Non-Technical Summary

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Introduction

This Non-Technical Summary provides a brief overview of the process and outcomes of the Sustainability Appraisal (SA) of the East Sussex and Brighton & Hove Waste and Minerals Core Strategy - Preferred Options which underpin the 'Preferred Strategy'. Detailed findings can be found in the full SA Report which is available on the website at http://consult.eastsussex.gov.uk.

The SA Report of the Preferred Options supports the Core Strategy 'Preferred Strategy' consultation document. Both documents are published for consultation for a 6 week period between 21 October 2009 and 2 December 2009. Statutory consultees, members of the public and other stakeholders therefore have the opportunity to comment on the SA Report alongside the Core Strategy.

Waste and Mineral Core Strategy – Preferred Strategy

The 'Preferred Strategy' is the second stage of consultation on the document called the Waste and Minerals Core Strategy, which will set out the Councils' over-arching strategic and broad spatial planning policies concerning waste management and minerals production in East Sussex and Brighton & Hove to 2026.

The Core Strategy will also propose potential strategic locations for waste management which are areas of particular importance because they are key to ensuring that the Core Strategy can be delivered.

The Core Strategy is the first part of a suite of waste and minerals planning policy documents collectively called the Waste and Minerals Development Framework. This will replace the East Sussex and Brighton & Hove Waste Local Plan and the East Sussex and Brighton & Hove Minerals Local Plan.

The Waste and Minerals Development Framework will be made up of the following Development Plan Documents:

- Waste & Minerals Core Strategy
- Minerals Sites
- Waste Sites

Purpose of a Sustainability Appraisal

Under the Planning and Compulsory Purchase Act 2004 all Local Planning Authorities are required to undertake an SA of Development Plan Documents including those for the management of waste and minerals. The SA must also satisfy the requirements for a Strategic Environmental Assessment (SEA) in accordance with the requirements of European Directive 2001/42/EC. Whilst SEA only assesses the impact of plans on the environment, SA assesses the sustainability of a plan, and therefore includes social and economic issues as well as environmental.

The purpose of an SA is to promote sustainability, to ensure that Development Plan Documents contribute to sustainable development by integrating considerations of social, environmental and economic impacts into the plan preparation process. The SA achieves this by identifying and reporting on the likely effects of a plan and determining the extent that it will contribute to sustainable development. For example it assesses the plans likely impacts on air quality either from developments or from transporting waste and minerals, particularly in sensitive areas such as those close to communities or where poor air quality has already been identified.

The Sustainability Appraisal Process

Government guidance 'Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks' suggests that SEA and SA are carried out using a combined methodology. The five stages of SA are:

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope.
Stage B: Developing and refining the options and assessing effects.
Stage C: Preparing the Sustainability Appraisal Report.
Stage D: Consulting on the preferred options of the Plan and SA Report.
Stage E: Monitoring the significant effects of implementing the Plan.

This period of consultation forms Stage D of this process and the SA report describes the process and findings of Stage A and B.

Sustainability Context

The first part of Stage A of the SA process involved establishing the evidence base for the appraisal. It has involved a review of policies, plans and programmes, and the collection of baseline information.

A review was undertaken of policies, plans and programmes which are relevant to sustainable development in the plan area and to the management of waste and minerals. This set the policy context for the plan. The review identified the key sustainable development policy objectives and relevant targets which have fed into the identification of sustainability issues. The list of documents and key findings is provided in Chapter 2 of the SA report and the full review is available on the website at http://consult.eastsussex.gov.uk.

The collection of baseline information helped to provide a basis for predicting and monitoring effects of the Core Strategy and has also helped in identifying sustainability issues and problems. Key findings are provided in Chapter 2 of the SA report and the full baseline data table and maps are available on the website at http://consult.eastsussex.gov.uk.

Sustainability Issues

The sustainability issues were identified with reference to the baseline information and the policy review. The main issues for sustainable development in the plan area and which are relevant to the management of waste and minerals are summarised in the following table. The full discussion of issues and how the Core Strategy can address them can be found in Chapter 2 of the SA Report.

Table 1.1 Key Sustainability Issues

Issue	Discussion
Health inequalities	Major health inequalities exist within the plan area. High level health indicators show that communities predominantly in the rural north exhibit relatively good health compared to national averages while the coastal towns have neighbourhoods where health is well below the national average.
Waste generation	There has been a continual but small decline in municipal waste generation over the five year period to 2008. In contrast commercial and industrial waste has increased though detailed data on this waste stream and commercial and industrial waste is poor.
Waste recovery and diversion from landfill	Municipal waste going to landfill decreased significantly in 2007/08 to 57% in East Sussex and 59% in Brighton & Hove. The percentage is still high compared with the South East. 60% of all Construction and Demolition

	waste arising in the plan area is sent to landfill rather than being reused or recycled. Data on Construction and Demolition waste and Commercial and Industrial waste is poor. If national and regional targets are to be met more needs to be done to divert waste to more sustainable methods.
Increase marine dredged and secondary and recycled aggregates	Data on the supply and use of secondary and recycled aggregates is incomplete. However, regional trends indicate that these aggregates are becoming an increasing component of supply. Despite its regional significance, landings of marine dredged aggregates in the plan area have remained low with a slight increase in 2007.
Water quality	The quality of water bodies in the plan area is considered to be generally good and improving. With the introduction of the Water Framework Directive, EU member states must ensure that, at a minimum, no deterioration of water quality should take place. Key pressures on the water environment in the plan area include climate change, diffuse pollution, and growth in per capita consumption of water. A significant issue for the Core Strategy is waste water treatment and ensuring that growth in the plan area is catered for without compromising water quality or the integrity of designated habitats.
Increased water consumption	The provision of adequate supplies of water in the South East is an issue which is of particular concern to the plan area. Whilst Southern Water's Brighton & Hove area demonstrated a surplus in supply in 2006/07, the majority of East Sussex remained in deficit. In light of climate change and development pressures it is clear that the water companies will need to both develop new sources of supply and raise awareness of the need to reduce consumption in order to maintain a sustainable supply.
Flood risk	The plan area is subject to flood risk in a number of locations and to varying degrees. Surface water flooding is a predominant risk in many of the urban areas, but this is compounded by fluvial and/or coastal risk in locations such as Lewes, Newhaven, Uckfield, Eastbourne and Rye. It is evident that climate change will introduce greater instability to weather systems, leading to more intense summer rainfall, increased storminess and generally higher rainfall during the winter months, in turn increasing the risk of flooding.
Climate change	Mitigation – man made emissions of Greenhouse Gases (GHG) are driving the pace and severity of climate change. CO_2 represents the greatest issue given the volume emitted, but other GHGs such as methane are more potent and associated with waste management techniques. National policy is geared towards reducing emissions and shifting away from a carbon economy. Waste management and the minerals industry have roles to play in reducing the amount of energy used in managing waste, supporting renewable technologies and promoting waste minimisation. Adaptation – evidence suggests that there is some 50 years of climate change in the pipeline which society will have to adapt to. The extent and severity of this change is difficult to predict, but we can expect warmer summers, wetter winters, greater frequency of extreme weather events, increased storminess and higher sea levels. A key issue for the Core Strategy to adopt is the recognition that past weather patterns are no longer an accurate indicator of future conditions.

Air quality	Poor air quality in the plan area is found in key settlements in the plan area, with Brighton & Hove, Lewes and Hastings containing Air Quality management Areas (AQMAs). The trend is worsening; Brighton & Hove's AQMA has been extended and the prospect of designating an AQMA at Newhaven is currently under investigation. Road transport emissions are the principal cause of poor air quality in the plan area. Consequently, the Core Strategy will need to consider how it minimise adverse effects on air quality.
Transport	The growth in road transport has not been met by the necessary improvements to the highway network. As a result congestion and traffic related air pollution represent the key environmental challenges facing the plan area. Available data on transport growth does not extend as far as detailing waste and minerals related movements. Despite this absence, it is evident that minerals and waste movements are minor in comparison with the total volume of traffic. Nonetheless, the Core Strategy must promote a strategy which reduces the level of road traffic and maximise opportunities for alternative modes wherever practicable.
Quality landscapes and historic environments	The plan area enjoys a varied and high quality natural, built and cultural environment. The number and importance of designations, including Areas of Outstanding Natural Beauty and proposed National Park, demand that appropriate regard is paid to their integrity. Although a great deal of the plan area's cultural heritage is identified as designated features, sites and landscapes, it is evident that a considerable archaeological resource remains undiscovered this potential will need to be taken into account when developing in the plan area.
Sites of important biodiversity and geodiversity	The plan area is notable for its high incidence of biodiversity designations, ranging from international to local significance. Despite this concentration of valuable habitats, (which in the case of SSSIs a large number are improving in condition), certain bird populations are in decline. This gives rise to particular concerns as bird populations provide a valuable indicator of the general health of the biodiversity in the area, and emphasises the need to exploit opportunities to enhance biodiversity wherever possible.
Rising energy consumption	The use of energy is inevitably linked to efforts to mitigate climate change and reduce Greenhouse Gas emissions. Available data indicates that whilst the industrial/commercial consumption of gas has declined, the use of electricity has increased. It is evident that government policy on reducing emissions and promoting energy security will act as a downward pressure on the inefficient use of energy.
Growth	Parts of the plan area will experience significant growth over the lifetime of the South East Plan (2006 – 2026). Some 40 000 dwellings will be constructed over this period with employment development and other infrastructure to support it. The majority of development will take place along the coastal strip, in the form (for example) of strategic development aimed at regenerating ailing local economies such as Hastings and Bexhill, or significant urban extensions in south Wealden. Development of this scale will require the necessary minerals and aggregates during construction, and will generate greater demand for waste management and waste water treatment when in use.

Sustainability Appraisal Framework

The second part of Stage A involved establishing a framework for undertaking the appraisal. This is essentially a set of sustainable development objectives against which the Core Strategy could be assessed. The sustainability issues have informed the development of the framework.

The framework consists of a number of objectives and decision making criteria that reflect relevant sustainable development policy issues. The objectives were first identified at the scoping phase and were revised in response to consultation. The full SA framework including the decision making criteria can be found in Chapter 3 of the SA report.

The revised Sustainability Appraisal objectives are:

1. To avoid negative effects and enhance, where possible, positive effects on health.
2. To protect the amenity of residents and neighbouring land uses.
3. To improve equality and access to sustainable waste management.
4. To minimise waste generation and disposal to land.
5. To ensure the sustainable use of local mineral resources.
6. To maintain and improve water quality.
7. To seek the protection of and sustainable use of water resources.
8. To reduce risk and impact of flooding.
9. To limit the causes of and adapt to climate change.
10. To protect air quality and reduce air pollution.
11. To reduce adverse impacts of transporting waste and minerals on the environment.
12. To conserve and enhance important soil functions and types.
13. To protect, conserve and enhance East Sussex and Brighton & Hove's countryside and historic and built environment.
14. To protect, conserve and where appropriate enhance East Sussex and Brighton & Hove's biodiversity and geodiversity.
15. To increase energy efficiency and the proportion of energy generated from renewable sources.
16. To contribute to the growth of a sustainable and diversified economy.
17. To provide employment opportunities and develop and maintain a skilled workforce.

The Core Strategy has developed a number of Spatial Objectives which set the framework for the plan. Because of the clear sequential process adopted, each objective can be closely linked to a Core Strategy policy and delivery strategy. The Spatial Objectives have been tested against the SA Objectives to ensure compatibility with sustainable development objectives. Both sets of objectives are broadly compatible therefore, the plan objectives accord and support sustainable development principles. However, in the implementation of the Spatial Objectives possible conflicts may occur but this will be dependent on the type, scale, location of facilities and pollution control regimes applied and enforced.

Outcome of Options Appraisal

The SA process centres on the consideration of different reasonable plan options. The key purpose is to compare the relative sustainability of each option, highlighting the differences in order to inform the process of identifying preferred options. The options are tested against the SA framework to determine their potential to give rise to significant effects and therefore highlight the sustainability implications of each. The SA includes recommendations for improvement and indicates where further information is required in order to better assess impacts and reduce uncertainties.

The Council consulted on various options in the Waste and Minerals Core Strategy Issues and Options document in February 2008, which included SA commentaries highlighting the main impacts, key issues and uncertainties. The set of options were reviewed and refined in response to consultation comments and new information. These were then appraised and the findings were

reported to the Waste and Minerals Planning Policy Team in the Sustainability Appraisal of Options September 2008. At the time of the appraisal there were no options available for wastewater management or for hazardous waste. Options for wastewater management have since been assessed as part of the wastewater management study undertaken by Scott Wilson which used the same SA framework.

A summary of the key conclusions and recommendations from the options appraisal is set out below. The whole report has been incorporated into the SA Report of the Preferred Options, available at http://consult.eastsussex.gov.uk, with the full conclusions and recommendations in Chapter 6 and the appraisal tables in Appendix ??.

Issue: W1 – Waste Prevention: The amount of waste produced by individuals and businesses must be reduced.

Conclusions

- The impact on many of the SA objectives will depend on how successful options are in reducing waste and how any reduction is managed in terms of its effect on the quantity, type and location of additional facilities.
- All options perform positively overall as they all aim to reduce waste. Depending on implementation, this has the potential to reduce greenhouse gas emissions and therefore limit the causes of climate change, to achieve more efficient use of resources and to reduce consumption leading to energy savings.
- It is uncertain though what added benefit some of the options would have as they duplicate what already exists in regional and national policy. The options could be developed into policies which provide a local dimension or provide more information on implementation to avoid duplication and to add value.
- Differences between options will largely be dependent on further research into the ability to deliver the options, including the resources and funding available. Also further clarification of certain aspects of the options will help to define impacts and highlight differences.

Recommendations, mitigation

- Further investigation will be required to test the options however a combination of the options may produce the best strategy. For example targeting the largest waste stream and targeting the specific geographic areas, which both performed well, could be combined to deliver the best use of resources and the highest reductions in overall waste arisings.
- Options could be improved by local context and being locally specific. Also more detail on how options will be implemented and who will be involved in its delivery would provide more certainty.

Issue: W2 – We need to understand how much additional waste recovery capacity is needed.

Conclusions

- The options consider the strategic issue: the degree of flexibility to use in planning for additional waste management infrastructure. The options therefore do not impact on SA objectives which relate more to specific locations and how the plan is implemented such as water quality, flood risk and biodiversity.
- All options perform positively towards reducing disposal to land and increasing the use of secondary and recycled aggregates as they all will provide additional waste recovery facilities.
- Planning for low waste growth performs the best in terms of sustainability due to the low level of additional waste management infrastructure required under this option. It could also have indirect positive effects as the plan would be seen to be planning for high waste minimisation and therefore would encourage initiatives to achieve this.

- It however is the most risky of the options in terms of delivery, if higher waste growth occurs than envisaged then there is a risk that there may not be enough capacity to deal with the increase. It is uncertain how this capacity shortfall would be met, it could potentially lead to waste being managed outside of the plan area using a variety of methods.

Recommendations, mitigation:
- In order to reduce the risk associated with option W2c (low waste growth) it is recommended that as much certainty is built into the forecast including regular monitoring to take account of changing trends.
- The significance of the impact on many of the objectives would depend on the levels of additional infrastructure envisaged. To clarify this uncertainty options should give more of an indication as to the levels of waste growth envisaged.

Issue: W3 – Meeting need for new waste management capacity in environmentally acceptable ways.

Conclusions
- The options consider which targets to set for the overall recovery of waste and also the proportions for recycling and composting, options consider this by meeting either national or regional targets.
- All options will be dependent on other factors to enable targets to be delivered.
- All options perform positively against objectives to reduce disposal to land, to limit the causes of climate change and to support a sustainable economy because they all aim to recover more waste.
- Meeting regional targets has the potential to be the most positive as it aims to meet higher targets. However it is recognised that the regional targets are very challenging so there is uncertainty that they are realistic and deliverable.
- Taking into account local factors would probably to the most realistic option, and could lead to the most accurate prediction of waste management requirements.

Recommendations, mitigation:
- Further investigation and information will be required to ascertain how realistic and deliverable the targets are particularly some of the regional targets.

Issue: W4 – Options for strategic locations for waste management facilities other than landfill.

Conclusions
- Regulatory processes will ensure that all facilities are appropriate and do not present a risk to environment or health. However some residual environmental impacts will remain though these will be minor in nature.
- Locating away from settlements will reduce the level of community interaction, disruption, and potential impacts on health pathways. Adverse impacts would potentially affect less people.
- However facilities linked to towns and settlements where the majority of waste is generated perform more positively on issues of access, transport, energy efficiency and the economy.
- Accessibility has the potential to be increased with having more facilities however this will depend on how facilities are dispersed across the plan area. The full potential though, is limited by all options needing to avoid Areas of Outstanding Natural Beauty. This will particularly reduce accessibility in the northern part of the plan area.
- There is a slight risk with certain options that not enough sites will be identified. It will depend on the site identification work and the precise size thresholds and operational requirements of facilities to decide whether options are realistic.
- Specific impacts particularly the differentiation between the impacts of small and larger facilities will depend on clarification of the size thresholds and the related technology types.

Recommendations, mitigation

- Reducing and mitigating adverse impacts on many of the SA objectives will depend on the broad policy in the Core Strategy which will make sure that the impact of developments on the environment, communities and health are acceptable and that appropriate environmental and community benefits will be sought. Recommendations for this policy are covered under W5.

Issue: W5 – Identifying the right types of sites/areas for different types of waste management facility and minimising the impacts of facilities on people and the environment.

Conclusions

- The option which includes any greenfield site which is considered suitable locally for waste has the most uncertainty and the greatest potential for negative impacts. The full impact will depend on the specific locations, however, there is greater certainty that other options will perform better with regard to accessibility, transport and the economy.
- Focusing on areas of growth and urban extensions potentially performs best overall even though it may include greenfield sites. Potentially these sites would be where the greatest amount of additional waste will be generated both during construction and once areas are occupied. There is also potential for it to integrate activities, reduce the transportation of waste and increase potential for energy generation.
- Focusing on previously development land only within settlements also performs well in terms of access, integrating activities and transportation. However, there is risk that not enough sites will come forward or sites may be restricted in scale, size and capacity, as there is a lack of previously developed land. It will depend on site identification work to decide whether this is a realistic and deliverable option.
- Focusing also on previously development land outside of settlements may provide enough sites and avoid greenfield allocations. However, these sites may not perform so well on accessibility, integration of activities and increasing potential for energy generation, though impacts would depend on the specific locations.

Recommendations, mitigation:

- Reducing and mitigating adverse impacts on many of the SA objectives will depend on the broad policy in the Core Strategy which will make sure that the impact of developments on the environment, communities and health are acceptable and that appropriate environmental and community benefits will be sought.
- It is therefore necessary for this policy to be as robust as possible and cover all areas of the environment. It is recommended that impacts on the environment, communities and health also includes impacts to water, air and soil quality and the historical and built environment.
- The broad policy should promote increases in energy efficiency low/zero carbon technology and sustainable building design.
- It should also provide details of how health will be addressed. In particular it is recommended that it includes the requirement for a Health Impact Assessment on strategic sites at application stage. This would make sure that wider community concerns and perceptions are addressed beyond those covered by regulatory bodies.

Issue: W6 – Strategic Options for Strategic Locations for Land Disposal Sites.

Conclusions

- Locating sites without consideration of environmental constraints and proximity to communities has the greatest potential for negative impacts. Though regulatory bodies will ensure sites operate at acceptable limits minor impacts may remain. Impacts on many SA objectives would depend on specific locations. However, there is a high probability that there will be negative impacts on the countryside, historic environment and biodiversity.
- Locating away from communities and valued environments would provide a greater degree of environmental, community and health protection above what is required through the regulatory

process. Adverse impacts would potentially affect less people. Minor impacts would be dependent on the specific locations and the proximity to where waste is generated or treated.

- Focusing on existing waste sites and mineral voids may have more potential to avoid impacts on environments which are not categorised as 'valued' such as agricultural land, rare soil types, and local designations. Site identification work will ascertain whether there are enough sites to make this a realistic option.
- Prioritising sites close to waste arisings, has greater potential to achieve positive impacts on accessibility, transport, air quality and the economy. It has potential to support waste collection authorities in reducing the distance waste is transported. The reduction in waste transportation is also likely to reduce adverse impacts on air quality and climate change.
- Prioritising locations close to the borders of the plan area is likely to lead to sites away from where waste in the plan area is mainly generated. This could, depending on the specific site, have negative impacts on accessibility, transport, air quality, climate change and the economy.

Recommendations, mitigation:

- Regulatory bodies such as the Environment Agency and Environmental Health will operate to ensure facilities do not present a risk to the environment or health.
- Appropriate avoidance of 'valued environments' should be developed as part of the site selection process, and should take into account the findings from detailed studies such as Habitats Regulation Assessment and the Strategic Flood Risk Assessment. It will be necessary to vary the distance depending on the specific designation or constraint and the areas geology.

Issue: M1 – The need to adopt a more sustainable, efficient, hierarchical approach to managing and using minerals resources where practicable in the Plan area.

Conclusions

- All options have the potential to contribute positively to diverting (mineral) waste away from disposal to land, and to encourage more sustainable use of mineral resources. This has the potential to reduce energy use with benefits to climate change.
- Proactive options which aim to raise awareness, set targets and restrict production of primary materials, depending on implementation, have greater potential and certainty in achieving a more sustainable use of mineral resources than the option relying on market forces and other legislation.
- None of the options are likely to have negative impacts on the sustainability objectives, although there is a risk with the option relying on markets that only minimum legislative requirements would be delivered unless economics drive businesses to go further than that.

Recommendations, mitigation:

- For the best performance in terms of sustainability the options should aim to tackle behaviour in terms of production and use of minerals. Currently options either address one or the other, combining them would be more effective in both reducing use of primary materials coupled with encouraging use of alternatives.

Issue: M2 – Mineral resources, wharf and rail facilities need to be safeguarded.

Conclusions

- Devising a safeguarding strategy which covers all existing and potential sites is the most comprehensive and the most flexible as it deals with sites individually, so the specific circumstances can be taken into account. It may lead to sites being freed up for other uses as inactive sites will be assessed for viability. It is unclear, though, how feasible, in terms of staff resources, it is to implement.
- The option focusing on viable sites relies on significant input from the minerals industry further investigation may be needed to determine whether this is achievable in the context of commercial sensitivity of such data.

- The option relying on consultation areas contains an element of risk as it is dependent on the district planning authorities notifying East Sussex County Council on planning applications and also there being sufficient background information for decision making when consulted.

Recommendations, mitigation:
- It should be clarified whether protection of wharves is site-specific or on a capacity-basis, which would be more flexible to meet changing economic circumstances.

Issue: M3 – Timely supply of minerals to meet national and regional and local demand within the limits of the stringent environmental constraints present in the plan area.

Issue M3a: Contribute to local, regional and national aggregates provision.

Conclusions
- The option based on increasing secondary/recycled aggregates, is generally more sustainable than other options which rely on primary sources either from land or sea.
- Generally the option focusing on marine-dredged sources, is likely to have the least impacts on people and environments within East Sussex and Brighton & Hove eg amenity, water sources, mineral reserves, as the impacts of extraction would be largely displaced to outside of the plan area although impacts to the marine environment should be considered. There is however a risk with delivery as it is reliant on factors beyond the plans control. This includes the granting of dredging licences and other development pressures in ports which could limit wharf capacity.

Recommendations, mitigation:
- For the most sustainable use of mineral resources, all options should include increasing the use of secondary/recycled aggregates.
- This may however outstrip demand therefore the most sustainable approach may be to include the investigation of increasing secondary/recycled aggregates supply as part of all options.

*Issue: M3b – Meeting national requirements and regional development needs for clay***.**

Conclusions
- Promoting maximum recycling and stockpiling waste materials is the most sustainable option. It is the most proactive in ensuring the sustainable use of mineral resources. This would also contribute to minimising waste with knock on benefits on energy consumption and climate change. It also has the greatest potential to avoid designated environments as there is more flexibility with materials can be stockpiled than the extraction of primary resources.
- Other options are less sustainable as they aim to use only primary resources. This would have negative impacts on SA objectives on mineral resources, climate change and energy efficiency. The options, depending on specific site locations, also have the potential for adverse impacts on the countryside, historic and built environment, biodiversity and geodiversity.
- The option to identify further reserves at existing sites would have benefits over other options as it would reduce transportation which would potentially benefit the environment and communities.
- Of the two options which deal with meeting the need for flood defences. The option which will identify alternative sources of material has more certainty to meet demand and to safeguard clay reserves for other uses; both have the potential to benefit the economy. There is however uncertainty over what alternative sources of materials would be. If they include secondary/recycled materials there would be benefits in terms of climate change and energy efficiency. If it includes other primary resources there is potential for adverse impacts on the environment but would be dependent on specific sites.

Recommendations, mitigation:
- Clarification is required on certain aspects of options to better assess impacts.

Issue: M3c Maintain supplies to and from British Gypsum works.

Conclusions

- Maintaining reserves of at least 20 years would meet policy requirements for maintaining reserves to meet current production rates. It would though meet demand solely by primary resources and it is unclear how demand would be met if rates increased.
- Investigating availability of alternatives and other sources of gypsum has potential to lead to more efficient use of resources. It would though involve greater transportation of minerals potentially increasing adverse impact to climate change and air quality. However, it is anticipated that materials would continue to mainly be transported by sustainable means, rail and water, which would reduce any impact, details though, of the exact source location and therefore transport alternatives are not known.

Recommendations, mitigation:

- Clarification is required on certain aspects of options to better assess impacts.

Issue: M3d – The need to determine a policy approach for oil and gas extraction and development.

Conclusions

- In supporting the exploration and exploitation of hydrocarbon reserves in the plan area all options do not assist in the mitigation of, or adaptation to climate change, nor do they promote the use of low carbon energy sources.
- There is potential for all options to have adverse impacts on the countryside, historic and built environment, biodiversity and geodiversity. The extent and potential of the impact depends on the area exploration and development will be permitted. Therefore the option which does not support extraction and development on international or national designations provides the most protection. Though other legislation and assessments would protect and limit development in certain designated areas which are included under other options.
- All options could also benefit the local economy in the event of viable reserves being discovered. The less constrained such activities are the more the economy could benefit.

Issue: M3e – Provision for local chalk supply.

Conclusions

- Encouraging the use of substitute material and stock piling existing chalk to meet needs is the most sustainable option as it is assumed that 'substitute materials' would only include secondary/recycled aggregates and waste chalk but not other primary materials. This would contribute to minimising waste and ensure efficient use of resources. It would also benefit energy consumption and climate change. Further investigation into supplies and demands for chalk will show whether the option has the potential to meet needs.
- Meeting needs from imports or alternative materials would have similar potential. However, it includes imports of raw materials which would reduce the overall sustainability. It may though have greater potential to meet demand by relying on both alternative materials and primary resources.
- Using imports or alternative materials has potential for adverse impacts on other SA objectives as they would involve the stockpiling and greater transportation. Impacts though at this stage are unknown and would depend on specific site locations and the point of origin of imports and alternative/substitute materials. Impacts would also be mitigated to a certain extent by other issues and options in the Core Strategy, by regulatory bodies and other legislation and assessments.
- The option to safeguard high quality chalk resources for appropriate uses would lead to more efficient use of resources. There is uncertainty though how other requirements e.g. constructional fill, would be met. The option could also lead to the extraction of chalk within the plan area for appropriate uses. This would have a high potential for adverse impacts on the countryside as almost all reserves are within an Area of Outstanding Natural Beauty. There

could also be potential impacts on other SA objectives depending on the site's characteristics, location and how it is operated.

Recommendations, mitigation:

- The option to safeguard high quality resources does not meet all demands for chalk it should therefore be used in conjunction with the other options.
- Clarification is required on certain aspects of options to better assess impacts.

Issue: M4 Protection of designated areas and reducing the environmental impact of minerals development.

Conclusions

- The option which does not support locating minerals production sites in international and national designated areas and in close proximity to settlements provides the most certain protection for the environment and for communities. However, it does not consider environmental impacts beyond these designations and amenity or sensitive land uses beyond those within settlements. It would need to rely on other options/policies in the Core Strategy and regulatory bodies to ensure impacts are acceptable. The option is also very rigid and may prove impracticable when considering mineral location or strategic and logistic requirements.
- Allowing production sites in any location where there is an 'overriding need' has more flexibility. This would ensure that sufficient mineral provision is provided. However, it is uncertain what the impacts would be, mitigation measures applied and what is meant by 'overriding need'.
- Establishing stringent development criteria to assess environmental and health impacts has the greatest flexibility and, depending on implementation, the greater potential to mitigate adverse impacts and enable the maximum benefits to be achieved. It is, however, reliant on the development of appropriate assessment criteria and mitigation measures to be enforced.
- A combination of allowing sites where there is overriding need and establishing stringent development criteria may provide the best degree of flexibility while protecting important international and national designations.
- Options seeking to achieve appropriate restoration and after uses of the sites are proactive and aim to manage resources more efficiently, with potential to achieve benefits to the countryside, biodiversity, health and amenity. The nature and extent of impacts will depend on implementation and the specific site, restoration and after use.

Recommendations, mitigation:

- The option to establish stringent development criteria only indicates that there will be an assessment of impacts. To ensure that actions to mitigate adverse impacts are carried out following assessments it is recommended that the option wording is changed from 'assess' to 'mitigate'. Criteria should include water, air and soil quality and the historical environment. Clarification is required on when it would be applied.
- Consideration should be made to address health impacts beyond regulatory requirements, to further reduce potential residual environmental impacts which effect health (e.g. air, noise, traffic). This could be done through a Health Management Plan.
- Clarification is required on certain aspects of options to better assess impacts.
- Waste options indicate that there will be a broad policy which will make sure that the impact of developments on the environment, communities and health are acceptable and that appropriate environmental and community benefits will be sought. There should either be a similar policy for minerals or a joint policy with specific waste/minerals criteria where appropriate.
- The issue should only refer to mineral extraction and not secondary and recycled aggregate sites. Extraction sites are limited to where minerals are located therefore environmental allowances may be appropriate however, secondary/recycled sites are more flexible. Policies should be developed which recognise these differences. The plan should also consider if appropriate allowances should be made to sites which integrate activities leading to benefits associated with reducing the transportation of minerals.

- Consider combining site restoration options as they consider different types of sites, new and existing.

Issue: M5 Sustainable transport of minerals into and within the Plan area.

Conclusions
- Both options have potential to provide benefits by reducing adverse impacts associated with the transportation of minerals, which include impacts to health and amenity. They are though, fairly limited as there are few opportunities for transporting materials by rail and water in the plan area.
- The option which focuses on existing operations and encouraging transport by more sustainable means, rail and water is fairly limited. Potential on existing sites is probably very limited and it is uncertain how the option would be delivered or enforced.
- The option which also includes encouraging and safeguarding developments which seek to reduce the level of transportation presents greater opportunity and deliverability as it includes new sites and extensions which the plan has more influence on. It is also assumed that it would include encouraging the co-location of activities and locations near to markets.
- Potential benefits to health and amenity will be dependant on location, changes in community exposure and relative sensitivity.

Recommendations, mitigation:
- Consider combining options as they consider different types of sites, new and existing.
- Clarify that reducing transportation would include co-location of activities, such as processing on extraction sites, and close proximity to the market.

Outcome of Preferred Options Appraisal

In order to document the preferred options selection process for the Core Strategy a proforma was designed and used to record reasoning for selecting each of the preferred options. The questions in the proforma follow the various tests of soundness. The findings from the evidence base including the Sustainability Appraisal of Options were used to help answer the questions in the proforma and to test the options. The responses to the questions in the proforma then helped to identify a preferred option for each issue. More information on the selection process can be found in the Core Strategy 'Preferred Strategy'.

These preferred options were then assessed in order to suggest ways to improve the sustainability of the Core Strategy and where necessary mitigate likely significant adverse effects. The findings were reported to the Waste and Minerals Planning Policy Team in the Sustainability Appraisal of Preferred Options July 2009. At the time of the appraisal there were no preferred options available for wastewater management or for hazardous waste. Subsequently a separate SA of wastewater management options has been completed. Future appraisals of the Core Strategy will incorporate an assessment of the Preferred Strategy for these issues.

A summary of the key conclusions and recommendations from the preferred options appraisal is set out below. All the appraisal findings have been incorporated into the SA Report of the Preferred Options, available at http://consult.eastsussex.gov.uk, with the full conclusions and recommendations in Chapter 7 and the appraisal tables in Appendix ??.

Issue: W1 – Waste Prevention: The amount of waste produced by individuals and businesses must be reduced.

Preferred Option:
W1h – The Core Strategy should adopt a pro-active approach on waste minimisation. It should set objectives and take the lead on working with delivery partners to implement initiatives to minimise waste production, with an overall policy aim of reducing the amount of waste that needs to be managed and disposed of to land.

Conclusions
- The preferred option recognises that although it has limited influence, it is appropriate for the Core Strategy to include a policy on waste minimisation.
- The plan has limited direct influence on waste minimisation as it has no direct control over measures to reduce waste or to change behaviour. It can, however, support and influence others to undertake initiatives which have the potential to reduce waste. Therefore there is the potential for positive impacts on waste generation, climate change, transportation and the economy.
- Overall there are no negative or potential negative impacts on SA objectives.

Recommendations, mitigation:
- A policy on waste minimisation is necessary given the need to move waste management up the waste hierarchy. Nonetheless, there are limitations to such a policy given that it requires other agencies and a change in behaviour to achieve its objective. Very little can be done to overcome the uncertainty identified in the appraisal, but the policy has a key role as a statement of county council policy and as such lends considerable support to a variety of initiatives aimed at reducing the amount of waste generated.

W2 – We need to understand how much additional waste recovery and land disposal capacity is needed.

Preferred Option:
W2b: The assumptions that are used to forecast how much capacity will be required in future should be based on the principle of planning for <u>some flexibility</u>. This would include medium waste growth and impact of minimisation and the need for less additional waste recovery infrastructure than option W2a.

Conclusions
- The option performs positively towards reducing disposal to land as it will provide additional waste recovery facilities. Planning for some flexibility and medium growth would avoid the risk of under and over provision; both could undermine movement up the waste hierarchy.
- The option may be the most accurate forecast of waste generation and the most deliverable in the plan area. This would have positive impacts on the economy and may reduce total waste miles with potential benefits to climate change and air quality.
- The option would involve additional facilities and though initial results of the site identification study show there may be sufficient land available there is the risk of impacts on many SA objectives. Impacts though are uncertain as they would depend on the amount, scale and location of the additional waste management infrastructure and the site selection process.

Recommendations, mitigation:
- Regular monitoring will test whether the option is the most accurate forecast and will enable, where necessary and possible, changes to be made. However it is appreciated that the time lag between allocating a site and a site being operational may reduce the effectiveness of this approach.
- The potential for adverse impacts on SA objectives should be mitigated by the broad policy to protect the environment and communities and the site selection process.
- The maximum benefit to climate change, air quality, transport and access will depend on the distribution of facilities and their location close to where waste is generated.

W3 – Need to manage waste in accordance with the Waste Hierarchy.

Preferred Option:
W3b – Meeting national targets, but taking account of local factors to determine the most likely balance of requirements between waste management types and aiming towards extending national targets to meet regional targets where practicable.

Conclusions
- The option will be dependent on the timely delivery of facilities to enable targets to be delivered.
- The option performs positively to waste, minerals, climate change, energy and economy objectives, because it aims to meet most of the regional targets which would, if achieved, substantially increase waste recovery.
- Even though the municipal waste target will be below the regional target, if met, it would still increase recycling. As the target takes into account local factors, it is probably realistic and could lead to the most accurate prediction of waste management requirements.
- The option would involve additional facilities and therefore there is potential for impacts on SA objectives such as health, amenity, accessibility, air quality, transport, the countryside, historic environment and biodiversity. Impacts though are uncertain as they would depend on the distribution, scale and specific location of the additional waste management infrastructure and the site selection process.

Recommendations, mitigation:
- The potential for adverse impacts on SA objectives should be mitigated by the broad policy to protect the environment and communities and by the site selection process.
- The maximum benefit to climate change, air quality, transport and access will depend on the distribution of facilities and their location close to where waste is generated.

W4 - The need for an appropriate distribution and scale of waste recovery facilities.

Preferred Option:
W4e – facilities of varying sizes in locations with good access to the strategic road network. If necessary, specific, identified sites in Areas of Outstanding Natural Beauty/South Downs National Park could be allowed as contingency.

Conclusions
- The option should provide sufficient flexibility to the waste industry to deliver a wide range of recovery facilities and to accommodate changes in waste management practices/technologies. This would have positive impacts on waste, minerals, climate change and economy objectives.
- The focus on locations close to where the majority of waste is generated has the potential for positive impacts on accessibility and reducing the transportation of waste. There would also be more potential to generate and use energy from waste (combined heat and power) and, to link with related activities, new waste businesses and potential markets.
- However, by locations being focused on settlements there is a risk of negative impacts on amenity and air quality. Any potential minor impacts on health would be mitigated by pollution prevention and control regimes implemented by the Environment Agency.
- The relative unconstrained nature of this option may lead to adverse impacts on environmental objectives. Impacts would depend on the environmental criteria employed in the site selection process, and the application of a robust policy governing environmental impacts and mitigation. Similarly, potential enhancements should be secured by the proposed policy on community and environmental benefits.
- The recommendations of the Strategic Flood Risk Assessment and the objectives of the draft Southern River Basin Management Plan should be used to inform the site identification and selection process ensuring that adverse impacts on water quality and flooding is avoided.

Recommendations, mitigation:

- The Core Strategy generally needs to provide certainty over how sensitive areas – communities (including impacts to health and amenity), designated environmental and historical sites, water bodies and flood risk areas - are going to be protected and how unavoidable impacts are going to be mitigated. This should be covered by policies under issue W5 and the proposed broad policy on environmental and community protection.
- However, policy under this issue should specify what criteria will be required for locations developed within the Areas of Outstanding National Beauty to ensure facilities are appropriate to the surrounding character and serve the local community, distinguishing between the High Weald and the Sussex Downs (proposed South Downs National Park).
- The Core Strategy should ensure that the full potential of the option will be achieved. It should support the development of sites which:
    - are appropriate for and serve the surrounding area;
    - reduce the transportation of waste including integrating activities on site;
    - have potential to be linked with other related businesses;
    - utilise the available and practical opportunities for modal shift (from road to rail and water); and
    - maximise energy efficiency opportunities.

W5 - Identifying the right type of sites/areas for different types of waste management facility and minimising the impacts of facilities on people and the environment: Options for strategic locations for waste management facilities other than disposal to land.

Preferred Option:
W5e – on brownfield/previously developed land or land adjoining (including waste management sites), and in industrial areas, and on greenfield sites where they are part of identified growth areas, masterplan areas, urban extensions, or minerals sites.

Conclusions

- The option provides the potential for a variety of locations to be identified, giving sufficient flexibility to the waste industry to deliver a wide range of recovery facilities.
- It is anticipated that a more detailed assessment of impacts will be undertaken as part of the site selection process. Furthermore, it is assumed that potential adverse and uncertain impacts on community and environmental objectives will be addressed via a combination of pollution licensing regimes and environmental/community impact policies in the Core Strategy.

Recommendations, mitigation:

- Policy under this issue should make reference to the proposed broad policies on environmental and community protection and appropriate environmental and community benefits. This should not repeat national or regional policy but should show how higher level policy will be applied at local level and provide local distinctiveness.
- Given the role of the site identification process and polices governing environmental impacts it is necessary for site criteria and policies to be robust covering all aspects of the environment.
- The Core Strategy should promote increases in energy efficiency low/zero carbon technology and sustainable building design.
- The broad policy should provide details of how health and amenity issues will be addressed. In particular it is recommended that it includes the requirement for a Health Impact Assessment on strategic sites at application stage.

W6 – The need for an appropriate distribution of Land Disposal facilities for residual waste: Options for Strategic Locations for Land Disposal Sites.

Preferred Option:

- *Land disposal capacity will be provided at existing suitable mineral voids (Ashdown Brickworks).*

- *Should there be a demonstrable need for additional land disposal capacity, this would be provided at either alternative suitable mineral voids or at landraising facilities. Such facilities would need to demonstrate that they are suitable locations in terms of environmental acceptability, minimising effects on communities to an acceptable degree, and have good access to the main areas of waste arisings.*
- *There will be no provision for waste from London.*

Conclusions

- The option goes a long way to meet demand for land disposal in the plan area. However, there is still uncertainty over whether the option can be delivered as all potential sites have issues which need to be resolved.
- Delay in use of Ashdown Brickworks may lead to waste having to be exported out of the plan area, increasing transportation and potential for associated impacts on the environment and communities. There are no specific alternative landraise proposals and if this uncertainty were to remain it could lead to minor impacts on health due to anxiety over the perceived health risks associated with land disposal sites.
- Ashdown Brickworks is close to a main area of waste arisings so has potential to reduce transportation with benefits to climate change. However, there are access issues, particularly in the short term before the Hastings to Bexhill Link Road is completed, which could have adverse impacts on amenity and air quality. Access, though, will improve once the Link Road is built.
- There are environmental issues at Ashdown Brickworks. These should be resolved through technical solutions and appropriate mitigation and/or compensation measures to off set any loss of habitat.
- Impact from additional landraise sites is generally uncertain due to a lack of detail on specific locations. The requirement for good access to waste arisings and to demonstrate environmental and community acceptability should reduce impacts. Detailed impacts will depend on how criteria are considered through the site selection process. Issues should also be addressed via a combination of pollution licensing regimes and environmental/community impact policies in the Core Strategy.
- The ultimate restoration of any of the mineral voids, including Ashdown Brickworks, has the potential to achieve enhancements and benefits to biodiversity, the countryside, amenity and climate change.

Recommendations, mitigation:

- Potential adverse impacts should be covered by the proposed broad policy on environmental and community protection. Potential benefits again should be covered by joint policies on securing benefits and achieving appropriate restoration of mineral voids covered under Issue M4.
- Reducing the perceived health risks of land disposal sites needs to be addressed through the Core Strategy and public consultation documents and events associated with the Core Strategy have an important role to play in this.

M1: The need to adopt a sustainable, efficient, hierarchical approach to managing and using minerals resources where practicable in the plan area.

Preferred Option:
M1(b) Promote, where practicable, secondary and recycled alternatives in preference to primary materials allow production of primary materials only where the need cannot be met in a more sustainable way.

Conclusions

- The option has the potential to achieve more sustainable use of mineral resources and to contribute positively to diverting (mineral) waste away from disposal to land.

- It also has the potential to reduce energy use as generally the process of recycling uses less energy than extracting and processing new primary materials. This would have benefits to climate change.
- More efficient use of mineral resources is also likely to be generally positive for economic growth.

Recommendations, mitigation:
- For the best performance in terms of sustainability, this option should aim to tackle behaviour in terms of production and use of minerals.
- The overall plan would be more sustainable if a method of implementation were incorporated into the Preferred Strategy which could include raising awareness, setting targets and working with operators.
- Clarification will be needed on the circumstances required which will allow production of primary materials.

M2: Mineral resources, wharf and rail facilities need to be safeguarded.

Preferred Option:
M2(e)
i. Using the British Geological Survey (BGS) safeguarding methodology to identify Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs) to ensure sufficient land-won mineral resource within the plan period.
ii. Safeguarding wharves and railheads to ensure continued capacity in strategic locations.

Conclusions
- The option has the potential to manage resources efficiently and ensure sufficient supplies of minerals to meet future economic growth.
- Protection of wharves capacity rather than just sites will ensure flexibility with competing proposals for other (non mineral) uses. This will enable minerals to continue to be imported while allowing regeneration of port areas specifically at Newhaven and Shoreham.
- The option will protect the potentially limited opportunities within the plan area for modal shift which if implemented would have positive impacts on climate change.
- There is unlikely to be any significant impact from safeguarding on many SA objectives as there would not necessarily be any change from the current land use. There may be potential impacts should the site later be used for extraction of minerals but this would be considered at that time.

M3: Timely supply of minerals to meet national and regional and local demand within the limits of the stringent environmental constraints present in the Plan area.
M3a: Contribute to local, regional and national aggregates provision.

Preferred Option:
M3a (v) Meet regional and local aggregate demand through existing land won aggregate permissions, marine landings at existing wharf facilities and through secondary and recycled aggregates.

Conclusions
- The option has positive impacts on many of the objectives because it will meet national, regional and local demand by not increasing land won allocations and by including an increase in the use of secondary and recycled aggregates. This would lead to efficient management of resources, reduction in waste disposal and protection of the countryside, historic and built environment and biodiversity and geodiversity. It will meet economic need and is likely to be deliverable because it takes into account the assessment of local supply and demand.
- There may be possible adverse impacts from an increase in secondary and recycled aggregates however additional processing is generally likely to be done at demolition sites and therefore impacts would be small scale and temporary.

- An increase in marine landings may add to poor air quality in areas where it has already been identified or is being investigated.

Recommendations, mitigation:
- Impacts to air quality at Shoreham and Newhaven need to be considered. Alternatives to road transport should be supported and appropriate routeing away from sensitive areas should be encouraged.

M3b: Meeting national requirements and regional development needs for Clay

Preferred Option:
Identify extensions or further reserves within the site for brickworks with less than 25 years remaining. However if it is not possible for sufficient reserves to be identified due to environmental or resources reasons, clay imports may be permitted where essential to sustain production of the brickworks.

Only allow clay extraction for flood defences from existing reserves where an exceptional need has been demonstrated to outweigh loss of reserves and any ensuing environmental impact. If clay from existing permitted reserves is not available or its extraction would not be acceptable, consider proposals to extract clay or other materials from new sites for flood defences on a case by case basis and in accordance with other plan policies.

Conclusions
- The option performs positively towards the economy as it identifies alternative ways which will ensure brick production continues at sites in the plan area. It also aims to support the construction of flood defences by providing materials through a variety of ways, which would help in adapting to climate change and could allow economic growth and regeneration to be achieved in areas at risk of flooding.
- The option would though meet demand mainly from primary resources. Though there is little evidence to suggest that an increase in recycled secondary alternatives would be deliverable the option does not acknowledge or encourage maintaining of existing levels of recycling.
- There is potential for adverse impacts on many of the objectives as it could lead to an extraction of new reserves either for brickworks or for flood defences. Impact would however be dependent on specific locations and site characteristics.
- The option could also lead to an increase in transportation which could have adverse impacts on air quality, climate change, health and amenity.

Recommendations, mitigation:
- Though the issue of recycling generally is covered by Issue M1, policies under this issue should encourage the maintaining of maximum recycling on site.
- Policies under Issue M4 on environmental protection should provide a certain level of mitigation and avoidance of potential adverse impacts. The joint policy on community and environmental protection will also provide the opportunity to address impacts.
- Opportunities to reduce transportation should be encouraged by selecting sites close to demand. Also the potential impact on communities of additional transportation should be appropriately considered and mitigated.

M3c: Maintain supplies to and from British Gypsum works

Preferred Option:
M3c (i&ii)
- *Maintain reserves of at least 20 years for mined gypsum.*
- *Support use of DSG and other sources of gypsum to increase supply and to safeguard and extend lifetime of reserves of mined gypsum.*

Conclusions

- The option aims to both protect existing / natural resources and enable production to continue at the works.
- The option has the potential to lead to more efficient use of resources. Alternatives could include the use of recycled gypsum which would reduce waste disposal.
- The main alternative would be from the import of raw gypsum from other countries which would reduce resources globally. The greatest potential impact on SA objectives would be from the increase in the transportation of minerals which could have adverse impacts on climate change, air quality, health and amenity. However, it is anticipated that materials would continue to mainly be transported by sustainable means, rail and water, which would reduce any impact.
- The option provides flexibility which should enable production to continue leading to positive impacts on the economy.
- There is no significant impact on other objectives as the option does not include extraction at new sites. It is also expected that the option would not lead to an increase in stockpiling.

Recommendations, mitigation:

- Benefits and the reduction of adverse impacts will be achieved from the increase of transportation of materials by sustainable means. This issue is covered by M5 on transport.
- Any potential adverse impacts should be covered under Issue M4 and the joint policy to ensure impacts on the community and environment are acceptable.

M3d: The need to determine a policy approach for on-shore oil and gas exploration, extraction and development

Preferred Option:
M3d(i) Support the exploration and development of on-shore oil and gas.

Conclusions

- The policy issue does not assist in the mitigation of, or adaptation to climate change, nor does it promote the use of low carbon energy sources. However, the “need” for such resources is set at a national level and therefore it is not an issue to be considered by the Core Strategy.
- The option could benefit the local economy in the event of viable reserves being discovered. The less constrained such activities are the more the economy could benefit.
- The option taken in isolation will have adverse impacts on the countryside, historic and built environment, biodiversity and geodiversity. Higher level plans and other legislation would provide protection for key national and international designations. Modern techniques may also help; by locating headworks away from reserves sensitive environments could be avoided.
- Impacts on many of the other objectives are uncertain as they would depend on the specific location of sites and operational details which are not known at this stage.

Recommendations, mitigation:

- Policies under Issue M4 on environmental protection should provide a certain level of mitigation and avoidance of potential adverse impacts. The joint policy on community and environmental protection will also provide the opportunity to address impacts.

M3e: Provision for chalk supply

Preferred Option:
M3e(i) Identify no new reserves and meet need from imports, or alternative materials.

Conclusions

- Identifying no new reserves generally has positive direct impact on SA objectives, particularly in respect to the countryside, biodiversity and geodiversity.

- Overall demand for chalk is low within the plan area and can be met from imports and from alternative materials therefore though the option is largely passive, relying on the markets, it would have positive minor impacts on the economy.
- Impacts on the sustainable use of mineral resources are mixed. It identifies that needs could be met by alternative materials however it does not directly encourage them and needs will also be met by imports of primary chalk resources. Impacts though would be small as demand is low and would be met from existing quarries.
- There may be possible impacts associated with stockpiling of recycled materials, although this would depend on the specific location of sites and operational details.
- There may also be possible adverse impacts on objectives from the transportation of imports and recycled materials.

Recommendations, mitigation:
- Encouraging the increased use of recycled aggregates should be covered under Issue M1.
- The avoidance and mitigation of any potential adverse impacts from the stockpiling of recycled materials and from the transportation of materials should be covered by the general joint broad policy on environmental protection referred to under the waste issues and Issue M4.

M4: Protection of designated areas and reducing the environmental impact of minerals development

Preferred Option:
M4 (a): Prioritise locating minerals extraction and production sites in a manner that does not cause unacceptable adverse impact.

Conclusions
- It is uncertain as to how and to what extent adverse impacts on the environment and communities will be minimised / mitigated by the issue and option.
- The relative unconstrained and flexible nature of the option means that on its own there is a high risk that there will be adverse impacts on many SA objectives. National and international designations will generally be protected by higher level policies and regulatory bodies who will also ensure that sites operate without a risk to the environment. However above these standards some impacts may remain but these should be minor in nature.
- There is uncertainty on the impact to health and amenity as developments close to settlements are not avoided. Regulatory bodies though, should restrict major adverse impacts.
- There is potential for the proposed joint policies on environmental and community protection and on securing benefits to mitigate adverse impacts and to achieve maximum enhancements.
- The option does provide flexibility for mineral extraction by not restricting locations, recognising that many mineral resources are within designated areas. This has the potential for mineral demands to be met supporting the local and wider economy.

Recommendations, mitigation:
- The joint policy on community and environmental protection will provide the opportunity to address many of the uncertain impacts on SA objectives. It is important that it considers all potential impacts on health, building on regulatory body standards to address the wider determinants of health. This could include the need for a Health Impact Assessment for major developments. Also amenity, water, air and soil quality and the historical environment will need to be appropriately considered through these policies.
- Core Strategy policies should also support energy and water efficiency and appropriate adaptation to climate change.

Preferred Option:
M4 (e): Devise a framework for inactive or dormant sites to include assessing viability and seek restoration, if appropriate.

Conclusions
- The option is pro-active and aims to manage resources more efficiently.
- There is potential to achieve positive benefits to the countryside, biodiversity, health, amenity and climate change from the restoration of sites. The nature and extent of impacts will depend on implementation and the specific site, restoration and after use.
- Including landfill as an option to aid restoration could increase disruption in the short term with potential for adverse impacts on SA objectives. However in the long term it would lead to the restoration of sites with potential for positive impacts. The potential and extent of impacts would depend on the specific site and its location.
- This option may also lead to sites coming forward to be worked, as it would assess viability and therefore could help to ensure provision of sufficient minerals to meet demand.

Recommendations, mitigation:
- The joint land restoration policy should ensure all potential benefits and enhancements are maximised including those related to health, amenity, the countryside, biodiversity and climate change.
- The avoidance and mitigation of any adverse impacts from landfilling should be covered by the general joint broad policy on environmental protection referred to under the waste issues as well as other regulatory regimes.

M5: Sustainable transport of minerals into and within the plan area

Preferred Option:
M5(c) Support sustainable means of transporting minerals within and in and out of the plan area.

Conclusions
- The option has potential to provide benefits by reducing adverse impacts associated with the transportation of minerals by road. If achieved this would have positive impacts on many of the SA objectives particularly health, amenity, air quality and climate change.
- The option though is fairly limited because it focuses on achieving modal shift, from road to rail and water, and there are few opportunities in the plan area to achieve this. Issues over the viability of such schemes are also likely to reduce deliverability of the option. Benefits therefore, if at all, are likely to occur later in the plan period once feasibility and viability issues have been overcome.
- Potential benefits to health and amenity will be dependant on location, changes in community exposure and relative sensitivity.

Recommendations, mitigation:
- The option would have greater potential for positive impacts and for delivery if it included measures to reduce the overall transportation of minerals which would include encouraging the co-location of activities and locations near to markets.
- Policies under this issue should also consider the impact of transport on communities and provide mechanisms for appropriate avoidance and mitigation.

Cumulative Effects

The significant cumulative effects of the implementation of all preferred options on SA objectives are set out in the following table.

Table 1.2 Significant Cumulative Effects

SA Objective	Key effects and issues
1. Health.	Possibility of adverse effects as waste facilities are focused on urban areas and many mineral options will increase transportation. Effects would be minor as regulatory bodies would ensure impacts are within acceptable limits. However, some impacts may remain particularly those considered to be

	perceived risks. The potential would be dependent on the concentration of activities on certain communities and their sensitivity.
2. Amenity	By focusing waste facilities close to urban areas and many of the mineral options leading to an increase in transportation there is potential for adverse effects on the amenity of residents and sensitive land uses. The extent and severity of impacts would be dependent on the concentration of activities on certain communities.
3. Access	Positive effects: as options should ensure the provision of sufficient recovery facilities and locate them close to where waste is generated, this will support waste collection operators in providing a sustainable and equitable service.
4. Waste	Positive effects: as options will enable an increase in the amount of waste being reduced, reused and recycled leading to a reduction of waste being disposed of to land.
5. Mineral resources	Positive effects: as options will lead to an increase in recycled materials being used reducing the need for primary resources.
9. Climate change.	Reduction in disposal to land will reduce methane emissions and locating waste sites close to where waste is generated will reduce potential increases in CO2 emissions from transportation. Both will contribute to limiting the causes of climate change. However, many mineral options could potentially lead to increased freight movements, thus increasing CO2 levels. There are insufficient details on waste and minerals locations and trip rates at this stage to establish whether the overall plan would reduce or increase overall freight movements and CO2 levels.
10. Air quality	The focus of facilities in urban areas where air quality thresholds have been exceeded or is close to exceedance could exacerbate or at least maintain poor air quality.
11. Transport	Locating waste facilities close to where waste is generated will reduce related traffic movements. Supporting reductions in waste generation may reinforce this. Many mineral options though could potentially lead to additional transportation in the plan area. Though options encourage modal shift (from road to rail and water), opportunities are limited and delivery is uncertain. The plan should encourage at every opportunity the reduction in the number and length of transport movements through co-location of activities and locate sites (wherever possible) close to where demand exists.
13. Countryside and historic and built environment. 14. Biodiversity and geodiversity.	Specific waste facility locations have not been determined, therefore there are unresolved issues associated with impacts on these objectives. Overall impacts will ultimately depend on the site selection process and the robustness and scope of the broad policies to protect the environment and to seek benefits. Mineral options have the potential for positive effects as they will generally avoid damage to the countryside, historic, built environment, biodiversity and geodiversity by only requiring minimal additional extraction. The plan could also lead to mineral sites being restored in turn increasing positive effects.
15. Energy efficiency	Positive effects: as options will enable an increase in energy generated from waste.
16. Economy.	Positive effects: as options provide flexibility to enable the waste industry to deliver a wide range of waste infrastructure to manage waste efficiently within the plan area. Options will also ensure sufficient, raw and recycled minerals which would support sustainable economic growth including meeting the demand for the construction of housing and infrastructure.

Statement on the Difference the Process has made.

The SA process has made a difference to both the process of developing the plan and the outcome. It has achieved this in several ways:

- It has been fully integrated into the plan preparation process. Therefore sustainability principles and considerations have been built into the plan from the outset and have been incorporated throughout.
- Participation in the development of options has supported the identification of realistic options. Unreasonable or impractical alternatives were rejected, including those which were contrary to national or regional policy.
- The appraisal of options at several key stages in the plan process has resulted in a fuller appreciation of the implications of options as they and the preferred options have been developed.
- The appraisal of options findings have been incorporated into the preferred options selection process and as such have influenced the choice of preferred options.
- The SA process has identified gaps in information and evidence which has led to further research which has enabled better understanding of the issues and impacts on various SA objectives and the need for changes in options, policy and mitigation measures.
- SA objectives have been considered in the development of site identification criteria ensuring that information on all sustainability issues are covered by the process.
- The SA has identified the need and provided details for appropriate policies on environmental and community protection and enhancement, which should ensure that this is adequately covered by the Core Strategy.

Conclusions

Overall the Core Strategy will make an important contribution to achieving sustainable waste management by driving waste management up the waste hierarchy, increasing recycling and recovery of resources and reducing landfill of waste. The Plan is likely to be able to deliver the required capacity to achieve net self sufficiency, although this is strongly dependent on the further identification of appropriate sites and, ultimately, their delivery. The flexibility of the plan should provide the necessary safeguards to enable sufficient sites of varying kinds to be developed. The Core Strategy will enable the sustainable use of mineral resources by encouraging the use of recycled materials and limiting the need for further extraction of primary resources.

Despite this positive performance there are inevitable uncertainties which remain at this stage of the plan making process, some will only become apparent as the core strategy is implemented such as the level of contribution towards efforts to reduce waste generation and related benefits such as reduced energy and resource consumption and corresponding reductions in transport movements and green house gas emissions.

However, this appraisal has been of the preferred options and not the policies in Core Strategy. Consequently, specific policy details and potential impacts were uncertain at the time of appraisal. Also, uncertainty surrounding site specific impacts on communities, transport, air quality, and the natural, built and historic environment will be addressed in the later stages of plan making process. It is at this later stage that site identification studies will have concluded, detailed policy on environmental protection and enhancement will have been developed and the strategy as a whole will be appraised.

Next Steps

Following consultation on the Core Strategy ‘Preferred Strategy’ and SA Report all comments will be considered. Both documents will be revised accordingly and the submission version of the Core Strategy and SA Report will be produced and submitted to Government for approval. There will

then be a chance to comment on the 'soundness' of the submission documents, before an Independent Public Examination where comments will be taken into account by the Independent Inspector holding the Examination.

Comments on the Core Strategy 'Preferred Strategy' and Sustainability Appraisal of the Preferred Options must be received no later than 5pm on Wednesday 2 December 2009.

The consultation documents, response form, background and Information Papers will be available online (to view or download) from 30 September at http://consult.eastsussex.gov.uk. They will also be available in main libraries across East Sussex, in the Citydirect offices in both Brighton and in Hove, and in the Jubilee Library and Hove Library. We will accept paper copies and photocopies of the response form.

To submit comments by post: Xxxx freepost address xxxx Or you can fax to: Fax: 01273 479 040