Local Economic Development and the Environment (LEDE) Toolkit: Report on Trial

Final Report prepared for

Natural England,
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Final Report

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1 Introduction

1.1 Rationale for the study

The natural environment plays a crucial role in the local economy, both directly and indirectly, but is consistently undervalued in economic analyses and decision making. In order to ensure the sustainability of economic growth the Government has made a commitment to place natural capital at the heart of economic planning. Therefore, Local Enterprise Partnerships (LEPs) and Local Authorities have been asked to deliver growth which is environmentally sustainable.

During 2011/2012, the Defra-network worked with three LEPs to develop a toolkit to support Local Enterprise Partnerships, the economic development departments of Local Authorities, and interested others, to build information about the economy's relationship with the environment into local economic plans. The Local Economic Development and Environment (LEDE) toolkit is designed to assist LEPs and Local Authorities with their economic planning with the aim of meeting their goals. It is aimed at helping LEPs identify and use the relationships between the environment and the economy. Though its focus is to assist LEPs and Local Authorities there is a key opportunity to develop closer working with Local Nature Partnerships (LNPs).

The research process last year was essential to bringing the toolkit to its current stage of development. However, there is a need for further research and testing of this approach in order to:

- Test the usability of the toolkit;
- Develop clearer exec summary and final report format;
- Provide a worked example of use of the toolkit; and
- Propose simplifications to the toolkit so that it can be used by non-specialists if possible without reducing its scientific rigor.

The final requirement includes assessment of the potential to split the approach into two stages:

- Stage 1: a lighter introduction or taster for scoping/awareness rising. This will produce a product that could be used in isolation from the rest of the toolkit; and
- Stage 1 and 2: a full run through the toolkit including the stage one section. This will refine the toolkit and provide a case study of its full use following this staged approach.

1.2 Aims and objectives

The overall aim of this study is to retrial the toolkit approach with one local area consortium (using consultants used to carrying out assessments), and make suggestions for how the

approach may become usable by consortium members themselves. There are five main project objectives as follows:

- **Objective 1: Re-trial the toolkit with the new proposed mode of operation**
- **Objective 2: Re-trial the toolkit with post-trial amendments**
- **Objective 3: Test whether the difficulties experienced by the non-specialist researchers are also experienced by specialist consultants**.
- **Objective 4: Generate recommendations to make economic/environmental assessment easier**
- **Objective 5: Produce a local area case study which acts as a demonstration of the toolkit potential**

1.3 Summary of project outputs

This report sets out the approach to the study, specifically the methodology that has been followed during the trial and to assess the need for revisions to the toolkit. This report is supported by the completed workbook for the New Anglia and Wild Anglia consortium. Three workshops were held during the trial, and the workshop reports summarising the discussions are provided as Annexes to this report.

1.4 Organisation of this report

The remainder of this report is organised as follows:

- Section 2 describes our approach to the study, including meetings and workshops held, data collection and how we have applied the workbook;
- Section 3 presents a summary of the findings for the New Anglia/Wild Anglia consortium;
- Section 4 provides feedback on the trial of the toolkit, including suggested changes and justification for those changes;
- Section 5 sets out information from our trial that will be of use to the Defra network when rolling out the revised toolkit; and
- Section 6 summarises the conclusions and recommendations.

2 The study methodology

2.1 Overview

This section outlines our approach to the study, which was based on following the workbook structure and guidance. Where any deviations or changes were made in order to improve this process, these were noted and recorded for possible future improvement of the toolkit (discussed later).

2.2 Start-up meeting and workshop

We held a start-up teleconference on Tuesday 18th December 2012. This covered issues such as the rationale behind the toolkit, the work which had been undertaken on it so far and the plan for this study. The following bullets summarise the key issues discussed:

- Rationale for the toolkit: the toolkit was designed to help LEPs plan where they want to go and meet their goals. It was not written specifically to improve the accountability of LEPs to the environmental agenda or to Defra.

- Previous trial: the toolkit has already been trialled with three LEPs. However, this work highlighted several challenges faced by the LEPS when trying to complete it including time constraints (staff members were often trying to complete the toolkit in addition to undertaking their normal work) and people having to work in areas which were not their speciality.

- The reasoning behind this second trial: we want to demonstrate what the toolkit can do and how it is useful. If it is released in its current form, it may be misunderstood. It needs to be simple, but still robust enough to be meaningful. However, there is a tension between simplification and loss of value in completing the toolkit. The tool ultimately needs to be embedded in the cycle as part of strategic planning.

- The first stages of this study: the study will start with a workshop on the 10th January 2013. This will include a morning session for senior staff to introduce the concept of the toolkit and an afternoon session for practitioners to go through the toolkit and find out what areas people know about, where data are located, which areas need to be prioritised, etc.

- Final outcome: the study needs to provide an output which both Wild Anglia and New Anglia (the chosen local consortium) are happy with.

We held an initial workshop on 10th January 2013. This gave the opportunity to gain buy-in from the senior stakeholders with the aims, objectives and process of the toolkit explained. The morning session was structured around presentations from Natural England and RPA,

with the opportunity for discussion throughout. The key outcomes of these are listed in the full workshop report which can be found in Annex 1.

During the afternoon session, a more in depth discussion with the wider practitioners took place. This focused on developing focus areas for data collection. This provided a useful starting point from which to focus our research efforts. Following discussions led to a list of possible sources of where information may be found, and who may provide useful insights and expertise to the relevant sections. It was apparent from this exercise that there were a large amount of data available, highlighting the need for a tailored approach.

2.3 Data identification and collection

The workbook outlines many possible data sources for the various sections, most of which are publically available. These were used as starting points for more detailed searches which were focused on the LEP area, often leading to additional sources of information. Part of this process also involved speaking directly to individuals in order for the underlying issues and future developments to be identified. This was important as much of this information would not necessarily have been available by simply looking at published reports etc. alone. More detailed accounts of these meetings can be found in section 2.4.

Section 2 Economic development indicators and pathway

We started by collecting and analysing the raw data indicated in the toolkit. This proved to be an extensive and time consuming process, and further searches led us to reports which had already analysed the baseline data, and often included explanations and reasons for the trends identified.

Section 3 Inputs and outputs to the economy

The majority of the information for this section was publically available. Most of the data used for this section was relevant for parts of sections 4 to 6. It was often difficult to avoid repetition between data used for this section and those which concerned ecosystem services.

Sections 4 to 6 Ecosystem services

For some of the ecosystem services, there were large amounts of publically available data. The majority of expert advice was used to support these sections, which aided in understanding issues which were specific to the LEP area.

Data gaps and uncertainties

It is important to note that for some aspects of the workbook there were data gaps, in terms of data simply not being available, such as the use of ornamental resources, or data not being up-to-date. This was particularly the case for the economic development indicators and pathway section (Section 2). Some of the available statistics only covered the period up until 2008, which does not allow for trends and impacts of the economic downturn to be fully captured. The economic forecasting model used to establish future growth projections

into 2030 is based on data up until 2010/11. However, caution must be taken when using the projections, as the effects of the economic downturn are not yet fully understood. However, given that the effects of the economic downturn were not as pronounced in the New Anglia area compared with the rest of the UK, the projections align with the LEP's approach to the downturn as an interruption rather than a complete shift in how future development is planned. Therefore the projections, although cautionary, were considered the most appropriate available.

Annex 2 lists all the data sources used for each section together with data gaps and comments.

2.4 Meetings with key organisations and individuals

We held face to face meetings with people from various sectors to provided expert knowledge and opinion on relevant areas of the toolkit. These meetings were used to fill in gaps in the publically available data and to verify some of the assumptions we had made. These meetings also resulted in the identification of opportunities and threats.

It was also recognised that there were many more individuals whom it would have been useful to ask for their input on various sections. However, time constraints meant that data collection was mainly focused on those sections for which little publically available data existed or where local opinions would be more insightful. The total approximate number of person days spent conducting face to face meetings was four (this often included two members of RPA staff in attendance).

A summary of the individuals contacted and their inputs to the relevant sections are given in Table 2.1. Also included are organisations and individuals contacted via email, where data were not publically available.

Table 2-1: Summary of data provided through meetings and contact with key individuals and organisations

Person/Organisation Contacted	Type of Contact	Summary of the information provided	Sections of the Toolkit Covered
Ellen Jones, Planning Analyst, Norfolk County Council David Dukes, Economic Development Manager, Norfolk County Council	Face to face	Provided information and opinions on the possible reasons for growth or reduction of the main sectors in Norfolk. Reasons for low productivity, potential opportunities for growth in the area and potential threats to growth. Suggested that the data collected for the toolkit would be most useful for them (and others within the Council) if presented at County scale where possible	Section 2 Economic development indicators and pathway
Iain Dunnet, Operations Manager, New Anglia	Face to face, email	Provided information regarding New Anglia's Plan/vision for future growth New Anglia Plan for Growth and Sector Strategy report	All

Table 2-1: Summary of data provided through meetings and contact with key individuals and organisations			
Person/Organisation Contacted	**Type of Contact**	**Summary of the information provided**	**Sections of the Toolkit Covered**
Martin Horlock, Biodiversity Information Officer, NBIS, Norfolk County Council	Face to face, email	General information and opinions on the main threats to biodiversity in the Norfolk region. The need for strategic design of biodiversity into development. Data received: • Area and condition of County Wildlife Sites in Norfolk • Areas of BAP habitats • List of species of conservation concern	3.1 Land use 4.6 Biodiversity (Genetic Resources) Opportunities and threats
Mike Sutton-Croft, Coordinator Non-Native Species Initiative, Norfolk County Council	Face to face	Discussion regarding the main invasive species which are causing problems in Norfolk. Information regarding control methods which are currently underway and what the impacts of the planned future development areas could be in terms of disease and pest risk. Details about potential plans to create a joint Norfolk and Suffolk approach to invasive species control	5.4 Disease and pest regulation Opportunities and threats
Martin Sanford, Director Suffolk Biological Records Centre	Email	Data received: • Area of County Wildlife Sites in Suffolk • Areas of wetland BAP habitats and map • List of species of conservation concern	3.1 Land use 4.6 Biodiversity
Katrina Hann, Managing consultant, Experian	Email	Experian resilience index for the Business section of New Anglia rankings	2 Economic development indicators and pathway
Tim Lidstone-Scott, Senior Trails Officer, Norfolk County Council	Face to face	Discussion regarding the importance of enhancing public access and connectivity to the whole economy. Planned future projects in the Norfolk area and past successes/failures with regards to connectivity and infrastructure. Also discussed the need to increase non-motorised infrastructure, using the example of Marriott's Way, and how this trail has successfully brought benefits to wider sectors of the economy	5.1 Climate 6.1.2 Recreation and Tourism 6.2 Health Opportunities and threats
Dr David White, Green Infrastructure coordinator, Norfolk County Council	Face to face	Discussions regarding green infrastructure in Norfolk, the potential issues faced and the opportunities and threats for the future. Other information and opinions on tourism and sensitive areas and the need for maintaining and improving ecological networks. Also gave information regarding the Community Infrastructure Levy (CIL)	4.6 Biodiversity 6.2 Health 5.9 Pollination Opportunities and threats

Table 2-1: Summary of data provided through meetings and contact with key individuals and organisations			
Person/Organisation Contacted	**Type of Contact**	**Summary of the information provided**	**Sections of the Toolkit Covered**
Haidee Bishop, Coordinator Wild Anglia	Face to face	Discussions regarding biodiversity in Norfolk and Suffolk, and the main issues and threats affecting key areas. Opinions and views on the way that sustainable development should be tackled in the area – a more holistic and landscape scale approach. Views as to the likely impacts of the planned future growth sectors	4.3 Agriculture 4.6 Biodiversity 6.1.2 Recreation and tourism Opportunities and threats
Natural England	Email data request	Natural England Land Cover Map 2007 GIS database, cut to Norfolk and Suffolk	3.1 Land use 4.4.1 Timber
Sue Hooton, Senior Ecologist, Suffolk County Council	Face to face, email	Discussions focused on the issues and threats currently affecting wildlife in the Suffolk region and the potential future impacts of growth sectors. Condition of County Wildlife Sites in Suffolk	4.6 Biodiversity 5.9 Pollination 6.1.2 Recreation and tourism 5.4 Disease and pest regulation Opportunities and threats
Jai Raithatha, Head of Economic Development, Suffolk County Council	Face to face	Discussed the impacts of growth sectors in Suffolk, and confirmed assumptions made when explaining trends in section 2, and for the future plan/vision key growth areas. Discussed issues over what is appropriate development for the area, and how sensitivity is needed when approving plans to consider other factors aside from which bring the most economic returns	2 Economic development indicators and pathway 4.3 Agriculture 5.1 Climate
Steve Scott, Forest Services Director, East & East Midlands, Forestry Commission	Email	Timber production in the East of England InCrops report	4.4 Fibre
Jonathon Dix, Landscape & Biodiversity Lead Advisor, Natural England	Email	Draft National Character Areas report covering Norfolk and Suffolk	4.6 Biodiversity 5.5 Erosion regulation 5.6 Land and soil quality 5.9 Pollination 6.1 Landscape 6.1.3 Aesthetics
Huw Richards, Environment Planner, WFD Co-ordinator, Environment Agency	Email	Number of properties at risk of flooding by County Council. Licensed abstractions, volumes abstracted and number of licenses by purpose for Borough Councils	4.2 Water supply 5.2 Flood and coastal risk management

2.5 Application of the workbook

We applied the workbook, feeding in data, our analysis of the data, the results of reviews of plans and strategies and the views/feedback from meetings.

Section 2 includes the economic development indicators. We followed this section through answering the questions posed at the start of each chapter.

Section 3 covers material inputs and outputs, and also opportunities and threats that arose from these. Much of the information gathered for this section was available online, and also fed into to the ecosystem services.

Sections 4 to 6 cover the ecosystem services, and we looked at each of these in turn. In order to establish the impacts of the development sectors recognised in section 2 for the LEP's future plan/vision, we developed a matrix to assist with the identification of direct and indirect linkages between these sectors and each ecosystem service (Table 2.2). For example, the development sector Energy will have a direct influence on Renewable energy, as development in this sector is set to increase renewable energy resources. Indirect impacts of development sectors such as advanced manufacturing and Ports and logistics may also have influences on Renewable energy. As there are undoubtedly indirect linkages between most of the growth sectors and ecosystem services, only the key linkages were identified. Construction has been added as a growth sector to capture the associated development which is anticipated. For example, a general increase in population size and development will lead to an increased need for more housing and other infrastructure which may not be captured under the separate growth sectors.

Along with our research findings, we used the matrix to develop an initial set of opportunities and threats. These were then ranked in terms of their importance and urgency ratings using the scores set out in the guidance document. We expanded the scoring definitions slightly in order to capture the relationships with the key growth sectors (see Annex 3 for the revised definitions used).

Table 2-2: Linkages between New Anglia's key growth sectors and ecosystem services											
Workbook Section	Ecosystem Service	Key Growth Sectors									
		Advanced manufacturing	Digital & cultural creative industries	Energy	Food, drink & agriculture	ICT	Financial services	Ports & logistics	Tourism	Life sciences & biotechnology	Construction
4	**Provisioning Services**										
4.1	Fuel										
4.1.1	Oil and gas	I		D				I			
4.1.2	Coal	I		D				I			
4.1.3	Mineral resources										D
4.1.4	Peat										
4.1.5	Renewable energy	I		D				I			
4.2	Water supply			I	D				I		
4.3	Food										
4.3.1	Agriculture				D				I	I	
4.3.2	Fisheries and aquaculture				D			I			
4.3.3	Game and wild food				D				I		
4.4.1	Timber			I					I		D
4.4.2	Fibre			I					I		D
4.5	Ornamental resources								I		
4.6	Genetic resources/Biodiversity				I				I	I	I
5	**Regulatory services**										
5.1	Climate										
5.1.1	Global climate change mitigation										
5.1.2	Local climate regulation			I		I					
5.2	Flood and coastal risk management										
5.2.1	Non-coastal										
5.2.2	Coastal										
5.3	Water purification	I			I						

Table 2-2: Linkages between New Anglia's key growth sectors and ecosystem services											
Workbook Section	Ecosystem Service	Key Growth Sectors									
		Advanced manufacturing	Digital & cultural creative industries	Energy	Food, drink & agriculture	ICT	Financial services	Ports & logistics	Tourism	Life sciences & biotechnology	Construction
5.4	Disease and pest regulation				I			D	I	D	
5.5	Erosion regulation				D				I	I	
5.6	Land and soil quality				D					I	I
5.7	Air quality										
5.8	Noise										I
5.9	Pollination				I					I	
6	**Cultural Services**										
6.1	Landscape										
6.1.2	Recreation		I		I			D	D		
6.1.3	Aesthetics				I		I		I		
6.2	Health										
D = Direct linkages; I = indirect linkages											

2.6 Setting the baseline

In order to develop opportunities and threats, it was necessary to establish the LEP's future plan/vision. This was based on the LEP's Sector Growth Strategy[1], which included 9 key growth areas. Many of the published plans and strategies, such as the County Council development strategies, were also used to develop the future plan/vision. We then used forecast modelling data from the East of England Forecast model to accompany this, as the LEP's plan did not include quantitative forecast data.

2.7 Workshop on opportunities and threats

We held a second workshop on the 14th March 2013. This workshop enabled discussions to take place around the opportunities and threats which we had developed for each ecosystem service (sections 4 to 6 of the workbook). Attendees provided their opinions on both the content and rankings which had been assigned to the top 30 opportunities and the top 30 threats. These were divided into three categories by those services which are directly related to growth sectors; services which are location specific and related to all growth sectors; and those services which feed into all growth sectors but which are difficult to influence at the local level. This made the process more manageable, and presented a broader section of the opportunities and threats for review.

This workshop was very useful and we were able to improve our list of opportunities and threats by taking people's views into account and revising our assessment and ranking. We also used feedback to identify how and where changes needed to be made to the workbook itself.

We also used comments received on the workshop report, sent to those who attended and also those who were unable to attend, to further revise the opportunities and threats and rankings. The full workshop report including additional comments can be found in Annex 4.

2.8 Identification of the top 10 opportunities and threats

We developed a simple spreadsheet for recording and scoring the opportunities and threats. This contained drop down scores for the importance and urgency ratings, and a column for the combined score, which allowed for easy manipulation of the database.

Some of the main comments received from the workshop identified the need to develop a process for identifying the strategic opportunities and threats, as several of the individual opportunities and threats are linked, such as those referring to water supply. As a starting point we separated the opportunities and threats which scored either 12 or 16 (which gave around 20 opportunities and 20 threats). Linkages between these were then analysed using the baseline information and feedback from the workshop (see Annex 5 for the linkages identified). Once these had been reduced to the 10 key opportunities and threats, a revised

[1] New Anglia (2013): New Anglia Local Enterprise Partnership for Norfolk and Suffolk, Sector Growth Strategy, February 2013.

set were created by consideration of the linkages between those which fed into the final 10. This aimed to ensure that the overarching issues were presented and taken forwards.

2.9 Identification of strategic and tactical solutions

The final set of amalgamated opportunities and threats were analysed following the questions set out in section 7 of the workbook. As the scoring system was no longer relevant, these were excluded from the final tables (Tables 3.5, 3.6 and 3.7). In order to estimate the anticipated financial cost of implementing the tactical and strategic responses, three levels of cost were estimated as follows:

- Low: £1,000 to £10,000;
- Medium: £10,000 to £100,000; and
- High: >£100,000.

Most of the responses to the top ten opportunities and top ten threats were tactical. This was mainly due to the fact that the LEP's plan/vision already includes consideration of the environment, with the Green Economy pathfinder, which may not be the case for other LEPs applying the workbook.

2.10 Time and resources used

The approximate amount of time spent on each of the main sections of the workbook trial is set out in Table 2.3. The majority of time was spent collecting data for the various workbook sections (30%). Sections 4 to 6 of the workbook which included the ecosystem services, was by far the largest of the sections, and this is mirrored by the amount of time which was spent applying the workbook to these sections, with around 30% of the time allocation. Section 2, the economic development indicators and pathway, and the identification of opportunities and threats had the second highest time input of the workbook sections (10% and 11% respectively).

Table 2-3: : Time allocated to each task, by workbook section

Task	% of total time spent on this task
Planning and preparation	2%
Initial workshop	3%
Data identification and collection	30%
Meetings with key organisations and individuals	3%
Application of the workbook (includes data collection, analysis and writing workbook sections):	
- Section 2	10%
- Section 3	7%
- Sections 4 to 6	28%
- Identification of opportunities and threats	11%
- Identification of strategic and tactical solutions (on-going)	2%
Workshop on opportunities and threats	4%

The allocation of time spent on each section differs slightly from that suggested in the guidance document. The guidance suggests the following time allocation:

1) Initial Scoping of Opportunities and Threats (Chapter 2) – 1 day workshop
2) Discussion with relevant local experts and gathering data – 40%
3) Identifying environment and economy Linkages – 40%
4) Identifying opportunities and threats – 5%
5) Tactical/Strategic – 15%

Similar amounts of time were spent on data collection and discussions with local experts to those recommended. Environment and economy linkages were developed in the application of Sections 3 to 6 of the workbook, which total 35%, similar to that set out in the guidance. Our allocation included a higher proportion of time spent on developing the opportunities and threats, as this was a lengthy process which was increased by consultation and amendments from stakeholders. This added to the value and robustness of the opportunities and threats developed. A smaller amount of our time was spent developing the tactical and strategic solutions, mainly due to the length of time taken to ensure that the strategic opportunities and threats had been drawn out from those identified.

3 Key findings: New Anglia and Wild Anglia

3.1 Overview

This section sets out the key findings from the application of the LEDE toolkit to New Anglia Local Enterprise Partnership (LEP) and Wild Anglia Local Nature Partnership (LNP) consortium.

3.2 Key economic data

Table 3.1 summarises the key economic data for the New Anglia LEP.

Table 3-1: Summary Economic Data

Economic criterion	New Anglia's performance
Overall growth rates	4.8% compared with 5.4% for England, but GVA per person has declined to about 80% of the national average since 1995 (to 2008). Overall GVA per capita has increased by 79% since 1995
Key sectors	Tourism, energy, business support
Fastest growing sectors	Business services, insurance and finance: 164% GVA increase since 1995 Construction: 145% GVA increase since 1995
Declining/slow growth sectors	Manufacturing: 23% GVA increase since 1995 Agriculture: 25% GVA decrease since 1995
Effect of economic downturn	Overall declining trend in GVA since 2008, especially for business support sector (output declined from £15.2 billion to £11.8 billion). Estimated that 1,500 businesses and 8,000 jobs have been lost across all growth sectors
Population	Net migration is main driver for demographic change, especially the 65+ age group. This trend is likely to continue
Employment rates	At 76%, the LEP has one of the highest employment rates in the country (national average is 70.5%). Job density is increasing in Suffolk but decreasing in Norfolk
Commuting patterns	Remoteness of the area means most commuting is intra-regional rather than inter-regional. Ipswich and St Edmundsbury are becoming important labour importing regions
Productivity	Both Norfolk and Suffolk have lower productivity levels than the East of England and East Anglia. This helps explain relatively low GVA despite high employment rates. Increasing growth in higher value sectors should help to increase productivity levels although current evidence suggests job creation is currently driven by lower-value sectors
Qualifications	The percentage of the population holding NVQ2 and 3 is higher than average but 5% lower for NVQ4. Apprenticeships and internships are also important in the region and only 10.3% of the population had no qualifications in 2010 (compared with 18.5% in 2005), almost comparable with the national average
Deprivation	The most deprived areas are at the coast (Waveney, Great Yarmouth, North Norfolk) and pockets in the urban centres of Norwich and King's Lynn

3.3 Key information on material flows

Just 5% of the land area of New Anglia is urban (see Figure 3-1). Arable and horticultural agriculture makes up 62% of the total area with grassland making up a further 20%. Area of high biodiversity value, such as fen, marsh and swamp, freshwater and broad leaved mixed woodland make up

around 7% of the total land use. Around 80% of agricultural land in Norfolk and 67% in Suffolk is under Land Management Schemes[2].

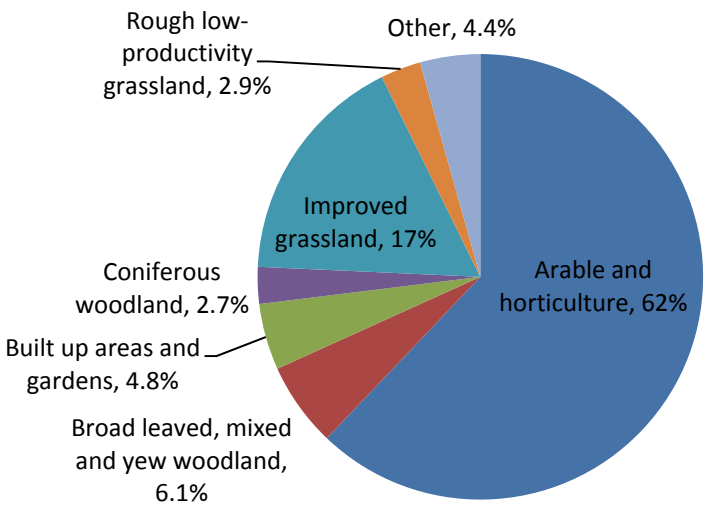

Figure 3-1: Breakdown of land use in the New Anglia LEP

Table 3-2 summarises consumption and production statistics that are important when considering sustainable growth.

Table 3-2: Consumption and production statistics

Statistic	New Anglia's performance
Energy consumption	Total energy demand in 2009 was 21,000 GWh. Consumption of electricity declined between 2005 and 2011
Energy generation	Total energy generation (renewable and non-renewable sources) was 37,000 GWh in 2009. Of this, renewable sources provided almost 870 GWh
Water consumption	Daily domestic water consumption in 2008/09 was 153 litres per person, slightly above the national average of 150 litres per person. Total water abstracted in the Anglian region was 475 million m^3 per year (average over six years), of which 30% was for Public Water Supply and 54% for energy production. A total of 930 million m^3 per year are licensed for abstraction in the New Anglia LEP area
Waste production	Household waste production decreased by 6.3% (Norfolk) and 8.5% (Suffolk) between 2005 and 2012. Non-household waste has increased significantly in Suffolk, but declined slightly in Norfolk. The percentage of waste recycled has also increased, from 34% to 45% in Norfolk and from 35% to 57% in Suffolk (2005 to 2012).
Development	67% of new development in Norfolk and 62% in Suffolk was on previously developed land (2007-2010).

3.4 Overview of LEP Plan/Vision

New Anglia's Business Plan identifies nine growth sectors expected to be key to the transition to a green economy:

- Advanced manufacturing;
- Digital & cultural and creative industries;
- Energy;

[2] These include Entry Level Stewardship, Higher Level Stewardship, other agri-environment payments and internationally and nationally designated sites.

- Food, drink and agriculture;
- ICT;
- Financial services;
- Ports and logistics;
- Tourism; and
- Life sciences and biotechnology.

The East of England Forecasting Model predicts that the economy of New Anglia will increase by around 30% by 2020 and 61% by 2030, an average growth of 3.07%. Table 3-3 summarises the targets that will need to be met to achieve this level of growth.

Table 3-3: Growth targets

Economic criterion	New Anglia's performance
Population	Working age population predicted to increase by 17%, or 0.7% per year
Employment rates	Employment rates will need to increase by 0.6% per year to keep pace with growth targets, or 12% overall
Productivity	A move towards higher value sectors will help to increase productivity, with average productivity increases of 1.9% per year predicted
Qualifications	A move towards higher value sectors will require higher skill levels; this will also lead to higher earnings and, hence, higher productivity. The fastest moving sectors in employment creation typically require a minimum of NVQ4

Figure 3-2 provides a summary of the expected sectoral changes. Growth in ICT will help enable growth in the other sectors. Ports and logistics is also an important enabling sector, although predictions for this sector are largely stable. This could be improved by the recent developments taking place, such as at Felixstowe and the Haven Gateway.

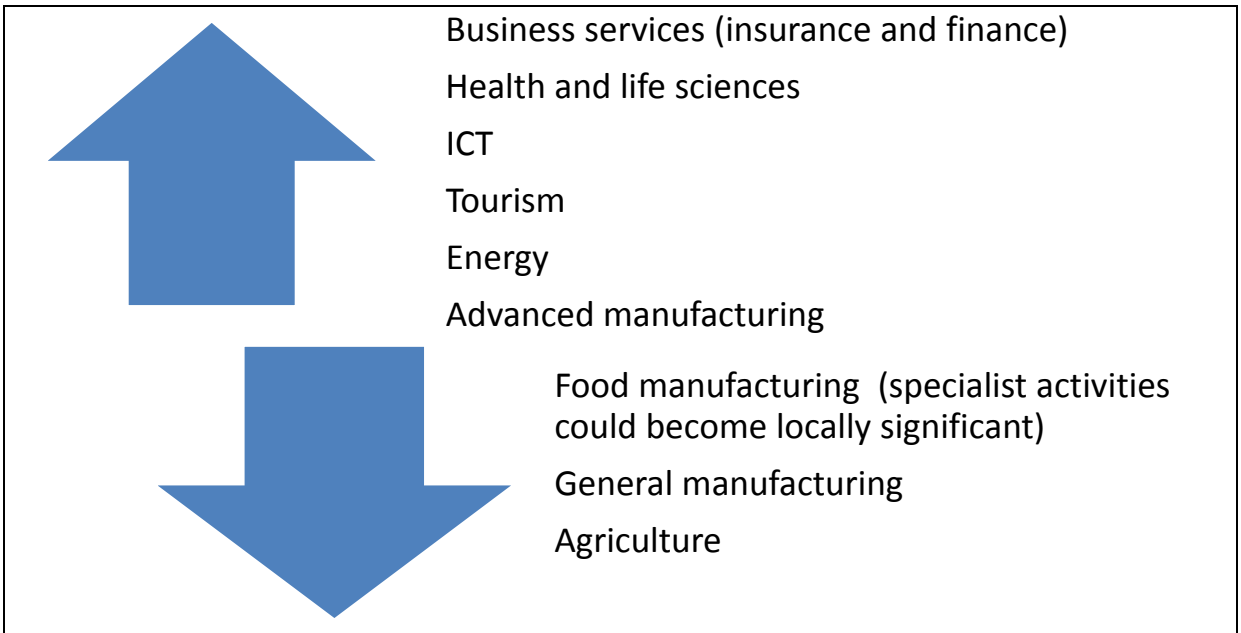

Figure 3-2: Predicted changes in importance of sectors to the future structure of the New Anglia economy

3.5 Summary of ecosystem services

Table 3-4 provides a summary of the key findings from the assessment of ecosystem services, by type of ecosystem service.

Table 3-4: Summary of ecosystem services key findings

Type of service	Summary of key findings
Provisioning services (products that are produced by ecosystems)	• Potential for expansion into new technologies such as Carbon Capture and Storage and development of nuclear capacity (currently almost 1,200 MW capacity) • Mineral extraction relies on imports from outside the area. Marine aggregate extraction does not make use of existing infrastructure, with most being exported to Thames Estuary • Renewable capacity is currently around 206 MW, with this expected to increase due to planned investment in the LEP area of £31 billion by 2020 • Water supply may struggle to meet future demand due to increased population and drier summers. Reducing leaks and burst pipes, improving water efficiency and raising awareness may contribute to meeting this increased demand • Food production will need to increase by 60% by 2050 to sustain current UK consumption. Producers in LEP area may struggle to meet demand due to pressures controlling use of fertilisers and pesticides, increasing flood risk and reduced water availability • Timber in Thetford Forest represents an area of carbon sequestration which may also have ecological value if managed correctly • Genetic resources are significant due to variety of habitats. They are threatened by climate change, land use change, pollution, reduced water supply and tourism
Regulating services (these describe the way in which ecosystems provide order and structure to the world in ways which are important, but that we often take for granted until they go wrong)	• Carbon dioxide emissions have decreased on a per capita basis due to reduced energy consumption and growth in renewables. Green Infrastructure is designed to mitigate the effects of climate change on resources • Flooding is a significant risk as 20% of the Anglian area, or around 4,400 properties at risk of river (1% probability) and tidal flooding (0.5% probability), and an estimated 160,000 from surface water flooding (0.5% probability). This is expected to increase significantly due to climate change, with 19,000 properties at risk from river or tidal flooding by 2100. Natural defences and raised awareness offer sustainable solutions to flood impacts • Water purification by the environment provides cheap, high quality water treatment; it is threatened by climate change, population and economic growth • Disease and pest regulation is expensive (floating pennywort eradication costs in Norfolk £45,000/year). Climate change may increase prevalence of non-native invasive species. The Norfolk Non-Native Species Initiative is tackling non-native species in Norfolk, a joint initiative is planned for Suffolk • Soil erosion is a problem due to cultivated land and in dry conditions. Agri-environment schemes aim to protect soil quality • Local concentrations of nitrogen dioxide reduce air quality in LEP area, mainly from road traffic. Green Infrastructure and urban traffic management control will help improve air quality. Agriculture also contributes significantly to reduced air quality • Road traffic is the main source of noise • Pollinators are important for more than 10% of crop cover in LEP area, they are threatened by land use change, parasites, diseases and pesticides
Cultural services (these capture the non-material importance of ecosystems to human beings)	• The landscape is characterised by agriculture • Tourism is strongly related to the natural environment and is threatened by reduced water quality, flood risk, deterioration of the environment and lack of accommodation • The aesthetics of the Norfolk Coast and Suffolk Coast & Heaths AONBs play an important role, and attract visitors. Poorly managed and designed developments threaten the aesthetics • Health in the LEP area is better than the national average and is improved by proximity to quality greenspaces

3.6 Opportunities and solutions

The top 10 opportunities are listed in Tables 3.5 and 3.6. Table 3.5 identifies possible tactical solutions which could be carried out by the LEP to seize these opportunities, and table 3.6 identifies possible strategic solutions for one of the top 10 opportunities. Further details on the suggested tactical and strategic responses can be found in Annex 6.

Table 3-5: The Top opportunities and suggested tactical solutions in order to seize them

Description of opportunity	Actions to seize the opportunity	Financial costs to pursue the opportunity	Other key impacts
FR1, FR7, GCCM2 Identifying and promoting the benefits of the area for investment in renewable energy and new technologies (financial and planning incentives assisted by award of Enterprise Zones, activities that are taking place, technologies being developed, infrastructure in place and planned, how the area is investing in itself to improve attractiveness to incentives)	Identification of existing infrastructure and planned development, supply chain, skills, etc.	Medium	Crossover benefits for other sectors. Development needs to take account of impact on ecosystem services
	Promotion of what the area offers (from above), e.g. trade fairs	Medium	Risk of over-subscription potentially affecting environment (drive to develop becomes stronger)
	Sell area as a 'package' (covering assets and quality of life), backing up specific promotion	Medium	Potential to attract higher skills that could be transferred to local population. Risk of over-subscription or conflicts between sectors for land/water, etc.
GCCM6 Supporting and spearheading the importance of high quality Green Infrastructure for improving quality of life and the environment. Ensuring its inclusion in development planning, with the region acting as a leader with above average uptake and quality	Ensure that high quality Green Infrastructure is included in development planning	Low-Medium	Benefits for all sectors by improving quality of life and environment. Possibility that GI inclusion will have high short term costs for the developers, reducing uptake
	Support for an LEP wide coordinator of GI to ensure a joined-up approach to the design and inclusion of GI in new developments which aims at a more strategic approach (working with local Councils and Wild Anglia LNP)	Medium	Benefits for all sectors by a more joined up approach
LSQ3, ER2, FCr9 Promotion of sustainable farm management which may include diversification into other practices such as farm tourism and other environmentally friendly practices. Promotion of uptake of agri-environment schemes	Support for farmers wishing to embark on business ventures which improve environmental quality and biodiversity, such as farm tourism, or wetland agriculture	Med-high	Possible benefits to tourism, and the agricultural sector through increasing yields/quality. May not be as profitable as intensive farming practices, but has longer-term benefits
	Promotion of agri-environment schemes and other management such as the use of natural systems for water storage	Med	Benefits to public water supply and quality by improving water capacity. This will also increase yields
WS6, WS4, WS12, WP1 Support the uptake of water saving measures into new developments (including the use of natural systems).	Increase support for the uptake of water saving devices in new developments (natural reed beds as water filtering devices, SUDS etc.)	Med	Where possible this should be developed in line with the delivery of multiple benefits for the environment

Table 3-5: The Top opportunities and suggested tactical solutions in order to seize them			
Description of opportunity	**Actions to seize the opportunity**	**Financial costs to pursue the opportunity**	**Other key impacts**
	Increase awareness of the sustainable use of water by working with water companies and others to increase awareness raising	Med	Reduces demand and lowers the costs of alternative option such as water imports
	Support the development of water efficiency technologies	Med	Potential to benefit the economy by leading technological advancement in the area and encouraging further investment
Foo5 Promotion of locally grown produce to increase local food security and reduce reliance on the global market. This will also provide security in terms of global climate change impacts, and lowering food miles, thus reducing emissions	Support suppliers and producers of local produce by facilitating links with supermarkets and other retailers	Med	Potential to benefit the economy by increasing the value and ease of selling local produce
	Support sustainable food producers wishing to start up new businesses with a view to supplying the local market	Med-high	Potential to make farming/food production more attractive and profitable to those wishing to start up new businesses. Demand may outstrip available land for growing food, and put pressure on land for biodiversity
	Promotion of food festivals which offer opportunities to sell out of season produce	Med	Potential to increase tourism and recreation and develop a sense of place and community
LCR8 Increasing broadband speed has the potential to reduce local carbon emissions by enabling more people to work from home and encouraging new businesses to the area	Support the roll out of improved broadband speed	Med	Potential to have large benefits to the economy
	Promote the area as a quality place to live with improving broadband speed	Med	May increase investment in the region through business start-ups though encouraging more people to relocate to the countryside may put added pressure on the environment
WP1 Improving water quality without hindering growth will have knock on benefits for the whole economy and the environment	Promote practices which improve water quality through awareness raising, both in the public (e.g. reducing urban storm water run-off) and private sectors (e.g. reducing agricultural nutrient leaching), by working with water companies and Councils for a more joint approach	Med	Benefits the whole economy
	Support the inclusion of natural systems in new developments which increase water quality	Med	

Table 3-5: The Top opportunities and suggested tactical solutions in order to seize them			
Description of opportunity	**Actions to seize the opportunity**	**Financial costs to pursue the opportunity**	**Other key impacts**
DaP4 A LEP wide approach to establishing a biosecurity defence system. This will ensure that detection and response is quick enough to prevent negative impacts to the economy, especially as there is no current specific body allocated to invasive non-native species in Suffolk as there is for Norfolk	Support for a joint Norfolk and Suffolk Non-Native Species Initiative programme	Med-high	Prevention of larger costs to the economy should an invasive species not be detected early enough
Hea1, Rec11 Increase connectivity and access by improving non-motorised routes and public transport links. Awareness raising of these services should also be carried out	Improve connectivity linkages which enable environmentally friendly access to the environment	Med-high	Improvements to the tourism industry together with quality of life for residents, may also encourage inward investment
	Ensure that all new developments incorporate the inclusion of improved connectivity links, by both non-motorised routes and public transport connections, as standard practice	Med	Improved quality of life and may encourage inward investment. May increase short-term costs for developers, but should be a standard practice
	Promotion of non-motorised and public transport services	Low-med	Increase access to areas will benefit local economies. Demand may outstrip the current capacity of public transport, but this open opportunities to improve services
Key: Low: £1,000 to £10,000 Medium: £10,000 to £100,000 High: >£100,000			

Table 3-6: The top opportunity and suggested strategic solutions			
Description of opportunity	**Actions to seize the opportunity**	**Financial costs to pursue the opportunity**	**Other key impacts**
GR1 Increase strategic design of biodiversity for new developments and infrastructure. For example, where there are several different developers in one	Support a coordinator to act as an interface between developers working alongside Wild Anglia to ensure that a wider more joined-up landscape approach is taken in development planning	Med-high	Benefits to all sectors through improving quality of life and encouraging inward investment

Table 3-6: The top opportunity and suggested strategic solutions			
Description of opportunity	**Actions to seize the opportunity**	**Financial costs to pursue the opportunity**	**Other key impacts**
	Promote the region as leading the way in sustainable development and design with biodiversity at its core	Med	Promotion should not supersede the action of strategic design of biodiversity in development planning
	Ensure the incorporation of biodiversity alongside infrastructure at the outset of planning design	Low-med	May encourage inward investment through improvements to environment quality
Key: Low: £1,000 to £10,000 Medium: £10,000 to £100,000 High: >£100,000			

3.7 Threats and solutions

The top 10 threats are listed in Table 3.7 with their identified possible tactical solutions which could be carried out by the LEP to avoid or mitigate these threats. Further details on the suggested tactical and strategic responses identified can be found in Annex 6.

Table 3-7: Top 10 threats with suggested actions to avoid or mitigate them			
Description of threat	**Action**	**Financial cost**	**Other key impacts**
WS1, LCR6, WS10, FCR8 Increased demand for freshwater resources, which are already stressed, and impacts of climate change potentially leading to a deficit at some times of the year (potential loss of biodiversity if deficit is dealt with purely by building storage reservoirs, since these may be targeted towards least productive areas)	Promote more integrated approach to managing water through planning	Medium	None identified
	Promote best practice in member organisations	Low-Medium (could be done alongside other activities)	Short-term costs might affect uptake (even if longer-term they would save)
	Targeting funds (e.g. CIL) towards activities that help to retain water (e.g. wetlands, lakes)	Low-Medium (depending on level of LEP involvement)	Could redirect funds from other activities (e.g. communities)
FR10, FR3, LU1, FR8 Failure to meet the Government targets for energy supply from renewable sources by 2020. This is underlain by investors are likely to be deterred by the lack of infrastructure, and a skills deficit	Promote a more integrated approach to infrastructure development when looking at plans for individual roads and energy related developments, etc.	Medium	None identified
	Support investment into new technologies	Medium	Increasing renewable energy generation should be sustainable, and not impact on biodiversity, such as land take or nutrient loading from biofuel generation

Table 3-7: Top 10 threats with suggested actions to avoid or mitigate them			
Description of threat	**Action**	**Financial cost**	**Other key impacts**
	Facilitate apprentice schemes and promote the renewables industry in education centres to increase the skill base	Medium	Risk that other industries/sectors may suffer from a skill deficit
LCR1, HEA3 Increases in the population along with economic growth could negatively affect green infrastructure, e.g. the need for rapid development may mean that insufficient time is given to consideration of green infrastructure when assessing planning applications	Help ensure that people making decisions about planning have a clear understanding of what green infrastructure is and why it is needed	Medium	None identified
	Promote the need for green infrastructure to property developers and planners	Medium	None identified
FCOA2 Changes in availability of funding for flood defences for coastal areas could increase the severity of the impacts of flooding as well as decrease inwards investment in high risk areas	Promote flood resilience measures amongst businesses and households at risk	Medium	Could lead to those outside the area seeing it as a high risk place to be; thus there could be knock-on impacts in terms of further decreases in inwards investment as firms look to move to areas with lower risk
	Encourage discussions in at risk areas about the way in which flood risk can be managed (such discussions may involve talking about contributions and awareness raising about the benefits of soft defences)	Medium	None identified
	Promote the uptake of flood resilience measures by member organisations where appropriate	Low	None identified
FNC3 Greater pressure from new developments, climate change and ageing infrastructure are likely to increase the severity of flood events	Promote flood resilience measures amongst businesses and households at risk	Medium	None identified
LSQ1, POL3 Movement towards more intensive high value crops could lead to greater use of chemical fertilisers, herbicides, pesticides and water with knock on impacts for pollinators (through both use of chemicals and growth of different crops) and biodiversity	Promote agricultural research into ways of farming without the use of large quantities of chemicals	Medium	None identified
	Encourage the uptake of agri-environment schemes where appropriate to minimise the impacts on water (e.g. through using buffer strips) and pollinators (through provision of field margins)	Medium	Potential for decrease in food production and loss of competitiveness in the short term relative to other areas of the country if the focus is on the environment alone (but bearing in mind the potential long term negative impacts of intensive farming)

Table 3-7: Top 10 threats with suggested actions to avoid or mitigate them			
Description of threat	**Action**	**Financial cost**	**Other key impacts**
MI4 High speed broadband infrastructure is increasingly becoming a concern for businesses with new technology and communication requirements	Promote local schemes providing better broadband for villages	Low (if LEP members undertake this where they are based)	None identified
	Encourage consideration of communications infrastructure during the planning process for new developments	Medium	None identified
WP2 Growing population and size could increase demand for resources resulting in declining water quality	Promote water efficiency to limit the increased increase in demand for water, thus helping to retain quality of resources	Medium	None identified
REC1, GR12, NOI1 Growth in tourism could put pressure on already stressed resources (e.g. water) and transport infrastructure	Encourage tourism businesses to promote wise use of resources (e.g. in accommodation) and use of public transport (e.g. Coasthopper) when visiting the area	Medium	Risk that the area may be portrayed as somewhere that restricts tourists
	Promote cooperation between tourism businesses to minimise impacts without limiting tourism (e.g. a coach firm could have an arrangement with a rural tourism attraction to take visitors from a set point (in a town) to the attraction to avoid large numbers of cars)	Medium	None identified
FOO6, DAP2 Climate change in combination with greater capacity at ports in the LEP could increase the risk that pests and diseases are brought into and/or transferred within the LEP. Increases in tourism and recreation activities may also increase the spread of invasive species.	Raise awareness of pest and disease transfer routes at appropriate forums, for example, during discussions about port expansion and maintenance, etc.	Medium	
	Promote the uptake of measures to combat the spread of pests and diseases throughout the LEP (i.e. in agricultural businesses as well as at ports)	Medium	Some may see measures to combat transfer of pests and diseases as restricting economic growth and development
Key to financial cost column: Low: £1,000 to £10,000 Medium: £10,000 to £100,000 High: >£100,000			

4 Key findings: application of the toolkit

4.1 Overview

This section summarises the issues that arose when we applied the toolkit, how we addressed the issues, how we would change the toolkit in light of our experience, and the justification for those changes. As well as identifying areas that we found issues with, this section also highlights those areas of the workbook that we felt were most useful.

4.2 Adjusting, revising or revolutionising

In assessing the accessibility, usability and practicability of the workbook and how these could be improved, we have identified three different types and scale of changes that could be made. These are:

- Adjustments: small changes that we identified as being needed to address a particular issue. These would result in small changes within the current structure;
- Revisions: changes to the way that sections are organised. These would not change the way that the outputs are achieved but might change the way that the workbook itself (as a tool) looks; and
- Revolutions: changes to the way that the workbook sections are structured. These would change the way that the workbook looks but would leave the methodological process largely untouched as this has shown itself to work reasonably well.

4.3 Areas of the workbook that worked well

Having applied the workbook and completed an example application, we have identified in Table 4-1, those aspects that we found most useful. The table also describes what these benefits are, and where these lead into issues that are covered in Sections 4.4 to 4.6.

Table 4-1: Summary of where the workbook worked well

Sections of workbook	Particular benefits identified
Ecosystem services framework	The use of the ecosystem services framework provides a structure that forces users to consider the goods and services provided by the environment. As such it is useful in raising awareness of the importance of the environment to the economy. However, some stakeholders did not fully understand ecosystem services, which could undermine the information that the workbook is trying to provide. Whilst this could be a negative point, the way that the ecosystem services approach is presented in the workbook is significantly simplified and, hence, easier to apply than some frameworks we have seen
Workbook template	Having the template already set out provides a good starting point and helps ensure a consistent approach through all sections of the workbook. However, this does provide a temptation to start at Section 1 and work through sequentially
General wording and language	The wording and language used in the workbook are helpful to both the economist and non-economist, as well as to scientists and non-scientists being general enough to be understandable to all, with good explanations of concepts that may not be obvious to people from other disciplines. Good examples are 'productivity', where economists tend to use this term as 'output per hour, and where there are several ways to measure output (GVA, total output, etc.). Having clear explanations is invaluable

Table 4-1: Summary of where the workbook worked well	
Sections of workbook	**Particular benefits identified**
Suggestions and hints	Specific links, for example in the local climate section, provided a good starting point and helped to guide the analysis that was undertaken. Although our team had experience of most of the ecosystem services, we felt that someone with less experience and knowledge would be able to undertake the analysis required in each section by using the help and guidance provided in the workbook.
Questions with prompts to consult people	The inclusion of text suggesting that those completing the workbook consult with others is useful since otherwise people might feel that they need to know or find all the answers themselves. Finding the time to talk to people in different organisations and sectors is very beneficial since it helps provide further context as well as details that might not otherwise be picked up. The suggestions as to who to speak to are also likely to be useful where an external team is applying the workbook (or even an internal team where partnership working has not previously been undertaken to any great extent)
All sections: section headings/categories	The section headings provide a good structure for identifying what type of information needs to be included within each section. This helps structure the approach to completing the workbook and enable it to be broken down into smaller pieces that are easier to tackle
All sections: questions	The questions do make you think when applying the workbook. This takes you beyond just what the data immediately show and encourages you to investigate further. However, some of the questions are too difficult to answer and sometimes there is a temptation to delve ever deeper into a sub-section even where this does not necessarily lead to identification of opportunities and threats
All sections: data sources	The links to and description of potential data sources do provide a good start and give an indication of the breadth of data that are available. This is especially important for data from the Office of National Statistics as these can otherwise be very difficult to find. However, the data links do not take account of work that may have already been carried out within the LEP area, especially by Local Authorities
Definitions of significance and urgency ratings (in guidance)	These provide a useful reference when identifying the likely ratings to assign to each opportunity and threat. Although we identified some issues with the definitions, the use of a consistent set of definitions helps to ensure that the rankings are comparable, even when undertaken by different people
Section 7: headings under tactical and strategic solutions	The headings provided give a very useful structure for thinking about the actions that need to be taken to seize opportunities and remove/mitigate threats

4.4 Adjustments

The issues raised that require suggested adjustments are summarised in Table 4-2, together with responses from the Steering Group as to which of these suggested changes should be taken forwards.

Table 4-2: Summary of issues requiring adjustments to be made				
Issue	**Sections of workbook affected**	**Suggested change to be made**	**Justification**	**Comments from Steering Group**
1: The urgency ratings in the guidance do not take account of actions that may be urgent but may already be underway	Guidance and for use in sections 3,4,5 and 6	The ratings need to be redefined so that actions which are urgent and could be promoted by the LEP are highlighted as urgent even when other plans and strategies suggest that they are already being considered	Under the current definition, there is a risk that urgency ratings of 0 could be applied where an opportunity or threat is urgent. This could mean that key threats and opportunities could be overlooked	Yes. This limits the toolkit to assessing the importance of strategic threats and opportunities, rather than trying to assess the adequacy of what's in place
2: The significance ratings do not adequately take account of the environment. These ratings are skewed towards economic benefits, more than environmental gains	Guidance and for use in sections 3,4,5 and 6	The ratings need to be expanded to include consideration of the environment as well as growth sectors. This could be achieved by expanding the definitions to include the number of ecosystem services affected as well as growth sectors	The ratings were expanded to include growth sectors, but it was suggested at the workshop that the number of ecosystem services affected by each opportunity and threat should also be taken into account, so that consideration of the environment is more apparent	No. This is going beyond what the toolkit is trying to achieve. These must be related to the LEP's targets. Perhaps the issue is more how the toolkit is sold to people and what the outputs are likely to be. Some of the environmental issues could be dealt with by the LNP instead
3: The recommended lengths for each section are unrealistic and do not reflect the detailed questions which are posed. This makes it difficult to understand what exactly is expected	All	Remove the recommended length suggestions for each section. State in the guidance that the sections will vary in length depending on how relevant each is to your LEP, but as a guide the information presented should provide a background to the opportunities and threats developed. Also add an example section in the guidance to aid the process	It will be easier for users to understand the level of detail required	Agree

Table 4-2: Summary of issues requiring adjustments to be made				
Issue	**Sections of workbook affected**	**Suggested change to be made**	**Justification**	**Comments from Steering Group**
4: Some of the questions posed in the toolkit are unrealistic and in some cases would need an in depth study to answer them. This has the potential to make the process daunting and challenging for the user	All, but certain questions (e.g. 3.1.2 insert a map showing possible land use areas in 20 years' time)	Re-phrase some of the questions or remove them	This toolkit needs to be user friendly and not deter people from using it	Needs looking at on a question by question basis. Questions still need to remain challenging in order to encourage wider thinking at a more strategic level, but not so challenging as to be counter-productive This might be also about the framing of the questions
5: Ecosystem service headings may be confusing and in some cases do not adequately capture what is needed to develop opportunities and threats. For example, there is no section for Biodiversity. This is important for the LEP to consider; things like the number of protected areas and their condition probably need to be included in a stand-alone section	All	Change Genetic resources to Biodiversity and insert relevant related questions such as: How much of the LEP is currently designated as conservation areas and what is the condition of these sites, etc. Change Tourism to Recreation. Change Inward Investment to Aesthetics. Add Fibre to Fibre, so it does not just capture Timber	It important that biodiversity is included as a stand-alone section so that the toolkit remains environmentally focused. Tourism may not adequately capture local use of the environment. Inward investment perhaps needs renaming (e.g. as Aesthetics)	No. This will confuse the issue making the toolkit too ambitious. Having a biodiversity section may cloud what the LEP is trying to do by requiring an approach that is more integrated than can be achieved

4.5 Revisions

Table 4-3 provides the summary of issues identified as requiring revision to the workbook to address them. As before, the table also include comments and responses from the Steering Group to each suggested change.

Table 4-3: Summary of issues that could be addressed through suggested revisions				
Issue	**Sections of workbook affected**	**Suggested change to be made**	**Justification**	**Comments from Steering Group**
1: The workbook provides links to a lot of primary data, but many of the questions could be answered more easily by referencing existing plans and strategies as these have often undertaken similar data analysis	All sections that provide links to data sources	Creation of a data resources section that includes links to plans and strategies. To make this proportionate, it is suggested that the data resources section identifies first choice data sources, second choice (where first choice are not available), etc. through to primary data sources	This would save a lot of time analysing data and looking for the reasons to explain trends as many of the existing plans and strategies provide explanations behind trends	Agree could provide pointers to general strategies and this will save time
2: Many of the data sources used in different sections of the workbook are the same, or similar which could result in the same data being used repeatedly	This is particularly relevant to sections 2 and 3, but also 4, 5 and 6 (for example baseline data on the ecosystem services)	Include within the data resources section of the workbook the sections that different data sources could feed into and how/what level of information is needed for each	This would save time by enabling the user to identify what is needed for each workbook section by data, minimising the risk that the data have to be revisited to provide the additional information needed in a later section, or to add further detail	Agree
3: The data requirements, questions and organisation of Sections 2 and 3 mean a lot of time is spent on these sections, but the information collected is not used extensively in later sections	Sections 2 and 3	This can be partly addressed through the route mapping through the workbook that would be provided by the data resources section, as this will highlight the summary role that Sections 2 and 3 could take	A clearer distinction between the requirements of Sections 2 and 3 and the baseline data used in Sections 4, 5 and 6 would help to ensure that time and effort are concentrated onto where they would provide the greatest value added	Section 3 is intended to show a whole economy view, data collection needs to be proportional though

Table 4-3: Summary of issues that could be addressed through suggested revisions				
Issue	**Sections of workbook affected**	**Suggested change to be made**	**Justification**	**Comments from Steering Group**
4: The questions in sections 3, 4,5, and 6 do not necessarily assist with the identification of opportunities and threats	3, 4, 5, and 6	Re-address these questions so they aid with the identification of opportunities and threats.	It will be easier for non-experts to have clear guidance on how to come up with opportunities and threats	These questions do need reconsidering. The questions were not designed to be asked directly to stakeholders/experts, but to guide the research process. Agree, you could possibly change it round, i.e. what opportunities and threats do you see? What evidence is there for these? There is a risk however of confirmation bias?
5: The level of detail and scale required for opportunities and threats is unclear. The examples provided in the guidance document do not give enough insight to this issue	3, 4, 5 and 6	Develop a system of identifying the 'umbrella' opportunities and threats, and then relating them to the most important lower level opportunities and threats, which will hopefully avoid having 50 lower level ones under each umbrella opportunity/threat. Provide better examples and explanation in the guidance document	If the level at which opportunities and threats is not clear then there is a risk that if very specific and detailed ones are developed this could take a long time and lead to hundreds being identified. On the other hand if only very broad and general opportunities/threats are identified this may miss the underlying issues which need to be addressed to be able to deal with the large scale ones	The opportunities and threats need to be strategic in their scope, it may be that we need two levels, with more detailed ones coming under the more strategic ones, with only the strategic ones being ranked
6: Issues with expectations as to what the toolkit will and can deliver to the LEP, LNPs and Local Authorities	All/Guidance	What exactly the toolkit is designed for and what it will deliver should be presented at the first workshop as well as in the guidance document. It is difficult to make this clear due to the early stages of development of the toolkit, and even though this trial may be used as an example, the integration of the outcomes and process are not yet apparent	It is important that all those who are inputting time and effort into the toolkit understand what is in it for them, and are clear on what the toolkit can deliver	Agree. The experience of this trial is that this needs to be regularly re-communicated

Table 4-3: Summary of issues that could be addressed through suggested revisions				
Issue	**Sections of workbook affected**	**Suggested change to be made**	**Justification**	**Comments from Steering Group**
7: Housing and infrastructure are not clearly included in the workbook sections	3	Add an additional section to the Inputs and Outputs (Section 3), with questions that capture the level of development anticipated	This feeds into the LEP growth areas and was highlighted at the workshop as missing from the opportunities and threats	This was meant to come out of land use/planning (in Section 3), with the overarching whole economy opportunities and threats also to be identified in Section 3. Need to make it clearer that this is where it goes.
8: The guidance document is not really adequate as a supporting framework to the toolkit, especially as the toolkit itself is set out as a final report template	Guidance document	The guidance could be a step by step guide set out with a flow diagram as part of it (which could be colour coded by section). This would make it easy to follow and help the user work through the relevant sections	Currently, the guidance document is more of an introduction to the toolkit and does not provide sufficient instruction on application of the workbook or where to start (also see revision 9)	Agree, as long as we aim to avoid a 100 page document, must be easy to use and not put people off
9: As the toolkit is currently set out as a final report template, there is no clear method as to where to start data collection, or which sections to complete first. Although this may differ depending on which sections and services are more important for the particular LEP, it would be useful to have an outline and guidance which is common to all (this follows on from Revision 8)	All	A flow diagram or table which suggests which sections to start with, and shows which sections feed into others (also see Revision 2)	Presently there is little information or guidance for users to reference how to work through the toolkit. This makes the process a little daunting due to the size of the toolkit	Agree
10: The opportunities and threats identified from each individual ecosystem service need to be linked/ combined into higher level, umbrella opportunities and threats	Section 4, 5, 6 and 7	The opportunities and threats need to be reviewed to determine which are linked. Where there are a lot of opportunities and threats, this process may need to begin with the top-ranked ones, identifying the umbrella one and then those that sit beneath them	The similarities between many of the opportunities and threats were identified at the workshop, as was the need to identify higher-level, more strategic umbrella opportunities and threats	***New issue identified since the teleconference***

4.6 Revolutions

There are some issues that could be addressed by a larger change, wherein the structure of the workbook is rearranged. These revolutionary changes are summarised in Table 4-4. The responses from the Steering Group are also included.

Table 4-4: Summary of issues that could be addressed through revolutionary approaches

Issue	Sections of workbook affected	Suggested change to be made	Justification	Comments from Steering Group
Revolution 1: The opportunities and threats do not sit neatly in the ecosystem services framework. This is because the proposed framework includes some services that are sector-specific, some that are common to some sectors, and some that are common to all	Sections 4 to 6	Change the structure of Sections 4 to 6, so it is sector-based with the impacts on ecosystem services identified depending on which services are relevant (plus some economic/infrastructure impacts) and include a cumulative effect sector to ensure that the overall opportunities and threats are identified	This will make it much easier to apply the workbook. The ratings can be revised so that they reflect the significance of environmental opportunities and threats, and the urgency with which these opportunities and threats need to be addressed	No, although this is an interesting idea it would take the toolkit too far towards analysing things separately rather than a whole economy focus – there's a big danger of things getting missed
Revolution 2: Issues with understanding from stakeholders	All	It may be more understandable to stakeholders to approach the toolkit by starting with sectors instead of ecosystem services, and also making it clearer what each section adds to the overall toolkit	It is important to gain understanding from those involved with using the toolkit so that they take it up in the first instance, and also can understand what is required of them	The toolkit is already using a whole economy and sectors approach. How we communicate the toolkit will depend upon the audience. We can talk about critical environmental dependencies, or even the environmental supply-chain if necessary
Revolution 3: The ecosystem services approach does not always capture adequately the interactions between development and the environment, for example no inclusion of Biodiversity as a service on its own (see Adjustment 4)	All	The starting point would be what is present in the LEP now, for example the number of protected areas and their condition, and then look at why these sites are failing, and what the expected changes are in the future (e.g. how much development/ infrastructure). This would then lead more easily to developing opportunities and threats and ways in which growth could prevent further damage and promote positive change	This method may be easier for users and stakeholders to understand, and may make the process quicker to undertake	No, including biodiversity for its own sake would expand the definition of what the toolkit was trying to achieve untenably. Some guidance though about the relationships with biodiversity and the precautionary principle could be included.

4.7 Changes to be made to the toolkit

In total, two of the suggested adjustments and seven of the suggested revisions have been agreed by the Steering Group. Although making these changes is outside the scope of this study, we have identified how and where the agreed changes could help to simplify the process. The expected implications of the agreed changes are summarised in Table 4-5.

Table 4-5: Implications of the agreed changes

Suggested change to be made	Justification	Implications of this change
The ratings need to be redefined so that actions which are urgent and could be promoted by the LEP are highlighted as urgent even when other plans and strategies suggest that they are already being considered	This limits the toolkit to assessing the importance of strategic threats and opportunities, rather than trying to assess the adequacy of what's in place	This will simplify the identification of the most appropriate rating as this could be based on existing information, as well as future opportunities and threats
Remove the recommended length suggestions for each section. State in the guidance that the sections will vary in length depending on how relevant each is to your LEP, but as a guide the information presented should provide a background to the opportunities and threats developed. Also add an example section in the guidance to aid the process	It will be easier for users to understand the level of detail required	An example section will help users understand how much information is required
Re-phrase or remove some of the questions posed. This needs looking at on a question by question basis. This might be also about the framing of the questions	Some of the questions posed in the toolkit are unrealistic and in some cases would need an in depth study to answer them. This has the potential to make the process daunting and challenging for the user	Consideration of specific questions to rephrase or reframe will help simplify the process by minimising time spent trying to answer questions that may not always be answerable
Creation of a data resources section that includes links to plans and strategies. To make this proportionate, it is suggested that the data resources section identifies first choice data sources, second choice (where first choice are not available), etc. through to primary data sources	Would provide pointers to general strategies and this will save time	This will simplify the process by reducing the time and effort spent on collecting/analysing data twice (or more) for different sections
Include within the data resources section of the workbook the sections that different data sources could feed into and how/what level of information is needed for each	This would save time by enabling the user to identify what is needed for each workbook section by data, minimising the risk that the data have to be revisited to provide the additional information needed in a later section, or to add further detail	As above, plus this change will streamline the process by enabling users to tailor their analysis to the specific needs of different sections without having to do additional work
A clearer distinction between the requirements of Sections 2 and 3 and the baseline data used in Sections 4, 5 and 6 would help to ensure that time and effort are concentrated onto where they would provide the greatest value added	Section 3 is intended to show a whole economy view; data collection needs to be proportional though	An example section in the guidance together with a flow diagram showing where to start should help users to understand which data and information should go where

Table 4-5: Implications of the agreed changes		
Suggested change to be made	**Justification**	**Implications of this change**
What exactly the toolkit is designed for and what it will deliver should be presented at the first workshop as well as in the guidance document. It is difficult to make this clear due to the early stages of development of the toolkit, and even though this trial may be used as an example, the integration of the outcomes and process are not yet apparent	The experience of this trial is that this needs to be regularly re-communicated	This change should help those involved in feeding into the process through meetings, as well as those who may be affected by the outcomes to better understand what the workbook will do and how this can be used
Add an additional section to the Inputs and Outputs (Section 3), with questions that capture the level of development anticipated	This was meant to come out of land use/planning (in Section 3), with the overarching whole economy opportunities and threats also to be identified in Section 3. Need to make it clearer that this is where it goes	This change will make it much clearer that there is a need for development infrastructure to be captured directly, rather than indirectly. Although this adds to the workbook, it will simplify the process by making it easier to see where to put these data
The guidance could be a step by step guide set out with a flow diagram as part of it (which could be colour coded by section). This would make it easy to follow and help the user work through the relevant sections	Agree, as long as we aim to avoid a 100 page document, must be easy to use and not put people off	This may be more a case of moving information from the workbook to the guidance, so the useful suggestions are kept. Alongside the other proposed changes, this will help to simplify the process as people will be able to see a clear path through the workbook and the activities they need to undertake to complete it
A flow diagram or table which suggests which sections to start with, and shows which sections feed into others	Presently there is little information or guidance for users to reference how to work through the toolkit. This makes the process a little daunting due to the size of the toolkit	As above, this will help people to understand how the various sections of the workbook feed into each other, which will simplify the thought process behind its application
The opportunities and threats need to be reviewed to determine which are linked. Where there are a lot of opportunities and threats, this may need to start from the top-ranked ones, identifying the umbrella one and then those that sit beneath them	***To be decided if this is to be carried forward***	If carried forward, this additional step will provide a transparent basis for bringing the opportunities and threats together

5 Rolling out the revised toolkit

5.1 Overview

This section summarises what needs to happen next with the toolkit. As changes to the workbook and guidance have not yet been agreed, this section focuses on our key findings and what these might mean for roll-out.

5.2 Projected time and resource needs

Table 2-3 in Section 2.10 identifies the percentages of time applied during the trial of the workbook. It is anticipated that the time requirements could be revised to reflect the adjustments, revisions and/or revolutions proposed in Section 4. The changes to the proportion of time likely to be required for each step along with the rationale for the change in time are provided in Table 5-1.

Table 5-1: Time allocated to each task, by workbook section, following revisions

Task	% of total time spent during trial of the workbook	Implication of agreed changes on time and resource requirements	% of time predicted with agreed changes
Planning and preparation	2%	This should reduce as the workbook and guidance will be tailored to help people get started, although some familiarity with the process will be needed	1%
Initial workshop	3%	None	3%
Data identification and collection	30%	This should reduce as data can be collected and analysed once before feeding into all relevant sections. Identification of existing reports and plans should also help reduce the time spent collecting primary data	20%
Meetings with key organisations and individuals	3%	This may need to increase depending on who is applying the workbook. Application by a LEP may require more meetings to cover all the services. Application by consultants may require more meetings to gather data and views. Where possible, it is suggested that local consultants be used to facilitate organisation and holding of face-to-face meetings	10%
Application of the workbook (includes analysis and writing workbook sections): - Section 2	10%	This may remain largely unchanged although data collected for Section 2 would also be utilised in other Sections	10%
- Section 3	7%	The inclusion of a specific sector on development may require a small amount of additional time	10%
- Sections 4 to 6	28%	This may reduce slightly as interactions between ecosystem services will be more readily identified by following a flow diagram showing how the services link together	25%

Table 5-1: Time allocated to each task, by workbook section, following revisions			
Task	% of total time spent during trial of the workbook	Implication of agreed changes on time and resource requirements	% of time predicted with agreed changes
- Identification of opportunities and threats	11%	The inclusion of an additional step to bring together opportunities and threats under umbrella headings and to identify more strategic opportunities and threats may mean that this increases slightly	15%
- Identification of strategic and tactical solutions (on-going)	2%	This will increase as more focus can be put on discussions to identify solutions. This will be particularly important where consultants are applying the workbook (time constraints have limited the extent to which meetings could be held to discuss solutions in this study)	5%
Workshop on opportunities and threats	4%	This could be redirected into meetings with individual organisations/sector/ecosystem service experts, although a combined meeting enabling discussions amongst individuals is likely to be beneficial to verifying that all the key opportunities and threats have been identified	2%
Notes: Totals may not sum to exactly 100% due to rounding			

As well as the suggested changes to the toolkit, there may be merit in looking at a three-stage approach. A first stage to raise awareness, for example, through a workshop could be low cost. The workshop could be tailored to encouraging attendees to think about the interactions between the environment and the economy and where the main issues are likely to be. To be of greatest value, a clear Plan/Vision would need to be available and known to a range of attendees. The attendees should cover both economic and environmental skills and knowledge as this should encourage wider discussions.

A second stage could involve initial consideration of the ecosystem services to look for opportunities and threats. The third stage would then focus on the key ecosystem services, to make sure these are adequately assessed.

Table 5-2: Projected cost and resources needed to undertake each stage		
Stage	**Time needed**	**Projected costs**
1: One-day workshop focused on identifying opportunities and threats and potential solutions	• Time to organise workshop and prepare necessary material (3 days: 1 day to organise; 1 day to run workshop; 1 day to write-up findings)	£0 (if organised in-house) to £2,000 (if external contractors/facilitators are employed)
2: Initial consideration of all the ecosystem services for threats and opportunities	• Meetings with representatives of groups of ecosystem services (e.g. covering energy, water, etc.) so that 0.5 day is spent on each service (using meetings to identify main data sources and investigate opportunities and threats) (approx. 20 days to cover all 34 services). • Workshop to discuss key opportunities and threats and actions (or if Stage 2 is needed) (3 days: 1 day to organise; 1 day to run workshop; 1 day to write-up findings) • TOTAL: approx. 25 days	Estimated at around £10,000
3: Detailed consideration of key ecosystem services for threats and opportunities (following on from Stage 2)	• Detailed data collection on key ecosystem services, detailed analysis and investigation of likely opportunities and threats, including further meetings as required (3 days per ecosystem service, assumed up to 15 ecosystem services can be investigated in detail) • Ranking of opportunities and threats, identification of strategic/umbrella opportunities and threats (2 days) • Workshop to discuss opportunities and threats and identify actions (1 day to organise; 1 day to run; 1 day to write-up findings) • Preparation of final outputs (2 days) • TOTAL: approx. 50 days	Estimated at around £20,000

5.3 Projected timetable

A three-stage approach allows a breakpoint to be included at the end of each stage, where a decision is made as to whether it is necessary and/or worthwhile to continue. For example, the workshop in Stage 1 could be used to also explore if there is a need to investigate using the ecosystem services framework. This might be the case where attendees are not confident that they have identified the key opportunities and threats, or where there are uncertainties and unknowns raised during the workshop that suggest further investigation is warranted.

At the end of Stage 2, the workshop could include a chance to discuss whether it would be worthwhile investigating further into the key ecosystem services. Again, this could be linked to whether attendees feel satisfied that the outcomes of the workshop do cover the key areas of interest, or whether additional questions have been raised that could not be answered through the work undertaken to date. This approach would provide a strong steer for the Stage 3 assessment, in particular, identifying those services that should form the focus of additional work. The main output from Stage 2 where a Stage 3 assessment is not considered necessary would be the opportunities and threats identified during the study and the results of discussions as to how these opportunities should be seized or the threats mitigated.

The Stage 3 assessment would then involve addressing the key uncertainties, as well as making sure that the main issues for those key ecosystem services have been adequately captured. This may broaden the scope of the Stage 3 assessment beyond that initially identified in the Stage 2

workshop, but will help to ensure that there is sufficient flexibility for any additional uncertainties or new issues to be fully assessed. The workshop at the end of Stage 3 would then present the top ranked strategic opportunities and threats, as well as the proposed tactical and strategic solutions. Following the workshop, a final workbook would be produced that provides the summary of the whole assessment.

Table 5-3 provides a simple projected timetable for each Stage, also showing how the previous stage feeds into the subsequent ones.

Table 5-3: Projected timetable by stage

Stage	Month						
	1	2	3	4	5	6	7
1	Workshop						
2		Hold meetings, collect data	Analyse data, further meetings	Workshop 			
3				Focus on key services	Collect more data, hold further meetings	Analyse data, further meetings	Workshop Workbook complete

In terms of how the sections link together, we have identified an initial plan as to where to start to reduce the risk of duplicating work. We utilised this plan during our trial of the workbook, although the interactions and inter-relationships between the various sections of the workbook (especially when assessing the ecosystem services), means that the approach cannot be as linear as that shown in Figure 5-1.

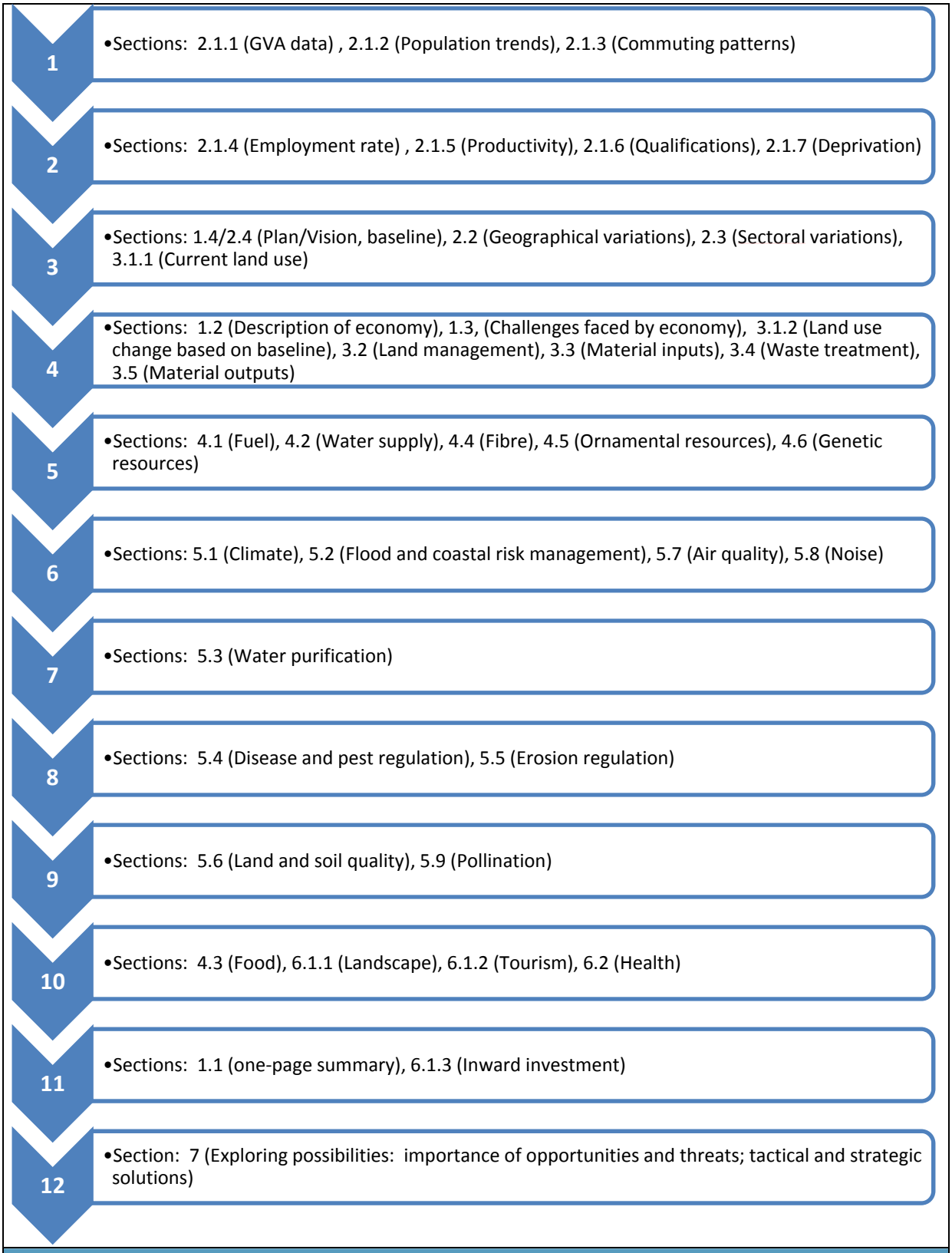

Figure 5-1: Plan to maximise extent to which preceding sections can feed into subsequent ones

5.4 Baseline needs

The baseline is a critical part of the assessment. The whole process is much easier where there is a clear Plan/Vision with economics trends and, potentially, targets. Where a clear Plan/Vision is not in place, some work may need to be undertaken in advance of Stage 1 to develop the baseline. This will need to include identification of projected growth (using growth models where these have been produced), and likely growth sectors and their demands on the environment.

As well as influencing the opportunities and threats that are identified, the baseline is also important in determining whether the solutions are likely to be tactical or strategic. The New Anglia LEP Plan/Vision is based on the principles of sustainable development and, therefore, more of the actions to address opportunities and threats are tactical (they do not need significant revisions to the Plan/Vision). Where a Plan/Vision is not in place, is not fully developed or does not adequately embrace sustainable development, there may be a greater number of strategic solutions. This suggests that development of the Plan/Vision could be informed by discussions, for example, from Stage 1, such that it may need to be reconsidered following the Stage 1 workshop. This approach would require close working with the LEP as they develop their Plan/Vision but could provide a process that enables both the workbook and Plan/Vision to be developed synergistically.

5.5 Managing expectations

There was significant confusion from stakeholders over what the workbook would produce and how they could use this information. Some interpretations assumed that completion of the workbook would produce a plan. Some of the proposed changes to the toolkit (workbook and guidance) are intended to make this clearer, as will the completed example workbook for the New Anglia LEP/Wild Anglia LNP Consortium. However, time should be allocated in the workshops to explaining what the workbook will, and equally importantly, will not do. It would be worthwhile reiterating this message in all three workshops (Stage 1, 2 and 3) where all three stages are undertaken to ensure that this message is not lost and to manage the expectations of stakeholders.

The Defra-network should also consider working with the New Anglia LEP/Wild Anglia LNP as it uses the outcomes from the application of the toolkit. This information and experience can then be used in supporting materials to explain to other LEPs how and where the workbook will provide specific assistance.

6 Conclusions and recommendations

6.1 Conclusions

The key findings for the LEP are that the most significant opportunities are associated with the potential to promote the New Anglia LEP area and what it already has to offer to specific sectors such as renewable energy, development of new technologies, and more generally as a high quality place to live. There are also opportunities to promote good practice, such that this can be taken up more widely. Most of the proposed actions are tactical in that they can be clearly identified and do not need any significant changes to be made to the Plan/Vision. One exception is associated with new development and the potential for the LEP and LNP to act as coordinators interfacing between developers to encourage a more joined-up, landscape based approach; this is seen as a more strategic action.

The response to mitigating threats is also largely based around promotion, focused on best practice and integrated approaches, but also raising awareness of key issues such as pests and diseases and using the LEP's influence to encourage use of existing funds and bidding for additional funds that could help to tackle some of the threats identified. Overall, we found that the approach set out in the workbook was very useful in bringing together the economy and environment such that opportunities and threats associated with future growth could be highlighted. This has enabled actions to be identified that the LEP could put into place to help deliver its Plan/Vision. As a result, it is clear that the process would provide benefits to other LEPs in ensuring that environmental needs, as assessed through ecosystem services, are taken into account during delivery of growth plans.

In terms of achieving the five objectives (as set out in Section 1.2), our conclusions are as follows:

- **Objective 1: Re-trial the toolkit with the new proposed mode of operation**. The toolkit has been re-trialled. The toolkit has been trialled thoroughly, following the recommended approaches set out in the guidance and workbook, and with adjustments and changes made to reflect the practicality of the trial and the specific needs of the New Anglia LEP/Wild Anglia LNP Consortium. Proposed changes have been submitted to the Defra-network, who have then agreed which of the changes should be taken forwards before the toolkit is rolled-out more widely. In applying the workbook, we did identify some key issues and problems. Most of these are addressed through the suggested changes set out in Section 4. The main problems were:

    - The time and resources needed to complete the workbook. This was partly based on the number of ecosystem services that needed to be covered, but also our approach which involved following the recommended links and suggestions in the workbook. Changes to better target initial data collection and to identify how and where these data are used should simplify the process by reducing the amount of time that is required to collect and analyse data.

    - Difficulty of placing all the information collected into the workbook. Information on some aspects such as housing and development and biodiversity as a whole is covered by the workbook, but in a rather fragmented fashion. This meant that some of the overarching issues associated with these aspects were not captured within the opportunities and threats. Changes to pick-up housing and development in Section 3 of

the workbook will help to address this. It was agreed by the Steering Group that impacts on biodiversity should not be covered in the workbook as this goes beyond its scope. Instead, linkages with biodiversity and the precautionary principle will be included in the revised toolkit.

- Difficulty handling the large number of opportunities and threats that are identified through application of the workbook. In total, we identified 107 opportunities and 97 threats. The opportunities and threats varied in terms of level of detail and geographical extent. As a result, they were not directly comparable. The workshop on opportunities and threats identified the need for development of umbrella, strategic opportunities and threats. The large number of each made this a significant undertaking. Consideration was given as to how the opportunities and threats could be linked or combined in order to move towards a top ten that comprised just strategic opportunities and threats. An additional step needs to be included in the toolkit to help guide future users through this process.

- It is difficult for those not directly involved with the day-to-day activities of the LEP to identify solutions. This is because it is important to identify what the LEP can actually do when suggesting solutions, as well as what they may already currently be doing. This step may be more efficiently undertaken through meetings with the LEP (if the toolkit is being applied by consultants) or in strategy meetings held by the LEP Board. In addition, the starting point for the trial was the Green Economy Pathfinder and Plan/Vision developed by the LEP. As a result, most of the opportunities and threats were linked to these documents. This meant that very few strategic solutions have been identified. This may not be the case where a LEP's Plan/Vision is not as strongly rooted in sustainable development.

- **Objective 2: Re-trial the toolkit with post-trial amendments**. We collated a list of suggested changes to the toolkit as the trial proceeded, with these grouped into adjustments, revisions and revolutions. The Steering Group have identified which of these changes they believe should be implemented. In addition, during the trial, we made minor changes to improve the effectiveness of our application of the toolkit. This included changes to some of the section headings, and the definitions for importance and urgency so that we were able to apply them to the specific case of the New Anglia LEP/Wild Anglia LNP Consortium. The short timescale for the study and the potential significance of the suggested changes meant that only a few of these have been tested during our trial. For example, major revisions such as developing the data resources section would clearly simplify the data collection exercise, and a plan showing how the various sections link together would reduce the risk of duplicated work. The outcomes of our trial provide a summary of the data sources we have accessed and a plan for completing each section of the workbook minimising the risk of duplicated effort.

- **Objective 3: Test whether the difficulties experienced by the non-specialist researchers are also experienced by specialist consultants**. The greatest difficulties we experienced were in handling the large amounts of data that were generated by the process, covering all the ecosystem services within the time available, and bringing together the large number of opportunities and threats that we (and others through meetings and workshops) identified. The process for identifying opportunities and threats is not a difficult one, although it does require considerable effort. More difficult for us was identifying the actions that the LEPs should take to seize opportunities and mitigate threats. This would be more easily achieved

by the LEP. Indeed, we will discuss our suggestions with the LEP to ensure that they are appropriate, both in terms of what LEPs have powers to achieve and the resources that would be required.

- **Objective 4: Generate recommendations to make economic/environmental assessment easier**. We have made a series of suggested changes to the process to simplify application of the toolkit. These changes focus mainly on adjustments and revisions to how the workbook is structured and how its application should be planned, rather than changes to the principles or approach.

- **Objective 5: Produce a local area case study which acts as a demonstration of the toolkit potential**. The completed workbook is provided as Annex 7 to this report (as a working draft). This is supported by a spreadsheet that lists all the opportunities and threats, including the importance and urgency ratings assigned and justifications for those ratings. Annex 6 provides a summary of the strategic opportunities and threats, and the detailed opportunities and threats that these cover. Example sections from the workbook (once completed) could be incorporated into the guidance to provide specific examples, as well as the complete workbook providing an overall local case study.

6.2 Recommendations

The suggested recommendations are:

- The suggested changes should be implemented before the toolkit is rolled-out to other LEPs.

- Ideally consideration should be given to trialling the three-stage approach with another LEP before rolling the toolkit out more widely. This trial should investigate whether any of the suggested changes that have not been agreed should be taken up or whether the changes made to the toolkit before this trial are sufficient for the toolkit to be efficiently and effectively applied. However, it is noted that due to time constraints this may not be a feasible option.

- Any workshops held during the three-stage approach should highlight what the objectives of the toolkit are and how this fits into the wider work being undertaken by the LEP. To identify how the workbook can feed into LEP outputs, it is suggested that the Defra-network works with New Anglia LEP/ Wild Anglia LNP as they use the outcomes from the workbook trial, and potentially also with the LEP used to trial the three-stage process. The findings can then be included in future supporting materials to help explain to other LEPs how and where the workbook will provide specific assistance.

- There was significant confusion from stakeholders over what the workbook would produce and how they could use this information. Some interpretations assumed that completion of the workbook would produce a plan. Some of the proposed changes to the toolkit (workbook and guidance) are intended to make this clearer, as will the completed example workbook for the New Anglia LEP/Wild Anglia LNP Consortium. However, time should be allocated in the workshops to explaining what the workbook will, and equally importantly, will not do. It would be worthwhile reiterating this message in all three workshops (Stage 1, 2 and 3) where all three stages are undertaken to ensure that this message is not lost and to manage the expectations of stakeholders.

- The amount of data required by LEPs when applying the toolkit needs to be investigated further. The extent to which this can be short-circuited through partnership working between LEPs, LNPs and Local Authorities should be explored to assess how far data collection can be simplified. This could include taking or following up opportunities such as those from the Open Data Immersion Programme (run by the Open Data Institute). Some of this work has already been undertaken (for example, NOMIS data is available by LEP), but time and resources spent on data collection (see Annex 2 for instance) suggests that there may be further opportunities to facilitate data collection.

- Where possible the workbook should be applied by LEPs in association with LNPs, Local Authorities and other data holding and expert organisations. Where resources are limited, there may be benefit in employing consultants to undertake the work as they may be able to maintain momentum more than people who are trying to apply the toolkit alongside their day job. Where consultants are used, there would be significant benefits in using appropriately skilled local consultants as they should have knowledge of the local area and local contacts that will minimise delays in setting up meetings, understanding local priorities, etc. Use of local consultants will also make it easier to hold face-to-face meetings, which enable more issues to be explored than can be easily done using email or even telephone discussions.

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