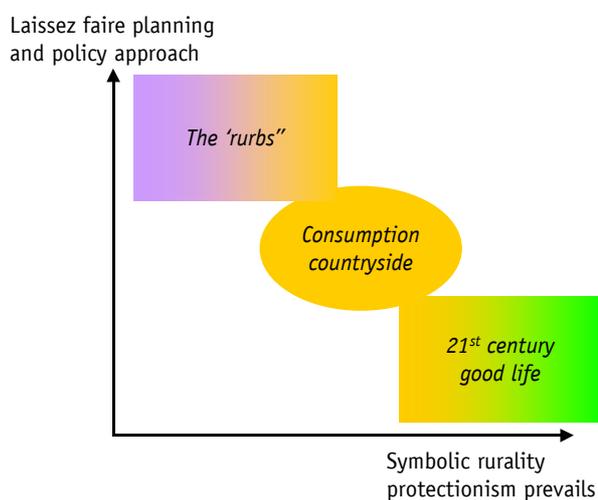
- The scenarios were presented in the visual forms created as part of a wider explanation of the process, to different groups for consultation. Four public focus groups were held in Ashford, Kent and Alnwick, Northumberland in which participants also built their own 20 year scenarios and commented on the 'expert' visions. A one-day stakeholder workshop with 50 participants drawn from the widest possible array of rural stakeholder organisations was held. Descriptions of the scenarios were placed on a special section of the Future Foundation web site and over 200 organisations were invited to give feedback. 56 forms were received via the web site and 16 via email and post.
- Initial backcasting analysis by the project team informed the design of two participative and highly structured regional backcasting workshops – one in Northumberland and one in Surrey in which groups worked to selected desired or to be avoided outcomes from the 50 year scenarios, and identified the actions and decisions that would be needed to create this future.
- Further analysis of these outputs and an evaluation of the Scenarios against Defra's stated policy objectives from the 2004 Rural Strategy Review, provided additional insights on the backcasting process.
- A one day workshop has been held with the project team to review the process and learning, the outputs of which have been captured in this report.
- Finally, there has been an appraisal and evaluation stage in which all participants in the project are being invited to comment on the project and the outputs. This is now complete and comments have been received. Given the nature of the project and the time lag between the initial report submission and this final version, it has been decided to focus on pulling out the key learning for Defra from the process.

Four Project Steering Group meetings were held during the course of the project at which advice, comment and input on the project design, objectives and implementation was sought and fed into the iterative process. This Steering Group included representatives from Defra's Horizon Scanning Team, Defra's Science Directorate, the Countryside Agency and English Nature.

3. Summary of the scenarios

The three scenarios for 2024 were: *The Consumption Countryside*; *The Rise of the Rurbs*; and *Twenty-First Century Good Life*. These scenarios were derived by projecting present social and economic trends and then making different assumptions on factors that would affect the balance of different types of rural areas across the country. The most important of these assumptions were: the nature of future planning and building policies and the degree of attachment we have as a society to preserving and fostering the distinctiveness of the countryside.

Picture 1 Three scenarios for 2024

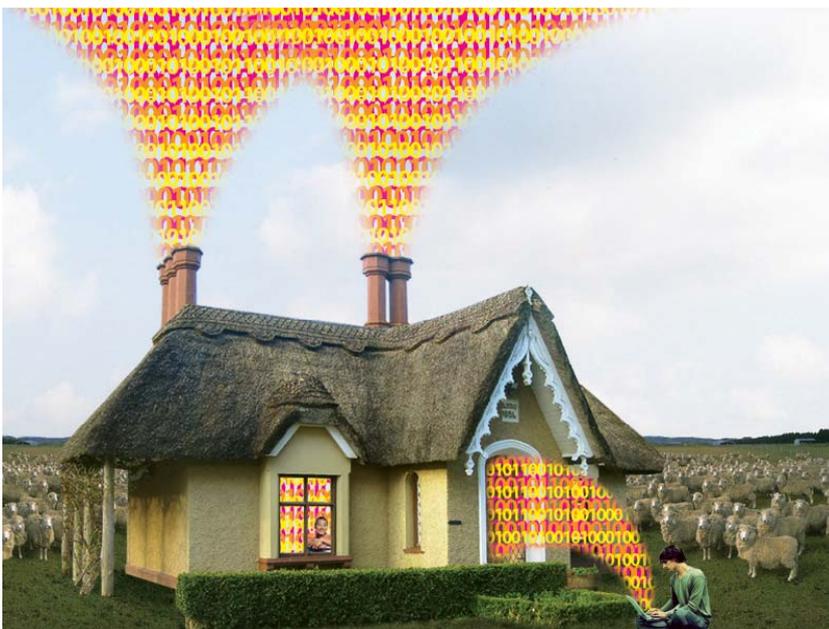


The *Consumption Countryside* is effectively a 'central' scenario based upon what are considered to be the *most likely* outcomes in these regards. The two 'alternative' scenarios are those that would result from a divergence from anticipated trends, *The Rurbs* resulting from liberal planning policies allowing 'rural suburbs' to spread and the *21st Century Good Life* resulting from stronger planning controls and investment in protecting the countryside.

The 50 year scenarios have also been described in detail in previous documents, together with the contribution to them that were made by the 'blue skies' futures specialists in a range of areas. Each of the 50-year scenarios represents in a sense a different type of quality of life that might be available in the future and would therefore imply different evolving understandings on the part of the population as to what 'rural idyll' meant. In terms of how they represent different qualities of life and outcomes they can be summarized as follows:



Vibrant Variety: In this scenario rural life is centred on the countryside as a pleasant, open and democratic environment in which a wide variety of leisure activities, and other forms of consumption, can be enjoyed. This is what the rural idyll comes to mean – a pleasant, relatively low-density (compared to the city) place to enjoy doing things with little emphasis on production (whether agricultural, manufactures, or knowledge-industry related). The prime drivers of rural economic growth will be: tourism, retirement-related services, and leisure and sports activities, rather than knowledge-industries or accommodation for urban commuters.



Gardens and Guilds: The future vision of rural life in this scenario is based on the countryside being a technologically facilitated place of work, creation and active social networks. It is a place of culture and innovation and not just a venue for agribusiness and tourism. People are allowed to build where

they like so long as they utilise approved designs that do not interfere with the rural landscape. The rural idyll reflects these new designs — such as ‘deep-fall’ buildings built into the ground and dwellings (often temporary and pre-fabricated) that blend in with the landscape — but also reflects the idea of lively, creative, modern social networks, enabled by new communications technology.



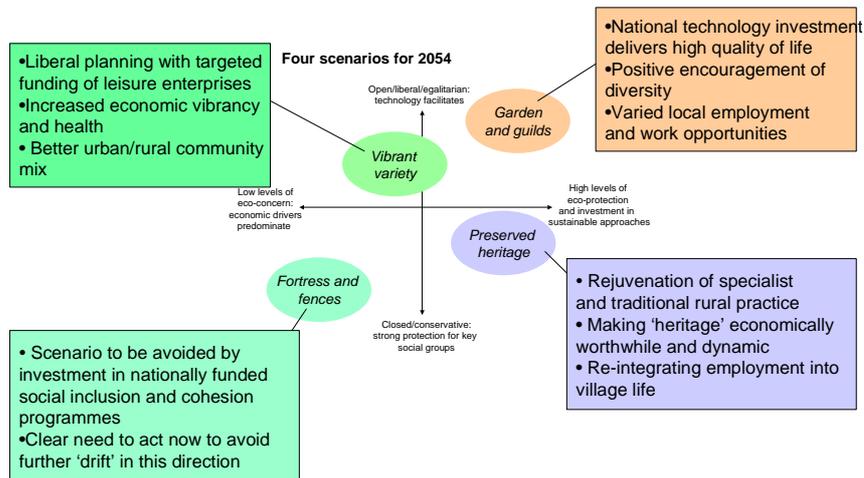
Preserved Heritage: In this scenario, the rural idyll remains relatively close to that which exists today. The countryside is treated as a protected remnant of English heritage, including traditional English flora and fauna, which will have difficulties surviving due to climate change and the effects of invasive species taking over key habitats. A traditional rural quality of life is preserved for relatively restricted numbers of people living in rural areas. Visitor flows and activities are not allowed to threaten preservation and public subsidy is an important part of maintaining rural prosperity.



Fortresses and Fences: In this scenario, the richest 20-30% of the population live in 'gated' secure communities in the traditional countryside ambience, serviced by high quality private sector provision, no longer dependent on publicly provided goods and services. The quality of life is high for those who are part of this elite, but relatively low for the surrounding areas, partially inhabited by those who service the elites behind their fences.

In summary, *Vibrant Variety* is relatively socially and economically liberal, and has freedom and diversity as key elements of its idyllic appeal. *Garden and Guilds* is economically dynamic, but with activity rooted in strong, but modern social networks *Preserved Heritage* has heritage and heritage and environ heritageenvironmental protection as the key elements of its idyllic appeal. *Fortresses and Fences* is based on an economically liberal model in which the rural idyll is overtly aspirational - only available for the wealthiest in their enclosed, privileged and privatised areas.

Chart 1 Summary of the key features of the 50 year scenarios



It should be noted that in each scenario there are different balances of social and political forces around rural areas and different constituencies around national rural policy agendas.

4. Main lessons from the project outputs

There are a number of key points that have emerged from an examination of the scenarios and the Backcasting outputs that appear to offer significant insights into the nature of the challenges facing Defra in its strategic planning and futures work. We have decided to highlight these separately from the specific learning resulting from the project process that follows in the next section – here we are providing our reflections on the nature of the scenarios and the way in which the Backcasting process manifested.

- **No single scenario delivers all of Defra’s strategic objectives:** First and foremost is the simple observation that there is no one scenario that delivers strongly on all of Defra’s objectives for the countryside as itemised in the Rural Strategy Review 2004. This is demonstrated in the table below, where each scenario has been evaluated against its inherent abilities to deliver the main sustainable policy objectives. This is a fundamental and major issue that has to be addressed in some way if Defra is to be able to develop effective, coherent and convincing strategies to meet these latest objectives. This schematic summarises the project team’s assessment of the scenarios against the Rural Strategy Paper Objectives (where + is positive – is negative and 0 is neutral).

Chart 2 Scenarios assessed vs 2004 Rural Strategy Objectives

		20 Year Scenarios			50 Year Scenarios			
		Consumption Countryside	21st Century Good Life	Rise of the Rurbs	Vibrant Variety	Preserved Heritage	Fortress and Fences	Garden and Guilds
1. Economic and Social Regeneration	Building on economic success	++	--	+++	+++	-	+	++
	Tackling economic weaknesses	0	---	++	+	--	--	+++
2. Social Justice for All	Fair access to services and housing	--	---	++	++	--	---	++
	Tackle Social Exclusion	---	--	+	+	--	---	+++
3. Enhancing the value of our countryside	Agriculture/biodiversity	-	++	--	0	++	--	+
	Access/sustainable tourism	+	++	0	+++	++	--	0

- **The challenge is to balance competing objectives:** The most obvious policy tensions emerge from the difficulty in balancing activities that are currently conceptualised as oppositions: economic liberalism and social inclusion; environmental sustainability and a more liberal planning regime. If scenarios are to appear consistent and comprehensible they need to reflect current oppositions, even though these may be transcended in the future. That

suggests a role for more innovative thinking to find ways of maximising the achievement of conflicting objectives within a single scenario. As our knowledge currently stands, it would seem that the best approach is to construct a 'mixed economy' of scenarios within a differentiated future that will deliver Defra's objectives. Thus the rural future has to be conceived of in terms of a variety of outcomes and quality of life experiences not as oppositional or mutually exclusive scenarios.

- ***Innovative and creative policy approaches are required:*** Part of the challenge to thinking creatively, in a way that helps reconcile tensions within society, relates to the point made earlier. Despite the enormous efforts made in the scenario creation process to shift perceptions and encourage fresh thinking about the components of the rural future and how these will interact, people remain hidebound by stereotypical views. Not only do we have a strong attachment to particular types of rural idylls that cloud our thinking, but there are many stereotypical views about (for example) elderly people, the possible role of business, and the nature of farming. Thus, for example, we need to be able to describe ways in which the elderly might become a more active and less problematic part of the community; to provide examples of rural businesses that are driven by social and civic entrepreneurs; to find new ways of describing a 21st century farmer that is not referenced solely on food production.
- ***Embodying unlikely but catastrophic events is difficult in a socially-led future:*** It is also clear that the scenarios do not effectively embody the impact of any major disruptive events in the future, despite the introduction and discussion of these possibilities at every stage. Although *Fortress and Fences* implies that such an event may have occurred, it could as easily exist as the result of an amplified 'culture of fear'. This confirms other experience in this field – it is very difficult to imagine a future world in which people really behave differently, so strong is the drive towards social norms.
- ***Key objectives are conceived of as outcomes and not seen as directly created by policy action:*** One major challenge to creating visions of the future that can satisfy the full range of Defra's sustainable objectives is demonstrated in both the scenarios and the Backcasting stage. This is the way in which only certain components of the rural future are conceived of as actively shaping the future (such as the economy, transport and education) whereas those that represent many of Defra's objectives - good environment, biodiversity, social inclusion, quality of life - are conceptualised as outcomes, not drivers. Thus there is the need to find ways of demonstrating the link between desired outcomes and actions that can deliver these directly.
- ***Major ethical questions are raised about the nature and beneficiaries of the scenarios:*** Each scenario raised major ethical questions amongst participants and consultees, particularly during the Backcasting workshop, about the nature of the future world and who would be the major constituents and beneficiaries of the countryside. In the Backcasting workshops there was a strong tendency to identify the challenges of effectively incorporating and delivering in everyone's interests. Particular concern was expressed for the socially excluded groups in Surrey and for the need to encourage enterprise in the face of

conservatism in Northumberland. The current inequalities in power, influence and access today are reflected in concern about how these might play out in the future. Rather than the future being neutral ground, it is in fact an entity onto which people project their existing stakes. Again this might require that Defra redefine its rural constituencies in the future – and bear in mind the degree of conflict (albeit genteel in nature) that exists between rural groups today.

- ***Creating a coherent view of urban-rural inter-relationships is vital:*** Throughout, the problem of creating rural scenarios without specific reference to urban developments is highlighted. Every scenario implies the relative development and attractiveness of urban centres that would make a particular scenario likely or feasible. An integrated future reality of rural, urban and suburban areas is assumed if not made explicit. Similarly, there is a sense in which the scenarios could be criticised for being parochial and not incorporating clearly the impact of global trends and regulation as a counter to more locally based initiatives and activities – another area which holds many questions and potential tensions for the future.
- ***Policy integration across all departments is essential:*** In a similar vein, and as noted above, the strong social nature of scenarios highlights the requirement for effective integration of policy formulation and delivery across all Government departments impacting on the rural population. There has to be the ability, when creating and dissecting future visions of this kind, to address all aspects of the future society that they depict and address the future needs of the population.

5. Lessons from the project process

For the sake of brevity and clarity, we have assessed each stage of the project process and identified the aspects that we felt worked well, and those that raise some questions for the future applications of the methodology within the Horizon Scanning context and summarised these in the table below.

Project activity	Positive aspects	Challenges to method	Future implications
Creation of 'rural futures' knowledge base	<ol style="list-style-type: none"> 1. Identified the many and complex drivers of rural change 2. Formed a useful platform from which to select key drivers in order to create the scenarios 3. Highlighted the usefulness and impact of academic concepts in creating the scenarios 	<ol style="list-style-type: none"> 1. Lengthy written report proved not to be user friendly or easy to manipulate 2. Proved necessary to create the base from scratch, because the Defra evidence base had not yet been published and made available 3. Clear that knowledge base exists but is dispersed between different academic and government centres 	<ol style="list-style-type: none"> 1. Points to future time saving possible from creating a single, comprehensive and accessible knowledge base for Horizon Scanning projects 2. Question as to how this integrates with the current development of the Defra evidence base
20 year scenario creation process	<ol style="list-style-type: none"> 1. Development of rural typologies using census data created a tangible and engaging manifestation of the reality of the 'differentiated countryside' turning this from academic analysis to usable maps of rural England and Wales today 2. Use of a quantitative multivariate modelling methodology worked effectively to combine known quantitative trends with qualitative (expert) judgements about the key drivers over this time span 	<ol style="list-style-type: none"> 1. Tendency has been towards qualitative methods of scenario creation in this area in the past – this generated some questions about the validity of this approach initially. 2. The transparency of the modelling process and the explicit evaluations of the components fed into the model could make this more open to question and challenge than more opaque workshop based processes. 	<ol style="list-style-type: none"> 1. The typologies should be made available as a basis for modelling the possible impacts of other aspects of future development. 2. Consider further development of the model to include and assess some more extreme environmental conditions and a range of different policy interventions

	<p>3. The basis for creating the scenarios was necessarily explicit and transparent.</p> <p>4. Each scenario had a tangible and measurable outcome in terms of future land and population covered by the different typologies.</p> <p>5. Several key policy options were included in the scenario modelling making their impact on the future clear and measurable – essentially helping to assess the effect of different approaches.</p>	<p>3. The continuing mixed and differentiated nature of rural England and Wales in the scenarios, whilst realistic, makes it more difficult to create compelling and clear distinctions between the scenarios.</p>	
50 year scenario creation	<p>1. Blue skies inputs from a range of fields worked effectively to broaden the perspective beyond strictly ‘rural’ inputs.</p> <p>2. The contrasting methodology based on selecting outcomes rather than drivers produced a different range of scenarios types based on the creation of future life qualities through the ‘day in the life’ exercise.</p> <p>3. The human/social emphasis created compelling and interesting scenarios.</p>	<p>1. The links between the different inputs and the rural futures were not always easy to draw through.</p> <p>2. An outcomes based approach meant that the underlying assumptions and drivers were not made explicit – the project team had to identify what these were subsequently.</p> <p>3. Despite inclusion of ‘disruptive factors’ in the inputs and discussion – eventual scenarios were normalised by their description through the eyes of a future inhabitant.</p>	<p>1. Question of how to combine a drivers-led with an outcome-led approach to create a seamless process in the future</p> <p>2. Possible benefits of forcing scenarios to include problematic or dystopian elements more specifically – for example – taking a ‘worst case’ flooding scenario from another project and inhabiting that landscape with people</p> <p>3. Blue sky thinking needs to be encapsulated in a way that can be</p>

			used in other projects
Visualisation of scenarios	<p>1. Developed a range of visual stimulus material that helped prompt creative thinking in the scenario workshops</p> <p>2. The use of illustration in the workshops helps to fill the gaps and articulate the future visions of the working teams in an effective and immediate way.</p> <p>3. The final visual representations of the scenarios worked to communicate complex ideas and information in an easy to grasp and stimulating way.</p> <p>3. Many people were prepared to accept the visualisations at 'face value' and work with them without question.</p> <p>4. They helped to 'democratise' participation much more than would the presentation of graphs and diagrams.</p>	<p>1. Making a complex concept tangible through visualisation necessarily simplifies the thinking behind the development and raises questions about its basis – requiring some further explanation.</p> <p>2. Some participants fixed on specific aspects of the images and quibbled with their appropriateness. The people who seemed to be most unsettled by the visualisations were often those who would have been more comfortable with standard technical and abstracted forms of graphic representation.</p> <p>3. Setting the images more consciously in a range of landscape types could help integrate the environmental aspects of the rural future.</p>	<p>1. Visualisation should be considered alongside other techniques (such as short stories and computer simulation) as an effective way to help communicate and engage diverse audiences in the scenario process.</p> <p>2. Integration of socially based visualisations with the outputs of environmental landscape modelling could prove an interesting development.</p>
Consultation - public	<p>1. The public focus groups generated a raft of fresh insights and stimulating responses to the scenarios themselves and the process of constructing them.</p> <p>2. Responses confirmed the plausibility and veracity of the expert-created future visions for the general public.</p>	<p>1. The range and scope of this consultation was too limited to be representative.</p> <p>2. The cost of conducting participative focus groups of this kind is high and not easy to scale up to more representative groups.</p>	<p>1. There is much to be gained from integrating public perspectives into the futures process.</p> <p>2. Greater engagement and wider consultation could provide a valuable means for increasing the</p>

Summary report and recommendations - Lessons from the project process

	<p>3. The degree to which people are influenced in their response to future options by their current circumstances is more transparent with a non-expert audience.</p>		<p>legitimacy of future policy initiatives</p> <p>3. Exploration of different options and costs for extending public engagement is needed.</p>
<p>Consultation - stakeholders</p>	<p>1. A wide range of stakeholders were attracted to the process providing a good mix of perspectives and questions.</p> <p>2. Process helped to surface concerns from different areas in a constructive way that could be integrated into the scenario descriptions.</p>	<p>1. The responses from stakeholders reflected their vested interests in the present – the backcasting stage worked better to move people beyond these.</p> <p>2. Difficult to take on board concerns and criticisms fully without re-doing the scenarios completely – question as to whether this group could be better used elsewhere in the process.</p>	<p>1. Pooling learning from consultation exercises about the best way to balance competing interests and give voice to less powerful but important groups is critical.</p>
<p>Consultation – web based</p>	<p>1. Web based consultation opened up the scenarios to the scrutiny of a far larger group than would be possible to interact with personally</p>	<p>1. Only limited responses were received and often these are from people with strong vested interests</p>	<p>1. Web consultation needs to be more structured with greater resources allocated to recruiting participants in future</p>
<p>Backcasting process</p>	<p>1. Backcasting allowed for a constructive discussion between different interest groups about the desirability of outcomes and priorities</p> <p>2. In this respect the process using the 50 year scenarios created an apparently neutral space outside of the present</p>	<p>1. The benefits of having local community and stakeholder representatives contributing to the backcasting is offset by the short time available to undertake complex tasks and thinking</p> <p>2. Longer periods would exclude important</p>	<p>1. Backcasting can be an effective and structured approach to identifying policy implications of different outcomes</p> <p>2. The challenge before embarking on such a process is to develop a clear path</p>

	<p>3. Participants were prepared to work with the scenarios as described and visualised.</p> <p>4. The workshops really engaged a diverse audience of stakeholders in the two regions and provided a useful reflection of the differences between the areas and the nature of the concerns and aspirations in each.</p> <p>5. Regional workshops brought the issue of urban-rural linkages to the fore, as the participants at a local level are more aware of the complex inter-relationships within their geographic areas.</p> <p>6. It was possible for non expert groups to identify key interventions that need to be made to achieve future desired outcomes or avoid undesirable ones.</p> <p>7. The use of timelines for decisions and actions worked to reconcile differences and force participants to focus on key decisions and choices.</p>	<p>representatives from voluntary and less professional groups</p> <p>3. Attendees were not representative of the wider rural population who could be less open and inclusive (on evidence of focus groups).</p> <p>4. Timeline exercise immediately placed decisions and actions in the present time – emphasising the long term implementation of many decisions, but also demonstrating the difficulty really developing a staged implementation programme in limited time.</p> <p>5. No real limits were set in resource terms on future investments – which in a real life situation would require greater juggling of competing objectives.</p>	<p>to deciding which outcomes are desirable and how they can best be combined to deliver policy objectives in order to ensure that backcasting can be focussed on creating practical and usable outputs.</p> <p>3. Therefore active engagement of the policy community with backcasting will add to its usefulness as a policy tool in the future.</p> <p>4. Backcasting has proven to be a valuable means by which to engage local and regional stakeholders in constructive discussion and collaborative problem solving.</p>
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As well as these specific lessons from each stage of the project, there were some further more generic insights that emerged from the process that are germane to this report. Many of these arise from a comparison of the methods used for the creation of the 20 year scenarios with those used to generate the 50 year scenarios.

- ***The future will comprise a mixed economy of different outcomes:*** The modelling process, based on the current view of the nature and distribution of the differentiated countryside, generated outputs that encapsulated the mixed economy of different futures – with continuing differences in community types, albeit affected by 20 years of social, economic and political change. In contrast, the 50 year scenarios focus on creating distinct ‘worlds’

and describing these in terms of a quality of life. The helpful emphasis on the fact that there would continue to be many different 'types' of countryside in the future, encapsulated in the 20 year scenarios, was easy to lose sight of. It would be interesting to think about ways of developing a 50 year set of scenarios where this could be made more explicit. Additionally, we could see some benefit of conducting further work on the Scenarios in which the likely impact of future conditions could be analysed in terms of how it might change the scenario – thus varying rates of economic growth; degrees of environmental policy implementation; the impact of global events etc.

- ***Clearer objectives for the two sets of scenarios:*** Additionally, it would be good to have a clearer set of individual objectives and reasons for the 20 and 50 year scenarios and a basis for relating these to each other. Clearly the 50 year time horizon is more liberating in terms of freeing the imagination beyond an extrapolation of current trends, and the 20 year period works to emphasise the possible outcomes of many current trends. Moreover, we have been able retrospectively to map the two sets on the same set of underpinning drivers, so that we can see the logical progression from one set to the next. However there would be a merit in setting clear guidelines from the outset as to the basis of each timeframe.
- ***Public focus groups and the backcasting workshops were the most insightful:*** One key question that emerges from the entire process is the role and effectiveness of the consultation activities. In the context of a more consultative and engaged approach to policy making in government generally, it is clear that there is a need to create the means for consultation. The backcasting workshops were particularly effective in engaging local and rural community stakeholder groups in new ways with a more practical and pragmatic outcome. The public focus groups were particularly interesting in terms of the insights they generated. Elsewhere it has been less clear as to the direct contribution of different experts and stakeholders to the process and, given the range of competing scenario creation exercises and other projects currently underway, there is also a question about the best way to involve and benefit from these groups overall.

6. Wider implications for Governance

Whilst we have not addressed specific policy issues in this project as directed, a number of insights that broadly relate to Governance issues can be distilled from the work conducted to date. Specifically, we are thinking about the implications of the project within the context of the Modernising Delivery Review and the need to move towards a more regionalised and local approach to achieving Defra's strategic objectives as described in the Rural Strategy Review 2004. These include:

- A scenario-led backcasting approach could prove a very effective means for articulating local and regional objectives in relation to the overall strategy and should be considered as a tool in the short to medium term as the review is rolled out nationally.
- This would provide both a national framework of priorities based on the desired outcomes within the scenarios, and an attractive degree of local and regional flexibility within the framework to identify how such future outcomes could be achieved in each area. Flexibility has to be key to the success of implementing the Review in a way that allows real adaptation to local conditions and resources.
- Generally it has emerged that participants see the regulatory framework governing the countryside as essentially constraining and uncreative. This is exacerbated when considering the future impact of EU legislation which is seen as being more restrictive, more controlling and more widespread. Therefore, it would appear advisable that a review of how legislative impacts on the countryside could be simplified would be another means to promote local action and creative problem solving. It seems that a coherent range of policies, including a greater emphasis on new forms of investment through incentives and a wider range of more personalised and targeted service delivery options is required to revitalise the rural economy in some areas. However, the design of these should be subject to local intervention and design.
- A specific instance is the way in which CAP reform is being instituted. This has changed the basis for farmer remuneration without, it seems, providing a raft of alternative economic models for the future of farming in a way that inspires and encourages the large majority of farmers and the wider rural community to change direction and find new ways of generating income from their assets. Currently it is left to the most enterprising and creative to find new ways of earning money.

7. Recommendations to Defra

We have expanded this section at the request of Defra's Horizon Scanning team to incorporate a number of new areas, that are relevant to the future direction and plans for Horizon Scanning:

- First, we review the most important assumptions and uncertainties that that need to be investigated further and monitored in order to more firmly assess the direction of travel of different rural areas and make in-flight corrections to policy going forward.
- Second, we summarise some other rural policy development issues that this project suggests it will be particularly important to tackle.
- Third, we summarize the conclusions for the Horizon Scanning programme that flow from the wide range of processes undertaken as part of this project.
- Fourth, we highlight specific learning from the project that suggests ways in which Horizon Scanning work can be more effectively integrated with decision making process.

7.1. Incorporating assumptions and uncertainties into the scenarios

There are a number of critical assumptions lying behind the scenarios that sensitivity analysis needs to assess on a regular basis in relation to the possible trajectories of rural areas. The key areas of general assumptions are demographics, the economy, environmental and agricultural production carrying capacity, the relative attractiveness of the countryside, infrastructure carrying capacity and a future without low probability 'disturbances/wild cards' coming to pass. These are each discussed briefly in the following sections, for simplicity mainly in relation to the fifty-year scenarios, though the issues are relevant also to the 20-year ones. These areas particularly point to the need to consider and create cross-departmental solutions.

7.1.1. Demographic uncertainties

Meeting the challenge of an ageing population

The current NSO projections for the age structure are assumed. Over 50 years, however, this could be significantly wrong, particularly for the under-50 part of the population, if assumptions about birth rates and immigration are incorrect. In terms of older people, it is assumed that the slight increase in life expectancy continues as the NSO projects and that morbidity, disability and needs for low-level support and intense support remain a constant proportion of people's lives – i.e. that there is no medical breakthrough in terms of things such as Alzheimer's, Parkinson's and so on. It is therefore assumed that public spending and public policy allows sufficient carrying capacity in the health/social services to support the growing number of older people in rural areas, despite the migration of older people to some places. This is, however, a critical area of concern for rural policy whichever trajectory an area is on in relation to our scenarios because of the particular delivery issues in areas of less population density.

Anticipating the rate of household formation

The rate of household formation is less certain than the rate of population growth. The current ODPM assumptions on this are implicit in all the scenarios and are compatible with a slightly increasing and then levelling off average age at which young people form their first independent households and a levelling off at current rates of separation and divorce. In terms of the former of these, the availability of housing is critical and this has been the subject of much thinking within Government already – for example with the Barker review. However, it should be noted that if affluence continues to increase at current long-term rates (see section on economy below) that this projection of household formation is compatible with housing costs rising as a proportion of income. The main issue will be whether planning and actual supply of housing in particular areas lead to localised house price inflation that impacts dramatically on migration or household formation in those particular areas.

Rate and direction of urban rural migration

In terms of internal migration in general, it is assumed for all the 50-year scenarios that the relative attractiveness of the countryside as a place to live and visit remains at least as great as today – although in some of the scenarios this will not be the only engine of economic growth. In some ways this is the most heroic assumption in that it assumes a particular relationship between urban and rural areas and this is discussed further in the section on rural development policy below. However, particularly over the longer term it may be worth thinking through how this might reverse as a result of wild card events in the future and how this might fundamentally affect the scenarios.

7.1.2. The long term economic outlook

We have been concerned in this project with identifying possible future scenarios that are different in terms of the social consequences for rural areas. Although each scenario has a different implication for the balance of economic activities, there is an underlying assumption that overall economic growth is not greatly different from the long-term trend in the UK. In addition, there are specific assumptions made about income inequality for the fifty-year scenarios. In *Fortresses and fences* income inequality is projected to increase substantially. In the other three scenarios, overall income inequality is expected to decline slightly in the next few years (on the basis of a continuing policy stance to reduce poverty for families with children and raise overall levels of employment) and thereafter to level out (see relevant section in the Knowledge base summary). Again, it should be worthwhile to test out the effects of the range of wild cards on these assumptions and integrate the insights that other research within government about the nature of income inequalities now and in the future- for example from the Social Exclusion Unit, the DWP and the EOC.

Economic growth is partly generated by a rate of technological innovation (and roll out) that is assumed, in some generic sense, to be at a similar level to the past twenty years. No attempt is made to identify these in specific or quantitative terms within this project, but because occupation mix is particularly important in terms of different social scenarios, the scenarios implicitly contain assumptions on the nature of technical development and roll-out that differ between them in generating different mixes of employment (and land use). This is particularly the case in relation to

communications and communication infrastructure. Clearly some technical innovations could make a huge difference to the nature of employment and lifestyles, and there is bound to be at least a couple over the next 50 years. However, the Blue Skies part of the project concludes that identifying precisely what innovation will be of this nature is very difficult and the probability of any individual, currently identifiable one is therefore low, so we need to treat this as a wild card element (see below).

7.1.3. Environmental and Agricultural Carrying Capacity

Whilst the potential for dramatic climate change was introduced in the Blue Skies stage, all the scenarios assume that there is no catastrophic environmental issue – such as the potential threats from alien species discussed in the Blue Skies document – that prevent the countryside retaining the degree of relative attractiveness or supporting the population assumed in the scenario. Similarly, it is assumed that in the context of world agricultural production, trade and global security issues that there is no policy intervention to force an increase of particular types of agricultural production and/or agricultural employment that make the mixes of employment and land use assumed in any of the scenarios impossible. Clearly, though, for some of the scenarios – e.g. the Preserved Heritage one – a greater emphasis on environmental protection or agricultural production would increase the likelihood of the scenario occurring (see section on sensitivity analysis below).

This has been one of the key learning features – the difficulty of incorporating low probability/high impact events into the socially based scenarios. As discussed, elsewhere, we believe that forcing an evaluation of the scenarios in the context of such ‘wild card’ events would be very interesting.

7.1.4. Relative attraction of the countryside

An important assumption underlying all the 50-year scenarios is that the pressure towards counter-urbanisation continues because the relative attractiveness of the countryside remains. There is, however, an assumption within the Vibrant Variety and the Garden and Guilds scenarios that the relative attractiveness of the countryside to pre-family groups increases because it is unlikely that the rural economies in these areas would be supported solely by an influx of families.

This assumption does, of course, depend on urban policy and development being such that, given lifestyle aspirations of different groups in the future, the urban environment does not suddenly become much more relatively attractive. The key issues to monitor here (as noted above) are migration flows of families with young children and the migration flows of older people. At the moment, 80% of new developments in the centre of cities is for one and two bedroom accommodation (see forthcoming JRF report), but policy in this area could change. There is also an evolving uncertainty about the aspirations of the next generation of older people, who have been brought up with greater consumer choice and affluence than previous ones. Will a retirement to peace and tranquillity be as attractive a proposition as currently? A critical area to monitor here will be the perceptions of the relative security offered by urban and rural areas for children and older people.

There is equally some uncertainty about the relative attractiveness of the countryside as a place to visit. In different ways, both the trajectory towards a Vibrant Variety scenario and that towards a

Preserved Heritage scenario particularly depend on this. The assumption that consumers will become more and more inclined to consume active experiences rather than other goods and services (see relevant section in Summary of the Knowledge Base) is important. Though well-founded in terms of recent trends and likely future, it is just possible that home-based entertainment and infotainment in particular could alter this.

We have not assumed massive change here in any of the scenarios, but were there to be such change, a further scenario for consideration would be one of a reverse in migration away from rural areas – and possibly visitor numbers (though less likely) – equivalent in scale to the reverse towards counter-urbanisation in the last century. Rural policy would then be concerned with limiting and dealing with massive depopulation (except in those areas identified in the 'differentiated countryside' part of the 20-year scenario creation as dynamic commuter belt, which if counter urbanisation was reversed would effectively become part of the urban phenomenon rather than rural.

7.1.5. Infrastructure Carrying capacity

Major infrastructure developments

The internal consistency of the scenarios and their feasibility is premised on the basis that it will be possible (occasionally with policy intervention, some of which is identified in the backcasting process) for physical and technical infrastructure to support the mix of population, employment and other activities inherent in the scenario. The Blue Skies exploration of infrastructure issues indicated how much infrastructure is currently fixed – e.g. the layout of sewage and water pipes. If a particular scenario is aimed for in a particular area, it will only be possible to make necessary changes to such infrastructure with early planning given the very long term nature of infrastructure planning and development over 20 – 30 years in many cases.

It is therefore vitally important to map out the critical path for major infrastructure investment decisions that would be necessary to achieve any of the scenarios. Although in very broad terms some of this was approximately done in the backcasting part of the project, there were neither resources nor time within the project to apply specific expertise about infrastructure planning requirements to the backcasting process – the two workshops were more concerned with the participation of local community interests – and therefore this is a further task that needs embarking on, relatively quickly. It may be that the work that the DTI Foresight team is currently undertaking in the Intelligent Infrastructure project may prove to be of value in terms of taking this aspect forward, and applying their learning and insights to mapping the infrastructure requirements of the scenarios would be worthwhile.

The critical contribution of communications infrastructure

The importance of communications infrastructure in terms of both transport and wireless/broadband etc are particularly critical to different degrees in the various scenarios. The success of a Gardens and Guilds scenario depends critically on communication technology supporting employment in low-density areas, whilst the transport infrastructure that supports visitor flows from the cities is essential

for Vibrant Variety. That scenario also particularly depends on developments in housing and working accommodation that can support the flexible work and living patterns envisaged without detracting from the attractiveness of the countryside. Again, given the lead times in investment in these aspects of infrastructure, an expert view on the backcasting in order to identify the critical paths for an area aiming for a particular scenario is an important early task in next steps.

7.2. Incorporating low probability disturbances and wild cards

As noted above, the issue of how best to deal with 'wild cards' has been a challenge to the project, since the emphasis on the social dimensions of the future has resulted in major disturbances being largely discounted by the scenario creation teams although these were considered at the outset. However, it is clear that there could be some benefit in terms of learning of imposing these wild cards on the various scenarios to see what effects they would have, and how society is likely to react in each set of circumstances.

The consultative and development processes used in generating the 50-year scenarios created three distinct scenarios with considerable, but different potential positive outcomes for rural areas, together with one that most would consider a scenario that should be avoided if at all possible. Part of the usefulness of these scenarios is that the processes leading to them involved consideration of trends in a way that makes them all seem reasonably feasible. They are therefore seen as choices that rural areas could potentially make if there was enabling policy from central and local government. For them to be useful in terms of helping decide the direction of travel that rural areas might want to go in, it was important that they should not be dependent on low-probability disturbances to trends and wild cards.

However, over a time period as long as fifty years, one would expect one or two of the low probability wild cards to occur – and they could either be enabling or disabling to the scenario being aimed for. Therefore, in terms of developing a risk register and, where necessary, contingency plans, it is important as a next step to do further work on how sensitive each of the scenarios is to these low-probability developments.

The project, particularly, in its Blue Skies phase, but also elsewhere has identified a number of such wild cards, but it has been outside the scope of the project within its resources to look in any detail at their implications. Also, further work would be necessary to ensure that a list of disturbances and wild cards was comprehensive – it may be that it would be possible to use the outputs from the OST Horizon Scanning of Excellence Sigma Scan for example. Some of the possible areas would include the obvious list:

- Catastrophic climate change – either in terms of extremes of temperature or flooding
- Changing ecosystems resulting in changing arable and livestock farming
- Alien species/disease invasion
- Oil based fuels are exhausted

- And/or alternative energy sources are created, including synthetic fuels
- Major terrorist activity prevents global travel and trade
- And/or religious wars create hostile global trading conditions
- Nano-technology and bio technology provides a new basis for food production

Alternatively, it might be possible to take environmentally based scenarios of the future that have incorporated these types of issues and evaluate them in the context of these – for example, to take work conducted by the Environment Agency on the foresight scenarios.

7.3. Undertaking a rigorous sensitivity analysis

Apart from further exploration of the implications of wild cards and the application of different expertises to the Backcasting process in order to create critical paths for policy and investment areas, a logical next step in this project, could be to carry out a sensitivity analysis on the key assumptions and uncertainties identified above. Conceptually, in a slightly simplified way, one might want to consider the following grid for each scenario:

		Income inequality less than central assumption		Income inequality more than central assumption	
		Economic growth more	Economic growth less	Economic growth more	Economic growth less
Carrying capacity doesn't limit	Relative attraction of countryside higher	More benign outcomes			
	Relative attraction of countryside lower				
Carrying capacity does limit	Relative attraction of countryside higher				
	Relative attraction of countryside lower				Less benign outcomes

The next steps would then be to:

- Consider in each cell whether the scenario would be more or less likely to occur if those conditions were developing.
- Therefore in each cell whether the degree of policy intervention or investment would need to be stepped up or reduced
- Consider in each cell whether the scenario itself would change its characteristics if those conditions were developing. This would in effect create more extreme scenarios than the

ones presented in this report, but it would be clear what was driving them and such extremes would not be dependent on low-probability disturbances or wild cards.

- d) Consider in relation to c. whether the desirability of the scenario was improved or decreased and this would help guide decisions in relation to b.
- e) Assess which trends and which disturbances/wild cards would actually cause the conditions identified in each of the axes to occur. These would be particularly important to monitor where the analysis in a and/or c suggested that this particular condition tended to make an aimed-for scenario either less likely or less desirable.

(NB The demographic issues are not explicitly on this grid because the internal migration issues are implicit in the vertical axis. The other issues really relate to specific sub groups of the rural population in a more specific way than the conditions highlighted in this grid that relate to the scenario as a totality.)

7.4. Recommendations for Improving Rural Development Policy

There are many critical issues for rural development policy to consider at the current time. As noted above, the Backcasting stage of the project was specifically designed to help tease out the policy implications of the scenarios, but given the difficulty of involving policy decision makers explicitly at that stage, it proved difficult to address the central policy implications directly. The workshops in fact, were more geared towards identifying the policy challenges of the local areas although more generic strategies were identified (see the Backcasting report). Therefore, we believe that a concerted effort to ensure that the outputs of this project, and subsequent work, can engage policy makers effectively, either in the design and specification stages or through the development of tools to maximise the value of the outputs from a policy perspective is essential. Clearly this is a challenge facing Defra's Horizon Scanning team going forward, and it is central to the success of the programme.

In terms of specific recommendations beyond the need to involve decision makers more closely and perhaps to develop tools to facilitate their engagement and use of the material, we have identified a number of areas which need to be addressed to help improve the quality of rural policy decision making. This section is not attempting to be an exhaustive list of these, but to draw out the particular issues that have arisen as a result of the scenario and back-casting processes (and that have not been covered in the discussion of assumptions and uncertainty above).

7.4.1. Using the scenarios to help prioritise rural policy objectives

Before arriving at the scenarios actually presented in the reports of the project, a number of internally consistent scenarios or variants on the scenarios were considered. During this extensive process, we did not arrive at any scenarios that were internally consistent AND completely met all the aims set out in the 2004 Rural Strategy Objectives, as discussed in section D above. The major over-arching rural policy issue is therefore to define below the level of generality in the strategy, what the range of balance between the objectives should be. This may be at two levels. First, is there a minimum

requirement in each of the objectives that has to apply everywhere and which a policy mix has to achieve whatever the characteristics of the area. Second, is it acceptable for there to be very different balances in different areas. The analysis of the differentiated countryside that led to the 20-year scenarios suggested that this is likely. But rural policy development needs to determine whether there is a limit to the number of areas that can follow particular trajectories that give weight to a specific objective, relegating another. Clearly there may be a limit if the net result is to create a nation in which one or more of the policy objectives is barely met at all.

This leads directly into three other general policy issues for rural development that have been highlighted throughout this project and in which there is undoubtedly already further thinking taking place in DEFRA and the various new institutions that have been created since the project began.

- Further clarity on who the countryside is for and what it is for.
- Related to this, whether or not current distinctions between rural and urban Britain are valid and whether or not it would be more appropriate for there to be a concept of a 'differentiated Britain' that encapsulates differences and similarities between areas, even where the density of population is different. The increasing reliance of the countryside on activities and employment mixes that are similar to some urban areas makes it more imperative than ever to follow through this line of argument.
- The implications of this for the governance issues.

7.4.2. Helping to explore and resolve more specific issues

Premised on the assumption that the case for a differentiated set of trajectories for different rural areas is now accepted, the project identified some specific policy issues to explore and resolve. Given the social emphasis of this project, we are not including here policy considerations that relate to carrying capacity, environmental concerns, or global security concerns.

- *Making the development paths between the 20 and 50 year scenarios more explicit:* There is a link between the likelihood of particular 50-year scenario and the trajectory different areas are on for the next 20 years. Critical in the 20-year scenarios was how planning and housing policy would play out in various parts of the differentiated countryside. This needs further work to ensure that national planning frameworks are sensitive to the implications of this. There may be specific inputs available to this from analysis undertaken by the OPDM and regional bodies.
- *Reviewing the relationship with economic policy:* One way of presenting the scenarios was shown in the diagram within section C above. Economic policy and the relative importance of eco-policy and sustainability are critical in determining the likely trajectory for individual areas and for the balance of the country overall. Some further thought is needed on the implications of particular economic policies moving the balance of outcomes towards the right or left of this diagram and on the implications of particular ecological or sustainability policies moving the balance of outcomes towards the top or bottom.

- *Exploring the degree of economic self-sufficiency vs subsidy:* Another way of summarising how the scenarios differ would be their relative reliance on visitors or residents for their economic prosperity and on traditional agriculture/country activities or newer 'industries'. Vibrant Variety for example would be in one quadrant with its reliance on visitors and on modern 'industries' or occupations. The balance of policies and outcomes on these dimensions are particularly important in terms of the trajectories of areas. The Department of Culture, Media and Sports may well have been conducting work in their new Horizon Scanning team that could provide useful insights on the development of the creative industries and tourism.
- *The role of innovation and enterprise:* Related to this, we could find no scenario that was very likely that involved dependence mainly on residents – i.e. self-generating economic growth and traditional activities – that did not imply what seem to be unrealistic levels of subsidy for income inequality. The issue of whether it is possible to have a traditional countryside with rural towns and villages having clusters of wealth creating activities that are self-generating or not is brought into sharp relief. The conclusions from the scenarios and from the trends analysis is that this remains very difficult – and is likely only to be possible in terms of new occupations that are closely integrated with the world and nearby urban economies. This again suggests that rural development policy needs to be thought of in a regional context that includes urban areas. This is clearly the direction of current policy and the analysis in this project would seem to support this.
- *Considering older people as an economic asset:* Large demographic changes continue to affect particular rural areas within any of the 50-year scenarios, but are more pronounced in certain parts of the differentiated countryside. The rates and nature of family formation and the degree of ethnic diversity is particularly likely to affect the commuter belts. The ageing of the population will particularly affect more peripheral areas, though is important elsewhere too. In addition to the points made about health in the uncertainties section, further consideration needs to be given to how those demographic groups, such as older people, can be used as an asset – e.g. in contributing to different types of social and cultural capital (see bullet point below) as well as being planned for in terms of services.
- *The impact of changing consumption behaviour:* People's consumption and lifestyle patterns are changing. The move to consumption of services and, in particular, active pursuits is projected to continue. Probably one of the most researched areas, this is an aspect of future development that can be readily expanded upon in relation to the different scenarios, and could usefully have some relevance to Defra's expanding Sustainable Consumption and Production programme.
- *Evaluation of the social and cultural capital implications of the scenarios:* Given the changes in lifestyles and demographics and the differentiated occupation mix of the scenarios, what is the implication for social and cultural capital? This issue, explored in the Summary of the Knowledge Base document, is very important both to the competitive advantage a rural area might have in terms of the labour market and also in terms of how relatively attractive rural areas are to live in. Rural development policy has to consider carefully the links between employment mix, demographic mix and social/cultural capital. This project may allow this to

be a bit more sophisticated, because it is clear that the relative importance of these differs for the various scenarios.

7.5. Developing the Horizon Scanning Programme

Steps that DEFRA might take to develop further the techniques used in this project can be summarised under four main headings:

- The enhancement of the knowledge base for Horizon Scanning activities
- Investment in further interdisciplinary approaches
- Integration of learning across all Horizon Scanning activities
- Creating more coherent public and stakeholder engagement

7.5.1. The enhancement of the knowledge base for Horizon Scanning

We note the parallel development of a 'scan of scans' and the Defra evidence base at Birkbeck during the course of the project that we applaud. However, there are a number of areas in which, based on the experience of this project, it would be advisable for Defra to build a range of tools and resources to underpin the quality and increase effectiveness of future Horizon Scanning projects in this area. Obviously, the relevance and importance of these is relative to the continuing investment in Horizon Scanning activities that will model and assess the social aspects of the rural future. However, assuming that such activities will continue, our recommendations include:

- Access, accumulation and analysis of more long term quantitative evidence about change in all aspects of the countryside – perhaps best integrated with the current evidence base being developed at Birkbeck College.
- Commonly agreed 'key trends' and their likely impact on the future.
- Forecasts based on the quantitative evidence for the current trajectories of such key trends into the future.
- Hypotheses about the impacts and inter-relationships of these key trends on the rural landscape and its communities.
- Evidence of innovative policy interventions in rural development and community creation from the UK and around the world with an assessment of the time taken to implement and their actual effectiveness – these could take the form of case studies where they exist or possibly, modelled outcomes of different policy interventions. This would be invaluable to future backcasting work.

- Best practice on time lines and investment required for implementing policies in key areas would also provide valuable information for non expert groups in considering future policy priorities and creating timelines.
- The visual prompts, pro formas and outputs from this project should also be considered part of the future knowledge base, as should experimentation with other communication techniques and an assessment of their effectiveness as communications tools. These new and innovative ways of maximising the value of futures work through communication should be included as part of the base.

7.5.2. Investment in further interdisciplinary and mixed skill approaches to Horizon Scanning and other research projects

Throughout the project, we have been struck by the benefits of mixing skills sets and the insights that are to be gained from integrating different perspectives. Whilst we are mindful that there is a major Government investment in RELU to encourage interdisciplinary studies of the Rural Economy and Land Use, from which new knowledge and approaches will emerge, it seems that Horizon Scanning could benefit from applying similar principles in future projects. We understand that Defra has appointed a social scientist in order to promote the better understanding of social science disciplines and how these can be effectively integrated into the enormous investment made by the department in scientific research and this gives a good base on which to build. Most specifically, we can see the advantages of the following:

- The combination of social science teams working explicitly with natural and biological scientists to create a common ground approach to the integration of socially-derived futures (such as this project) with the more ecologically determined scenarios, in order to find ways of balancing these two different (and often competing) perspectives of the future. Specifically we would like to think that an attempt could be made to combine our approach to socio-economic modelling of the 20 year future with a range of environmental models for the same period.
- Similarly, there may be some important learning to be gained from combining in-depth knowledge about food production technologies and the future role of agriculture and the food chains of the future with these visions of the future of society. Throughout the project finding a clear and balanced view of the real future for agriculture in rural England has been difficult, and sometimes because of the reducing economic impact of this sector easy to overlook. However, it is certain that agriculture is an important 'symbolic' activity and one that has to be understood and integrated into the wider picture of the future.
- Likewise a more conscious integration between a social view of the rural future and technologically determined visions may also pay dividends to help understand the real benefits of the new technologies available to the countryside. Whilst our Garden and Guilds is designed to be a technological utopia of sorts, this was predicated on the universal access to ICT in the future. There are many more difficult and vexed areas of development to consider in terms of how they might impact on the rural societies in the future such as

robotics, gene therapies, GM foods, nano-technology and other areas of technological innovation.

7.5.3. Integration of insights from all Horizon Scanning work

In a continuation of the previous point, there is a more short-term opportunity for the integration of the learning from the current raft of Horizon Scanning projects commissioned by Defra. There are also projects that we are aware of that may fall outside of this, such as the Future of Rural Services work being conducted by Gloucester University, that should be included in an overall assessment of the learning created so far by investment in futures work. We are aware that there is a plan to produce a summary report in 2005, but we would like to see the opportunity for a more active engagement between the projects and an attempt to set the findings (albeit from a range of different fields) in a common and usable common format.

7.5.4. More coherent and comprehensive public and stakeholder engagement

Given recent announcements and the implementation of the Modern Delivery Review, it is clear that Defra is embarking on a period of considerable upheaval. The future investment in Horizon Scanning may also be uncertain. However, it seems imperative that any attempt to broaden the base of knowledge and integrate understanding of future options and policy choices must include a growing component of public consultation and open stakeholder engagement. This is the current trend across government as a whole and in the area of the application of science and how important scientific and ethical decisions are made about the future (many of which are in Defra's remit) it seems vital that as many activities as possible are able to involve some component of genuine consultation and feedback from key groups.

Our observation is that the insights derived from interacting with the general public from different localities was invaluable and should be extended to a wider range of genuine rural residents. Their input is fresh, unfettered by 'professional' considerations and provides a more realistic view of likely reactions to policy alternatives 'on the ground.' Cost is an issue, but the benefits are potentially enormous in terms of increasing the legitimacy of knowledge creation and policy formulation in this area.

The experience of dealing with more professional rural representatives and stakeholder groups in the consultation stage and the backcasting workshops highlighted the potential benefits for Defra in creating a more structured approach to identifying and involving these groups going forward. The range of rural futures work and consultative projects underway might result in 'consultation fatigue' amongst some of the most important and influential groups thus reducing the likelihood of such exercises being representative because they are small, voluntarily funded and run and do not have the resources to constantly participate (the Black Environmental Network springs to mind as an example). Thus consideration should be given to developing a standing network or 'panels' that can be consulted in a more coherent way over all the projects being commissioned and conducted. Identifying a comprehensive and representative network of rural stakeholders across England and Wales, as part of the on-going resource base would be a useful task and helpful to future projects, in any case. These

should be organised on a regional and local basis as well as at a national level in order to facilitate consultation and 'flexibilisation' of policy at this level.

As noted above the specific application of consultative approaches in the backcasting workshops was, we felt, very productive and we recommend that Defra consider adopting this approach as part of the implementation of the Modern Delivery Review in order to facilitate the adaptation of policy to local conditions and needs within a nationally set framework. The use of future scenarios as a starting point proved to create a neutral space for discussion and an effective way of involving diverse groups in a constructive, future-orientated discussion.

Additional documents to read in conjunction with this report

A: The Summary of the Knowledge Base

B: The Summary of the Blue Skies Inputs

C. Report of the Scenario Building and Consultation

D. The Backcasting Report