



100 Club

**RAC/RICS Annual Fellowship in Rural Land
Management
Royal Agricultural College, Cirencester**

“New Demands; old countryside”

Report No 6

**Mr Rob Yorke BSc MRICS
Rob Yorke Associates Ltd**





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Preface

The Royal Agricultural College Annual Fellowship Awards Programme has very clear remits:-

- Generate added value
- Recognise the commercial importance of discovery, and the
- Exploring, inventing and creating of 'possible options' that can excite and help each section to play a major role in forward development.

The evolution of understanding the minute components of 'climate Change' will inevitably be complex and ever changing through the multiplicity of public and private information.

This unique RAC/RICS Annual Report highlights and discusses modern trends and is supplemented by the author's impressive photography.

The Royal Agricultural College/Royal Institution of Chartered Surveyors Annual Fellowship in Rural Land Management

Founded: - 2004

Funded by The Royal Institution of Chartered Surveyors
12 Great George Street, Parliament Square, London SW1P 3AD

The 10 year programme involves appointing a Fellow to research a selected subject and then present a final report and lecture at the Royal Agricultural College.
The award presented is that of a 'Fellow of the RAC 100 Club'.

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Dated: 27th October 2011

This is part of the existing Annual Fellowship Programme at the Royal Agricultural College focussing on important issues – vis

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Contacts:-

The Principal	Professor Chris Gaskell Royal Agricultural College, Cirencester, Glos. Tel: 01285 652531
Skills Project Manager, RAC 100 Club	Beverley Allen Royal Agricultural College Cirencester GLOUCESTERSHIRE GL7 6JS Tel: 01285 652531 e-mail: beverley.allen@rac.ac.uk
The Author	Rob Yorke Land Agent Gelliwelltog Abergavenny WALES NP7 7LR e-mail: ry@robyorke.co.uk Twitter: @blackgull

It is an honour to have been invited by the Royal Agricultural College/Royal Institution of Chartered Surveyors Annual Fellowship to share my experiences and thoughts in this stimulating series of Reports.

The views expressed are those of the author and are not necessarily those of the RAC or RICS.

FOREWORD

I may have bitten off more than I can chew but, for me, the countryside is too important a place to let vested interest, polarised, single issue positions distort our inability to have a balanced rational debate on something close to many of our hearts. Having said that, I unashamedly declare my own vested interest in attempting to stimulate and provoke this debate by placing all the matters on the table at the same time.

I thank all those that contributed to this debate paper – especially those that I interviewed and who are listed in the section on methodology – and to all those that partook in the focus group feedback in addition to the random souls from whom I canvassed opinions on the matter.

Thanks must go to Peel Holroyd for his early encouragement, Fiona Mannix for her unerring support, Charlotte Evans for sorting reams of focus feedback, Beverley Allen and Philippa Limbrick for their diligent formatting and Ben Jolliffe for his exceptionally focussed editing.

The biggest thanks must go to my wife, Alexandra, for her patience and support over the year that it took to research and write this paper.

Rob Yorke
October 2011



New Demands; old countryside

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1. Executive summary

If the Foresight report on *The Future of Food and Farming* has faded from your memory, and the Lawton and Read reports on biodiversity and climate change are just a vague recollection, you are probably in tune with the majority of the population. In recent years, they've come thick and fast.

But the reports do have one thing in common. Whether in food production, in biodiversity management or forestry, they demand a 'step change'.

The UK countryside, of which 75% is farmland, is much loved by our urbanised nation.

It helps to feed our stomachs and our souls, it's a place for leisure. However, the general public, seeing it on a short weekend walk at best, or through the warped prism of food packaging at worst, don't get the full picture. Insulated in our urban habitats, Brits are largely ignorant of nature red in tooth and claw, not to mention the complex web of demands we make on our natural environment.

Reconnect our thinking....

The Natural Environment White Paper is pushing biodiversity high up the agenda, aiming to reconnect us with the countryside via nature, rather than food. At the same time, European bureaucrats now claim that on top of paying farmers for their produce from our own pockets, we should pay them from the public purse for a range of benefits – such as clean air or the protection of our fauna and flora. In addition, the EU sets tough targets to cut CO₂, reduce pollution, increase energy from renewables and protect our soil and water.

The vested interests set out their stalls in response. Farmers believe we should prioritise food production and increase self-sufficiency; supermarkets busily provide cheap food; conservationists talk of more money for wildlife and environmentalists call for greener energy. Very often, large membership organisations have the ear of politicians whereas smaller expert groups are ignored. The media, always hungry for emotive stories to feed our 24hour appetite for news, tend to give an unbalanced view which, intentionally or not, can easily feed public prejudice, or worse, hysteria.

Organic confronts conventional farming, town is set against country and everyone seems against biotechnology. Overloaded with these and many other issues, both land managers and the public turn away.

It has led us into a state of confusion, disinterest and general apathy. Scaremongering and belt-tightening have seen climate change slip down the agenda. On the positive side, there is a growing interest in how our undervalued food is produced, but price tends to rule and as long as the countryside looks pretty, we don't enquire how it all works and have little idea that advances in one area may be traded off against reverses in another.

...to drive new action

But we cannot afford to ignore these demands, as the countryside, not nature reserves or gardens, is where our combined demands for food, biodiversity and climate change must be reconciled. Old countryside hands have to grapple with new demands and, together with NGOs, the government and even retailers, explain it to the rest of us. Ecosystem services and sustainable intensification may mean little now but, carefully communicated, traditional farmers, foresters and the new breed of conservationist land managers can understand their *raison d'être* and, critically, the opportunities these new demands bring. Only then will they be able to deliver what wider society is asking of them.

Now's the time for all of us to engage. Vested interests and sacred cows must be put aside as we begin a genuinely 'national conversation' based on trusted, informed and balanced information. The rural sector must get more involved in consultations and co-operation. We must scrutinise new incentives, lobby for rural funding and initiate these step changes before the way we live stamps too heavily on our natural heritage.

2. Research Methodology; interviews and focus group feedback

2.1 Interviews.

I undertook face to face and telephone interviews of key industry leaders within farming, conservation NGOs, supermarket, politics, media, government departments and other rural interests to garner opinion and comment on current and future topics within the rural sector.

No individual names are attributed to any of the content, statements or quotations; unless already in the public domain or cleared with the individual. The opinions expressed within this paper are entirely my own but may at times also reflect other general views canvassed from my interviews.

<p><u>Farming</u></p> <ul style="list-style-type: none"> • Peter Kendall - National Farmers Union (NFU): President • George Dunn - Tenant Farmers Association (TFA): Chief Executive • Helen Browning - Soil Association (SA): Chief Executive • Christine Tacon - The Co-Operative Farms: Managing Director • Ed Bailey - NFU Cymru: President 	<p><u>Conservation NGOs</u></p> <ul style="list-style-type: none"> • David Riddle - National Trust: Land Use Director (now retired) • Mark Avery - RSPB: Director of Conservation (now retired) • Alastair Leake - Game & Wildlife Conservation Trust (GWCT): Head of Policy • Mark Lloyd - The Angling Trust: Chief Executive • Neil Sinden - Campaign to Protect Rural England (CPRE): Director of Policy & Campaigns 	<p><u>Politicians</u></p> <ul style="list-style-type: none"> • Richard Benyon - Minister for Environment • Mary Creagh - Labour Rural Affairs MP • Tim Farron - Lib Dem Rural Affairs MP • Daniel Kawczynski - Conservative MP • Anne Mcintosh - MP EFRA Chairman • Lord Cameron of Dillington • Baroness Byford
<p><u>Civil servants</u></p> <ul style="list-style-type: none"> • Sally Webber - Defra Specialist Advisor Food & Farming • Roger Thomas - Countryside Council for Wales (CCW): Chief Executive • Huwel Manley - Countryside Council for Wales: Specialist Support Team Manager • Poul Christensen - Natural England: Chairman • Patrick Isaac - Welsh Government 	<p><u>Supermarkets</u></p> <ul style="list-style-type: none"> • Steve McLean - Marks & Spencer: Agriculture Manager • Annie Graham - Sainsburys: Agriculture Manager • Pearce Hughes - Asda: Agriculture Manager 	<p><u>Land managers/advisors</u></p> <ul style="list-style-type: none"> • Stuart Goodall - ConFor: Chief Executive • William Woolsey - Country Land & Business Association (CLA): President • Caroline Drummond - Linking Environment And Farming (LEAF): Chief Executive • Simon Thorp - Heather Trust: Director • Sue Steer - RICS Countryside Panel • Peter Fane - RICS Countryside Panel • David Slack- RICS Rural Chairman • Jeremy Blackburn - RICS Policy • Jonathan Harrington - plant biologist
	<p><u>Media</u></p> <ul style="list-style-type: none"> • Jane King - Farmers Weekly: Editor • Andrew Thorman - BBC: Head of Rural Affairs 	

Table 1: List of Interviewees

2.2 Matters discussed

A selected list of questions, based on the organisation's interest in the countryside (see full main list in appendix) with my opening gambit:-

“The gap is widening between the urban majority and rural minority: there must be engagement of the majority's imagination while understanding the minority's requirements.”

- A countryside under pressure – prepare bio fuels, plant biomass, push biodiversity, produce food, plan bio-security, promote carbon capture etc. How do we prioritise?
- Would consumers pay more for their food if they knew that farmers were doing more for the environment and would supermarkets pass increases onto farmers?
- Science led farming – if evidence based - why not biotechnology?
- Are traditional rural bodies engaging with shaping policy?
- Should government facilitate but not regulate the countryside?
- Would stock headage payments to upland farmers support the inefficient ones?
- Do the public love the countryside but not care for it because they don't understand what goes on there?
- Could the rural sector embrace media and be more proactive in getting messages across?
- Was the forestry sell off a missed opportunity to divest 'unimportant' woods to enthusiastic owners?
- Are ecosystem services, high nature value farming targets realistic and how do farmers react to such terminology?
- Was the agric-enviro Glastir drafted by practical farmers or civil servants constrained by EU targets?
- Is organic farming having a tough time using copper sulphate to contain blight while relying on methane producing manure?
- Why don't farmers form co-operatives to comment on policy or negotiate with supermarkets?

2.3 Focus groups:

I undertook online and email surveys of two different groups using separate sets of questions. A list of the questions and some of the comments received are set out within the [Appendix](#).

- The Insider group were farmers and land managers familiar with technical rural terms.
- The Outsider group were non farmers from urban and rural backgrounds.
(These terms are taken from Paul Selman's 'Planning at the Landscape scale' 2006)

2.4 Caveats

Planning: I have sidestepped this huge influence in how the countryside functions, and more importantly, remains economically viable. Both the Localism bill and National Planning Policy Framework (NPPF) are in draft stages and with speculation running rife on the NPPF (Oct 2011), planning deserves a debate paper in its own right.

Coverage: with 84% of the UK population in England [WIKIPEDIA], the primary emphasis of my paper is based on England but with some reference to Wales due to it having much in common with some of the smaller, atypical EU countries.

Third person: the phrase ‘them’ and ‘us’ is often heard within some rural/urban debates with a detrimental effect for all concerned. I have avoided this by referring to ‘we’ and ‘us’ as the consumer, taxpayer, public and society as a whole and the land manager as covering farmers, foresters, landowner, tenants et al.

Generalisations: due to the wide scope of the debate paper, I am probably guilty of some generalisations and superficial coverage of some important matters. However, the purpose of a debate paper is to stimulate discussion and that, no doubt, will include feedback on areas that cause ‘heat’ or need further debate.

Future proofing: by the time of publication, some of this paper’s contents will be out of date. The Natural Environment White Paper, forestry policy, MacDonald reforms on reducing regulation, badger culling, the proposed Groceries Code Adjudicator, planning issues and even a proposed food strategy plan, could all have dramatic effects on the contents.



3. The First Demand: The General Public

“Challenges for present *landscapes* facing new demands require a combination of perspectives, methods and scales of application, to design innovative and adapted solutions for the future”

Pedroli et al.

3.1 A nation disconnected from nature?

The United Kingdom (UK) is a highly urbanised nation with 90% of the total UK population living in cities or built up areas. In comparison, Germany is 74%, France 77%, and the USA, 82% [FAO 2011]. The general public’s perception of the countryside is, therefore, often based, not on personal experience, but on second-hand information, learned from the media. Consequently, opinion is often poorly informed even if well-meant and passionately held.

The modern UK passport shows scenes of idyllic countryside, emblematic of our country, but here’s a selection of indicators as to how urban we are-:

- Mobile and broadband operators show coverage of population, not area.
- Royal Mail have trouble supplying you a rural postcode without a street.
- Delivery firms are stumped without a house number.
- It’s tough to recycle unless you live in a 30mph zone.
- Tesco have an outlet in every UK postcode bar Harrogate. [GUARDIAN SEPT 2011]
- Higher quality food found in urban supermarkets rather than village stores.
- Defra’s dedicated Myth Busting: is this any relation to urban myth, a convenient untruth?

Extensive motorway networks distribute chilled, highly processed foods directly to supermarkets while commerce, culture, media, food, housing, health and infrastructure are all largely geared to our majority urban population.



The statistics tell a similar story:

Even though agriculture utilises 75% of the countryside, many taxpayers are incredulous that we should waste so much time and effort on matters that contribute a mere 0.9% to GDP, employ a tiny fraction of the UK workforce (2%) and involve 17% of the farmers commercially farming 80% of the land? Why do we need a Forestry Commission when trees can ‘look after’ themselves and we get a lot of the wood we want from Scandinavia?

Total UK land area: 60 million acres Total area of countryside: 56 million acres	42 million acres of agricultural holdings [WIKIPEDIA 2011] 3 million acres of common grazing land 7 million acres of forest
Agri/food industry contributes £85 billion to the gross value added (GVA) of the UK economy [NFU 2011] Of which, agriculture contributes £7.2 billion [NFU 2011] (same worth as the value of Nike brand)	
Farm employees 535,000	Average age of farmer: 59 [WIKIPEDIA 2011]
Forestry incl. primary timber products worth £400 million employing 40,000 employees [FORESTRY COMMISSION]	

Table 2: Land use UK

Others are better informed. Ever since Professor Stern issued his climate change report in 2006 and Sir John Beddington uttered his “perfect storm” phrase in 2009, there has been a plethora of reports. Some of them are very long. Even ‘executive summaries’ can run to 80 pages. The juicy, more interesting details are often lost within the main section of the report, buried between graphs of declining birds, levelling wheat yields and increasing human populations. Some reports are so ‘extreme’, with their demands for radical action from often uninterested or ignorant urban taxpayers, that I suspect the majority of us turn off from the important messages they contain.

3.2 We all love the countryside

“What are those blue remembered hills, what spires, what farms are those?”
A Shropshire Lad – A. E. Housman

There’s plenty of nostalgia for the English countryside; a diversity of landscape, accentuated by one of the most erratic climates in the world providing us, through some eyes with “the greatest heritage asset that this country has”. (Lord Cameron of Dillington)

Landscapes have a powerful hold over us and we tend to intuitively identify with particular territories. We consume landscapes, romantic ones casting awe over us, and we even feel possessive towards them as if we owned them [SELMAN 2006]. Green areas feed our inner health [MARMOT 2009] and, according to a recent survey, 93% of us value countryside for fresh air and relaxation [PRINCES COUNTRYSIDE FUND 2011]. Our gardens, covering a larger area than all NNR and RSPB reserves put together, comprise the most commonly viewed green space for many of us – even if we manicure them to within an inch of their lives.

Love of the countryside was reflected within the record 8000 responses to the Natural Environment White Paper (*The White Paper*). Quotes ranged from “when I was a boy, there were butterflies and crickets everywhere” to “bees, bluebells and badgers” being the most important part of the natural environment mattering to them [DEFRA 2010]. Living Wales, a Welsh Assembly Government (WAG) consultation, received its highest number of responses from conservation bodies [WAG 2010].

“So long as it looks good”
Insider’s view on whether we cared about the countryside.
(more comments within Appendices)



We are deeply attached to trees and woodland, as illustrated by the public’s reaction to the recent forestry sell-off proposals: we’re glad they’re there, according to a Department for Environment, Food and Rural Affairs (Defra) survey, even if 90% of us will never visit such natural places [DEFRA 2011].

“I would leave it to overgrow and let wildlife enjoy it”
77% of the Outsider group would like to own a piece of countryside.

But, whether the public is informed or not, rural tourism remains big business.

2009	28 million walking trips in Wales	Worth £632million in spending	[BMC 2011]
2009	Rural festivals in the UK	Worth £550 million	[BBC 2011]
2010	2.8 billion countryside visits to the UK	Worth £20 billion	[NFU 2010]
2011	Value of Welsh tourism	Worth £3billion	[WAG 2011]

Table 3: UK Tourism

The 2001 Foot & Mouth was estimated to cause £8 billion's worth of losses. Of these losses, £3.1 billion related to agriculture and the food chain, with the remaining £4 billion from lost tourism [DEFRA 2004].

As society urbanises, organised events such as Open Farm Sunday, the Game Fair, the Royal Welsh Show etc. are all becoming more popular as we become time poor and seek a quick-fix 'breath of fresh air'. Plenty of us don't even get out at all and opt for a voyeuristic trip to the countryside via the television set: 6.3 million of us sat down to watch a rural program relaunched with new presenters.

["Julia Bradbury boosts ratings at sexed-up Countryfile"](#)

Daily Mail



There's a special fondness for national parks. Nearly 60% of us visit them for the scenery [NAT PARK WEB], and although this can obviously be enjoyed from the car, 35 million people hike off around the National Parks annually [ECOLOGIST JUNE 2011]. But we don't venture too far from the path. Even though the Countryside and Rights of Way Act 2000 enables free access to much of the open countryside, we like to be told where to walk. Walking trails are regularly covered by weekend broadsheet papers and we have over 190,000 kms of paths in England alone (contrasted with 60,000km of long-distance footpaths in France and approximately 100,000km in the US [WIKIPEDIA 2011]).

The Outsider focus group – reflecting the views of the general public – gave a varied response as to whether they thought farmers looked after the countryside:-

["Some do, some don't. It depends what you want. Food? Cheap food? Nice views?"](#)

["Farmers do the best job – looking to the long term - generations preserving the countryside. A lot of these fancy organisations end up being run by people who may recognise fauna, but not how the whole jigsaw fits together".](#)

It is how that 'jigsaw' fits together that we come across a fundamental issue.

3.3 Do we understand our countryside?

Due to the urbanised state of the UK, we are many generations away from our agricultural roots.

This disconnected state is reflected in surveys where children think food comes from the internet [STANDAGE 2011], bacon grows on trees, cheese comes from macaroni [JAMIE OLIVER USA]. Adults are often no better: surveys reveal the beliefs that acorns come from beech trees and honey from pollen, and that councils look after all the hedges [LEAF 2011] and the whole countryside is only worth about one billion pounds [PRINCES COUNTRYSIDE FUND 2011].



Other misconceptions about the countryside include the belief that uplands and mountains are pristine, untouched by human hand [SELMAN 2006].

["Wildlife is being forced to live in populated areas. Nature should be left as nature"](#)

Respondee to White Paper consultation [DEFRA 2010]

Very often the general public want to know that the countryside works but, not surprisingly given their hectic lifestyle and urban 'habitat', they don't care about the details.

The media fills in the gaps. But its view of the countryside is not a balanced one. We cannot blame them because most stories only sell on adversity or polarised views and rural stories often slip to the bottom of the agenda.

The image of farmers has improved but perhaps on the whole, the public favours the old 'Farmer Giles' image as opposed to the modern agribusiness farmer. Rural media celebrities such as Adam Henson, Jimmy Doherty, plus various chefs, are under instruction to provide 'infotainment' which ensures that the countryside is still viewed through rose-tinted glasses.

As we become more removed from our rural roots, we lose interest as to what goes on there; apathy descends in both rural and urban quarters as we ignore White Papers, reports and the policies that underpin changing rural regulation.

One of the biggest connections with our countryside should be food. But UK supermarket consumers are the most disconnected in any of the EU countries with unrealistic perceptions of the countryside and with interviewees' views that the consumer 'couldn't care less' about climate change or wildlife habitat. 33% gave no thought at all to biodiversity loss in a 2011 survey [DEFRA 2011].

"There appears to be an increasing disconnect in a growing proportion of society between lifestyle choices and environment on which we reply."

Respondee to White Paper consultation [DEFRA 2010]

And as food becomes more processed and cling-film wrapped, the more we lose that connection with the source. A local scoutmaster 'lost' his scouts to tears as they fled the room where he was skinning rabbits. That said, at least 28% of consumers were honest enough to say they were 'honestly disengaged' when asked about their attitude to food purchases and the environment [DEFRA 2011].

Perhaps more worryingly, even those who appear to be closely connected with the countryside are losing their first-hand knowledge. Some farmers are disconnected thanks to driving larger, better 'insulated' machines and having to be in the office dealing with paperwork complying with regulations. Some land agents haven't heard of the Natural Environment White Paper as they're "too busy earning a crust". And a scientist farmer I spoke to hadn't heard of the Foresight Report on Food and Farming, politicians haven't the time to read all White Paper consultations and most people haven't the time or inclination to read anything after a hard day's work.

Land managers are also disconnected from the public. When the first agric-environmental schemes (AES) were brought in, landowners were advised not to enter the schemes in case public access over their land followed. Strident rural voices call out to educate the urban masses.

During my research, I sometimes heard the words, 'we, the rural folk, must educate the urbanites'. One of my interviewees wanted a 'battle royal' to take the rural message to the urban masses and



reverse the dismissive attitude to the rural sector. Yet land managers, while challenging issues, must be careful not to bracket those who disagree within a crude caricature. Dismissive comments are made about vegetarians and scorn poured upon anyone writing for or reading certain newspapers. Prejudice, wherever it's found, distracts from good analysis and effective discussion. [MIKE CHILDS AUG 2011]

And it's important to remember that we all carry some of the blame: we all drop litter, whether crisp packets, fertiliser sacks or shotgun cartridges.

“Our greatest weakness (is not enjoying it)”

“I don't mind but Dad dislikes it”
Farmers' views of dealing with the public

Even though there's been a recent trend of population moving back from town to country [TAYLOR REVIEW 2008], post offices and libraries continue to close and a gap continues to widen between the urban majority and rural minority. When people move to the countryside, they get involved with the community council, sometimes usurping existing incumbents who disengage with local issues. Anomalies arise such as rejection of lottery funding for a village hall because some felt it wouldn't be in keeping with their idea of a picturesque 'rural idyll', planning permission for a football field is turned down in case it attracts the wrong sort of 'youth' and resistance mounts to a first time mains drainage system for a village in case it encourages new development.

“The countryside has a pretty dysfunctional relationship with its wider beneficiaries.”
Professor Chris Pollock 2009

A great effort is being made by the government to connect the population - urban or rural - with the natural environment [WHITE PAPER 2011] via such schemes as a national garden competition funded by DEFRA. But such attempts can have unforeseen consequences. Some suggest they could lead to the over exaggeration of the role of urban green areas resulting in society underestimating the real conservation problems leading to a 'domestic' view of nature and increasingly lower conservation targets [BALMFORD 1999].



The countryside is much loved but the taxpayer does not understand it and is certainly not always happy to contribute funding. Perhaps because the majority of people in the UK don't own or need to understand the countryside, policy makers fill in the disconnected void by proposing vote winning though unworkable policy ideas and targets.

“The relationship between knowledge and attitudes toward a new idea is that greater knowledge of an idea is associated with positive attitudes about that idea.”
after Teisal 2009

3.4 RECOMMENDATIONS

- Further research is required on how to illuminate the general public on understanding the relevant issues BEFORE surveying them.
- Government consultation documents that affect the countryside should be better drafted to enable a balanced response and ensure there's room for expert feedback ALONGSIDE the popular response.
- Some of the grittier elements within the countryside may have to be explained in more detail: 'infotainment' may be perfect for media ratings but poor for a rational debate.
- Rural and urban stakeholders must take care to avoid stereotyping or caricaturing each other to prevent distraction from or dismissal of a good analysis. It is easier said than done, but an understanding of the other's point of view is vital in commonly polarised debates.
- Conservation should not be 'domesticated' to further foster an unrealistic connection with nature i.e. 'garden' conservation is not promoted at the expense of remote, larger scale beneficial conservation.

4. The Second Demand: The Conservationists

“We are entering an age in which nature is finally getting the recognition that it deserves”

Professor Tim O’Riordan UEA

4.1 Introduction

Whether you agree or not with the quote above, there is no doubt that, as one government minister tweeted, “Value of nature now at the heart of government!”. The present government wants to be the greenest ever and is partly utilising nature as one pathway to achieve that result.

In 2009, Professor Lawton was commissioned to write a review of England’s wildlife sites and ecological network. He concluded that the natural environment provides us with a range of benefits scientists and bureaucrats call ‘ecosystem services’, ranging from the provision of clean air and water, or the protection of our soil and the fauna and flora (see 4.3 below). The vast majority of UK citizens are hardly aware of them until they start to go wrong. Lawton went on to note that wildlife networks were fragmented, in poor condition and that species declines were on a global scale, with climate change potentially having a major negative impact. His final report in Sept 2010, ‘Making Space for Nature’, advocated a “step change in nature conservation”, suggesting a range of practical actions needed to establish a “coherent and resilient ecological network”.

4.2 Protecting biodiversity

“A broad mix of species and habitat suitable for them all to flourish.....”

Focus group



Biodiversity conservation, known in our more biblical past as the stewardship of nature, is now a major policy driver in developed countries - countries which are home to a fifth of the global population who cause 80% of the world’s environmental damage. People in developing countries, on the other hand, tend to view environmental protection as a luxury, particularly if life is a struggle, access to basic medical care restricted and other basics such as education or even food and water are in short supply.

The European Environmental Agency (EEA) outlined the following threats to biodiversity in Europe in 2010:

- habitat fragmentation via threats from agricultural production, land abandonment and invasive alien species
- pollution and nutrient overloads and over-exploitation of resources
- climate change impacts

Remarkable as it may seem in our 'modern' age, there are still huge areas of the natural world about which we know little and we have even less idea about what a 'sustainable' approach might mean for them at a practical level. Targets and directives are often developed at the European level while our government tries to embed conservation policy within the wider framework of CAP and other environmental legislation.

The Birds Directive 1979 and Habitat Directive 1992, for example, became the Conservation of Habitat and Species Regulation 2010 and many other directives underpin our legislation; including laws on pollution, nitrates and organic products.

“Yes, it has become too much of a buzzword which tends to devalue it.

A more specific word or phrase would often be more appropriate”

Focus group response on overuse of the word biodiversity

In spite of much hard work – witness complex papers such as 2008's 'The Economics of Ecosystems and Biodiversity (TEEB)', international meetings like the 10th Convention on biodiversity in Nagoya last year and initiatives such as the 2010 Year of Biodiversity – communication to the wider public is often hampered by overly technical language and 'environmental disaster' overload. The scale is also hard to comprehend: it is reported that costs of inaction – a year's natural capital loss - would lead to losses of between US\$2-4.5 trillion over a 50-year period [UN UNIV 2010]. These figures are so large that they are impossible for us to imagine. Many of the reports grab headlines for a day and then sink without trace.

In a recent survey, 33% in the UK gave no thought to biodiversity loss and 31% had never heard of the phrase. Knowledge and awareness vary in the different socio-economic classes, with 30% of A and Bs knowing a fair amount about biodiversity, whereas 10% of socioeconomic classes D and E knew only a little about it [DEFRA 2011].

Government bodies abound with mission statements aiming to halt overall biodiversity loss, support healthy well-functioning ecosystems, establish coherent ecological networks as well as create better places for wildlife and people [ENGLANDS BIODIVERSITY STRAT 2011].

Doing nothing is not an option.

4.3 The Natural Environment White Paper

The largest reserve of wildlife is not in wildlife reserves but in the wider countryside. Many interviewees said that the White Paper could precipitate a sea change in land management as we start to apply business management tools to often unmeasured assets such as bees, peat, water, and land.

The consultation for the White Paper met with hostility from some land managers who disagreed with the suggestion that agriculture had resulted in degraded land and that we needed to take more care of the environment. However, the central idea seems sound: we can reduce further environmental damage by assigning an economic value to the 'services' and assets the countryside provides

Although these services have of course always been 'provided' for free and are therefore overlooked by many, perhaps we can put their importance into perspective if we imagine what would happen if we were to lose them.



The basic four **Ecosystem services** are:

- Provisioning: food, timber, energy. i.e. products from ecosystems.
- Regulating: dispose of pollutants, carbon sequestrate. i.e. benefit from regulation of ecosystems.
- Cultural: sacred sites, tourism, science, peace. i.e. non material benefits to people from ecosystems.
- Supporting: maintain soils, nutrients. i.e. ecosystems necessary for production of all other ecosystems.

It's true that the term ecosystem service is an awkward one - 28% had never heard of it [DEFRA 2011] and it's referred to twice as much in academic as in public texts [RUSOURCE 2011]. We certainly need a more easily comprehensible one – natural utilities perhaps? – if the idea is to gain broad public acceptance.

But it is absolutely essential that we ensure these services continue to function by accounting for them in the only way most of us understand – with a price tag. Our lives continue to depend heavily on the environment, albeit without the knowledge of the majority of the population but, at the same time, these services must be balanced with other demands (such as food, housing, energy and emissions) at local, regional, national and international levels.

The National Ecosystem Assessment [2011] that preceded the White Paper, has started placing a value on these natural assets, the results of which have been rapidly taken on board by the government.

<i>Headline results on the value of the UK Biodiversity Action Plan re some ecosystem services.</i>	<i>Current spend scenario (£m per annum)</i>	<i>Proposed benefits beyond current spend (£m per annum)</i>
Climate regulation	413.31	163.69
Water regulation	429.54	168.76
Sense of Place	131.34	167.40
Charismatic species threatened (birds, butterflies)	253.68	175.17
Non-Charismatic species threatened (insects, trees)	83.27	41.74
Total	1365.97	746.80

Table 4: NEA Values

Defra August 2011 [Christie et al.]

Once a figure has been calculated for each service, providers of ecosystem services, such as farmers or foresters, can be paid by their beneficiaries in the form of 'biodiversity offsets', much as heavy CO₂ emitters can purchase carbon credits in schemes such as European Union Emission Trading Scheme. The long-term aim is to stimulate a market for investors to start looking for opportunities to make a financial return by investing in activities that improve natural services. Some progress has been made, in the UK and internationally.

The Environment Bank has been set up to bring together funds to establish nature and landscape gains by various methods, such as conservation credits, now being piloted. Australia has introduced Green Offset initiatives and the United States has the Environmental Banc & Exchange (EBX) running wetland mitigation and stream restoration schemes worth \$37 million [IUCN 2004]. However, much more work is required on the ecosystem services initiative.

Other bold ideas suggested by the White Paper are the establishment of Local Nature Partnerships (LNPs) and Nature Improvement Areas (NIAs) to engage local communities and undertake conservation within large scale landscape projects. Such schemes are always fraught with cost

issues, as they have to be sufficiently well-funded to attract land managers. However a number of projects, such as the one below, have already been running for some years, and have started to flag up some of the issues to be addressed.

Big Chalk - a bottom up idea.

In 2008, landowners and conservationists in southern England were aware their area was something special. But they also knew that management of the area wasn't properly integrated or on a scale large enough for it to work properly. In 2009, Natural England started to push the idea of larger scale landscape management and introduced Integrated Biodiversity Delivery Areas which this group recognised as their own 'Big Chalk'; an area of chalk downlands across southern England unique within Europe and farmed by over 5000 farmers.

Lawton's Report, Making Space for Nature, developed the landscape model further under Ecological Restoration Areas. This in turn encouraged the Big Chalk group to draw up an agenda linking landowners and NGOs together in order to produce a low cost, high imagination working partnership based on each party voicing what they wanted from the land.

Some conservation non-governmental organisations (NGOs) were alarmed by the Lawton Report, concerned that the 'step change' demanded would mean less funding and encroachment by the private sector into what they viewed as their own area of expertise. Not all the land managers were on board either, and with increasing arable prices, they were finding it hard to concentrate on 'lower yielding' matters. Conservation measures can be time-consuming for efficiently contract-farmed land, especially as additional costs are borne unwillingly by the contractor.



Nevertheless, Big Chalk hopes to be one of the first NIAs to attract funding and bring more land managers on board to create a bio-diverse, profitable and connected landscape.

4.4 Influence of conservation NGOs

["Modern conservationists are stepping into the vacated shoes of farm labourers, shepherds and woodsmen, who would not have been able to read conservation manuals but knew more about conservation practice than most of us. The challenge today is to obtain similar results by different means."](#)

Peter Marren

Into this complex area of government and EU regulated conservation, step a wide variety of highly influential NGOs. The Royal Society for the Protection of Birds (**RSPB**), Europe's largest conservation charity, is a major player. With over 1 million members, 1500 employees, 12,000 volunteers and more press officers than Defra, it receives £22 million in government funds annually (*excluding* grants). It even has six jobs funded by the Environment Agency. As a result, when they issue a press release, the media and policy makers listen.

["It requires very little knowledge to care passionately about animals.
It requires a great deal of understanding to care properly for them"](#)

John Webster, Professor of Animal Husbandry at Bristol

The quote above highlights the void that the RSPB and other conservation NGOs fill. Passionate members with restricted knowledge trust that their NGO has the skill and understanding to look after their special interest, be it birds, fish or insects.

One idea developed by an NGO and now embedded in policy is the **Farmland Bird Index (FBI)**. Originated by the British Trust of Ornithology's (BTO) Common Bird Census, it was adopted by Defra and European officials as an indicator of the health of the countryside. It uses population data on 19 species of birds, including skylarks, yellowhammers and grey partridges, whose breeding habitats are

deemed inextricably linked with healthy farmland habitat. There are critics who think that too much emphasis is placed on species rather than habitat and that this artificial barometer sets organic against conventional farmers over which farm practice attracts the most birds.

“Yes, but not convinced of accuracy and I think it’s politicised”

“No, just another stick to beat you by”

Farmer focus group thoughts on importance of the FBI (more comments within Appendices)

Some mammals are commonly perceived to have more charisma or personality than others: badgers more than grey partridges (one of the FBI species), for example, and sparrow hawks more than house sparrows. When NGOs follow their members legitimately subjective feelings, they can end up with unscientific and illegitimate policy.

The release of high profile species, for example, smacks of instant gratification conservation – oversized continental goshawks now haunt our conifer forests endangering red squirrels – all in the name of attempting to reach biodiversity targets set by the EU for 2020.

Our obsession with instant results diverts us from much larger and more immediate threats to our biodiversity. Aggressively invasive alien species such as Himalayan balsam, Japanese knotweed, grey squirrel, oak moth, killer shrimps and signal crayfish cost the country over £1.5 billion annually [PARLIAMENT 2008] and although the issue is considered important by the EU, the UK’s conservation lobby largely ignore it.

“The contribution of non-native species to the UK economy means there is a trade off between economic and ecological factors.”

Parliament Postnote 2008

Whatever an NGO’s expertise in one area, members often extend their trust to all countryside issues irrespective of the original expertise of the NGO. Over the last few years, therefore, we have seen the RSPB extend their remit from birds to nature more broadly. People join them because they like nature and, rather surprisingly, I was told that their penetration is deeper within rural rather than urban areas. However, I did *not* get a positive response from my Insider (farmer) group when I asked if they were members of the RSPB:

“Are you joking!?”

“A bunch of comen”

“Good god, no!”

Despite the opposition of knowledgeable country professionals, RSPB endorsement of a policy or directive from Europe creates a climate in which a workable political framework can be set. The government would have found it very hard to roll out the first set of agri-environment schemes (AES) - see below- without the buy in of this powerful conservation NGO. Attitudes and recommendations reflect membership recruitment drives. The ongoing spat between the NFU (food production) and RSPB (biodiversity), for example, threatens to derail rational discussion. However, is it perhaps inevitable as both camps try to sustain member recruitment figures based on disagreements with each other. On top of this, whatever we think of the word sustainability, it very much underpins today’s policy agenda and is partly driven by more ‘efficient’ NGOs getting their message across, leaving the more traditional rural organisations behind.

The White Paper highlights the important role of conservation NGOs, in particular their skill at handling the media and getting their messages out, both to policy makers and the broader public: events such as the RSPB’s ‘Every child outdoors’ campaign ensures the message they want told gets across to the uninitiated. However, conservation NGO policy is not without its problems. In one example from the recent past, local



campaigners challenged the felling of alien conifers and expressed outrage at the removal of oak trees harbouring corvids that overlook lapwing sites: popular sentiment is frequently a poor guide to effective conservation.

The RSPB does undertake sound joint scientific research with other organisations such as the Game and Wildlife Conservation Trust (GWCT). One example is the 10-year Langholm Moor Demonstration Project which studies red grouse and raptors. It's a perfect example of a collaborative approach in aiding scientifically led land management practice.

But, very often, the RSPB is unable to comment or promote any 'unsavoury' results in case it upsets its membership.

Meanwhile, at the other end of the 'conservation axis', The **National Trust**, with their 3.8 million members and 60,000 volunteers, have expanded their focus from large country houses to farmland and countryside.



The charity now owns 250,000 hectares of land, 60% of it upland and 80% farmed by approx. 2000 tenants.

Their ambitious message for the future asks us to reduce our dependence on oil and wake up to the realisation that our long-term food and energy security depends on our environmental security. Their vision also sounds out the warning that unless we nurture our natural resources, the land will find it harder to deliver everything we need in the future [NATIONAL TRUST 2010].

This seems reasonable even if difficult to achieve.

In 2011, in an attempt to re-connect the public with food production, they launched an ambitious online scheme. 'MyFarm' encourages individuals to pay to take part in farm enterprise decision making. One flaw is that the scheme is entirely organic, possibly reflecting the preference of the majority of its members. In what some describe as the tyranny of the majority, the scheme has resulted in some strange decisions: the trust's farm manager was disappointed that online voters decided to go for a rare breed sheep as its main commercial flock and the project was somewhat muted after the live video showing the death of a foal soon after its birth [BBC JULY 2011].

Overall, some say the green lobby is perceived to be losing its grip. Others state that the conservation NGOs all bang the same drum thus confusing their messages, but for the time being, as some countryside lobby groups are perceived to be an unacceptable vested interest in policy maker's eyes, conservation NGOs will continue to have first call on the ear of government.

Ultimately, however the general public's love of the softer and prettier side of the natural world has grown as they have become more disconnected from nature red in tooth and claw. The NGOs that represent them are content to reflect this tendency to a varying degree, perhaps to maintain member numbers and in spite of their genuine expertise and both theoretical and practical understanding of the issues involved in conservation.

4.5 Bureaucrats and biodiversity

“Conservation without money is conversation”

Michael O'Brian DG Environment, Europe Commission

Initiatives for agri-environment schemes (AES) were started by some countries before they became an European Regulation in 1999 with requirements for all member states to roll out agri-environment measures. As AES compete economically with the most profitable land use, there is a need to set the correct level of incentive without overpaying land managers. The AES, so far, is the main vehicle used by bureaucrats at both European and national level to deliver environmental benefit to the countryside. While they provide an indication of the engagement with the environment by land managers, they are not without controversy on the real benefits they deliver.

AES are voluntary agreements that pay annual subsidies to land managers who manage their land in an environmentally sensitive way that goes beyond the minimum required of them by regulation [NATURAL ENGLAND 2009]. The first AES in England commenced in 1987 with Environmentally Sensitive Areas. They were followed by the Countryside Stewardship Schemes in 1991 and are now delivered within Entry Level and Higher Level Stewardship (ELS & HLS) schemes.

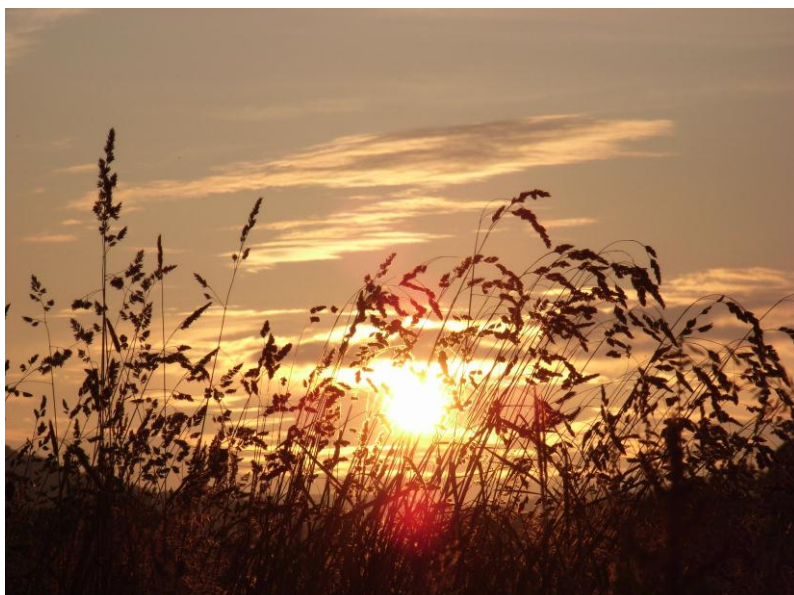
At the moment, the majority of funding is from the Common Agricultural Policy budget and approximately £446 million per annum is allocated by the UK to AES with a top up from government funding.

75% of farmers in England are already within AES. Many trumpet this as a good thing but looking more deeply, the answer is not so clear: 6 of the easiest options that absorb 50% of the budget, are operations that most farmers would undertake anyhow - hedge cutting and ditch maintenance require very little new conviction on improving or creating new habitat and have failed to result in much wildlife improvement.

“The resulting delivery shows a clear over-investment in boundary options at the expense of in-field options, which are more likely to produce biodiversity benefits”

Vickery et al.

In the same way the FBI is used as a barometer for the general health of the countryside, bird numbers are often used to measure the success or failure of an AES. Disappointingly for all, overall farmland bird numbers in 2007 were still at 52% of their levels in 1970 [DEFRA 2007]. There is a consensus that bird numbers have still not recovered under AES with the main blame focusing on changing farming practices including higher efficiencies in harvesting and storage and moving from spring to winter cereals and from hay to silage production.



The trouble is that, from the start, many land managers couldn't see the benefit of the schemes. It wasn't explained that grass headlands do very little for wildlife and so many farmers, by not defending the environmental budgets under close scrutiny in the early days, lost 'ownership' of the AES to conservation NGOs.

A current major blockage to better uptake by farmers is that payments, based on income foregone in line with World Trade Organisation rules rather than incentives, have fallen out of line with current farm output prices.

The HLS program has fared better in terms of delivery with higher quality results – partly because of its competitiveness and targeted delivery of certain bird species but mainly because there's more money in it. An example would be the reversal of corn bunting decline by adaptive management and targeting of works such as provision of over-winter stubbles and delayed mowing dates. [PERKINS 2011]

In Wales, AES have been revamped into the new **Glastir** replacing all existing schemes. The initial launch was not well received as it wasn't as generous as the existing schemes, was too complex and was perceived to have been drafted by civil servants with an overly strong ecologist input.

After a review from a panel including land managers, Glastir received a better response, incorporating delivery of carbon and water management targets as well as making the uplands more resilient to fluctuating price economics. It aims to focus on best food production areas but also use public money to buy environmental outcomes on behalf of society via ecosystem services. The reality is that recent announcements have seen the WAG pull back on funding to upland farmers, thus bringing forward concern as to how these areas will be farmed in the future [DAILY POST OCT 11].

In England, after a threat of compulsory set-aside, the farming industry lobbied for a voluntary scheme to continue managing the unforeseen conservation benefits of set-aside and the **Campaign for the Farmed Environment** (CFE) was born. In May 2011, 90% farmers had heard of it, 60% support it, but 21% still have done nothing about it. [DEFRA 11]. Some of the latter percentage thought they were doing enough already (but still not registering with the CFE), whereas others were upset as they thought land was being taken out of food production when, in fact, the CFE's real aim is to actively manage unproductive land for environmental gains. Other farmers worry that the proposed greening of the CAP would, in any case, involve increased statutory environmental obligations. In France, the government offered no such voluntary basis and already enforces a compulsory 3% set-aside rule, rising to 5% in 2012 [FARMERS WEEKLY MARCH 2011].

The government is watching very closely to see if, rather than using a new set of compulsory measures, the CFE could be used as a 'vehicle' to deliver the EU environmental requirements that will no doubt be requested when CAP is reformed within the next few years. This seems to be an effective way of encouraging UK land managers to be trusted to act on their own behalf instead of adding more regulations. But it does of course rely on their good will.



“It depends where there is supposed to be biodiversity! Not IN crops surely?”

Focus group response

The government’s green credentials are on the line with Nagoya 2020 biodiversity targets, the taxpayer wanting results for their money spent and with all eyes on the FBI as a health check, every pound must be targeted to work harder and smarter. There’s a lot of attention for a slice of the CAP budget. Future AES must reverse fragmentation of habitats within landscape scale schemes promoting infield options and intensive wildlife habitat management involving specifics as predator (not raptor) control and winter feeding for songbirds.

4.6 RECOMMENDATIONS

- Land managers must embrace the importance of the environment within their production systems.
- The sustainable intensification of wildlife management is as important as food production. The Campaign for the Farmed Environment must be further explained for those not yet participating.
- Remove the stigma surrounding the perception that environmental farming is incompatible with food production.
- Farmers and foresters must, even when they think it is outside their area of expertise, enter into the biodiversity debate: it’s a matter inextricably linked to their livelihood and affects best land management practice.
- The wider meaning and impact of ecosystem services must be translated into layman language so land managers (the ones delivering the results on the ground) can understand the long-term importance of matters such as soil and habitat for farming food and wildlife.
- Conservation NGOs and land managers need to work together and exchange ideas to deliver imaginative, low-cost targeted biodiversity results i.e. field scale winter feeding of birds.
- Illumination/informing/nudging of the public as to the benefits of ecosystem services so they understand the largely unseen results they will be paying land managers to deliver in the future.
- The government should look closely at the idea of conservation credit offsets in view of the possible trade-offs required to house an increasing population and attain other climate change and food targets.

5. The Third Demand: Agriculture and food

“We believe that food security is 'to have access at all times to sufficient, safe, sustainable and nutritious food, at fair prices, so as to help ensure an active and healthy life!.'”

Environment Food and Rural Affairs Committee April 2011

5.1 Introduction

In 2008 a landmark conference in South Africa raised the profile of increasing global population and decreasing agricultural yields. The next year, Sir John Beddington (Chief Government Scientist) warned of a future 'perfect storm' in about 2030, when diminishing resources – principally food, water and energy – will collide with the demands of increasing populations. The Royal Society chimed in with a new policy outlining how to produce larger yields in a more sustainable way. They described it as 'sustainable intensification' [ROYAL SOCIETY 2009]. Finally, in 2011, the Foresight Report on The Future of Food & Farming 2011 was published.

The Foresight Report demands tough measures to combat the crisis, calling for “*nothing less than the redesign of the whole food system to bring sustainability to the fore*”. Yet, in developed countries, where the supermarkets shelves are over-laden with food, the report seems to let us off the hook by stating:-

“*The political reality is that sustainability cannot be pursued in the absence of food security*”.



Increasing global population is undeniably a major factor influencing food production. **2010** saw the highest percentage increase (470,000 people or 0.8% annual increase) in the UK's population since 1962 [BBC 30.6.11]. But this pales into insignificance when, in 2050, it is anticipated that the Asian population will be equal to the current global population [ATLAS REAL WORLD 2010]. It is this sector of the population that will have the greatest impact on global food markets. Chinese buyers are already in the market for our unsellable '5th quarter' meat products (non-carcase meat such as eyes, ears and hooves) and are seeking 3 million tons of seed potatoes to enlarge its potato breeding programme to replace water-hungry rice [CHINA

POTATO EXPO 2011]. Yet, ultimately, the real issue is not the increasing numbers but changing tastes: there is a widespread acknowledgement that the vast population of China is already eating a lot more meat due to increased prosperity.

Some talk of revolution, others talk of evolution within the UK agricultural sector. There are efficiencies to be made within existing systems whether organic or conventional. These include technologies such as accurate computerised fertiliser application, targeted pesticide use, overall tighter control over inputs as well as the use of human sewage and food waste as fertiliser.

“*There's some really sexy kit on farms, that should be used to appeal to youngsters who are interested in technology.*”

Poal Christensen May 2011

Now back on the CAP agenda, food security is making UK farmers feel valued but they are having difficulty in coming together to deal with the issue, especially as it competes for attention with other issues such as biodiversity, dwindling budgets and the pros and cons of organic and conventional farming.

“Increased knowledge of one technology leads to more negative attitudes of other technologies. This effect may be due to negative information being provided by opponents of specific technologies”

Teisal 2009

5.2 Sustainable intensification

“Societies may not be able to expand available cropland without significant environmental risks”

Acevedo 2011

According to The Foresight Report, sustainable intensification is the only realistic way to feed more with less use of resources. The organic sector has difficulty with this. However, based as it is on land ‘greedy’ extensive methods such as grass-fed beef or free range chickens, some argue that we would require an extra 30 billion acres of grazing globally and an extra 7 billion cattle [MATT RIDLEY 2010] to replace all the inorganic fertiliser currently used, for organic to work as the dominant global system.

Others argue that the best way forward is to make better use of what we have. Globally we use about 1.2 billion tonnes of fodder to rear livestock. But the UN has calculated that if we fed food wastes to livestock instead, we would save enough to feed about three billion people – sufficient to continue feeding the world’s growing population until 2050.[TRISTAM STUART 2010]. However, encouraging the majority of people to give up eating meat is, most agree, unrealistic.

But even if intensive systems are the way forward, many usually unsentimental rural professionals and farmers find that although their heads tell them there’s a need, it goes against their hearts to embrace certain forms of intensive food production, however sustainable. And we all suspect cows want to feel the sun on their backs even when we watch milking breeds choose to stay indoors most of the time.

The Nocton dairy proposal in 2010 for 3700 cows to be housed in one unit was an opportunity to try out one form of sustainable intensive farming in the UK. Millions of pounds were to be invested in a state-of-the-art air-conditioned unit that housed the cows all year round (most are already housed for up to 6/7 months). A full-time vet was included in the plans along with bespoke feeding and bedding requirements. The huge volume of waste produced was to be safely contained and used to generate heat and power. However, after much vocal opposition, the Environment Agency refused the plan because of potential risk to a nearby aquifer.

Factory, close management and mega farming continues to be under close scrutiny. Yet we often react unthinkingly to the ‘label’ without asking about specifics. Could these systems enhance animal welfare or reduce emissions? Do they provide more efficient recycling, reducing reliance on fossil fuels and generating energy?



“Large-scale family farms and non-family farms account for 12 percent of U.S farms but 84 percent of the value of production.”

Structure and Finances of U.S. Farms: Family Farm Report

Some say we should look towards US agricultural practice to prepare for the future: they hold 20% of the global agricultural market [USDA 2011) and we could learn from their highly efficient meat production systems. Yet the UK countryside is very different to the US and our more intimate countryside does not generally suit large-scale hedge-less farming. Furthermore, the US decided years ago to zone rural areas, with food production provided by 2 million farmers with average sized holdings of about 450 acres. [EUROPA.EU], completely separate from non-food producing areas. The scale is also vastly different. The total area of US protected wildernesses (109 million acres) covers double the total area of the UK countryside.

There is more that our farmers can do: some are not fully aware of their costs, their openness to risk and need to tighten input costs. A certain section of farmers are working purely towards the farm subsidy rather than reacting to market drivers. Those farmers that manage risk and volatility do best and, coincidentally, they also happen to be those with mixed farming systems, while the top commodity producers are businesspeople first and farmers second: they make up the top 20% of profit-making farmers.

“I am 100% behind supplying what the market wants rather than telling them what I am going to produce. As long as the figures add up. And if not, I'd shut down and do something else!”

An agri-business farmer

That is not to say that there is plenty of room for niche product farms but as one interviewee put it, our food is produced by young agricultural business entrepreneurs, whereas family farms make the countryside look nice.

However, even within conventional farming, it's not just a question of animal management and soil fertility. Many argue that, in years to come, **water** will dictate where and how crops are grown. Natural

rainfall or irrigated water is of course required for all agriculture. Only 20% of globally cultivated land is irrigated but it produces 60% of our global grain [FAO 2010]. Although this intense use of water does not apply to our temperate UK at the moment, raising livestock uses by far the biggest proportion of water [DEFRA 2010]. Overall concerns on water usage will no doubt be reflected within the proposal for a White Paper on Water by the end of 2011.



“Enhanced land and water productivity are the major opportunities available to increase food production”

Acevedo 2011

The Water Framework Directive could have wide-ranging effects on agriculture via the requirement to reduce diffuse pollution from various sources. It is not unimaginable that field tramlines might exacerbate pollution from nitrate and pesticide run off [GWCT] and that the banning of tramlines could have devastating effects on land productivity. The same applies to water storage, excessive day time use for crop irrigation and use of unrestricted abstraction licences [DEFRA 2011]. These risks need to be foreseen, assessed and preventative techniques found now rather than when legislation is forced upon unprepared land managers.

There's clearly a need to diversify and innovate food and fuel production as much as possible, given the grim predictions we face today. The farming of insects – weaver ants, for example, or crickets now known sometimes as 'sky prawns' – growing crops vertically on systems such as VertiCrop™ to use less water or producing biodiesel with algae may all sound farfetched but when meat has been 'grown' in a lab [OXFORD & AMERSTERDAM UNIV 2011] using only 1% of the land and 4% of the water as required for farmed animals and also reducing greenhouse gas (GHG) emissions by 96%, it cannot be ignored.

Meanwhile, on the other side of the world, China, the rising superpower, the world's 3rd most bio-diverse country [KEW 2011], hosted a bio-agriculture industry summit and talked predominantly about biotechnology.

5.3 Biotechnology

At an earlier meeting in 2008, the US and China had disagreed with other countries on the emotive subject of biotechnology (biotech), stating that more explanation was needed and that the subject had not been reported in a balanced fashion [IAASTD 2008]. China, particularly, suffers from a precarious food supply. With 22% of the global population, yet only 7% of arable land [RICS MODUS 2010] and limited water resources, much of its agricultural R&D is focused on improving grain production.

**“It's our duty to develop science and technology, not to hold it back.
We need to feed people first, before we consider ideals and convictions.”**

Professor Li Ning (China Agric Univ)

For a number of reasons, public opinion in the UK is largely against biotech. Perhaps we are suffering a distinct attack of neophobia – the fear of progress and change. When biotech first arrived on the scene, it was rushed out, strongly marketed as being beneficial to farmers, rather than to the consumer. Attempts to re-brand now, given its current reputation, would be seen by many as trying to hide something unpalatable.

In 2010, 15 million farmers grew biotech crops worldwide, mainly in developing countries, where there is more of a need to experiment with different ways of growing food given the harsh conditions. However, the high cost of regulation and security required (witness the trampling of non-commercial crops in Australia) combined with the massive investment needed, places the technology firmly in the hands of relatively few global corporates. Even companies that have a good track record in terms of transparency and fair play can be tempted to abuse their dominant position as they are always under pressure from shareholders to push profits.

Many critics also resent the patent protection required to recoup such large investments but as patents expire - Monsanto's Roundup Ready® patent is due to expire in 2014 for example – the Royal Society's call for public funded non-commercial research into biotech might at last be answered.

There are real concerns that biotech encourages farming techniques more in line with large scale, intensive, continuous cropping systems which do not suit the network of mixed farms or smaller holdings within the UK. There is also an important requirement to utilise more land to plant refuge areas for the crop's natural pests to prevent a build-up of resistance.



Yet supporters of biotech rightly ask whether our fears relate to the process of introducing a gene to change the property of a living organism (transgenesis) or the power placed in the hands of a small number of corporate multinationals. Differing forms of genetic modification have taken place for

centuries. Just very slowly. One conventional breeding technique is mutagenesis. This involves placing a block of irradiated cobalt 60 in a field to observe how gene mutations ‘naturally’ sort themselves in reacting to the radiation, allowing the desired mutants to be selected for further breeding. Do we forget that all farming is not that natural and the food we eat today is very unlike any varieties found in the wild?

Today we have created salmon that feed throughout the year enabling efficient food conversion, golden rice with added vitamin A to reduce human blindness and modified soya beans that are more resistant to boll weevil, thereby reducing pesticide use. Surely these are useful additions to the growing toolbox we need for feeding increasing populations with reduced resources?

The huge potential of the wheat genome, a thousand times larger than the human genome, must not be wasted and surely it would be surprising if the Food Strategy Plan in 2012 didn’t extol the benefits of biotech in some way.

“We should pioneer new systems that include more pest resistant crops developed through breeding or genetic modification so minimising the use of pesticide.”

England Biodiversity Strategy Group Update Jan 11

Biotech is not officially promoted within the EU, but the total ban on biotech feed has been relaxed. Spain happily grows biotech maize while we in the UK are going to try experimenting with it this year [ROTHAMSTED 2011]. Defra will want to be quietly continuing research and development. We take risks in other areas: we do not know, for example, just how the usage of mobile phones affects our health, yet we use them more and more. So when food spend heads toward 20% of disposable income, targeted ad campaigns might appear showing kids staying healthy with functional biotech food and a presently sceptical public might begin to view biotech as useful or essential.

“To throw away technology because some problems emerge, denies the potential value of improvements”

Trewavas et al. 2003

5.4 The National Farmers Union (NFU)

As a trade organisation that champions, represents and advises its farming members, the NFU has a powerful voice in debating and influencing countryside policy. The 53,000 commercial farming members are well looked after by the leadership, which, with varying degrees of success, tries to stay close to its members and decision makers. It runs into trouble at times by trying to be everything to everyone, and ends up being trusted by no one.

“Yes, generally, although they have to be careful as they have members from a broad church”

“No, In terms of the CAP reform discussions I believe they have misread the zeitgeist and their potential influence is reduced.”

Insider Group



60% of my Insider group thought the NFU was doing a good job whereas 40% thought not. Coincidentally, this percentage split reflects how interviewees viewed progression, or lack of it, within the farming community. The top 40% tended to be focused on looking for new markets, increasing yields and spending on the environment, in short, going places. The other 60% were either coasting along, banking their farm payments or at the lower range of the group, they seemed to pulling up the drawbridge and eschewing anything to do with change.

Outsiders wonder if the NFU actually represent the farmer's views. Others believe it is over-influenced by the large machinery grain producers in eastern counties and has dismissive attitudes towards organic farming. Can you, for example, be a member of the Soil Association and the NFU?

If it's true that power follows money, it's no surprise that influence lies in the east and not with small-scale or upland farmers too busy subsisting to get involved. The NFU is very aware of the issues at stake but finds it hard to air some of the issues in front of their members – some of whom have very traditional, old fashioned and conservative views.

The NFU should perhaps lead rather than reflect their members' views. But this is difficult when it is perceived as a trade union when in fact it is a democratic association voted for by members to best represent their interests. As with any organisation, there are factions that concentrate on matters closest to their own heart and not always the important wider issues. Their modern PR machine, while good at picking up issues, is perhaps not sufficiently efficient for the modern political climate where, as the NFU themselves admit, their parliamentary affairs team must work at full stretch 'to maximise and maintain the NFU's influence with politicians and [the] machinery of government' [NFU WEBSITE].

Social media, such as Twitter and Facebook, is well employed by some lobby groups. Some have successfully used them to ensure that issues such as the Nocton dairy, the forestry sell-off and the badger cull were all fast tracked into public prominence. They offer a good way of getting positive stories out, as well as rebuffing wrong information. As with any involvement with any media – organisations are judged on how effectively they participate in public conversations – it's important to take time to use authentic, well-judged and well-timed content to pitch the message. It's certainly not advisable to suddenly launch a Twitter account in the face of a public outcry! [Oxtale PR 2011].

There was a begrudging acknowledgement amongst respondents that the New Labour government brought up the food security issue which resulted in the Foresight Report, among others, but the NFU thinks that the forthcoming review of CAP looks backwards and is not dealing adequately with future food challenges. There is widespread concern that the new demands on farming will make it less profitable, potentially limiting production in the future which, in turn, could force up food prices [FARMERS GUARDIAN AUG 2011].

[“The Commission with its ‘Lark Rise to Candleford’ model of farming turning its back on potential smart technology in favour of small scale local niche markets”](#)
Peter Kendall June 2011 (Farmers Guardian)

By stating this, the NFU is perhaps implying that some farmers in the UK either shape up or move on to make way for the techno-smart, agri-business farmer required to deal with the future of multiple new demands on farming.

5.5 Supermarkets

In 2009, supermarkets accounted for 85p of every £1 consumers spent on food in the UK [ROUGH GUIDE 2009]. That figure is undoubtedly higher today with Tesco holding 51% of the grocery market [OBSERVER 2011]. We love the choice, the prices, the flexibility and, incredible as it seems, we've come to accept the unnatural level of consistency as perfectly normal. (40% of organic produce is still rejected on cosmetic grounds [SOIL ASSOCIATION])

The first self-service store, named Piggly Wiggly, opened in 1916 in USA. Which is still going. Our home-grown Tesco is no. 3 in the world, while, in a 5-year period, Sainsbury's



grew the same size as the whole lifespan of the Waitrose chain. Customers are driven largely by price - Asda attracts more socio-economic A and B customers than Waitrose and M&S combined – and the ability to shop out of season for pretty much anything we want now seems second nature: for most of us, the ‘permanent global summertime’ [JOANNA BLYTHMAN] created by the supermarkets is just too tempting to ignore.

“We are insulated from food production and need to know the importance of food choices”

Tom Standage

As a result, the chains have a huge say in the way our food is produced, distributed and sold. Their marketing even affects the public’s view of the countryside: the rural idyll shows cows in grassy fields, pigs foraging outdoors, and a picture of Geoff, your friendly farmer with a British flag flying in the background. Given our trust in supermarket brands – they stand head and shoulder above any other type of assurance or labelling such as The Red Tractor or LEAF Marque – surely they have a responsibility to the consumer over and above just supplying cheap food?

At the higher end, things are changing. Customers pay more for ‘greener’ products so the supermarkets have a number of suppliers who in turn, farm more sustainably. But the action often stops there: consumer trust in the high-end brand is so strong that, according to some supermarkets, only 15% of the consumers feel the need to further question the retailer on the produce and how it was farmed.

We are smarter on labelling, but we are also confused by too many labels: only 45% understand the



sell-by dates which might explain our staggering levels of waste. UK households throw away 5.3 million tonnes of avoidable waste [DEFRA 2010] and don’t realise that rotting food contributing to greenhouse gas emissions is more of an environmental problem than excessive packaging.

At the end of the day, many of us just want it all sorted on our behalf. But there are some who demand change.

“Yes, food is far too cheap, and as a result is treated with contempt which leads to waste”

Focus feedback

Quite a few interviewees thought that control of “ill-informed, deluded, disinterested, unemotional and oblivious supermarkets that exploit farmers...” should be brought under tighter regulation and a draft Groceries Code Adjudicator bill which will do just that, is currently under discussion. I also heard the other side. Supermarkets find it is in their interest to build cordial, though commercial, relationships with their suppliers who are ‘on brand’ and many believe that an adjudicator will have limited impact because there are so many reasons why a supplier can be delisted.

“72% farmers think producer/retailer relationships are improving, as retailers increasingly influence what is grown in the field”

Oxford Farming Conference Research 2011

The retailers regularly argue that improving animal welfare, farming more sustainably or even developing longer term relationships with their suppliers goes against the consumer’s interest in keeping costs down.

Yet, in a market economy, presumably the best way to get retailers to change is to focus on the consumer. Defra states that “ethical trading is one way consumers can support sustainable food consumption and ensure producers in developing countries are not being exploited in the quest for affordable food”. However laudable, some told me that we should be spending our money on local food to support our subsistence hill farmers, before spending on Fairtrade products.

Some have the time and money – and the passion – to shop outside the chains and as Walmart’s founder once said; “There is only one boss. The customer. They can fire everyone in the company simply by spending their money elsewhere” [ROUGH GUIDE 2009].

5.6 *Would you pay more for your food?*

“The era of cheap food is over. Food prices will increasingly need to take account of the full cost to the environment, and the consumption of natural resources.”
Foresight Report on The Future of Food & Farming 2011

Economists tell us that recent food price increases have resulted from a complex combination of:

- a steady rise in demand for staple foods from emerging economies e.g. China, Brazil and India
- high energy prices, driving up the price of agricultural inputs plus processing and transportation costs
- bad weather causing poor harvests and affecting producers & exporters e.g. Australia, EU, US, Russia
- lower cereal yields from European producers and developing countries, due to underinvestment
- food futures speculation.

[EUROPA.EU]

But many in the UK say that paying more for your food is a luxury of middle classes and not a choice considered by most consumers. Even though average incomes have doubled over 50 years, the average food spend is around 10-15% of disposal income while 50 years ago it was 33% and over the same time frame, housing costs have gone from 9 to 20% of family spending [OFFICE NAT STATS 2008]. Today we have the widest disparity in incomes for the past 40 years (richest 20% are 7 times as wealthy as poorest 20% [NEF 2011]) and, inevitably, the percentage spent on food is less for those with higher disposal income and higher for those with a lower income. Perhaps a relaxation of planning to enable an increased number of sustainably built and more affordable homes might release more money for spending on food?

Would you pay more?

“Yes, But I would want some sort of guarantee that the additional money was being put to good”

“No, there is room for savings in reducing bureaucracy and many farmers already adopt environmental practices without incurring additional cost.”



There are those who would spend more on food: 72% of my Outsider focus group said they would pay more for their food if farmers did more for the environment.

“Yes, food is too cheap.

The way we live is stupid - people will spend £100 on a satellite dish then feed their kids cheap junk”

Focus group feedback

But in 2011, in a survey on consumer spending, a higher percentage said they would cut back on food shopping *before* air travel or gym membership [YOU GOV 2011], even though every year we waste about £480 of food per household [DEFRA 2010].

On the whole, it is pretty clear that the majority of consumers demand cheap food (See letter, Appendix 7).

“We are constantly told by retailers, ‘We are doing what the consumer demands.’ Well, let the consumer demand, but make sure that they are properly informed so that we know that the demand is genuine.”

Jim Paice, Hansard March 2011

Cheap chicken

A broiler chicken farmer who produces 200,000 birds in 2.5 acres of sheds has borrowed millions to invest in a cutting edge technology, to create an energy efficient, high turnover poultry system. Margins are very tight. It costs £1.75 to produce a 2kg bird, the wholesale price is £1.80 while the retail price is around £3.50 or 2 for a £5.00. On margins like this, the welfare of poultry is paramount. Over and above this, in response to a request from the retailer he supplies, he is fitting, at no financial gain to himself, windows in his sheds so that birds can see daylight.

The UK consumer eats around 25kg of chicken per annum [UK AGRICULTURE 2008], and many still demand the cheapest version. This was confirmed when Hugh Fearnley-Whittingstall’s ‘Chicken Out!’ program championed the free range bird. Sales of cheaper birds fell and free range boomed but only for a short spike. Shoppers, patting their back pocket, gave up the £10.00 bird in exchange for a meal for four at a third of the price.

The current government, far from leading the way in buying more sustainably, seems to follow cost. They claim to ensure that they don’t want to undermine our own farmers’ high standards but as agriculture minister Jim Paice said recently: “...the government intends to buy the best foodbut only where this does not increase overall cost.” [CATERER JULY 2011]

The consumer’s expectation of cheap food adds force to a political pressure to keep food prices down by any means possible. We might think that the saying ‘We are only five meals way from anarchy’ only applies to an Arab Spring but in our world of volatile weather and political events, food riots have been predicted elsewhere if the pressure to spend more of our tight budget on food increases [GUARDIAN AUG 2011].

In 2008 the Cabinet Office published ‘Food Matters: Towards a Strategy for the 21st Century’. It flagged up key issues such as ill health due to poor diet, the end of cheap food, the need to maintain food safety and



the impact of the food chain on emissions. Its recommendations were precursors for the Foresight Report and apply today as they did back in 2008 being based on a more integrated approach to food policy around an increasing output, reducing waste, mitigating impacts on the environment and engaging the public to eat a better diet: all part of the driver towards a future of safe, healthy and nutritious food.

Hopefully the government is thinking of something (See word cloud in Appendix 8) just as important as biodiversity and will set a framework of how to achieve a food strategy on the back of the Foresight Report based around the other demands on the countryside.

5.7 RECOMMENDATIONS

- There is a need to consolidate the farming lobby: organisations such as the NFU, CLA and Tenant Farmers Association (TFA) must find common ground to produce a single voice to get involved in proactive consultation with government and the EU.
- Organic and conventional farming expertise should be shared with the common aim of starting to think about the future challenges outlined in the Foresight Report on Food and Farming, as well as producing nutritious, healthy and affordable food.
- The farming lobby should utilise objectively minded external PR to create a 'relentless advocacy' to connect with public consciousness and to prevent debates starting off on the wrong foot. Perhaps they also need a quick rebuttal team.
- Farmers must shed old-fashioned vested interest views. Those not willing to take up the new challenges should retire or let their holdings to new farming entrants.
- Farmers need to be aware of costs. This applies especially to smaller family farms, to look closely at further efficiencies and be run on tighter business lines and farmed not purely for the subsidy.
- Individual farmers should look at forming buying groups to deal with increasing costs of inputs.
- Farmer cooperatives should be pushed up the agenda and government set up funds for such ventures.
- We must discuss the pros and cons of supermarkets looking to vertically integrate farmers within their food supply chain.
- Consumers need to demand more from supermarkets: if the second largest global retailer (Carrefour) can stock local products in its largest store, we should demand them here. Mixing fresh organic produce with conventional produce, correct smarter labelling; would enable consumer to be aware of their purchases' impact on the wider countryside.

6. The Fourth Demand: The Bureaucrats

6.1 Europe's influence.

Europe is the source of many directives and regulations covering farming and forestry which have a direct impact and influence on how we manage the countryside. Directives require member states to achieve a certain outcome without Europe dictating the exact means of achieving that result, whereas regulations are self-executing having been set a legal framework for the implementation of the objective. Yet many of us are unaware of Europe's influence over the UK countryside.

“Hope not”

“Not specifically, however EEC [sic] legislation has a bearing”

“Yes. The issues of social and environmental care have pan-world connections, it would be little use re-arranging the deckchairs on the Titanic for us to act in isolation. We must influence and be influenced”

Focus group responses on Europe's influence over UK countryside

There was little external impact until we joined Europe in 1973 and for better or for worse, the marriage of 27 European nations, with more waiting in the wings, grows ever larger. EU influence on the UK countryside is immense and very complex.

Some facts:

The Common Agricultural Policy is a mystery to many.	The CAP budget is 42% of the total EU budget (it was 80% in 1980)
UK is the 5 th largest recipient of Pillar 1 but one of lowest recipients of Pillar 2.	Pillar 1 – direct payment subsidy (Single Payment Scheme) Pillar 2- Rural Development support incl. AES and funding to increase competitiveness etc.
UK received £3.1billion support in 2010 [DEFRA 2011]	Exchange rate plays major role in final value received.
UK has 300,000 farms [PRINCES COUNTRYSIDE FUND] UK has 119,000 claimants and Romania has 1.1 million claimants	Out of total 20.8million claimants claiming £157 billion [FARMSUBSIDY.ORG]
A large slice of the profit on UK commercial farms comes from EU support (and all supermarkets know what it is)	UK had a 21% higher agricultural income in 2005 than the average EU country

Table 5: EU Facts

“Over 500 million population, £1.70/head/wk is hardly a high price to pay for a healthy supply of food and a living countryside”

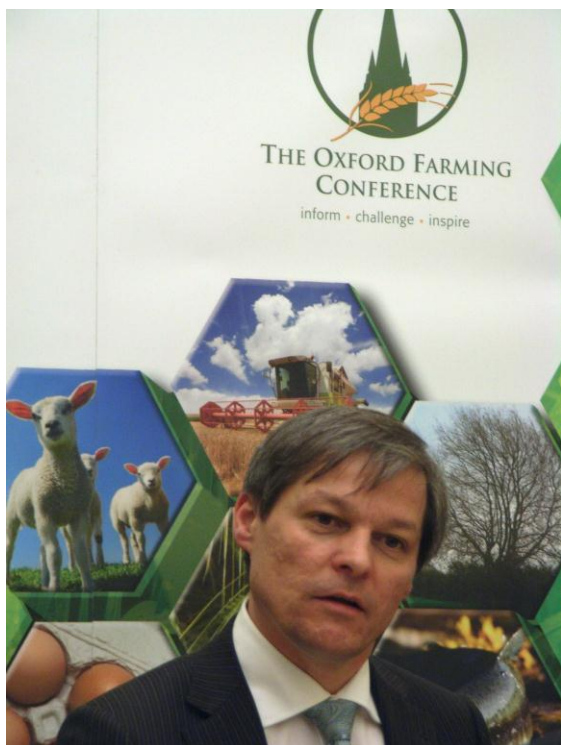
Europa.eu

As food prices rise, there is long term pressure to reduce the income subsidising direct payments to farmers (SPS), while increasing the environmental obligations ('greening') of cross compliance requirements for receipt of the payment under Pillar 1.

Rural Development payments (Pillar 2), are aimed at different objectives and each country has the ability to *choose* how they spend these funds:-

- Supporting rural communities via diversification etc.
- Funding agric-environmental schemes (AES)
- Improving agricultural and forestry competitiveness i.e. grants for new machinery.

It is interesting to note that the UK allocated 80% of this funding on AES, whereas most EU countries spend around 50% on AES and around 35% on improving industry competitiveness. [PARLIAMENT UK].



The CAP has come a long way from its original primary purpose of just providing food security to its 500 million inhabitants and the EU Commissioner for Agriculture and Rural Development has stated that the taxpayer has a right to public benefit from farmers *beyond just* producing food.

“The EU budget for direct CAP payments should be reallocated towards the provision of public goods, which is the only uncontested reason why society should provide money to farmers in the long run.”

European Parliament Study 2010

Equally, many see CAP reform as bringing all 27 countries up to a level playing field but with falling budgets and more importantly, the need to bail out whole EU economies, anything could happen in the next few years.

6.2 The Department of Environment, Food and Rural Affairs' (Defra)

At the national level, Defra's remit reaches far and wide, ranging over the Forestry Commission (FC), Natural England, the Environment Agency, National Parks and the Commission for Rural Communities. It is perceived by many as master of all but servant to few except the Treasury, and the influence of biodiversity protection on policy, seems to hang heavy in the air.

The department is perceived to be over-cautious, never signing off the accounts, over enforcing (gold plating) EU regulations and being suspicious of vested farming interests. They have reined in Natural England; no longer do they initiate new ideas, instead they merely implement policy and administer government proposals such as the badger cull, all the while helping businesses adapt to reach the new grail of carbon neutrality.

Department officials, who outnumber dairy farmers, are accused of being too remote, with a wooliness pervading their department and a lack of empathy amongst officials proposing policy. Even politicians have a wariness and suspicion of Defra civil servants; with its tendency to implement and enforce European legislation, the universally welcomed MacDonald Reforms for cutting red tape might never see the light of day. One of my interviewees said that, rather than push for the EU standards to come up to those of the UK, tight welfare standards have reduced UK pork self-sufficiency from 80% to 47% by pushing the production elsewhere. Current poor rules for labelling showed that in 2010 we only ate 126,000 tonnes of UK bacon, whereas we imported 280,000 tonnes of it from countries that may fall well below our standards [COUNTRYSIDE ALLIANCE & HANSARD 2011]

The implementation of the EU Water Framework Directive has also befuddled some Defra personnel. The directive asks that officials look at the cause of water quality problems and rather than tap into local knowledge or ask an NGO to help solve an ongoing pollution issue, officials tend to tick the “Cause Unknown” box thus leaving a resolvable issue unresolved. Perhaps a mandatory secondment

to experience the whole water, forestry or food lifecycle might help policy makers to understand the processes on which they are charged with either implementing or initiating policy.

When politicians are charged with steering the way, setting a framework, so that land managers can plan ahead, a message like this doesn't help:-

“This item was published under the previous Government.
It does not necessarily reflect the views of the current Government.”

Defra website caveat on the report: Food 2030

However, in the research I carried out, it wasn't all bad press for Defra. The current government looks to be bringing the department closer to the centre of business (the reasoning behind abolishing quangos such as the Commission for Rural Communities) and although some of the inner circle civil servants 'get the picture', there is an acknowledgment that those liaising directly with land managers should adapt their language so that land managers understand the meaning and, critically, the reasoning, behind the policies they propose.

Wales and Scotland are beyond Defra's remit and there we see variations in policy: the Welsh Assembly Government (WAG), for example, is strongly pushing sustainable land management practice. Their vision places the family farm at the heart of the rural economy supplying food, landscape and ecosystem services. The spotlight has moved away from food production, as the Rural Affairs post has been demoted from cabinet and now reports to the Sustainable Futures Director. The Countryside Council for Wales (CCW), meanwhile, has changed from being relatively independent to become more of an enabling body providing services on behalf of WAG.

Overall, however, it seems that due to increasing urban populations, the status of rural government departments is being downgraded and because of the high levels of urban staffing even in these rural departments, challenges will surely keep arising in dealing with a divided and remote rural sector.

6.3 RECOMMENDATIONS

- The government should play a more active role in proposing and forming agricultural policy within Europe.
- Defra, as part of its wide portfolio, must encourage an integrated land management approach to holistically deal with the overlapping demands on the countryside.
- Secondment of Defra officials with non-vested interest or broad minded land managers would enable a wider understanding of the range of complex issues and possible trade-offs.
- Government must raise the profile of new farming methods (including biotechnology, hydroponics etc) to allow them to be 'nudged' into the public's consciousness for discussion.
- Defra should actively promote some of the best farming expertise in the world and be prepared to experiment in the UK to enable best practice, rather than push poor welfare and unsustainable methods abroad.
- Defra must engage more closely with scientists and expert NGOs in dealing with the Water Framework Directive and related aquatic matters.
- Defra and Department of Energy and Climate Change (DECC) should liaise more closely on realistic targets set within each of their department's remit (See Appendix 6 for list of trade-offs)

7. The Fifth Demand: Climate Change

“The coalition government is committed to being the greenest government ever. It is taking action to cut carbon emissions, create the conditions for green growth, and improve resilience to climate change.”

Defra 2011

7.1 Introduction

While there are still some who refuse to accept climate change, most accept that it is changing and, since we are at least in part responsible, we have a responsibility to tackle its causes.

There may be some leaps of faith required, given the huge expenditures demanded and the extent of the unknown science we are dealing with. But precedents do exist: the US took a big leap when dealing with ozone – they didn't know that technology existed to deal with controlling ozone levels but it took a decision to push ahead and ultimately succeeded in reducing them.

7.2 Can we tackle it?

“Yes, the evidence from the Stern Report is clear to me. Act now to save greater costs in the future”

“Farms need to adapt....and should only spend on climate mitigation if it makes good business sense”

Focus group replies as to whether we should undertake costly works to mitigate climate change

There is little agreement on how to tackle the problem globally: the energy hungry US is pushing ahead strongly with biofuels, safe that they have enough land for biotech 'productive' food, thus freeing up land towards crops as a low carbon back-up energy/fuel supply. Some believe that by 2050, it might be feasible for the UK to operate on 100% renewable energy but only if we achieve these massive reductions in energy requirements through government-led energy efficiencies [PORRITT 2011] However, even if we can reduce our dependence on fossil fuels, many argue that the cutting of overall energy usage may be hard due to society's current dependence on and addiction to oil. Combined with the short-term priorities of politicians and investors [DEUTSCHE BANK 2011] it means that divorce from oil will be messy and with regards to food production, very long term.

China has decided that growth and a changing climate is more attractive than a future with neither. They have continued to open two coal fired power stations a week while, at the same time, manufacturing one wind turbine every hour and becoming the world's largest exporter of PV panels [CHINA DAILY 2011].

In the UK, however, the 'green economy' seems to be offering more risks than opportunities [ZURICH SURVEY] There is a dip in consumer knowledge of, and interest in, climate change [DEFRA 2011] and according to a recent survey, only 11% of consumers would spend more on meat that cost more but had a lower carbon footprint. [YOU GOV 2011]

And even though the cost of dealing with climate change is estimated at only 1 or 2 % of global GDP [STERN 2006], there is disagreement about the way forward even in the environmental camp. Some think we should check biodiversity loss before it becomes irreversible and then deal with mitigating the effects of possibly 'irreversible' climate change.

When we are told to cut back in the name of climate change, some of us feel the loss is too great: it's too 'hair shirt' for our comfortable existences. We only take the bus, in general, if there's no other choice [DEFRA 2011]. Those who deny or reject Al Gore's worst scenario movie 'An Inconvenient Truth' (2006), might applaud 'Carbon Nation' (2011), a film pitched to engage those disinterested or disbelieving in climate change by encouraging them to take care of the environment by saving or making money by, for example, installing green energy generation units while also achieving the right result of cutting use of fossil fuel based fuel.

Because when climate change mitigation dovetails with saving money, we are happy to sit up and take note. Whereas subjected to a deluge of dire predictions, we suffer 'report fatigue' and tend to ignore warnings such as these:

“Growing frequency and duration of extreme weather events will have an adverse impact on global agricultural production.”

Foresight – International Dimensions of Climate Change (Impact on UK) July 2011

7.3 Climate change and agriculture: a complex two step?

Although the need to tackle climate change is generally accepted, the impact it has on agriculture, and on our countryside in turn, is not as clear cut as you might imagine.

This year Farmers Weekly reported that yields are changing in parts of the UK directly due to climate change. Earlier ripening, warmer nights (leading to increased respiration at the expense of photosynthetic efficiency) and droughts in spring are all taking their toll [FARMERS WEEKLY 2011]. The anticipation is also that, over the long term, winters won't be so cold and we will need to increase pesticide use (or bring forward biotech requirements) while coastal areas might be more prone to flooding [FARMING FUTURES 2006].

“Agriculture is very vulnerable to climate change”

Nelson 2009



Agriculture is responsible for a relatively low level of total emissions (8%) [FARMING FUTURES], though this varies in different regions: Welsh agriculture, for example, is responsible for a higher figure of 11% [WAG]. Carbon dioxide (CO₂) is the major greenhouse gas (GHG). Other gasses make up a lesser percentage but have a more noxious effect. Agriculture contributes 85% of the total ammonia emissions for example, [DEFRA 2010] while methane from manure and food waste (20 times more potent than CO₂ in terms of climate change) and nitrous oxide from fertiliser and ploughing (310 times more potent than CO₂) have earned the sector a government reduction target in GHG of 11%. This target could be hard to achieve while also seeking an increase in food production and staying profitable.

Farming Futures (www.farmingfutures.org.uk) is a great place to start for comprehensive independent advice.

"There remains a risk of exporting production as a way of reducing GHG emissions locally."
Professor Chris Pollock

However, when it comes to climate change, it's not all bad. The UK's agricultural research centre, Rothamsted, suggests that extra carbon dioxide in the atmosphere, along with better targeted fertilisers and chemicals to protect arable crops, could hugely increase yields and reduce water consumption.

7.4 Renewable energy

The government's policy on low carbon energy is in disarray. Subsidies for generating electricity from PVs, at the UK's latitude, make them as expensive an option as nuclear, albeit without the waste issue [MONBIOT]. Onshore wind, often perceived as the only other *economically viable* regional low carbon energy, is thrown into doubt under closer scrutiny: the anti-lobby claim that manufacturing and install costs combined with carbon outlay make electricity both expensive and unsustainable, in part also due to the inefficient transmission from turbine to grid but also because most areas have variable wind [DAILY MAIL FEB 2011].

Nimbies and the public also object to turbines on aesthetic grounds (e.g. additional associated cross-country overhead lines) while some conservationists object on species specific grounds such as death of birds and bats.



"The wind turbines are just a few hundred yards from the kite feeding station"
Cefn Croes Action Group

Yet pro-wind advocates point out that electricity generation from wind turbines is comparable in terms of cost per unit, especially when we consider the true cost of generation from other forms such as decommissioning, the legacy of contamination, harmful emissions and land displacement.

Overall, there has been little room for sensible debate with dramatic actions by some countries (Germany switches off nuclear) contrasting with the polarisation of public opinion which distinguishes only between black (science & business is bad) and white (green & natural is good). We must find a way to look at things in a more balanced and rational way. [SCIENTIFIC ALLIANCE]

Meanwhile DECC has reviewed the Feed in Tariffs (FITs) for various renewables, pronouncing that, while recognising that industry needs a long-term plan for investment in which it can have full confidence, the government has closed the initiative for larger PV installations due to an overload of applications and a lack of funding [HULME].

Even positive developments appear more mixed under closer analysis. The target of 12% heat energy from renewables by 2020 is a high demand particularly as finding the raw materials to burn in the 30 large-scale biomass power stations that are proposed will be almost impossible without importing or using unsustainably sourced products. They will require a total of 23 million tonnes of wood annually. Furthermore, timber is only 30% efficient when burnt for electric within the proposed *regional* power stations and yet that figure climbs to 85% efficient when it's burnt for heat at a *local* level. That's why in France, rather than flail hedges, they allow them to grow into hedgerow trees and then coppice them for biomass.

On top of that, there are political problems. The Renewable Heat Incentive, designed to boost production by providing financial support for the high cost of biomass combustion installations, has been postponed due to political pressure, some say from Europe, others within the UK government. (GUARDIAN OCT 2011)

The matter grabs a lot of attention but there are receding opportunities to capitalise on providing renewable energy with financial backing from government. We are aiming to get most if not all of our energy from electric in the future and the current Electricity Market Reform White Paper might assist us reach 2020 targets but might not please the Nimbies amongst us.

The complex nature of climate change and global emissions puts many of us off from embracing any form of individual action. Why should I do anything when China is spewing out carbon and my neighbouring farmer is spreading fertilizer with a huge tractor? However, when governments set targets and there is real risk to our immediate environment, we must do something to mitigate our own impact, reduce profligate behaviour and open our eyes to the opportunities to save or even make money from the exercise, while taking a little hardship to protect the environment for the next generation.

**“We’ve co-evolved on planet earth so it suits humans,
we have to make this planet the one we can survive on”**

Sir David King (previous chief scientific govt advisor)

7.5 RECOMMENDATIONS

- Land managers should start imagining NOW about how they could save money or profit from the switch to lower carbon.
- Governments must be realistic in setting emission and energy generation targets that could impact against other demands on the countryside.
- Defra and land managers should consider any irreversible impacts and be prepared to prioritise demands within the countryside.
- Discussion is required to balance the demands of reducing agricultural emissions and achieving higher food productivity.
- UK governments (England, Wales and Scotland) should be clear in stating how they hope to achieve climate change targets.

8. The Sixth Demand: Forestry and the countryside

Trees are an emotive and complex subject. Are they an implement in our collective tool box for mitigating the effects of climate change? They absorb CO₂, after all. They offer a cheaper, carbon friendly building material (costs around £1285/ m² in timber versus £1338/m² in blockwork [HOMEBUILDING ONLINE 2011]) and they provide a realistic source of energy via biomass. Or are they an unworthy competitor for scarce food production space?

There is no specific forestry policy from the EU, though various initiatives such as the EU Forestry Strategy Plan 2005 and Forest Action Plan 2006, are supposed to create dynamic processes that are continually being refined.



One thing is certain though: we certainly have fewer trees than our European neighbours. In the UK we have a mere 13% tree coverage whereas France has 29%, Germany 32% and Italy 31% [FAO] yet a major report in 2009, The Read Report 'Combating Climate Change – a role for UK Forests' concluded that:

- Better forest management and planting could reduce CO₂ emissions by 25%
- We need to plant an extra 14,000 ha per annum (on top of the 8360ha assumed annual projection)
- We need incentives to pay for the provision of non-market benefits from forestry (e.g. reduce flooding)
- We should use more timber in construction (substitute for higher carbon intensive materials i.e. concrete)

“Warmer summers, wetter winters, with more regional variance”

Read 2009

While forestry may have a place in mitigating climate change, trees are, of course, themselves affected by the changing climate. The report acknowledges there are numerous issues that weren't on the agenda before: these include biodiversity protection, food security requirements, as well as water catchment issues and new threats from climate change affecting forestry species; some of our most cherished trees (larch and oak) are currently being threatened by disease and pests. These are all new demands on forestry.

Wetter winters along with higher winds will increase wind throw [Ray et al 2008] and drought-prone species will find it harder to survive in unsuitable sites. The report considers introducing new tree species, to fill the 50-100 year timeframe required to gain a sustainable coverage of usable timber for

both carbon sequestration and timber-use purposes. However, at the same time, as with grain and other crops, an increase in CO₂ levels could stimulate tree growth.

Conifers absorb more carbon dioxide (24t CO₂/ha/yr) than broadleaves (15t CO₂/ha/yr) and although many decry past policies of intensive single-species, even-aged conifer forestry, the current policy of mixed species for combined objectives (such as leisure) risks a decline in levels of carbon sequestration.

We have seen a subtle re-branding of forestry in the UK. We used to see it as primarily for timber production, which had side benefits for wildlife and public recreation. In England especially, it's now seen primarily as biodiversity habitat and for public leisure while its carbon storage potential is viewed as increasingly important. On the other hand, unless you have a medium to large conifer plantation, uneconomic timber production is seen as a side show [PARLIAMENT 2007]. Without factoring in the recent valuation of ecosystem service value, the UK forest has an estimated annual gross value added benefit of £7.2 billion from related businesses contributions and when employment in recreation and tourism are written into the valuation [CONFOR/CLEGG 2006].

Nevertheless the question is, has much of this non timber value been enabled not just by a change in what we value, but through the growth in timber imports? We now import around 80% of our sawn softwood timber needs (even if domestic production has increased in the past 30 years, displacing some of the imports) but most of us do not question the energy required to do so. Transporting such heavy, bulky materials is very costly, with energy costs of 28 kWh per tonne (and .02kgCO₂/kWh) for shipping timber from Sweden and with timber as the second most widely traded commodity in the world, second only to oil [CAT 2005], is there a way we can reduce our dependence on imported timber?

[“Yes, the FC’s original role is now out-dated and unnecessary”](#)

[“No, unless sold to a conservation agency with expertise in woodland management”](#)

Focus group on whether a forestry sell off was a good idea (Before the media notoriety)

Be that as it may, even well-thought out changes in policy can meet with public disapproval if they are poorly communicated. The forestry sell-off proposal in England was a case in point. In early 2011, the Forestry Commission (FC) was advised it could sell off 15% of its English forests, leave the Welsh woods alone and reinvest revenue from forest sales in Scotland by buying more land.

With 60% of English forests are unmanaged, large numbers of potential purchasers - one woodland agent had 10,000 on their books - and with local communities setting out to buy parts of Kielder forest, it looked like a good example of ‘Big Society’ in action.



The public outcry, however, was exacerbated by media claims that the cash-strapped government were ‘flogging’ natural assets. In contrast to the lack of media interest in the disposal of publicly owned local authority farms [TFA 2010], the media captured and exploited the public mood of the forestry sell off: “Feeble advocacy and determined opposition” was how one paper described the debacle. [TIMES] There seemed to be a shortage of balanced opinion and perhaps we have to ask whether it’s because the FC has been absorbed into Defra that we no longer hear their recognised expertise.

However, things have since changed and we await the Independent Forestry Panel’s views as to an updated and appropriate system of woodland management.

“Much of the unfarmed, less fertile countryside could be used to create more forest”

60% of the Outsider focus group thought the countryside could help us mitigate climate change

Glastir, the Welsh AES, combines its Agricultural Carbon Reduction and Efficiency Scheme (ACRES) – which includes improved water and manure storage measures - with its Woodland Creation Grant Scheme to offer generous, though tightly prescriptive, payments (see Appendix).

In summary, however, surely it is hard to disagree with The Read Report when it concludes with this suggestion: if we plan land use skilfully (i.e. not planting on peat), if we are not overly pro native and broadleaf species, and if we utilise timber for building, we should be planting more now and using what we have more sustainably.

8.1 RECOMMENDATIONS

- Society must be willing to pay for the non-market benefits of forestry, yet the forestry sector itself must be allowed to be profitable to deliver these environmental benefits.
- Government should review the prejudice against non-native conifers in light of their important potential role in mitigating climate change and even increasing biodiversity in some barren upland areas.
- There is a need to engage expert opinion alongside public sentiment to enable a balanced forestry debate on the findings of the Forestry Panel.
- Timber biomass should be promoted for local heat rather than regional and national use for electricity and targets should be refocused to avoid an unsustainable need to import timber as biomass.
- Woodland managers should form groups to justify paying expert consultants to manage woods for timber or other benefits, while utilising their numbers to broker economically viable timber sales.
- The government should revisit the recommendations of the Read Report and promote timber house building.

9. The Uplands: countryside conflict in miniature

9.1 Introduction

The issues and conflicts facing our countryside today are perhaps thrown into sharpest relief in the UK's upland environment: leisure, public perception, farming, food, biodiversity, climate change and forestry issues are all making a clear impact, creating new demands and opportunities for our countryside.

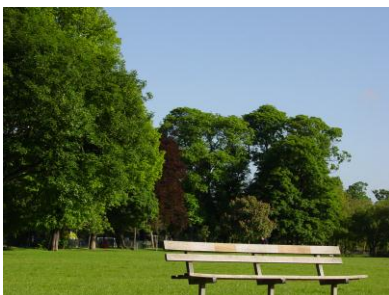


Just as there have been numerous reports concerning the key impacts discussed above, so the uplands has had its fair share of reports: these include High Ground, High Potential (Commission Rural Communities), High Hopes (CLA), Uplands Policy Review (Defra), Farming in the Uplands (Environment Food & Rural Affairs) and Vital Uplands' (Natural England).

“The EU favours sustainable, productive and competitive agriculture - even in regions where conditions are difficult”

European Commission

9.2 Leisure/public perception



The majority of the UK population is physically and mentally distant from these areas. They cover 40% of the UK but only 1% of the population live there [RELU 2011].

As discussed in relation to biodiversity above, governments want their taxpayers to see the ‘fruits’ of their payments. Thus they focus on enhancing natural environments near urban areas, whilst they view upland areas (many designated as National Parks) as a form of low investment and high value enjoyment for weekend trippers.

There are, of course, many important non-agricultural uses of uplands such as grouse shooting, walking and mountain biking. Many of us view these areas as quintessentially natural, or even as ‘wilderness’ but its physical appearance is, in fact, largely man-made. The uplands were once covered by thick, scrubby woodland but after thousands of years of continuous stock grazing, we now have our much-loved coarse grass and heather clad hills.

9.3 Agriculture and Food

"Public money for public goods" can only be delivered where there is an agricultural presence to which this condition can be attached.

DG Agric

Agriculture tends to concentrate on the more lucrative lowland areas, attracting the young, ambitious farmers who want to make money, use the latest technology and feed the world. Subsistence upland enterprises, on the other hand, are left to harder types.

The EU has always recognised the need for special attention for Less Favoured areas (LFA). 53% of the UK's agricultural land is eligible for LFA status mainly due to 'adverse natural production conditions' such as strong winds and poor drainage'. [IEEP 2006]. The risk of depopulation is also a problem in LFAs: where farmers move away, conservation suffers. As a result the EU financially supports the farming communities of these areas and with 80% of Welsh agricultural land in a LFA, it perhaps places Welsh farmers closer to upland farmers in Romania rather than their counterparts in the lowlands of Norfolk.



Most of us recognise that if farming is key to the future of the uplands, playing a central role in conservation and the local economy, farmers need support from the taxpayer, via the CAP. Beyond farming for food, upland farmers may be asked to 'farm' the environment to maintain ecosystem services. The taxpayer will effectively purchase those services for which the market does not reward the farmer. Although upland stock farmers' income levels are the same as lowland stock farmers, their dependence on AES makes them less efficient as food producers and less competitive in embracing non-farming enterprises. Against an average of 50% farmers, only 35% of upland farmers undertook any form of diversification [DEFRA 2009]. Yet, with their wider role in uplands management understood, it's clear they provide good value for money, particularly in attracting tourists: they help define a 'sense of place' that is now considered to be a valued eco-system service.

"Yes, it could be incredibly lucrative with the right agri-environment scheme"

"Yes, if I was loaded"

Insider Focus group replies on wishing to take on an upland holding

However, scale and communication are critical if upland farmers are to play their role in the new countryside effectively. The uplands are not suited to the kind of small-scale management that works on a lowland holding and activities such as heather burning, sheep hefting and water catchment management take up hundreds of acres. Further, increasing funds into Upland AES will not help delivery of public goods, unless the deliverers (land managers) are convinced or can see the benefits for which they are being paid.

"Farming must remain at the centre of any strategy for the uplands."

Environment Food and Rural Affairs Committee April 2011

Farmers in the uplands, adequately supported, have the chance to show how a competitive industry won't just provide food but also deliver other benefits that we all need – even if the general public are largely unaware of them at this point in time.

9.4 Biodiversity

It may come as a surprise to some land managers, but the EU funded LFA payment was not just to farm the land but also to look after, on behalf of others, an area that needed human input to maintain its character and related flora and fauna. No one could have anticipated the high esteem we now hold agriculturally 'non-productive' land.

Upland habitat	Past use grant aid purpose	Present use asset value
Rough	To level	Recreation
Wet	To drain	Water catchment
Reedy	To improve	Biodiversity
Peaty	To plant	Carbon storage

© RY 2011

Table 6: Upland habitat

Much work is required on working out how to target, quantify and reward upland managers for delivering these ecosystem services such as enhancing water catchments and managing peat at the same time as producing food, looking after the environment by not overgrazing or undergrazing and branching out into other non-farm enterprises. After all, if, as the White Paper proposed, upland managers receive biodiversity credits paid for by developers in Essex, we need to make sure the science, and its practical application, are absolutely right if that money is not to be wasted.

“You cannot force conservation onto farmers”

Government adviser

Biodiversity in the uplands provides the land manager with a diversification opportunity. One successful example is the reintroduction of the sea eagle on the Isle of Mull: it now attracts an estimated £5million a year from tourist income, which in turn helps to support 110 full-time jobs while also providing “a sense of well-being and exhilaration” [RSPB 2011] for those that see the birds. But these projects need the same very careful analysis – before and after implementation – if they are to be successful.

Should we ask how many lesser raptors, such as hen harriers, have these high profile ‘top-of-the-food-chain’ eagles predated? It’s an interesting subject for scientific research but clearly different stakeholders will want slightly different answers: the Tourist Board and the RSPB, for example, might be at odds with NGO bodies such as the BTO and Save Our Songbirds.

This sums up the difficulty that NGO – both conservation and rural - have in influencing policy. Expert gamekeepers may manage an area nine times larger than all national parks and nature reserves together [NATIONAL GAMEKEEPERS ORGANISATION 2011], but are often unable to connect with policy makers because one of their jobs centres around culling wildlife (rogue keepers accused of poisoning raptors do not help the situation and an increased level of self-regulation is required). The BTO, with a low number of knowledgeable members, finds it hard to gain media attention due to its small size. Two well-respected rural lobby groups operate in the same field. On the one hand, the CPRE advises government on rural planning but on the other, the Countryside Alliance, fighting not just for field sports but rural post offices, is kept at arm’s length by policy makers.



Land managers have much to gain from conservationists in certain areas – the fact that aftermath grazing, for example, although a recognised agricultural practice beneficial to landscape may not always be good for wildlife. But conservation scientists should also work more closely with land managers, tapping into their inherent knowledge, focusing on the application of conservation biology via practical land management.

9.5 Climate Change

Natural England's proposal in 2009 to re-wild the uplands caused an uproar at the time. Its aim was to lock up more carbon in what they described as the 'relatively underused' uplands. However, they weren't alone: further to the National Ecosystem Assessment valuing previously unaccounted for benefits from the uplands, the Lake District National Park Authority called for destocking the uplands. The suggestions were that there were higher priorities for land managers to produce 'public goods' beyond just food. Indeed, we must appreciate that our peat bogs store more carbon than the forests of the UK and France put together and a 5% loss of peat land is equivalent to the annual UK GHG emissions [IUCN].

However, we must fully understand the possible effects of climate change and how ecosystems operate *before* we implement new practices.

Natural England's 'rewilding' proposal would, on the face of it, have contravened EU policy. The Good Agricultural Environmental Condition (GAEC) Section 12 refers to cutting back scrub and rank vegetation every 5 years to ensure that it could be returned to agricultural production in the next growing season. Is this not a salient reminder that policy should be checked (in both senses) at times of a headlong rush into irreversible decisions in the name of mitigating climate change or increasing biodiversity?

There are other examples of poorly thought-out policy. Untargeted headage payments would, of course, cause untold damage to the uplands, but destocking could result in a monoculture of vegetation such as bracken and Molina grass, swamping previously diverse habitats and potentially increasing the number of wildfires in our warming climate.

And in Wales, low carbon energy policy seems at loggerheads with the public perception. WAG is strongly pursuing their sustainability agenda as part of its 'Low Carbon Revolution' and has designated large areas of uplands as suitable for wind power development under their renewable energy Technical Advice Note (TAN) 8. However, the rush to achieve these targets has grossly underestimated taxpayers' opposition - on aesthetic grounds - to the new power lines required to connect turbines to the grid.



9.6 Forestry

In the last fifty years, forestry in upland areas has earned itself a bad name. Large-scale conifer plantations have been criticised not just on aesthetic grounds but also as they provide a poor quality overly uniform habitat for local flora and fauna. Yet, because of the demands climate change and conservation are making on the countryside, it's not easy to work out what the blueprint for forestry in the uplands should be. Some species of wildlife (many of which are rarely seen by the public) prefer conifer habitat; red squirrel, blackcock, pine martin, crossbill and goldcrest all thrive either on the fringe or within upland plantations of spruce, fir and larch.

In Wales, WAG has declared, that it won't encourage the planting of alien tree species nor any large-scale forestry in upland areas which are now seen to be more important for other eco-systems services. However, they want to increase woodland cover by 100,000 ha over the next 20 years but after felling large areas of forestry for financial gain and with little new planting over the past 20 years, this could be quite a challenge even with all the incentives in place.

In other areas, we have labelled trees grown for timber as 'non charismatic' [NEA 2011]. Therefore, we are able to import large quantities of cheap timber, perhaps we have diverted too many of our resources towards recreation, rather than zoning our diminished wooded areas more effectively.

Adequate reward for the non-market benefits of forestry is required. Yet for an enterprise with little profitability in spite of its high environmental benefit, there is a danger that its economics are further eroded by government imposing policies to protect the environment which ironically result in further loss of environmental benefits.

9.7 Upland conclusion

The uplands suffer from many of the present day demands being made on the countryside. It's an area where viable farming is integral to vibrant uplands that also deliver eco-system service benefits for society whilst hosting a diverse range of flora and fauna. It's also an area that attracts renewable energy schemes but planning sometimes overlooks critical details such as how to connect these supplies to the grid. It's also an area which absorbs carbon on a grand scale while at the same time having huge potential for commercial conifer forestry planting.

These many different demands can be met but they require careful planning, cooperation and discussion at the local, regional and national levels. But our perspectives on how to manage such areas have changed with such speed over the last 30 years that quick answers and political demands continually threaten the long-term viability of our decision making. As discussed above, we are making good progress with new initiatives such as ecosystem services but there is still a long way to go.



9.8 Recommendations

- Farmers in the uplands (many who are elderly and very traditional) must prepare to adapt to having to deliver other ecosystem services over and above food. These include such diverse items as carbon storage, tourism outlets, field-sports activities, water catchment protection etc.
- The government should appoint an over-arching farm efficiency Czar to stimulate land managers to reduce costs and emissions, promoting innovation, improve competitiveness and set up co-operatives - all without any unsustainable impact on biodiversity.
- Conservation NGOs should look at habitat restoration and enhancement as a higher priority in achieving long term biodiversity targets rather than just reintroduction of high profile species.
- Even after the large numbers of upland reports, government should continue to lead on setting a definitive route map to manage the uplands within the smelting pot of the multiple demands.
- WAG should reconsider its view of upland planting of conifers (see Forestry Recommendations above).
- Land managers should spend more on watercourse management rather than fish hatcheries to provide wider environmental benefits to more species than just increasing fish numbers.

10. Conclusion

Recent government commissioned reports have called for a step change within almost everything: food production, tree planting, reducing emissions and reversing biodiversity loss. The countryside is the battleground for all of these equally deserving new and old demands, bringing together influential conservationists and rural experts to jostle along with traditional land managers; all under the lazy eye of the public.

We understand many of the existing demands such as food production and countryside management. However, we don't yet fully understand new demands or terminology such as climate change, ecosystem services and sustainability. At the same time, the rural sector is refreshing and re-establishing a connection with the consumer, all the while trying to make a profit - vital to a vibrant, operational working countryside.

Some say there was a point in time when the UK countryside was in a 'balanced' state: mixed spring-based crop rotations, hay meadows, wildlife thriving off by-products of farming, open corn barns, less efficient machinery, cattle on the hills, conifer plantations on unproductive uplands. The countryside happily serviced a lower UK population with no hint of a renewable energy target in sight.

These days of harmony are well behind us: existing land management regimes have been called into question and new ones brought forward. We constantly have to balance one demand against the others.

"We are entering a rural renaissance"

David Slack RICS Rural Professional Group Board Chairman

Food, climate change and countryside all have something in common. As society urbanises, we become disinterested and disconnected, and these subjects become too complex or too remote to deal with properly. As long as they work, most of us don't really care.

To break this apathy, I conclude:-

- We must champion the examination and exploration of the step changes called for by the reports to prepare the countryside for adaption to the need to intensify management of nature and ecosystem services (including soil/water) **alongside** the sustainable intensification of food production - producing more from less.
- As a viable countryside is inextricably linked to food production and most of us shop at supermarkets, they open an important window on to the countryside for much of society. They have a unique role in defining our view of farming, our diets and delivering the political need for cheap food. We must encourage and 'nudge' consumers into understanding their food choices and their effect on the wider environment while bringing new ideas to the fore.
- The polarisation of single issue vested interests between conservationists and land managers delivering the new demands on the countryside, requires informed cooperation, with a genuine exchange of ideas both ways. Organic farmers can learn from conventional farmers, conservationists can understand commercial timber production while farmers must embrace eco-system services. Last but not least, we must engage and inform the public to enable a balanced 'national conversation'.
- 'Sustainability', in all its senses from financial and social to ecological, underpins all these activities and incorporates the need to take account of climate change without reacting to impractical, ill-thought out initiatives and their unforeseen consequences. We need to commission peer-reviewed scientific material to promote best practice in all areas. Only

then will we be able to produce healthy food with fewer resources, enable biodiversity eco-systems to thrive and develop the requirement for trees.

The government is in danger of losing the argument by default
Times comment on High Speed Rail 2

The RICS president told rural surveyors in 2011 [RICS NATIONAL RURAL CONFERENCE 2011] that we were all on a journey and that if you weren't on it, we would pass you by.

This could apply to every land manager in the UK.



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<http://www.nfu-cymru.org.uk/>
<http://www.wfp.org/> *World Food Programme*
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<http://www.chickenout.tv/>
<http://www.climateactionprogramme.org/> *Climate Action*
<http://www.rothamsted.bbsrc.ac.uk/Research/Centres/home.php>
http://www.ofc.org.uk/index.php?option=com_frontpage&Itemid=1 *Oxford Farming Conference.*
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12. Appendices

Appendix 1: Questions and comments. Insider Focus Group (farmers et al.)

The questionnaire to Insider Group:

I'm doing the 2011 Fellowship paper for the RAC/RICS based on my subject –				
<u>“New demands - old countryside”</u> Rob Yorke BSc MRICS – land agent, Abergavenny				
I'm seeking general views on a somewhat wide matter – many thanks for your input.				
Take less than two minutes – your first impulse answer please!				
Occupation: Farmer		Landlord	Land agent	Other: Please specify
			Yes	No
				Any comment?
1	Is biodiversity an overused phrase?			See comments below
2	Will UK agriculture follow the USA in overall farming practice?			See comments below
3	Are you/your clients influenced by neighbouring land management practice?			See comments below
4	Do you/your clients enjoy dealing with the public?			See comments below
5	Should Forestry Commission woods be sold off?			
6	Should we pay more for our food?			
7	Are you/your clients in Entry Level Stewardship (ELS), Glastdir or similar environmental scheme?			
8	Would you/your client undertake environmental works even if not paid?			
9	Have planners prevented you/your clients from undertaking a rural diversification project?			
10	Are you a member of the RSPB?			
11	If applicable - does your landlord base rent on full agricultural production from the holding?			
12	Do you think the public care about the countryside?			See comments below
13	Should we be undertaking costly measures to mitigate climate change?			See comments below
14	Is the Farmland Bird Index important?			See comments below
15	Is your/your client's attitude positive in facing change?			
16	Are you generally happy with the NFU's pitch?			
17	If offered an upland holding gratis, would you farm it?			

Comments by Insiders (farmers et al.):

- **Is biodiversity an overused word?**

No, but it is heavily politicised.

Yes, overused in the respect of species biodiversity, when my understanding of the word includes ecosystem, landscape and culture.

Yes, it means so many different things to different people.

Yes, it has become too much of a buzzword which tends to devalue it. A more specific word or phrase would often be more appropriate.

No, but needs to be better understood by the public and in circumstances another phrase like nature might be better.

Yes, often used, but not always understood by the target audience (or even the people that use it).

I am not sure what is meant. It can be short hand for sloppy thinking avoiding the identification of specific habitat with assessment of value.

Yes, it depends where there is supposed to be biodiversity! Not IN crops, surely!

- **Will UK agriculture follow the USA in overall farming practice?**

No, we are so different agriculturally.

No, EU influences and importance of family farm plus size constraints will make this impossible.

No, don't know enough about the USA system other than the bad stuff in the media. Will we get more intensive, big dairies, indoor stock with more arable. I am not sure our landscape will support a huge amount of such methods and there seems to be a greater value added to quality food and animal welfare in the UK. I guess may be some moves in that direction but not whole sale.

No, we put great value on the landscape.

Yes, when food prices rise.

No, we have very different objectives. Even common initiatives have different objectives such as bioethanol (US originally farmer support, subsequently argued as security. EU GHG reduction). We are arguably already ahead in terms of action to reduce trade distorting subsidy. US agricultural states supply a large proportion of "swing" states so agriculture has undue influence in the US.

Yes, look at milk and pig production – output will be concentrated in fewer larger.

- **Are you/your clients influenced by neighbouring land management practice?**

Yes, do very little service direct to landowners (mostly Defra-funded research). Interviewing and talking to farmers confirms that they are very influenced by neighbours, although they often don't acknowledge it.

Yes, we try to ensure that we provide a refuge for flora and fauna that is being lost from our urban and rural neighbours.

Comments by Insiders (farmers et al.) cont:

Yes, by 'client's here I mean NT tenant farmers. All farmers are very driven by local fashion.

Maybe, I think they are more influenced by other landowners they know and have contact with – these are not necessarily the ones next to them.

Yes, they always look over the fence, but don't necessarily copy.

- **Do you/your clients enjoy dealing with the public?**

As long as they're nice to me!

As an agent, although clients are varied, some do not want the public onto their farms despite earning possibilities.

My clients do not as they wish to farm without public interference unless it is accompanied by a cheque!

Young farmers do, maybe not old.

Most shy away from public liaison, a few excel at it.

My clients are farmers who generally treat the public with suspicion.

If clients conservation bodies, but tend not to if 'private' landowners.

One of our greatest weaknesses as an industry.

But challenging when they are ill-informed.

I don't mind, but Dad dislikes it.

It is essential and can be rewarding. It is essential too. We have over 5000 children a year visit the Trust farm/headquarters and 100's of farmers, local residents and members are given guided farm walks and talks.

I do, but farmers generally do not.

- **Do you think the public care about the countryside?**

So long as it looks good.

Not the 'real' countryside.

But they don't understand.

But not enough understanding of the farming needed to keep it as they wish to see it.

Not nearly enough to understand how everyone depends on it for water, carbon storage, flood control, wildlife, landscape, etc., as well as their food.

They do care about it....but their own vision of what it should be!

Comments by Insiders (farmers et al.) cont:

But around these parts they're not very in tune with it (i.e. complaining about manure on footpaths, even though they like to see cows in the field and nicely grazed pasture and wildflowers/birds, etc.). They definitely don't like change!

Passionately, but they don't understand it and can't imagine how it could look.

Apart from poor thick people.

And more so when options explained to them.

I think the public is concerned about the "pretty" aspect of the countryside. As valuers, we need urgently to value the worth of "the view".

A vociferous minority – mainly lobbying groups. A tremendous number of the population do not stray further than 100m from their car when visiting; they only worry about it looking pretty.

Most would probably say yes, but most know very little about it, even people who live in rural areas. A lot of people are keen to see tidiness (e.g. regularly trimmed hedges) without realising that this is usually bad for nature.

But not enough understanding of the farming needed to keep it as they wish to see it.

- **Should we be undertaking costly measures to mitigate climate change?**

No, I think the measures should come from the government.

No, measures need to be political or legislation driven. Farms like any business' need to adapt. As a private business should only spend on climate mitigation if it makes good business sense.

No won't work and it's not manmade anyway!

Yes, the evidence from the Stern Report is clear to me. Act now to save greater costs in the future.

Yes, If not it will fall to our children to pay.

- **Is the Farmland Bird Index important?**

Don't know that much about it. I guess it is context but I think we pay too much attention to species rather than looking at habitats first.

Visual indication of the health of the countryside.

But is only one indication of environmental health.

In principal yes, but not convinced of accuracy and I think it's politicised.

As the great Malcolm Stansfield said – "you can't manage if you can't measure." We need measures to be able to put a convincing case for policies and budget.

Just another stick to beat you with.

Appendix 2: Questions and comments. Outsider focus group (non-farmers et al.)

The on-line questionnaire via Survey Monkey <http://www.surveymonkey.com>

1. How often do you visit the UK countryside every year?
2. Are you a member of the RSPB, Wildlife Trust, National Trust or similar organisation?
3. Do farmers look after the countryside? And if not, who should? SEE COMMENTS BELOW
4. Can the countryside help us adapt to climate change? If yes, how? (More trees/less animals etc.) SEE COMMENTS BELOW
5. Does Europe have any bearing or sway on how our countryside looks and functions? SEE COMMENTS BELOW
6. Would you pay more for your food if farmers had to do more work to help the environment? SEE COMMENTS BELOW
7. What is your favourite type of countryside - field and hedges/mountains/coast/rivers/parks/anywhere not less than 50 metres from a car park or road?
8. Do you perceive that people from the countryside are friendly? SEE COMMENTS BELOW
9. What does the word 'biodiversity' mean to you? SEE COMMENTS BELOW
10. Would you want to own a 'piece' of countryside and if so, what would you do with it? SEE COMMENTS BELOW

Comments by Outsiders (non-farmers et al.):

- **Do farmers look after the countryside? And if not, who should?**

Mostly. Do not approve of hedgerow removal.

Less so the highly commercial large farms.

Farmers do the best job – looking to the long term - generations preserving the countryside. A lot of these fancy organisations end up being run by people who may recognise fauna, but not how the whole jigsaw fits together.

Not always. They should.

If they own the land, they should be responsible for it and maybe also be part of engaging non-farmers, but rural communities in looking after countryside issues around them e.g. all being responsible for footpaths etc.

Comments by Outsiders (non-farmers et al.) cont:

They look after their land as a by-product of running their businesses. Ruskin asked 'who owns the view?' looking out over a landscape of many farms. We can also ask, 'who owns the countryside?'

But other organisations (NGO's) should also play a part.

Farmers, overall, do a great job looking after the countryside.

Some do, some don't - depends on the farmer. The government should monitor the countryside and protect it by law.

Farmers do look after the countryside. After all, they created it.

Farming mostly created what we think of as countryside. They should but if they create something we don't like they need to be paid somehow to create something we do.

Some do, but not all. They appear to resent anything which can 'impact' on what they do. Everybody has a responsibility to look after the countryside and protect it for others to enjoy.

But so do other groups including the E.A. and many other groups in their own way including the RSPB, walkers do a bit, large companies have environmental concerns in their Statements of Intent as to what they can do to help the countryside. The government and planning officers have a large impact on the countryside with their decisions. DEFRA also look after the countryside.

Some, but probably the best people to do so in conjunction with bodies above.

I feel that the vast majority of farmers try to look after the countryside but sometimes have conflicting objectives – not all production methods are countryside friendly but farmers have to make a profit. Ultimately farmers understand that the countryside is platform for their business and they must look after aspects of it (soil for instance) to sustain their livelihoods.

But they need support in doing so.

Perhaps not as we'd like it looked after, but on the whole they do a fair job with limited resources.

Some do, some don't. Best are the big feudal estates – they can afford to.

Generally, but its everyone's responsibility.

Some do, some don't. It depends what you want. Food? Cheap food? Nice views?

Farmers should look after the land they own but with an eye to the environment. Where they are tenants of organisations such as the NT they could be paid to carry out environmental conservation such as hedging, set aside etc.

- **Does Europe have any bearing or sway on how our countryside looks and functions?**

Probably more sway than Westminster and certainly more sway than consumers. European Agricultural Policy is the worst example of political weakness.

Largely because of subsidies influencing farmers' growing decisions.

Hope not.

Comments by Outsiders (non-farmers et al.) cont:

Through the inevitable distortion caused by subsidy and non-local regulation.

More important than UK government because of farm payments and environmental directives.

Increasingly, changes to the way EU subsidies are implemented has already led to greater environmental diversity in the valley I live in as farmers increasingly develop their role as guardians of the environment. On the other hand agro-business is making small/mixed farms almost untenable and the EU has a role to play in supporting regional and national variety in relation to food and farming.

Not specifically. However, EEC legislation has a bearing.

Most definitely, as the issues of social and environmental care have pan-world connections it would be of little use re-arranging the deckchairs on the Titanic for us to act in isolation. We must influence and be influenced.

It shouldn't.

Unsure of this but my opinion "we should manage our own environment". e.g. GC Newts and their protection they are only rare in Europe but are common in UK why should Europe dictate?

Don't know, but maybe.

I think we have to look inwardly and make our own decisions about our countryside.

Because through subsidies they dictate what farmers are more likely to grow.

- **Would you pay more for your food if farmers had to do more work to help the environment?**

Yes, as long as farmers got the extra, not middlemen. Milk is ridiculously cheap.

Yes, if it improved the quality of the food and additional cost (profit) was reinvested into land management, but this would be a long term communication and perception challenge – not just the principle of it being a good idea.

Yes, but only if subsidies were removed. They receive enough in grants as it is.

....Would we have a choice – more to the point would retailers pay more or would farmers margins just get squeezed?

Yes, As long as it was not going to supermarkets and middleman.

No, when I'm rich, yes. But for the time being, whilst I'm striving to get one over my neighbours, to accumulate showy displays of wealth, and build myself up with cheap proteins and carbohydrates, probably not.

Yes, but only slightly. Farmers should be constantly helping the environment.

Yes, I suppose so, but would want to be convinced that additional funds in this way were necessary.

Yes, I already buy organic food and do not agree with the excessive amounts of pesticides used and welfare of animals.

Loaded question, would I receive more money if I helped the environment.

Comments by Outsiders (non-farmers et al.) cont:

Yes, but there would be a limit and it would have to be post-recession.

Yes, but I would want some sort of guarantee that the additional money was being put to good.

Definitely – we don't pay for the many externalities the farmers do already (whilst also producing our food). No other industry is so heavily relied upon for additional contributions to society which are largely ignored.

Yes, on a limited budget I would alter what I ate to mitigate the cost rise – so yes, if I had to I would eat less meat and pay more!

Yes, if quality was maintained and there was a corresponding reduction in taxation – if we're going to be paying farmers, then the relevant portion of our taxes paid for that purpose could be reduced.

No, there is room for massive savings in reducing bureaucracy and abandoning daft policies. Many farmers already adopt environmentally practices without incurring additional cost.

Yes, provided we received a guarantee that the extra costs were not diverted to other schemes.

- **Do you perceive that people from the countryside are friendly?**

Have more time for you than people in large cities.

No more than people anywhere else. In fact, I have more cynical and miserable people in the countryside than in any town or city.

Hard to say, lots of people are moving from the town into the countryside.

Friendly, but more cautious of strangers.

On most occasions provided that visitors into the countryside respect the Country Code and realise that this is their work place.

Bump into someone in the street in London and they'll sue you. Bump into someone in the countryside and ten minutes later you're on each other's Christmas card lists.

Generally, but there are some grumpy sods about!

There is room for improvement here.

- **What does the word biodiversity mean to you?**

Cross section of productivity to minimise impact of concentrated strains.

Everything working together.

Fancy word for what we do already – not all your eggs in one basket.

Compatibility of usage with environmental benefit.

Everyone/everything getting along together.

All the life that can be in a place.

Comments by Outsiders (non-farmers et al.) cont:

Black and white sheep in the same field.

Managing the countryside successfully for future generations.

It's that amazing mix of flora and fauna that bursts to life at the dawn chorus and whispers through the leaves till dusk and haunts the night air with the sounds of a vibrant and verdant world. Man in harmony with nature, knowing who is the real master, yet not fighting against the natural world like a foe.

Nature, species, wildlife.

Earthworms acting as human dustbins.

Boring sanctimonious greens with wispy beard.

A current buzzword – i.e – bollocks.

A broad mix of species and habitat suitable for them all to flourish.....but biodiversity is so 2010.

- **Would you want to own a 'piece' of countryside and if so, what would you do with it?**

Leave it to be natural.

Let it go wild.

Keep it wild and bio-diverse.

I would have a wigwam and a fire, then cull all other humans. Humans have culled predators for generations. Its time to cull ourselves.

Not really – too much work. Wouldn't use it enough.

Plant more trees.

I would leave it to overgrow and let wildlife enjoy it.

Would not have time to look after it. Prefer to explore varied countryside around UK.

But if I did, I would allow a free access to all, so that the maximum number of people could enjoy it with me.

Help it return to a wild state.

Not really – if I did I would want something wild and unspoiled, and would want to give free access to it.

Would like to open it up to some public access, but I might want to keep a small bit private.

Through a campaigning or expert landowning body. Who would run it on their principles, on their budget/target, and with generally open access.

Appendix 3: How both focus groups answered (percentages)

	Blue – farmers et al.	Yes	No	Don't know		no. of answers					
1	Is biodiversity word overused?	54	45			106					
2	Will UK agric follow US?	33	67			100					
3	Are you influenced by neighbour?	68	31			101					
4	Do you enjoy dealing with public?	66	34			103					
5	Should we sell FC woods?	42	57			105					
6	Should we pay more for our food?	78	21			106					
7	Are you in enviro agric schemes?	73	26			87					
8	Undertake enviro works if not paid?	64	35			90					
9	Have planners prevented works?	44	55			93					
10	Are you a RSPB member?	22	77			102					
11	Does landlord base rent on agric prod?	55	44			34					
12	Do the public care about c'side?	78	21			106					
13	Costly works to mitigate climate chg	60	39			104					
14	Is the farmland bird index important?	84	15			104					
15	Are you positive to change?	90	9			97					
16	Are you happy with the NFU?	61	38			88					
17	Would you farm a 'free' upland hold?	46	53								
Green – non farmers											
18	How often are you in the c'side?				0-10 14%	11-50 18%	51-150 25%	Everyday 40%	97		
19	Conservation NGO member?				RSPB 7%	NT 24%	other 12%	None or ex 40%	97		
20	Do farmers look after c'side?	74	25						97		
21	C'side help us adapt to climate change?	79	12	8					96		
22	Does Europe influence our c'side	76	13	10					97		
23	Pay more for food	72	19	8					94		
24	Your favourite type of c'side?				Field/hedge 16%	Uplands/wild 40%	Rivers 13%	Coast 18%	Park 10%	96	
25	Are rural people friendly?	81	18						92		
26	Meaning of biodiversity?										
27	Would you want to own piece of c'side and do with it.?	77	22		Wood 28%	Farm 27%	Go wild 14%	Build 12%	Public 6%	Pony 4%	99

Appendix 4: Invitation letter to interviewees

Dear

Request for short interview - 'New demands; old countryside'

I am a rural chartered surveyor undertaking a fellowship paper on behalf of the Royal Institution of Chartered Surveyors (RICS) and the Royal Agricultural College (RAC) based on my selected topic: "New demands; old countryside"

I believe that the rural sector is going through a seismic shift on matters such as food production, biodiversity targets, adaptation to climate change, influence of NGOs, tourism and farm subsidies – not to mention forestry – much of which is ill understood by our predominantly urban population.

The aim of my paper is to illuminate the influences and driving forces behind the demands on today's countryside and seek explanations and open debate as to how those operating within the countryside can address these issues while engaging with the taxpaying public.

I would be grateful if you could spare about 20 minutes for a face to face (or telephone) interview based on matters as attached and with questions submitted in advance.

I look forward to hearing from you on my details above and thank you for your time.

Yours sincerely

Rob Yorke MRICS

Encl.

Appendix 5: Full list of matters for discussion

“The gap is widening between the urban majority and rural minority: we have to engage the imagination of the majority while understanding the requirement of the minority”

RY

- As populations urbanise, understanding of countryside diminishes: yet the EU Agricultural Commissioner, Dacian Cioloș, states the taxpayer has a right to public benefit from farmers *beyond just* producing food.
- Is it naïve to expect a Tory lead govt to be any more amenable to the rural sector – especially when a Government in power reflects the population which happens to be urban?
- Is the EU/public ready to pay to keep farmers on the hill to purely to keep the heritage landscape?
- Would consumers pay more for their food if they knew that farmers were doing more for the environment? But would supermarkets pass any increase back to farmers?!
- A countryside under pressure – prepare for bio fuels, plant for biomass, promote biodiversity, produce more food, plan your bio-security, prioritise for carbon capture etc. How can we prioritise?
- Sustainable intensification of agriculture – unsavoury but necessary? Foresight report: “nothing less than redesign of the whole food system to bring sustainability to the fore....though political reality is sustainability cannot be pursued in absence of food security”.
- Science led farming – if evidence based, why not biotechnology?
- On rural matters, the public trust NGOs followed by supermarkets more than government and farmers. Countryside messengers need to engage with urban majority.
- White paper on Natural Environment – invitation to shape the nature of England. Who drafted it? Out of touch DEFRA officials - degraded land. Who comments? If you don't engage, others who comment will influence by default. Comment by proxy is no good in a media driven world, where everyone has a say.
- Use of media, press releases by influential RSPB/NT etc., ensures the public trusts them (and supermarkets) compared with ‘vested interest’ incoherent/misunderstood rural messages. Results in uninformed one sided single issues debates: badgers, farmland birds, predator control, broiler chickens etc.
- Should the rural sector embrace media to a higher level, be more proactive in getting messages across?
- Are traditional land managers/farmers driven/constrained by business models in justifying expenditure on non-monetary return matters such as PR? Perhaps spend more on data/research/press releases to counter the daily RSPB press release? Where are the top facts from farming and countryside? Living countryside - UK Agriculture.
- Embrace modern media otherwise poorly presented policy – however well-intentioned and informed - can be shot down by on-line petitions.
- Should government facilitate but not regulate the countryside (example – The Campaign for the Farmed Environment?). Or are their hands tied by EU legislation and requirement to reach targets?
- Can we have common sense conservation UK law alongside EU directives? How did Benn get a derogation threatening compulsory set-aside when NFU said that no such EU requirement?

- Will headage payments to upland farmers support the inefficient ones, lead to overgrazing of valuable habitat rather than encourage enterprise diversification into other appropriate enterprise such as tourism?
- How much room is there for the UK to interpret EU directives on support for farmers and biodiversity targets in order to suit UK farmers and their ability to satisfy CAP objectives?
- With over 10,000 potential purchasers of woodland registered with just one specialist forestry agent – was this a missed opportunity to divest ‘unimportant’ woods to enthusiastic owners?
- Do the public love the countryside but not care for it because they don’t really understand what goes on there?
- What percentage of money comes from the EU for forestry grant aid administered by the FC?
- Ecosystem services. High nature value farming. They used to be by-products of farming but now has to be by design. Are targets realistic and how do farmers react to such terminology?
- Why did the launch of Glastir not grip farmer’s imagination? Was it drafted by focus groups of practical farmers or civil servants constrained by EU targets?
- Is organic farming having a tricky time with no organic drugs available for welfare, copper sulphate used for blight and methane producing FYM for crops?
- Are we over-mechanised? Why not share rather than look over the hedge and keep up with the Jones.
- Why don’t farmers join together (co-ops) to comment on policy makers or negotiate with supermarkets?
- Is there a dilemma on subsidies – farmers don’t really want them (bad image) but can’t survive without them (underpin incomes, rents, land values and food prices). However if we want consumers to appreciate good stewardship of land and landscape by paying more for food, that would undermine the need for support to farmers, increase food prices and hit the poorest.
- A hill farmer in Wales will have more in common with an upland farmer in Romania than a cereal farmer in Essex. Is Welsh farming more successful and ‘in tune’ than its English equivalent because of a higher rural population?
- Can the ability for govt. bodies to designate areas, such as AONBs, have a direct effect on how the land is farmed or managed?
- Why don’t the public roam free after the implementation of the Countryside Rights of Way Act?

Appendix 6: Farming trade-offs

Farming is an industry. Pastoral in parts but not perfect.

The future challenges for farming are much discussed at the moment and as one of my interviewees said “the need to balance efficiency, welfare and emissions was like playing three dimensional chess”.

Herewith a list of mixed trade-offs:

- Cultivations and use of fertilisers (organic & inorganic) increase the release of greenhouse gases (GHG)
- We try and cut fossil fuels by undertaking minimal or zero till cultivation but that means more use of pesticides and lower crop yields.
- Reduce stock numbers to reduce emissions, use of resources and healthy diet but knock on effect on less manure, organic farming’s fertiliser.
- Health scares over toxins and heavy metals prevent use of human sludge as fertiliser.
- We try to reduce pesticide use but yields suffer and we increase fossil fuel use and GHG emissions from weed control cultivation techniques.
- Warmer and wetter winters increase pests and disease and therefore use of pesticides or need for cultivations.
- We plant land for bio-fuels when its required for food but yet invest in oil hungry, fast paced machinery to outrun the rain at harvest time.
- Planting for bio-fuels require fossil fuels to fertilise etc.
- Organic farming resists inorganic methods yet has to use heavy metal copper sulphate for potato blight.
- Some resist welfare requests for windows in broiler sheds because it increases the carbon footprint.
- Carbon neutral meat is too expensive for most consumers.
- Improve air quality by banning stubble burning but increase use of fossil fuels and pesticides to control weeds and pests.
- Resist biotech but then use more pesticides.
- Is it possible to be green when you’re in the red?

Appendix 7: A retailer's reply to my request to interview

April 8, 2011

Mr Rob Yorke
Royal Institute of Chartered Surveyors
Parliament Square
London
SW1P 3AD

Dear Mr Yorke

Thank you for your letter received on the 4th April 2011

While I thank you for the interest you have shown in xxx. I regret that it is not company policy to participate in individual research.

As a retailer rather than a manufacturer, xxx does not undertake research or produce information on the topics you raised in your letter, preferring instead to spend the money to keep our prices low. Unfortunately therefore, I have no suitable information that I can pass on to you.

I wish you every success in your research.

Yours sincerely

Trading Director
TRADING DEPARTMENT

Appendix 8: Wordle

Appendix 9: Glossary of Abbreviations and Terms

Glossary of Abbreviations and Terms

AES	Agri-environment schemes - including (ELS) Entry, (HLS) Higher and (UELS) Uplands Entry Level Stewardship Schemes and Glastir, the Welsh equivalent
Biotech	Biotechnology (sometimes referred to as GM, GMO or genetically modified).
BTO	British Trust of Ornithology
CAP	Common Agriculture Policy
CLA	Country Land & Business Association
Conservation NGO	Conservation non-governmental organisations
CPRE	Campaign to Protect Rural England
DECC	Department of Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
FBI	Farmland Bird Index
FC	Forestry Commission
GHG	Green House Gasses
GWCT	Game and Wildlife Conservation Trust
LEAF	Linking Environment And Farming
LFA	Less Favoured Area. Areas disadvantaged by 'adverse natural production conditions'
NEA	National Ecosystem Assessment
NFU	National Farmers Union
NNR	National Nature Reserves
RSPB	Royal Society Protection of Birds
The White Paper	Natural Environment White Paper
WAG	Welsh Assembly Government (also referred to as Welsh Government)