Appendix A
Somerset Levels and Moors - briefing for the Round Table meeting - 29 November 2012

The main challenges facing the Levels in the medium term

1. **Water management**

    a. **National policy** now requires that financial and operational resources for flood risk management will be **focussed on protecting key assets** including settlements, critical infrastructure such as the power and water utilities, and transport links, to the current standards. In addition, these resources are likely to be **significantly constrained** in the medium term.

    b. In future, the protection of **agricultural land in the floodplains**, and minor transport links, **may attract fewer resources** and so these assets may be more vulnerable to flooding. How can we make these assets more resilient to increased flooding?

    c. The need to address **strategically** the **degraded state** of some rivers and ailing flood defences.

    d. **Peat soils**, and buried archaeological features, are **at risk of degradation** (including the loss of stored carbon) from arable farming, drought and inappropriate water level management. The speed at which this is already happening is variable but can be as rapid as 2cm in surface height per year.

    e. The combination of national policy, constrained budgets and climate change suggests that water supply to meet the needs of farming, rural enterprises and nature **may fluctuate between the extremes of drought and flood** to a greater extent than previously.

    f. The **dispersed ownership** structure of landholding on the moors means that it is difficult to implement **hydrological management** over large areas. Lack of agreement from just one or two people can prevent changes to the system even when the majority of landowners are in favour. There is also a lack of a landscape or a catchment scale perspective on water management. WLMPs are restricted to designated sites. We invest in controlling water levels in the lowest part of the system but have no mechanisms for influencing water/land management further up the catchment.

    g. Many of the rivers on the Levels **fail to meet Good Ecological Status or Potential**, as defined by the **Water Framework Directive**. The main reasons for failure are due to high levels of phosphate, barriers to fish movement in watercourses and low levels of dissolved oxygen. Water and land management practices together with point source pollution are considered the main pressures. There are considerable challenges ahead in working towards achieving WFD objectives whilst ensuring that the Levels continue to support the current uses both economically and environmentally.

2. **Land management**

    a. Livestock farming is **struggling to remain economically viable** (resilient) in the lowest and wettest parts of the Levels. These extensive farming

enterprises **provide livelihoods** for many, and help maintain the nature and landscape character of the Levels. These assets will be at risk unless these farming enterprises can find new ways to be more economically viable.

b. **Financial support for farming** from the public purse, through agri-environment agreements, **is critical to many livelihoods** and farm businesses in the area. The national budget for these agreements is **constrained and focuses** on maintaining the nature and landscape interest of the **designated sites and priority habitats**, leaving less financial support for important management work in the rest of the floodplains. The end of the **Environmentally Sensitive Area (ESA)** scheme is affecting farmers on the Levels and has affected the agri-environment income of many people and has increased the likelihood of intensified and potentially environmentally damaging agricultural change. The danger is that the traditional livestock farming which has given the Levels and Moors much of its landscape and wildlife interest will be squeezed from both sides: on the lower, wetter land by lack of profits and impracticability; and on the better land outside the SSSIs by intensification associated by the ending of the ESA scheme.

c. This budget constraint also **increases competition for agri-environment agreements** across the country and so there is a greater need to demonstrate that these agreements really do **provide good value in return for public money**.

d. **CAP reform** will take place in 2014, and this may lead to less money being available for agri-environment agreements and rural development in the medium term.

e. **Neglect of iconic landscape features**, such as pollarded willows, withy beds and orchards, continues leading to loss of the presently valued managed landscape character.

3. **Economic development/rural prosperity**

a. Generating more economic value in the area by encouraging the **expansion of business** sectors based around **tourism, local identity and products**, and those which provide a wider community benefit. Eco-tourism and agro-tourism has yet to be fully exploited as an opportunity within the area. However, tourism needs some management to mitigate problems with cars, parking and issues to do with the impact of managing larger numbers of people.

b. Building **more resilience into the land based economy** of the area so that it can better cope with environmental shocks such as flood or drought.

c. The **traditional character** of rural communities is disappearing through the continuing **decline** of the livestock industry, **outward migration of farming families** (with associated loss of land management skills) and **loss of local social facilities and services**.

d. **Demographic change**. An ageing farming population, which is in line with national trends, and probably above the national average age given the extensive traditional farming systems common on Levels. Many individuals have relied on ESA payments for pension planning and now have to look for alternative sources of income.

4. **Nature**

a. Land of high nature value is now concentrated in a series of **isolated sites** scattered across the floodplains of the Parrett, Brue and Axe. Many of these sites are **too small and fragmented** within the wetland landscape to be resilient to changes in management, or to climatic or environmental stresses.

b. Government policy encourages **rebuilding nature at a 'landscape-scale'**, with a greater focus on securing the integrity of sustainable ecosystems rather than isolated nature sites. To realise the great **potential for more nature** on the Somerset Levels, the patches managed with nature in mind would need to be bigger, better and more joined up in the future, and planned with reference to landscape scale ecosystem function.

c. Extensive livestock farming has been the main 'tool' for managing nature interests in the floodplain grasslands in recent decades. **If livestock farming withdraws** from the wettest areas, then the natural assets of these areas will change too.

d. The nature and landscape character of the Levels is **highly valued by many** who live and work in the area. An increasing number of people visit the Levels for the express purpose of enjoying these assets, and these visitors may provide **more business opportunities** in the local area.

5. **Climate change**

a. Whilst local and specific predictions regarding the changing climate are difficult at assess fully, there is a broad scientific and policy consensus that **we need to take urgent action** on mitigation and resilience/adaptation. The most profound prediction is that the climate is likely to become **more erratic and less predictable**, resulting in a greater occurrence of more extreme rainfall, drought and storms.

b. Predictions suggest that **climate change** will result in rapid regional changes and increased frequency of extreme weather such as heat waves and extreme rainfall, storms and flooding in North America and Europe, which will vary in location, intensity, and timescales. **Wet summers** could cause similar problems to those experienced on the Levels this year, and if combined with extreme rainfall a potential repeat of the 2007 Gloucestershire flooding scenario, whilst **dry summers** will increase the risk that there is not enough water in the river system to irrigate the Levels and Moors, reducing the water available for the livestock and for ditches which act as wet fences between the fields. In addition, there is a real risk in dry summers that the **peat soils shrink**, perhaps irreversibly, resulting in the field surfaces sinking. Drought will also impact on water quality with water penned up on moors as wet fencing becoming stagnant.

c. A slow but steady **rise in sea levels** will compound the effect of wetter winters and more extreme weather conditions for the Levels and Moors. As the sea rises, the length of time the rivers can flow to sea will decrease, essentially reducing the volume of water they can discharge on each tide. As a result, more water may need to be **stored on the floodplains** of the Levels and Moors until it can be returned to the rivers and discharged to the sea.

d. Climate change (for example) is likely to create **risks** (increased flooding, drought, new diseases) that will impact on land use, and **uncertainties** (about the frequency, timing and location of events) that land managers need to respond to. At the same time, those responsible for policy delivery and those affected by it (e.g. land managers), increasingly seek a **strategic vision and clear sense of purpose** for rural land use.

6. **Mechanisms for achieving land and water objectives**

   a. Understanding impacts and trade-offs. Being able to **identify the value of different goods and services** provided by land and water resources, and the possible conflicts and trade-offs between them, is critical to developing more effective decision-making processes and tools. However there is also the inherent challenge of how to 'value' nonmaterial landscape values and cultural services, which do not lend themselves to monetary valuation, and thereby can result in trade-off assessments which are biased and misleading.

   b. Once we have valued the different environmental goods and services how do we use this? **Paying for the right public goods and services in the right place** is a key challenge for the future. Current payment mechanisms, such as agri-environment payments, are largely based on agricultural income foregone plus costs incurred. There are concerns that this does not adequately recognise the value of public goods delivered or provide a long-term source of income for farmers who enter agreements. Is there an alternative basis to these payments?

   c. **Funding and its availability** from a range of sources has always been a challenge for this area, even more so in recent times. Through the recession and the 'age of austerity', securing funds for very worthy and necessary causes that are **non-statutory** is getting harder to achieve.

7. **New governance models for more co-ordinated, integrated and bottom-up approaches to land use planning and management (localism)**

   a. Finding new ways to improve the outcomes for the area, with **new forms of local leadership and direction**, which bring about more and **better collaboration** between organisations and with landowners / users.

   b. Finding new ways to **encourage more people to get involved**, that places the imagination, skills and practical knowledge of users at the heart of designing and **delivering new solutions** to these challenges.

   c. Developing formal (and informal) ways of **sharing what works well for the area**, so we can **demonstrate and celebrate success** widely (including value for money).

   d. Integrating different and fragmented policy arenas and funding mechanisms so we **join up multiple objectives** – including managing flood risk, water resource management, enhanced biodiversity, enjoyment of the countryside and rural livelihoods. And ways of working at a landscape scale rather than being restricted to designated sites.

   e. Ensuring that the **delivery of policy is responsive to local situations and circumstances** and to move away from the 'one size fits all' approaches of the past.

f. Recognising the **diversity of the motivations** of land owners and managers, and how these might be met.

g. Moving away from 'top-down' governance arrangements and structures towards ones that are more **integrated, collaborative and 'bottom-up'**. How do we ensure those responsible for policy development and delivery have adequate resources and work in partnership? Bottom up needs to include the landowners – resources will not be able to solely come from 'government'. A shift to more 'bottom-up' and collaborative governance arrangements and structures demands **better engagement with stakeholders and local communities** to: identify problems; define objectives for land use; and identify and deliver solutions. Because there is no formalised governance, such as an AONB type partnership arrangement, there is no centralised point of unification for all the initiatives that affect the Levels & Moors area.

h. How do we value / protect sites with **no legal protection** in a bottom up approach?

November 2012