



**SUSTAINABILITY APPRAISAL, STRATEGIC ENVIRONMENTAL ASSESSMENT,
AND FUTURE PROOFING OF POLICY CHOICES
FOR THE WEST MIDLANDS ECONOMIC STRATEGY**

For Advantage West Midlands

APPRAISAL OF POLICY CHOICES PAPER

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1 INTRODUCTION

1.1 Purpose of this Report

This paper has been produced to accompany the consultation publication called, 'The West Midlands Economic Strategy 2007: The Policy Choices - Consultation Document'. Both publications have been issued at the same time and should be read in conjunction with each other.

It has been published in the interests of best practice to ensure early engagement of the public and interested bodies in the sustainability appraisal and future proofing process. It is not a statutory document but will help inform the Sustainability Report which will be published next spring for consultation with the draft West Midlands Economic Strategy (WMES).

1.2 Sustainability Appraisal and Strategic Environmental Assessment

In March 2006, Advantage West Midlands (AWM) embarked on the process of reviewing the current WMES that was last published in 2004.

As part of the preparation of this document, which will follow five distinct phases (see the Policy Choices document for more information), there is a statutory requirement¹ to undertake a Strategic Environmental Assessment (SEA) and, through Department of Trade and Industry (DTI) guidance¹, an obligation to undertake a Sustainability Appraisal (SA) of the WMES. AWM have commissioned Halcrow to carry out this work and incorporate the Future proofing work commissioned from Forum for the Future.

SA and SEA are processes that are intended to improve the contribution that the document being appraised (in this case the WMES) makes to the achievement of sustainable development and to the minimisation of environmental impacts. The two processes follow very similar methodologies and it is possible to combine them without losing the essence of either.

The SA looks at effects of the WMES on environmental, social and economic sustainability whilst the SEA is concerned with the environmental assessment of the plan. The concept of sustainable development is to meet the needs of the present without compromising the ability of future generations to meet their needs.

A key part of the SA/SEA process is to consider alternatives for delivery of the strategy. To this end, this paper represents an initial assessment of options in terms of their effect of sustainable development.

1.3 How has the Assessment Been Done?

The assessment has been undertaken using the methodology described in the SA/SEA Scoping Report (see the background reports on www.advantagewm.co.uk/sea.html for more details). The methodology is a process which measures effects of a particular policy choice on a range of sustainability and environmental criteria (known as SA/SEA objectives). The SA/SEA objectives can be found in the Scoping Report. They relate to issues such as climate change, air quality,

landscape, biodiversity, cultural heritage, transport, health, social inclusion, crime and natural resources.

The findings presented here have been presented in a style that reflects the nature and broad detail of the policy choices. A more detailed assessment will be undertaken for the preferred policy options which will be selected following this consultation and inform the development of the draft WMES. The findings of the detailed assessment will be published in the Sustainability Report in spring 2007.

2 FUTURE PROOFING

2.1 Looking to the Future

AWM has commissioned Forum for the Future to conduct a series of 'future-proofing' assessments to compliment the SA/SEA process. This has consisted of building on the WMES evidence base, literature review, conducting a series of workshops with external and internal stakeholders, and conducting expert interviews to develop a set of key future drivers for the region.

These key future drivers require consideration if the WMES is to navigate a path through the risks and opportunities they represent towards its vision.

The key future drivers of change which could have a significant impact on the WMES and economy of the West Midlands are:

- Ageing population
- Population growth
- Migration
- Changing workforce and working practices
- Increased gap between rich and poor
- Skills gap
- Healthy lifestyles
- Transport infrastructure stress
- New technology opportunities
- Networked world
- Globalisation of markets
- Global competitiveness
- Accelerating change
- Knowledge economy
- Climate change mitigation
- Climate change adaptation
- Pressure on natural resources
- Energy supply and security
- Lack of regional identity

There is some overlap with the sustainability appraisal criteria, however the focus of future proofing is on the resilience of proposed policy to future conditions, not how that policy will affect them.

The future proofing results presented here are combined with the sustainability appraisal to provide an initial sustainability and future proofing review of the policy choices.

2.2 Best Practice

AWM are the first Regional Development Agency (RDA) to include a policy choices stage as part of their WMES review, in effect adding an extra consultation stage to the review process. AWM are also one of the first RDA's to use 'future proofing' as part of the ongoing assessment and development process to produce a Regional Economic Strategy, and the first RDA to combine it with the SA/SEA process.

The SA/SEA process includes a duty to produce a Sustainability Report (incorporating the requirements of the SEA Directive) which presents the assessment methodology, findings of the assessment, review of alternatives considered, mitigation and monitoring. In addition this will include the future proofing results. The Sustainability Report for the SA/SEA/future proofing will be published next spring alongside the consultation on the draft WMES.

AWM have chosen to publish this paper as part of best practice, to engage the public and interested organisations right from the beginning, to demonstrate how the sustainability effects and opportunities that the strategy will face can be met, and how future challenges will be managed.

We hope you will find it useful to inform and provoke the debate, and welcome your comments on the policy choices we need to make to secure this region's future economic, social and environmental advantage.

Dr Simon Slater
Head of Sustainable Development
Advantage West Midlands

November 8th 2006

2.3 How to Respond

This document is intended to help inform your comments on 'The West Midlands Economic Strategy 2007: The Policy Choices - Consultation Document'.

Our preferred way for you to comment on the proposed policy choices document is to go to the WMES review website - (<http://www.advantagewm.co.uk/phase-3.html>) to register for WMES review updates and the online consultation processes. Or alternatively contact Gerald la Touche 0121 503 3347 or Rumana Begun 0121 503 3503 for paper copies and response forms, or write to WMES review, Advantage West Midlands, 3 Priestley Wharf, Holt Street, Aston Science Park, Birmingham B7 4BN.

To find out more about the background to the SA/SEA/Future proofing processes go to www.advantagewm.co.uk/sea.html, or contact Neil Davidson at njd@tesserae-environmental.co.uk about SEA/SA, and Lorna Berry at l.berry@forumforthefuture.org.uk about future proofing.

3 PART 1: THE THEMES (QUESTIONS 1-6)

3.1 Theme 1: Enterprise

Question 1: Which of these Enterprise policy choices or what other choices for Enterprise should the WMES emphasise?

3.1.1 Sustainability Summary

The 'right' enterprise activities can improve social inclusion and health. New businesses can deliver environmental benefits through sound environmental management, by reducing waste, increasing energy efficiency and working closely with emerging and established environmental sectors. New skills and awareness raising of environmental management systems together with opportunities for carbon neutral enterprise is important.

3.1.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	Central employment group in the future. Also creates challenges for individual enterprises.
Population growth	Greater population to employ creates challenges and opportunities.
Migration	As for population growth. Also could create cultural challenges within the workplace.
Changing workforce and working practices	More women in workforce, more changes in where we work, more demand for work/life balance all have implications for enterprises.
Increased gap between rich and poor	Enterprise development needs to address gaps.
Skills gap	Enterprise development depends crucially on the right skills.
Healthy lifestyles	Creation of enterprise opportunities through satisfying new types of consumer demand.
Transport infrastructure stress	Inappropriate and inadequate transport infrastructure will hamper the development of enterprises.
New technology opportunities	Creates opportunities for the development of enterprises, with new product and market possibilities.
Networked world	Creates opportunities for enterprises in terms of the technology but also how it is used to take advantage of more global opportunities.
Globalisation of markets	Creates opportunities that enterprises need to exploit.
Global competitiveness	Enterprises will continue to relocate.
Accelerating change	Enterprises need appropriate risk management strategies to respond to accelerating change.
Knowledge economy	Needs to be taken advantage of both in the development

The impact of relevant drivers on this theme	
Driver	Why?
	of certain sectors and across all enterprises.
Climate change mitigation	Enterprises have their own role in responding to mitigation.
Climate change adaptation	Need to be prepared for the consequences of climate change; sector dependent.
Pressure on natural resources	Enterprises have own role in both responding to pressure and helping ensure that pressure is lessened.
Energy supply and security	A carbon constrained world has implications for most fossil fuel-dependent enterprises.
Lack of regional identity	Could hamper the attraction of the region for new enterprises.

The policy choices have direct or indirect links to a number of the key drivers. However the drivers highlight key areas for the future that have not been addressed. These are summarised below.

3.1.3 Sustainability and Future Proofing Comments

Policy Choice 1a: Increasing the number and proportion of West Midlands businesses that are trading in high value sectors and/or have high growth prospects and/or are externally trading businesses on the assumption that these will generate the greatest amount of wealth in the shortest time frame.

Summary (1a): Likelihood of adverse sustainability effects on environmental qualities including climate change, waste generation and energy efficiency. Short term increases in wealth will soon deteriorate in proportion to high environmental costs.

- High growth is resource intensive and this policy makes it clear that growth and the generation of wealth takes precedence over any sustainability concerns.
- This leads to adverse effects on climate change through resource consumption, which is unlikely to be sustainable as business seek to keep cost down and maximise profits. Associated impacts include increased flooding, bad weather and subsidence.
- These effects in turn would make the policy self-defeating in the medium term.
- Perceived benefits to quality of life through increased wealth and prosperity will bring their own environmental costs.
- Also assumes that there will be no distinction amongst industries for which growth will be pursued; environmentally harmful sectors are less attractive, such as those with poor histories of resource use.
- Sustainable consumption and production (SCP) amongst supply chains should be a feature of this policy.

- Likely to adversely effect air quality through transportation impacts in places which are already heavily polluted e.g. the Black Country.
- Adverse distribution of wealth likely - associated with equality issues such as distribution of jobs and access to services. This policy will exacerbate prevailing conditions amongst already excluded communities.
- Urgently needed new skills in relation to knowledge-based industries are unlikely to be achieved by this policy.
- Emphasis is on 'high-value' which links to innovation and higher value areas that are key for the future, although this is not explicit.
- Addresses 'growth' as opposed to 'development'. With this focus the impact on the natural resources and energy is not clear as growth can often lead to exploitation. The sustainability of this option in terms of quality of life should be made clearer.
- Using the proviso of 'generate the greatest amount of wealth' could unfairly sway the ranking of the choices.
- Focuses on the short-term, so whilst the first part of the statement might be somewhat aligned with the drivers of change, the short-termism of the second part negates this.

Policy Choice 1b: Driving up the number of new start businesses across the board in order to stimulate new competition in all sectors and markets.

Summary (1b): At the individual business level, in sustainability terms, the policy success will depend on nature and location of new businesses. It has the potential to have a positive impact on poverty and social inclusion.

- The benefits to individuals will come in the form of increased employment.
- Good opportunities exist to help influence employment and health issues at the regional level through the introduction of more SME's.
- Health benefits will vary depending on success rates (stress). Potential health benefits will be gained from an inspired and interested population.
- Quality of life should increase.
- At an individual business level, the policy success will depend on nature and location of new businesses.
- Since this policy concerns starting up new businesses, there is an assumption that they will be well aware of environmental effects like climate change and the importance of reduced waste, increased re-use and recycling.
- Has the potential to have a positive impact on poverty and social inclusion.
- New businesses (and existing ones) should be encouraged to sign up to CSR-type principles of operation.

- Sectoral support and diversification are likely to be pre-requisites for the success of this policy. In SA/SEA terms those sectors that can demonstrate sustainable development, lead to wider employment and bring in all sectors of society should be pursued.
- This addresses the acceleration of change that will inevitably take place. The more new companies you have the higher the chances are for succeeding. This will also stimulate competition and create diversity, which is a way of being resilient for the future.
- If you encourage growth by 'driving up the number of new start businesses' across the board and 'in all sectors and markets' you will not be taking the learning from where growth is likely to happen. This could be more focused.

Policy Choice 1c: Concentrating on the major enterprise gaps by tackling low levels of self employment and business start up i.e. in deprived and under represented communities such as certain Black and Ethnic Minority groups, women or people who are economically inactive.

Summary (1c): Policy success relies heavily on the delivery of training and skills enhancements. Economic productivity should improve. Opportunities to focus on environmental enterprise should be maximised.

- Policy relies heavily on the delivery of training and skills enhancements.
- Policy needs to address prevailing public transport infrastructure and improve accessibility.
- Health benefits should be gained by this policy through tackling low employment.
- Social inclusion and issues associated with the present inequalities (e.g. level of skills and wealth) in the region will also be a benefit.
- Economically the policy should help overall productivity.
- Environmental effects of this policy could be largely neutral.
- Enterprise should be informed by strong awareness of the principles of sustainability.
- Wider inclusion of BME groups may need associated skills training to have real benefit (see skills options).
- The focus is on underrepresented communities which will address the gap between the rich and poor, and migration.

Policy Choice 1d: Embedding a culture of enterprise and innovation in all businesses to drive up their appetite for change, competition and improvement right across all sectors and locations so that they appreciate the need to continually develop new customers, products and processes.

Summary (1d): Innovation can lead the way for carbon neutral industries and businesses. A focus on environmental, social and economic benefits promoted by strong sustainability awareness is essential.

- A culture of enterprise and innovation is good especially if it can harness sustainability principles and include environmentally sustainable businesses.
- Innovation and enterprise can include environmental innovation to introduce more environmental businesses in the region by providing support to the development industry for innovative environmental designs, manufacturing that uses recycled materials and energy saving expertise, for example.
- Innovation can lead the way for carbon neutral industries and businesses.
- Without this focus on environmental and sustainability awareness, demands for energy resources and associated adverse effects on climate change will continue.
- Cultural change towards climate change is essential; however a focus on competition and improvement may not assist this.
- Environmental effects of this policy are not clearly understood and could be adversely affected by competition that is characterised by unchecked growth.
- Including all sectors and all locations should help all sections of society and be beneficial in terms of social inclusion.
- Addresses the identified lack of regional identity, and the renewed focus on the culture of enterprise and innovation, new technology etc.

Policy Choice 1e: Developing a more positive set of attitudes towards enterprise in society in order to stimulate a stronger flow of people considering starting businesses and willing to be more enterprising at work.

Summary (1e): It would be beneficial for society and the economy, and indirectly, the environment, to increase enterprise that encourages more people to start sustainable businesses and to be more enterprising at work.

- Policy relates strongly to the prevailing lack of enterprise and genuine lack of ambition amongst certain parts of the workforce and those presently unemployed.
- It would be beneficial for society and the economy to increase enterprise that encourages more people to start sustainable businesses and to be more enterprising at work.

- Attitudes are an important outcome related to this policy. They need to harness sustainable development and increased awareness of climate change as a driving force behind enterprise.
- Environmental effects of this policy could be mostly neutral.

Policy Choice 1f: Promote the use and application of information and communications technology to increase productivity in key market sectors.

Summary (1f): Appropriate use and management of ICT will be beneficial for reduced car use, increased personal flexibility and increased economic output.

- ICT helps reduce the need for travel which will lead to carbon (and other green house gas) reduction currently emitted by transportation.
- ICT enables more home working, which is good for the same reason as above as well as being good for health in circumstances where people otherwise have to travel everyday and lose time commuting.
- Saved time increases economic productivity.
- ICT can be used to provide environmental management support for businesses at low cost.
- ICT helps less mobile people who are otherwise unable to get certain types of work due to their physical restrictions.
- ICT carries its own climate change impacts through consumption of energy; this can be reduced with appropriate best practice measures of turning off computers at night and during the day when not in use.
- ICT is an essential ingredient of all knowledge based sectors and industries.
- ICT can help with geographically isolated area, proving the appropriate connections exist for broadband.
- Help maximise new opportunities from technology and a networked world.

3.2 Theme 2: Innovation

Question 2: Which of these Innovation policy choices, or what other choices for Innovation, should the WMES emphasise?

3.2.1 Sustainability Summary

Innovation can bring a variety of environmental, social and economic gains depending on which innovations are pursued. Innovation can include new business and industries but may, equally importantly, consider different ways of business management. This can include for example the way in which the workforce is managed through to environmental management principles. Short term cost considerations and market failures can create barriers to investment in environmental technology innovation.

3.2.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	Creates opportunities in terms of a new large market.
Population growth	Indirect - helps to take advantage of innovation.
Migration	As above.
Changing workforce and working practices	More flexibility in working practices helps facilitate greater innovation.
Increased gap between rich and poor	How able are the poor to take up innovation opportunities?
Skills gap	Creating the right skills levels to address innovation.
Healthy lifestyles	Creates opportunities.
Transport infrastructure stress	Inappropriate and inadequate transport infrastructure could hamper innovation.
New technology opportunities	Creates opportunities.
Networked world	Creates opportunities globally as well as locally. Innovative enterprises will be networked.
Globalisation of markets	Creates opportunities.
Global competitiveness	With more industries moving overseas, the need to create competitive advantage in new areas becomes stronger.
Accelerating change	Highlights need to constantly innovate rather than once.
Knowledge economy	Source of innovation.
Climate change mitigation	Creates opportunities.
Climate change adaptation	Creates opportunities - will need innovative solutions.
Pressure on natural resources	Need to factor in what is needed for innovation

The impact of relevant drivers on this theme	
Driver	Why?
	to thrive.
Energy supply and security	Need to factor in what is needed for innovation to thrive.
Lack of regional identity	May hamper attracting innovative enterprises to the country.

Many of the key drivers have been considered within the policy choices. However there is no indication of which sectors the new innovation is likely to stem from and how innovation could be used to tackle the challenges of the region (e.g. transport, climate change) or respond to the opportunities (e.g. healthy lifestyles).

3.2.3 Sustainability and Future Proofing Comments

Policy Choice 2a: Driving up the number of businesses and the volume of economic activity in those limited number of sectors where R&D spend and innovation are already high.

Summary (2a): This policy has the potential to bring significant sustainability gain by targeting the environmental technologies sector as well as those industries that have strong links with regional and sub-regional character.

- Measures for improved environmental practice are not specific to this policy.
- R&D in the budding environmental technologies sector which employs 29,000 people will bring significant sustainability gain.
- Effects on biodiversity and water resources, and associated effects of climate change, are unclear but thought to have generally poor effects since these prevalent industries are all users of energy and responsible in some cases for pollution emissions.
- The effect of townscapes and character may benefit through ongoing presence of industries that have strong links with regional and sub-regional character, e.g. the potteries.
- Given the overall lack of growth and change leading from current R&D activities and their relatively narrow focus, social benefits are likely to be limited.
- Successful R&D initiatives which focus on sustainability issues as well as sector-wide improvements to production through innovation will lead to sustainability gains.
- Focuses on the existing situation i.e. where R&D spend and innovation are already high. However it appears that these sectors have not thrived as a result which precludes investment in sectors likely to do well in the future.

Policy Choice 2b: Embedding a culture of enterprise and innovation in all existing businesses to raise their appetite for change.

Summary (2b): Potential benefits for social inclusion and economic diversification if awareness of sustainable business practices are incorporated into delivery mechanisms.

- See comments for Policy Option 1d.
- Potential benefits for social inclusion are better than 1d since the change in culture need not necessarily be focussed on competition and improvement in this option.
- The same argument applies to health issues.
- This policy should help economic diversification but is likely to have a neutral effect on environmental issues in general.
- The change in attitude towards climate change needs to be cultural.
- There is a strong implied emphasis on innovation, knowledge economy, response to global competition and new technology.

Policy Choice 2c: Increasing the amount of applied R&D activity undertaken in the region's HEIs and businesses in order to increase the supply of new ideas.

Summary (2c): Has potential to reduce skills deficits in the increasingly important knowledge based industries by increasing graduate retention. Indirect environmental benefits may arise if R&D is increased in the waste, energy sectors and environmental technologies sectors.

- Strengthening the links between business, industry and the universities is beneficial from a graduate retention point of view which is good in terms of a local employment stock that brings high skills and can help diversify the skills base. This is good for social and economic SA objectives.
- Arguably, due to their diverse skills base, HEIs can help raise environmental and sustainability issues more effectively than business/industry might achieve on its own. This is especially relevant to R&D needs concerning climate change.
- R&D should be used to reduce waste production, increase energy efficiency and use environmental technologies more widely.

Policy Choice 2d: Focussing effort on changing perceptions of the region's R&D/innovation standing by concentrating on a small number of high profile interventions.

Summary (2d): This policy has the potential to directly benefit social, environmental and economic factors depending on the nature of the interventions made. Indirect benefits are likely due to improved social and economic attractiveness.

- The success of this policy will rely heavily on where the interventions are made and how inclusive they are in terms of integrating the wider employment base.
- It is assumed that improving attractiveness will also involve maintaining and increasing improvements to the wider built environment. These improvements should include environmental gains as well but it is not clear that the policy will pursue this.
- Crime plays a significant role in perception of parts of the region. To be successful, this policy will have to show awareness and provide for solutions to areas of crime.
- Environmental perception of the West Midlands can be one of pollution and low environmental capital (despite this not being the case); by including an environmental focus this policy can help improve perception concerning both of these issues.
- Links into knowledge economy, new technology, networked world and global competitiveness, taking advantage of the likely drivers of regional change.

Policy Choice 2e: Improving the interface between users and providers of R&D/innovation so that regional business can better tap into the already significant base of knowledge.

Summary (2e): Knowledge sharing will bring both social and economic benefits, the degree of which will depend on the nature of the R&D. This policy will help the transition into knowledge based industries.

- Very relevant to Lisbon Agenda intentions of transition into knowledge based industry.
- Depending on the nature of the R&D that has been achieved but assuming the R&D agenda has embraced environmental and sustainability concerns, there are a number of positive impacts likely to be achieved - especially social and economic.
- Directly addresses the increasingly networked world which will become vitally important in the future.

3.3 Theme 3: Skills

Question 3: Which of the Skills policy choices or what other choices for increasing Skills should the WMES emphasise?

3.3.1 Sustainability Summary

There is an opportunity to raise environmental and sustainability awareness as part of all skills enhancement. Links between existing education centres should be integrated with businesses to deliver a re-skilling agenda focused on providing opportunities throughout the region which are tailored to prevailing environmentally sustainable markets and new innovations that might be shaped by the RES.

3.3.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	Retraining and appropriate skills. An opportunity to keep valued skills in the workforce.
Migration	Increase in number of low and high-skilled people coming into the region. Training the low-skilled and encouraging those with high-skills.
Increased gap between rich and poor	Ensuring that everyone has basic skills.
Changing workforce and working practices	Different skills are needed. More flexibility for those with the right skills. Access wider group of people. More flexible workforce.
Skills gap	The core driver behind this theme.
New technology	Appropriate / new skills needed to take advantage of opportunities.
Networked world	Appropriate skills to develop and make use of it.
Global competitiveness	Having the right skills to be in a position to respond.
Global markets	To take advantage of the opportunities, appropriate skills needed.
Accelerating change	Greater diversity of skills in organisations will be more needed in the future. Emphasis on life-long learning and learning culture in general.
Knowledge economy	Appropriate skills to develop and take advantage of this.
Regional identity	Attracting the right people to the region.

Skills are identified as a key driver and the choices largely tackle the key areas raised by that driver and other associated drivers. However the quality of employment is not mentioned.

3.3.3 Sustainability and Future Proofing Comments

Policy Choice 3a: Focussing on tackling basic level skills and improving the skills of those with few or no qualifications in the region.

Summary (3a): Significant social and economic gain is possible with particular benefits to social inclusion, poverty and unemployment.

- English Heritage have recorded that there is a skills shortage associated with the management and restoration of buildings and features in urban and rural landscapes including for example stone walls. This policy does not address this.
- Improved skill levels across the region are a key issue and this policy will help achieve this. Associated benefits are largely social and economic.
- There is an opportunity to raise environmental and sustainability awareness as part of all skills enhancement.
- Environmental effects of this policy could be largely neutral.
- This helps address 'increased gap between rich and poor'.

Policy Choice 3b: Focussing on building a knowledge rich workforce by increasing the number of graduates and stimulating demand for better qualified employees in higher value companies.

Summary (3b): This policy needs to be combined with provisions for increasing basic level skills in order to bring social benefits.

- This policy is associated with exclusivity amongst who it affects. It is unlikely to help reduce poverty or increase social inclusion. As part of a longer term, inclusive scheme, it could be successful in sustainability terms. For example, combining with 3a and 1c is essential.
- Environmental effects of this policy could be largely neutral.
- Helps address the drivers of 'global competitiveness' and 'knowledge economy'.

Policy Choice 3c: Maximising the effective use of available skills by encouraging business to step up demand for higher skills and to better use those they have, in order to compete more effectively.

Summary (3c): Increasing demand for higher skills may help combat depopulation in parts of the region and increase graduate retention. Training for those with lower skill levels should be included to bring increased social benefits.

- Stepping up demand for higher skills may lead to net influx of people to the region since the region is short of a wide range of skills. This would be a good thing for parts of the region where depopulation is an issue i.e. the Black Country.
- The policy is unlikely to help local unemployment. Training and re-skilling is essential (see options on skills).
- Using existing skills of the West Midlands is unlikely to help expand the environment knowledge-based industry (which is important for the contribution it can make to sustainability).
- Environmental effects of this policy could be largely neutral.

Policy Choice 3d: Addressing the supply of skills by concentrating on making sure the schools, FE, HE and in the private and voluntary sectors are developing a cohesive skills infrastructure that responds to rapidly changing skill needs.

Summary (3d): Significant social and economic gain is likely. Sustainable development principles should be included in skills programmes.

- This policy will have a wide range of social and economic benefits. To be successful in sustainability terms it should include sustainable development principles, especially that of climate change, at the centre of the proposed cohesive skills infrastructure.
- Programmes to include full integration between private/public sector and education will be good for social inclusion.
- Healthy lifestyles (in relation to stress and the workplace) can also be a core part of the skills infrastructure.
- Environmental effects of this policy could be largely neutral.
- Addresses drivers of 'accelerating change' and 'knowledge economy'.

Policy Choice 3e: Embedding a commitment to continual learning and personal development amongst all learners and businesses.

Summary (3e): Continual learning and personal development will bring significant social and economic benefit across all sectors. Sustainability awareness should be encouraged as part of training programmes.

- This option can include health as a key personal learning and awareness issue. A healthy workforce will lead to improved economic output.
- Likewise the policy could include sustainability awareness raising and best practice amongst businesses.
- Environmental effects of this policy could be largely neutral.
- Addresses drivers of 'knowledge economy' and, indirectly, 'ageing population'.

3.4 Theme 4: Economic Activity

Question 4: Which Economic Activity policy choices or what other choices for Economic Activity should the WMES emphasise?

3.4.1 Sustainability Summary

Social exclusion and gaps in wealth distribution, alongside improved economic output, can be aided by appropriate training and skills provision. Opportunities to raise environmental awareness should be taken. Health and crime are factors that benefit by having an economically active workforce.

3.4.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	Potentially more people economically inactive.
Changing workforce and working practices	More economic activity among women. Changing working practices - home working opportunities. Opportunities for economically inactive e.g. if you are disabled.
Increased gap between rich and poor	Addressing the policy option directly relates to this.
Skills gap	If unskilled, more likely to be economically inactive. Addressing skills gap and economic inactivity is crucial.
Transport infrastructure stress	Access to employment.
New technology opportunities	Providing the right skills.
Networked world	Enables new work practices.
Globalisation of markets	Opportunity for growth.
Global competitiveness	Competitiveness, because of reliance on manufacturing, could increase number of unemployed.
Knowledge economy	This can have a negative effect on economic activity if the right skills are not present. Knowledge-based companies have a tendency to be heavily clustered, which can create issues of accessibility.

Drivers such as 'changing workforce practices' and 'networked world' could be better used as an alternative way to enable people to return to employment. Greater links could be made between this theme and innovation opportunities from drivers such as 'globalisation of markets' and 'knowledge economy'.

3.4.3 Sustainability and Future Proofing Comments

Policy Choice 4a: Intensively targeting people with the most challenging employment prospects focussing on the underlying social and cultural hurdles they face.

Summary (4a): Social and economic benefits will arise from this policy, particularly for social inclusion, poverty, inequality, unemployment and social cohesion.

- Social exclusion is a significant feature of various parts of the region and this policy will help reduce this issue, in particular the gaps that exist in wealth and skills.
- This policy will help with crime as poverty is associated with crime levels.
- Indirect health benefits can be gained from this policy.
- Environmental effects of this policy could be largely neutral.
- Helps address the 'increased gap between rich and poor' and its focus on the underlying social and cultural barriers.

Policy Choice 4b: Creating opportunities for new forms of economic activity and enterprise as a way of motivating people and providing a route into economic activity for those who are removed from the labour market.

Summary (4b): Indirect environmental benefits are possible depending on the forms of economic activity and enterprise targeted. Provisions for encouraging sustainable business principles will help maximise these benefits.

- New forms of activity that include environmental industries will help deliver sustainability.
- Measures to reduce waste, increase energy efficiency and deliver improved responses to climate change can be characteristics of new enterprises and increased economic output. This will require a well-informed and receptive business environment to realise the benefits to be gained in the medium and long term of delivering these measures alongside increased economic activity.
- This policy will help with crime as poverty is associated with crime levels.
- Potential health benefits may be gained.
- Environmental effects of this policy could be largely neutral.
- Increased economic output will be achieved; although overall sustainability effects associated with increased outputs are not clear.
- The new forms of economic activity and enterprise should be those which have strong future prospects.

Policy Choice 4c: Ensuring jobs pay for people who are out of work by concentrating on affordable care transport to work benefit traps and practical hurdles to getting into employment.

Summary (4c): Significant social and economic benefits will arise for the economically disadvantaged including improved access to services.

- Positive outcomes from this policy will include improved access to services and greater use of the public transport network.
- Other benefits include social inclusion.
- Environmental effects of this policy could be largely neutral.

Policy Choice 4d: Encouraging alternative sources of labour such as migrant workers and older workers.

Summary (4d): By encouraging migrant workers in place of other, this policy may negatively impact on social cohesion through effects on unemployment, poverty and social inclusion. Employment of older workers should bring social benefits to this group without impacting social cohesion.

- Adverse effects on existing unemployed are likely.
- This policy is unlikely to help social inclusion issues.
- The Community effects of migrant workers are unclear.
- Unlikely to achieve high levels of innovation sought by other policies.
- Good to employ older workers who cannot otherwise get work. It can help increase local economic output.
- Associated mental and physical benefits can be gained by older workers.
- Environmental effects of this policy could be largely neutral.
- Builds on drivers such as 'migration' and 'ageing population'.

3.5 Theme 5: Quality of Life

Question 5: Which Quality of Life policy choices or what other choices for Quality of Life should the WMES emphasise?

3.5.1 Sustainability Summary

Quality of life requires a good work-life balance and opportunities for healthy living. An equitable distribution of wealth, adequate green space provision, prudent use of natural resources, access to services and a carbon-neutral economy will help deliver a good quality of life.

3.5.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	Increased demand in leisure activities. Suggests overall quality of life will go down if nothing is done. Related to health issues.
Population growth	Increased demand for housing, services, open space etc.
Migration	What does quality of life mean to different communities?
Changing workforce and working practices	Enabling greater choice and flexibility, particularly for childcare. Opens up possibility for better quality of life, working from home etc. Better work life balance.
Increased gap between rich and poor	Emphasise better quality of life for everyone. Helping to decrease disparity.
Healthy lifestyles	Most impacts under lifestyle relate to this, including health and leisure time.
Transport infrastructure stress	Relates to access to open space and countryside.
Networked world	How a networked world affects social networking.
Accelerating change	Issue of stress.
Climate change mitigation	If not managed can lower quality of life.
Climate change adaptation	If not managed can lower quality of life issues.
Pressure on natural resources	Waste, land, linked to consumerism and lifestyle.
Energy supply and security	Impact on people's lifestyle. Low carbon economy can be positive; better place to live.
Lack of regional identity	Community - sense of belonging.

The policy choices do not focus on any challenges to our quality of life such as climate change, pressure on natural resources and energy supply and security. This will need to be addressed. There is no mention of the pressures from population growth and the effect this will have on resources such as open space and the countryside. Also the background text could explore whether 'quality of life' has different meanings to different communities e.g. the BME

community. Work-life balance is not addressed and there is no mention of community or supporting communities

3.5.3 Sustainability and Future Proofing Comments

Policy Choice 5a: Safeguarding the extremely high quality of life on offer in many of the region's rural areas by better exploiting its important role for knowledge economy workers and supporting diffuse employment.

Summary (5a): There will be environmental benefits through maintaining the quality of rural environments. A policy of safeguarding must not overlook economic pressures facing the lives of people living in less well-off rural wards.

- Policy has potential environmental benefits through maintaining the quality of rural environments.
- Access by car is essential for these areas and ways of offsetting this carbon input should be sought.
- ICT has an important role to play for successful micro-industries that are able to operate in rural environments by for example working at home. This has environmental benefits of reduced car use.
- Overall likely to have restricted social and economic benefits in its current form.
- There are some areas of rural deprivation which should not be overlooked by this policy and measures to help bring benefits to these areas need to concentrate on potential environmental effects associated with any new infrastructure or changes in population dynamics.
- It's not clear if 'diffuse employment patterns' include changing working practices - which it should. Otherwise this does build on the key drivers.

Policy Choice 5b: Concentrating on the creation of a limited number of cultural beacons which improve external perceptions of the West Midlands in order to attract new residents and businesses.

- This helps address 'lack of regional identity', potentially attracting inward investment.

Policy Choice 5c: Driving forward the greening of the region by preserving open spaces and countryside as key attributes of the region's high quality of life offer.

Summary (5c): This policy will bring clear environmental and health benefits. Indirect benefits will result from increased attractiveness of the region, which may encourage new businesses and knowledge sector workers.

- Clear environmental and health benefits will be gained from this objective.
- Attractive environments provide an incentive for new businesses looking to set up in new locations.
- More green space will help combat air pollution, and less so, climate change issues.
- It would be preferable to use another term to 'greening' to link it to the wider 'healthy lifestyles' driver.
- Benefits for biodiversity can be gained.

Policy Choice 5d: Channelling attention into the important suburbs of the major employment areas and focussing on the rounded quality of life offer to attract and retain higher skilled earners' families.

Summary (5d): Although this policy is likely to generate positive economic effects, negative impacts may arise, particularly if resources are diverted away from the economically disadvantaged. Provision of services and sustainable transport solutions may bring environmental and social benefits.

- The suburbs are often characterised by prevalent high energy consumption and sometimes, congestion often being victims of their own successful appeal and attractiveness. Increased attention in these areas may exacerbate these climate change issues.
- The suburbs traditionally have a good proportion of green space and a good supply of services, including education and health provision. This policy should not denude this high quality.
- Policy choice 5d focuses on the suburbs whilst choice 5a focuses on rural areas, which leaves the city centre areas with perhaps the greatest quality of life challenges, and these are not addressed by the choices.

Policy Choice 5e: Focussing attention on the social aspects of quality of life such as health which hold back many people's life opportunities and fulfilment.

Summary (5e): Clear health and 'well being' benefits can be expected. The extent of effect will depend on implementation and the aspects of quality of life targeted.

- Various benefits, as well as health, can be gained through such focus if a sustainable development agenda is pursued.
- Other focuses could include raised environmental awareness and social inclusion programmes to encourage wider integration amongst society and by association the economy.

- A focus on social aspects of quality of life can help with crime issues.
- It is also very good for regional identity and cultural integration.
- Health can be interpreted both as those elements over which we have limited control (e.g. inherited genetic diseases) and those which we can influence (e.g. through our lifestyle); it would be useful to concentrate on the latter here.

3.6 Theme 6: Infrastructure

Question 6: How should the WMES (supported by and supporting the Regional Spatial Strategy) tackle the infrastructure challenges and opportunities facing the region?

3.6.1 Sustainability Summary

New infrastructure should strive to be carbon neutral in design and delivery. Large projects will be subject to EIA. In general, adverse effects on environmental quality and the natural resources of the region might be expected. Opportunities exist to enhance the public transport network and seek solutions that reduce carbon (and other green house gas) emissions.

3.6.2 Future Proofing Summary

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	More supported houses, more accessible transport means, more hospital capacity required. More single households so more demand for housing.
Population growth	More demand for housing and services
Migration	If increases, then more demand for housing and services
Changing workforce and working practices	More home working enabled by developments in ICT More localised infrastructure required. Opportunity to promote local activity through planning etc.
Increased gap between rich and poor	Access to housing and transport
Healthy lifestyles	People's leisure trips
Transport infrastructure stress	Directly addressed by this policy option
New technology opportunities	Dual-fuel cars, hydrogen vehicles, maglev trains, opportunities created through addressing the infrastructure challenge
Networked world	Leads to request for additional policy option, making non-car access possible
Global competitiveness	Need to ensure effective and efficient infrastructure as a platform for competitive regional economy
Climate change mitigation	Transport (largely private and aviation) and housing contribute the largest proportion of CO2 emissions and

The impact of relevant drivers on this theme	
Driver	Why?
	therefore have a crucial role in its mitigation.
Climate change adaptation	Climate change impacts will be keenly felt by infrastructure in general. There is a need for existing and new infrastructure to be able to withstand a different and unpredictable climate.
Pressure on natural resources	Not much land available to build on. Low carbon economy opportunities
Energy supply and security	The need for secure energy solutions. Low energy or decentralised energy generation. Oil prices and lack of availability. Cost implications as oil and gas peak in the not too distant future.

Developing an infrastructure that allows for reduced demand for transport, allowing people to access goods, service, people and employment, for example through the use of ICT, without increasing demand for travel is not fully addressed. There is no mention of investment or reinforcing transport infrastructure in preparation for more extreme weather events.

4 PART 2: CROSS-CUTTING THEMES (QUESTIONS 7-9)

Question 7a: How should the WMES (supported by and supporting the Regional Spatial Strategy) address the role of different places within the region?

4.1.1 Sustainability Summary

A wider appreciation of place when considering RES focus should help provide a good starting point to ensure social inclusion and increased access to jobs and services. Existing legacies associated with certain parts of the West Midlands need careful consideration. Environmental considerations should guide any new development of certain places. Brownfield land is perhaps one of the most important first stages of taking this policy forward.

4.1.2 Future Proofing Summary

Some future drivers of change can have a more 'place' specific impact than others. For example:

The impact of relevant drivers on this theme	
Driver	Why?
Ageing population	An ageing population will impact on all local communities, from housing provision and access to services to labour supply.
Migration	Migration patterns will impact on areas where there is greatest change, often in specific communities.
Increased gap between rich and poor	Disparities in income, well being etc. are sometimes focused in certain deprived areas.
Healthy lifestyles	Issues around healthy lifestyles can vary from place to place, but factors such as poor housing, access to green space etc can often be a localised issue.
Transport infrastructure stress	The impact of inadequate transport infrastructure, be it congestion on the roads, inefficient rail and bus networks etc. will be felt at a local level and in specific places.
Knowledge economy	If you have the right skills to take advantage of the knowledge economy you may be excluded from taking part if you are not in a location where knowledge cluster jobs exist.
Climate change mitigation and adaptation	Extreme weather events can impact on anyone at anytime e.g. localised flooding of an area. Insurance premiums may increase in a flood risk area.
Energy supply and security	Increasing amount of decentralisation of energy generation in the future e.g. micro generation (uncertain).

4.1.3 Sustainability and Future Proofing Comments

- The region's prevailing difference in distribution of wealth, economic opportunity and access to services is, in part, related to place. Exclusion across the wider region becomes an issue when specific sites become the focus for employment. The important role of cities is that they create critical masses of firms and skills where they interact and create positive spillovers. The downside is that cities can suffer from disadvantages such as congestion and associated effects on air quality and green house gas emissions. Adverse social effects within cities can include crime.
- Different places, with their own identities and strength of 'brand' can be a good or bad thing depending on the association with that place. At a regional level many of the SA/SEA objectives can be affected by a policy which concentrates on addressing place. For example, taking a region-wide approach to place, the RES can address issues associated with transportation, the architectural and built environment (especially in relation to maintained and enhanced to improve attractiveness within the cities), and biodiversity through a strong commitment to green space provision at all key sites in the region when economic activity is likely.
- Such a policy should be careful not to isolate communities or individuals and at the same time maximise access to services and employment.
- A general good sustainability principle to apply to any policies relating to a prescribed geographic emphasis should be: local is good. That is, local supply and demand for jobs, services and where possible, natural resources. This also applies to waste or energy efficiency issues (generation of waste amongst the West Midlands is above the national average and this has implications for landfill sites and associated climate change impacts through emissions of gases like methane; pollution through leaching of heavy metals is also an adverse effect arising from landfill).
- All urban locations have higher energy demands than the rural locations.
- Re-use of brownfield land should help shape the smaller scale location of any new place-focused policy.
- Natural resources e.g. water abstraction could also be an issue should new development be a feature of this policy.

Question 7b: Should some places be prioritised as a focus for activity?

4.1.4 Sustainability Summary

Places that can demonstrate local supplies of energy, good connections to the public transport network, a local workforce, green space and access to services should be prioritised. (See commentary for 7a).

4.1.5 Future Proofing Summary

See commentary for 7a.

4.1.6 Sustainability and Future Proofing Comments

- The level of electricity produced from renewable sources in the West Midlands is already low compared nationally. Locally produced sources of energy should be pursued where possible.
- Transportation issues are significant with the West Midlands being a conduit for much traffic as well as inter-regional transportation issues. These should not be exacerbated by concentrating on areas poorly served by public transport or which might need new infrastructure.
- Specific locations in the region such as the Black Country and parts of Staffordshire i.e. Stoke on Trent have important industrial legacies that have now moved on or declined sufficiently that only intervention will help. In working with these places through the RES, sustainability issues that prevail include several social and economic ones such as health and wealth. Environmental considerations including biodiversity and minimising climate change effects can be part of any re-structuring and re-development of such places.

Question 8a: To what extent should the WMES seek to prioritise important types of businesses in the region?

4.1.7 Sustainability Summary

Prioritising businesses that are environmentally sustainable and which can provide for the range of skills available means that a policy of this nature should be combined with other policies that provide new skills and raise environmental awareness. Barriers to investment in new environmental technology industries need to be removed. Industries that are natural resource intensive and which contribute to carbon emissions should not be pursued; this has important implications for the Manufacturing Challenge. (See policy choices 1a-e; and questions 9a and 9b).

4.1.8 Future Proofing Summary

See the drivers associated with theme 1 on enterprise

4.1.9 Sustainability and Future Proofing Comments

- See policy choice 1d.
- Whilst there are significant differences in the productivity and employment, and therefore GVA, in different sectors, there are common environmental principles that can be applied to all sectors.

- For example, business contributes a high proportion of green house gases in the region. Business also generates a lot of waste that can be reduced, reused or recycled.
- Sustainable environmental business management principles also include adopting good principles of environmental design when building or furnishing new business premises.
- Individual sectors, such as manufacturing which already has economic issues to deal with, have environmentally specific issues associated with pollution (in general - air, water, noise) as well as landscape impacts and natural resource use issues. These sectors require considerable attention to how they can reduce their environmental impact and retain economic integrity.

The 7 possible focuses have different implications:

- 1 focuses on 'growth' rather than 'development', leaving the impact of such growth on the environment and quality of life unclear.
- 2 is on 'high-value' which links to innovation and higher value areas which is key for the future.
- 3 focuses on the short-term, by concentrating on the employment base which is 'declining nationally and regionally'.
- 4, 5, 6 and 7 - these statements are aligned with the drivers of change, directly addressing knowledge economy, new technology, competitiveness, global markets and accelerating change.

Question 8b: Which business sectors or clusters should receive the most support?

4.1.10 Sustainability Summary

Environmental technologies that can be pursued in the West Midlands should include renewables industries, environmentally-sustainable waste reduction and processing (See policy choice 8a).

4.1.11 Future Proofing Summary

See the drivers associated with theme 1 on enterprise.

With environmentally related business in the region now contributing more to the regional economy than the automotive sector, and the global market for environmental goods and services set to exceed £337 billion in the next five years to rival the pharmaceutical and aerospace sectors, then a focus on this area would seem obvious.

4.1.12 Sustainability and Future Proofing Comments

- Whichever sectors are pursued, it is important to concentrate on decoupling environmental effects from economic production and output.

- Sectors other than manufacturing that have environmental impacts include:
- agriculture (through methane, inputs of fertilizers, effects on biodiversity especially farmland birds);
- electricity generation (in terms of consumption of fossil fuels and associated carbon dioxide, sulphur dioxide and nitrogen oxides) - there needs to be a push for more renewable energy generation;
- minerals extraction and construction materials industries (effects on biodiversity, energy consumption, landscape and resource depletion);
- any industries or business that rely heavily on transportation of goods by road (which can contribute on a cumulative basis to congestion and adverse effects on climate change and air quality);
- The climate risk assessment on the existing business clusters indicated that building technologies, tourism and leisure, rail and environmental technologies had the most risk and opportunity associated with climate impacts.

Question 9a: To what extent should the WMES continue to prioritise manufacturing as a distinct challenge facing the region?

4.1.13 Sustainability Summary

Manufacturing has a legacy associated with environmental degradation and pollution. This sector requires considerable attention in terms of how it can reduce their environmental impact and retain economic integrity, jobs and communities associated with it.

4.1.14 Future Proofing Summary

Consideration needs to be given as to how manufacturing will respond to the key drivers, see for example drivers associated with theme 1 on enterprise, before it is prioritised.

4.1.15 Sustainability and Future Proofing Comments

- Environmental effects include high energy consumption of non-renewable energy;
- Greenhouse gas emissions from the industry (in addition to the effects of high consumption rates of electricity from power stations with high fossil fuel consumption);
- Sulphur dioxide and nitrogen dioxide emissions both of which affect air quality and, to some extent, climate change;
- The industry as a whole needs to adapt to climate change restrictions and innovate to reduce environmental impacts. Local sustainable generation of electricity would help,

as well as embracing new environmental technologies (which can be sourced in the region with the right support from the WMES - see policy choice 1c).

- If manufacturing ceases to play a key role in the economy (through combined economic and environmental factors), plans must be underway now to ensure transition - through new skills and training, and market support, for alternative employment opportunities in knowledge based industries.
- The strong social legacy, and in particular the communities which are part of the manufacturing heritage, are strengths which should be harnessed.
- The ability of the regions manufacturing base to diversify into new markets, such as wind turbine supply chains and environmental technology should be encouraged.

Question 9b: What policy interventions are likely to be most effective in addressing that challenge?

4.1.16 Sustainability Summary

Intervention which leads to reduced environmental impact and maximises benefits for people and communities is essential.

4.1.17 Sustainability and Future Proofing Comments

- Policy interventions could include support for environmental technologies in terms of new enterprise and support for existing enterprises who are ready to disseminate good practice but who are restricted by market forces and other factors such as economic output and GVA.
- Policy interventions could also seek to introduce environmental monitoring of manufacturing industries to get a better picture of the precise nature of effects and take opportunities to help achieve the SEA/SA Objectives.
- Seek a carbon neutral manufacturing sector.

The given priorities have different implications:

- 1 directly addresses the future drivers of 'knowledge economy', 'skills gap', 'accelerating change', and indirectly changing workforce and working practices.
- 2 is on 'growth' as opposed to 'development'. What will be the impact of this growth? It could have negative consequences for the environment. The focus on high-value links to innovation. The focus on high-strength areas would need to consider global markets and competitiveness when looking to the long-term.
- 3, 4 and 5 builds on drivers such as 'skills gap', 'knowledge economy' and 'accelerating change'. Skills improvements should be focused on areas that have strong future prospects.

Question 10: This document has set out a range of policy choices under six broad themes: enterprise, innovation, skills, economic activity, quality of life and infrastructure. Are some themes more important than others in improving regional economic performance?

5.1.1 Sustainability and Future Proofing Summary

Each theme, depending on how it is delivered and the sustainability and future proofing principles on which it is crafted, can have positive environmental, social and economic benefits.

- See Policy Choices 1a-6 (inclusive) above.
- Regional economic performance is affected by all of the themes. The effect to which they are sustainable and help achieve a sustainable vision for the West Midlands depends on how they are delivered.
- In sustainability terms, the themes which help sort out the inequitable distribution of wealth and associated health effects are the best. These include skills and quality of life.
- Opportunities for environmental improvements and in particular minimising impacts on environmental quality and climate change is the opportunity to innovate and support new enterprises that are forward thinking and willing to embrace or pilot new technologies which lead to reduction in waste, prudent use of resources (including in particular energy and water) and environmental enhancements (in terms of green space and biodiversity).
- Sustainability and future-proofing is essential for all the themes.

Question 11: If the WMES is to be specific in setting out choices and focusing attention, which of the strategies described in the above framework Tackling Need, Spreading the Success or Investing in Success should it focus on?

5.1.2 Sustainability and Future Proofing Summary

If sustainable development and future proofing principles are applied to each of these, the preferred focus will be able to avoid adverse effects and maximise opportunities for sustainable development.

- Tackling need can have the benefit of helping struggling sectors and communities.

- In sustainable development terms, any intervention strategy should be based on long term, sustainable development principles. Change may be needed and a catalyst for change can be the environmental and social issues and opportunities that face different parts of the region in different ways.
- Spreading and or investing in success should adopt the various best management principles referred to above in terms of the themes and manufacturing challenge in particular (see question 9a and 9b above).
- Investing in success should count the environmental and social costs as well as the economic profits that have been made before blindly pursuing those businesses and sectors that are doing well yet may have sustainability issues (such as the construction industry and manufacturing).

Question 12: How should the WMES address the challenges and opportunities associated with climate change?

5.1.3 Sustainability and Future Proofing Summary

The pursuit of a carbon neutral economy will help reduce the effects contributing to climate change, and realise economic opportunities through improved productivity and innovation in key market areas such as energy. Preparation for climate change is as important as seeking to halt and reduce the effects which contribute to it.

- A range of factors (which are regularly mentioned above) affect climate change. These include in large part generation and consumption of energy from non-renewable sources.
- Other factors are contribution through greenhouse gas emissions which come from various sources: business (end user and generator); transportation (generator); domestic energy consumption (end user) and agriculture (methane emissions can be significant as well as secondary emissions through transport distributing crops).
- The WMES should be aware of the forthcoming effects of climate change which are already affecting the economy and lives of the people in the West Midlands such as hot summers, flooding and unstable weather patterns in general.
- Congestion is a very significant factors in terms of carbon emissions and the West Midlands as a whole needs to reduce transportation by roads and road use in general.
- This addresses many of the key drivers of climate and energy, however unless appropriate relationships are forged with other countries such as China and India, the driver of globalisation will ensure the solutions and market opportunities are realised elsewhere.
- There is the potential of using the focus of a low carbon economy to help drive other themes such as enterprise (new carbon reduction businesses and social enterprises), innovation (new energy and building technologies R&D), skills and economic activity (sustainable construction skills, and intermediate labour markets associated with retro-

fitting housing stock), infrastructure (improved movement of people, goods and ideas through network management), and quality of life ('greener' region).

¹ SEA Directive 2001/42/EC on strategic environmental assessment (SEA) as transposed by the Environmental Assessment of Plans and Programmes Regulations 2004.

¹ DTI guidance to RDAs (2005) on Regional Economic Strategies states (in section 3) that they should be subject to sustainability appraisal.