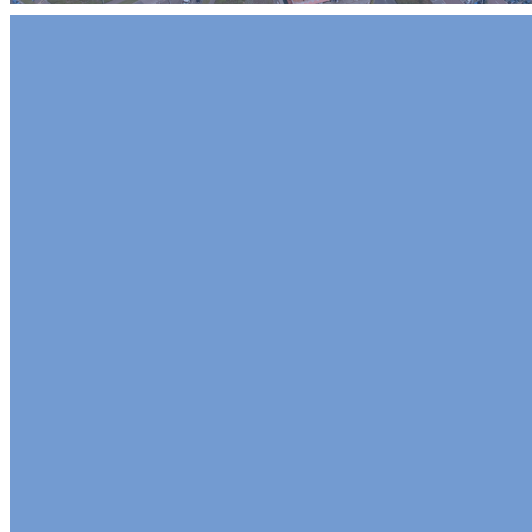




Rochford District Council
Southend-on-Sea Borough Council

London Southend Airport & Environs Study JAAP - Draft Sustainability Appraisal

June 2008



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**London Southend Airport & Environs
Study**
JAAP – Draft Sustainability Appraisal
Rochford District Council
Southend-on-Sea Borough Council
June 2008

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
1	1	Draft SA Report	June 2008	S.Scott

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1 Introduction

1.1 Background and purpose

Halcrow has been appointed by Rochford District Council and Southend-on-Sea Borough Council to produce a Sustainability Appraisal (SA) of the Initial Options for a Joint Area Action Plan (JAAP) for the Southend Airport and its Environs. The initial stages of the Sustainability Appraisal (SA) /Strategic Environmental Assessment (SEA), including the preparation of the London Southend Airport & Environs SA Scoping Report has been completed and consulted upon.

This Working Paper sets out the results of the appraisal of the Joint Area Action Plan Issues and Options Report (JAAP IOR) for the London Southend Airport and its Environs, as part of the second stage of the SA process. It forms part of the formal Sustainability Appraisal (SA)/Strategic Environmental Assessment (SEA) process that will culminate in a final SA/Environmental Report for the preferred option. The results of this initial appraisal will be fed into the development of the JAAP preferred options.

The aim of this initial options appraisal for the London Southend Airport Joint Area has several purposes:

- To contribute to the development of a sustainable preferred option for the Airport and Joint Area regeneration
- To identify key issues to be addressed at the later stages of the Action Plan, including the preferred option stage
- To ensure compliance with procedures and practices for undertaking sustainability appraisal

1.2 Appraisal methodology

The appraisal of the JAAP IOR was undertaken using the appraisal framework contained in the Southend Airport Joint Area Action Plan Final SA Scoping Report. The JAAP IOR was scored against potential compliance with broad sustainability objectives. A qualitative assessment of the options was undertaken and where appropriate quantitative data was drawn upon and the results of the appraisal have been recorded in a series of matrices. The performance of the JAAP IOR against the broad SEA/SA objectives was scored using the following seven point scale:

++ Very positive	+ Positive	0 Neutral	NR No relation
-- Very negative	- Negative	? Information inconclusive therefore uncertain	

It should be noted that scoring was based on available information in respect of each of the options and has been based on the SEA/SA team's judgement, substantiated by quantitative data where possible. Reference is made to the environmental baseline where appropriate but the options being considered are high level and generic and therefore the spatial dimension is not developed in sufficient detail at this stage. The baseline will be drawn upon in future phases when the appraisal of the preferred options is undertaken.

The ODPM's SEA/SA Guidance¹ requires the prediction of effects both geographically and temporally (short, medium or long term) in addition to stating the severity of the impact (significant or mild). The temporal definitions used in this report are:

- Short term- up to 5 years;
- Medium term- 6-15 years and
- Long term- over 15 years.

¹ Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents, ODPM, 2005

2 Development of the Initial Issues and Options and the Sustainability Appraisal results

This section describes, in brief, the set of issues considered to develop a series of scenarios for the Joint Area Action Plan. It also highlights key proposals under each scenario and discusses results of the SA. The detailed assessment tables are attached to Appendix 1.

The JAAP Issues and Options Report identifies five key issues namely:

- Issue 1- The future development and role of London Southend Airport
- Issue 2- The future of the JAAP as an employment area
- Issue 3- Balancing development with environmental enhancement in the JAAP
- Issue 4- Transport and movement
- Issue 5- JAAP 'Areas for Change'

A set of options were identified under each issue and a combination of these options were used to generate four scenarios. These scenarios are described below. In order to comply with the ODPM SEA/SA Guidance, an appraisal of a do-nothing scenario was undertaken in order to get a relative picture against each scenario.

2.1 Joint Area Action Plan Scenario description

All the four scenarios have the following common features:

- Development of a transport strategy that will need to consider improvements to current constraints identified within the immediate road network; linkages to wider transport network; location of new development should be in relation to transport network and accommodate high levels of public transport accessibility; encourage modal shift from cars to public transport and develop new routes and key points of access to new development area.
- Eleven parcels of land are identified as 'Areas for Change' within the JAAP and a combination of these parcels are used to create the scenarios
- A planning permission for a hotel already existing for the site, this is considered as a given in the appraisal

Scenario 1: Low Growth Scenario (do-minimum)

This scenario looks to maintain the current 'status quo' in the area with limited investments (focusing on maintenance of existing facilities) and continuation of the current airport model. Key features are;

- Passenger movement function will be marginal;
- Primarily focused on northern maintenance zone;
- Intensification of existing employment land involving no land take-up;
- Minimal transport improvements (i.e., relating to roundabout improvements, and other traffic improvements);
- No changes to the Rochford designated Green Belt contained within the airport boundary

Scenario 2 (a): Medium Growth

This scenario proposes an incremental growth of its MRO base within the constraints of its existing operation and guiding development policies. It envisages intensification employment concentrations within the airport; Aviation Way Business Park; Laurence Industrial Park; and the retail park to the east of the airport. In addition it proposes to extend, in small proportion, the Aviation Way in order to create new employment land to accommodate such intensification. Key features include;

- Employment will be focused to office and light industrial uses;
- New allocation provides opportunity for a new business park facility;
- Provision of new transport infrastructure to improve accessibility to employment areas (including a park and ride facility along fringe of the JAAP area);
- Passenger traffic will be a marginal function of this business
- New development will occur at the Brickworks' site and environmental enhancements are proposed in areas south and east of the site
- No change to existing Green Belt is proposed.

Scenario 2(b): Medium Growth-Aviation Cluster

This scenario aspires to transform London Southend Airport as a key driver to the sub-regional economy and shaping the future focus of the JAAP. Key features of this scenario are;

- Support the growth and investment in the airport to enable development of passenger based market of upto 2 million passengers by 2030;
- Support growth of aviation employment and create additional spaces to accommodate employment land;
- Intensification and growth and employment around Aviation Way will be restricted to aviation businesses;
- Development of a new railway station to the east of the airport to support passenger inflow as well as increased airport staff movement;
- Residential development will occur at the old Brickworks' site;
- Expansion proposed into the Green Belt, this area also falls within a medium flood risk zone.

Scenario 3: High Growth

This scenario will provide high growth that would place the JAAP in taking a positive role in both airport development as well as to meet the wider need for employment land in the two local authority areas. Key features of this proposal are;

- Extend the existing runway to accommodate larger commercial aircrafts;
- Support the growth and investment in the airport to enable development of passenger based market of upto 2 million passengers by 2030;
- Intensify existing airport employment land and take-up additional land from areas surrounding the airport;
- Develop both aviation and the wider sectors that will be a spin-off from airport improvements;
- In addition to the proposed new railway station, the transport strategy for this scenario will require improvements to strategic road network, new accesses and capacity, linkage with wider public transport initiatives;
- Residential development at the old Brickworks' site and environmental enhancements in some of the sites adjacent to the airport;
- Proposal will have the highest uptake of Green Belt land

2.2

Appraisal results

The scenarios build on an incremental basis from scenario 1 to 3, therefore the effects on economic and environmental aspects follow an incremental order of severity, either positive or negative. Following sections discuss the assessment results of each scenario, typically relative to a do-nothing scenario. The detailed assessment sheet for all the scenarios including the do-nothing is contained in Appendix 1. Key sustainability themes against which these scenarios were assessed are:

Sustainability theme/Objective
ECONOMIC
<i>Population and Local Economy-</i> To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth
<i>Employment and Wealth Creation-</i> To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to attract investment
SOCIAL
<i>Human Health, Safety and Risk-</i> To improve overall levels of health, create safe environments by reducing crime/fear of crime
<i>Education and Skills-</i> To improve the education and to assist people gain skills to fulfil their potential and increase their contribution to the community
<i>Community –</i> To nurture a sense of belonging in a cohesive community where people will want to live and work
<i>Housing-</i> To provide opportunity for people to meet their housing needs
ENVIRONMENT
<i>Biodiversity-</i> To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.
<i>Water-</i> To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible
<i>Climate Change, Energy Efficiency and Flooding-</i> To reduce contributions to climate change as well as guard from the effects of climate change and To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area
<i>Soil and Use of Previously Developed Land-</i> To ensure preservation of Greenfield land as well as enhance quality of soils, wherever possible
<i>Transport, Air and Noise-</i> To ensure high quality environment for the residents and users and To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures
<i>Waste and Material Assets-</i> To ensure high quality environment for the residents and users
<i>Accessibility-</i> To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures
<i>Landscape and Townscape-</i> To maintain the quality and setting of landscapes and townscapes
<i>Archaeology and Cultural Heritage-</i> To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Borough Council

Scenario 1: Low Growth (do-minimum) includes

Areas for Change-(iv) and (vi);

Issue 1 - option (i): Continue current airport model;

Issue 2(i) - option: Low scale employment growth:

Overall a minimum growth option is likely to have minimum to no impact under economic and social themes like economic regeneration, employment, improvements to existing community and social facilities and housing. Compared to a do-nothing scenario where the economic scores are observed to be negative, a minimum growth scenario is considered to help improve local economy, although negligible amount.

The proposals to integrate a transport strategy that encourages a modal shift from private to public transport, supported by park and ride facility near the airport entrance and traffic and road improvements under this scenario are likely to mitigate the possible increase in transport emissions, therefore implication of this growth scenario under transport, climate change (GHG emissions) and accessibility are considered to be neutral (the negative effect considered negated by the positive transport proposals).

Increase airport activities are likely to add water discharged into the brooks through the interceptors that are likely to worsen the already poor water quality in Rayleigh and Eastwood Brooks. For this reason combined with the absence of any explicit mention on enhancement of water (surface and ground) features, this scenario is not considered to support the water objective therefore scored negative.

The implication of a low growth development under biodiversity, landscape and cultural heritage objectives cannot be concluded as sufficient or definitive information on these aspects are not in hand at this stage.

Scenario 2(a): Medium Growth includes

Areas for Change- (i), part (ii), (iv), (v), (vi), (ix) and (xi);

Issue 1 - Option (i): Continue current airport model;

Issue 2 - Option (ii a): Low scale employment growth:

A medium growth (incremental) scenario is likely to bring positive economic and social benefits into the JAAP area. An incremental expansion of the existing MRO sector combined with creation of additional employment land spaces is likely to accommodate direct and indirect additional jobs in the joint area from the short term to the medium term, however the long term benefits cannot be established. In order to support economic regeneration within the Boroughs, it is considered critical for this development to consider ways to impart appropriate skills (training) among the local residents to take up potential aviation jobs (MRO sector) that will arise in the short to medium term under this scenario. The mixed land-use proposal within the area of change (i) will help encourage vibrancy

within the area and potentially bring in community and social amenities, encouraging constant movement of people and vehicles, thereby limiting the occurrence of crime (actual and perceived).

The environmental enhancements to areas (v) and (ix) are commendable that are likely to improve leisure facilities and encourage community interaction. As area (v) is an arable land of agricultural grade 1-2 the detailed development proposal should ensure no loss of the top soil. A medium growth scenario scores very high (positive) for the use of PDL and safeguarding soils as the development involves intensification of existing land, implying potential contamination remediation, and it does not involve take up of any Greenfield land sites.

The environmental implications of this scenario are considered to be limited to neutral against most objectives like transport, climate change, flooding, biodiversity and noise and a mild negative impact on water resources. This impact could be mitigated with appropriate strategies for safe water discharge and it is recommended that the scenario description should include this aspect.

Overall a medium growth scenario is expected to bring incremental economic opportunities with less to no significant environmental impact to the JAAP and the wider area.

Scenario 2(b): Medium Growth- ‘Aviation Cluster’ includes

Areas for Change- (i), (ii a-d), (iii) to (ix) and (xi);

Issue 1 - Option (ii): Airport growth with existing runway and new facilities;

Issue 2 - Option (ii b): Medium scale employment growth:

An Aviation Cluster-Medium Growth option is likely to intensify development and make space for accommodating new services thereby increasing the economic viability of the airport. It is likely that this option shall bring employment opportunities from the short term into the medium term. The economic reality in take up of the airport by commercial operators given runway constraints casts doubts on the long term benefits of this growth scenario. Even a moderate take up of commercial services (passenger aircrafts) is likely to create a spin-off into hospitality, retail and commercial sectors in addition to the aviation jobs, potentially creating employment opportunities for local residents.

Assuming such a take up shall occur, this option scores positive against most of economic and social objective, however mild negative effects are envisaged across many environmental themes. Most of the effects predicted can be attributed to the land-take within the green belt, particularly along the brooks that are habitats of local priority species like water voles. In case of negative effects to some species, a potential option could be identification of compensatory habitats within the region, if all ecological factors

of existing and new habitats are the same. With limited additional land left at the site after this proposal it is unclear if a compensatory habitat could be a feasible option. Detailed ecology impact and management study should be commissioned for this scenario to identify measures for the site and its vicinity, particularly for the Roach Estuary. An increased land-take of grade 1 agricultural land combined with proposals of potential soil contaminating operations (such as FBO) an Aviation Cluster-Medium Growth option is considered to have mild negative effect on soil resources. The areas identified for land-take are considered to have some landscape value that may diminish as a result of siting aviation related built structures with conflicting building material finishes and colour. The option should draw an appropriate landscape plan and management strategy that provides guidelines to size, mass, height and building material of these structures in order to mitigate the identified effects.

It is likely that development of an aviation cluster will draw considerable traffic (both HGV and LGV) into the JAAP area implying increased surface transport emissions and noise impacts. Implementation of appropriate mitigative measures is imperative to address these issues. Although the JAAP IOR proposes the need for a transport strategy that will encourage a modal shift, the effect on traffic and transport is likely to be very high for public transport to address. The option however scores a positive under accessibility to services as it introduces a new rail station potentially improving the connectivity for both the airport users and residents near the area. The station is likely to bring new inward investments and additional jobs. The development should be supported with guiding urban design principles to make the area attractive to live and work.

Overall a medium growth scenario with Aviation cluster will bring positive economic and social benefits in the short to the medium term and is likely to bring significant long term benefits provided the commercial operators are inclined towards taking up the offer from this proposal. The environmental impacts are likely to alter based on the take-up and actual expansion of services in the long term i.e., the effect could vary between significant and mild negative depending on the occurrence of the predicted economic growth.

Scenario 3: High Growth includes

Areas for Change- (i) to (xi);

Issue 1 - Option (iii): Airport growth with extended runway and new facilities;

Issue 2 – Option (iii): High scale employment growth:

A significant positive outcome for economic and social growth is likely under a High growth scenario when compared against a do-nothing scenario. The option overcomes the constraint identified under the Medium growth-Aviation cluster scenario i.e., operability of bigger commercial aircrafts due to the proposed extension of the runway. While intensification of existing employment land will bring immediate employment opportunities (i.e., in the short term), the expansion of the airport will add more

employment land for both aviation and supporting jobs as well as potentially attract other businesses like the hospitality industry both in the medium term and in the long term. These benefits will have a spill over effect on local economic regeneration; however there is a risk of the JAAP area attracting most inward investments creating an imbalance on the overall regeneration of the participating Boroughs. Appropriate policies or measures defining development control and use class should be specified in order to steer equitable distribution of investments between the Borough areas and the JAAP area.

While this option is likely to bring positive benefits to accessibility and housing, it scores poorly against many environmental objectives, primarily due to the absence of appropriate mitigative measures/policies. Particular themes that will potentially see significant negative impact include transport, air quality, noise, water quality and landscape value. It is acknowledged that the JAAP IOR recommends a transport strategy that will encourage a modal shift to public transport, supported by the park and ride facility proposal; however if the JAAP area allows space for freight storage and related activities there will be an inflow of HGVs implying increased traffic and noise. The increase in aircraft emissions and related noise will be inevitable in the long term under this scenario; therefore the effect on transport, air and noise quality is assessed to be significantly negative.

The proposed Areas for Change are sited within the Greenbelt area implying inclusion of Greenfield sites that currently offer good landscape views. The extent of Greenfield land-take is significant within the JAAP therefore having a severe negative impact against soil and landscape objectives. It is recommended that the option should include a landscape management plan in order to protect or recreate existing views and guide the design of building structures that shall complement existing landscape features.

Overall this option is likely to bring significant positive economic growth, therefore positive effects on social and community objectives however is likely to have significant negative impact on some environmental aspects that can be mitigated with appropriate policies/guidance

General comments:

There are number of uncertainties in relation to impact on education and skills; cultural heritage and archaeology; waste and material assets across all the scenarios due to limited or no information available to conclude assessment against these objectives. The recommendations section discusses on ways to address few issues identified in the previous sections as well as relating to information requirement.

3 Recommendations

This section provides recommendations to improve or address certain issues identified in the assessment process. It is not the duty of the options appraisal process to recommend a particular option, therefore this recommendation does not relate to a particular scenario, however should be a point of consideration whilst developing the preferred option.

Economic and Social:

- The option should address the existing mismatch between available jobs and skills of the local residents in order to ensure that any future development of the airport will benefit the local residents and therefore contribute to urban regeneration
- The JAAP should encourage policies relating to social equality (including ethnic minorities), social inclusiveness and prevention of crime (both actual and perceived)
- A balance on allocation of businesses between the airport premises and the wider borough should be maintained in order to ensure any future development at the airport does not encourage partial decisions in favour of the JAAP area jeopardising the wider regeneration objectives

Environment:

- In order to establish a clear judgement on the biodiversity impact within the JAAP area as well as its environs, especially the Roach Estuary a detailed ecological impact assessment and management plan should be produced
- Environmental enhancement measures on the proposed arable areas should carefully consider preservation of the top soil
- Future development in the area should be accompanied by a Landscape strategy in order to establish guidance on relative views, building material to use and siting of the buildings
- According to the National Renewables Energy Obligation, any residential development with over 10 dwellings will be required to meet at least 10% of their energy requirement from renewable energy sources. Appropriate spaces and funding should be considered by the proposal in light of this information
- Operation and construction waste generated under any of these scenarios should be handled through appropriate waste management strategies
- All residential developments will be required to undertake the Code for Sustainable Homes. The development in the area should aspire for the highest code achievable

- Commercial buildings in the proposed development should aspire to obtain highest BREEAM Standards and CEEQUAL rating.
- Resource and material efficiency should be prioritise during construction and operation of the JAAP area
- The development should establish appropriate policies/measures to ensure safe discharge of water in order to maintain and enhance the water quality of surface waters in the area
- The development should explore options to distribute warehouse and storage spaces out of the JAAP area in order to keep the HGV inflow into the area to a minimum

4 Next steps

This assessment completes stage B4 of the SA Process i.e., evaluating the effects of the Action Plan Initial Options. The assessment results should be used as a guide by the Joint Committee to inform them on the sustainability implications of the identified options and guide them to choose a Preferred Option(s), which could be a combination of some of the options presented in the JAAP IOR. Although it is not mandatory to undertake a public consultation at this stage, it may be a helpful part of the preferred option selection process.

Because SA is an iterative process, the next stage would involve repetition of stages B1 to B4 to assess and predict the impacts of the preferred option and progress to stages B5 to C1 i.e., preparation of the SA Report which will be carried out by the Council.

Appendix 1 Scenario Assessment

Performance indicators:

++ Very positive	+ Positive	0 Neutral	NR No relation
-- Very negative	- Negative	? Information inconclusive therefore uncertain	

Do-nothing Scenario: No specific development drivers are proposed and the area continues with business as usual

Sustainability theme/Objective	Performance	Commentary
ECONOMIC		
<p><i>Population and Local Economy-</i></p> <p>To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth</p>	-	Some of the wider Borough area wards in the Joint area are considered to have noticeable deprivation levels that need to be addressed. Under a do-nothing scenario these levels are likely to continue and may worsen. Additionally no development proposals for the area will conflict with the East of England's RSS that identifies Southend Airport as potential area to improve the sub-region's economy

Sustainability theme/Objective	Performance	Commentary
<p><i>Employment and Wealth Creation-</i></p> <p>To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to attract investment</p>	-	<p>Current unemployment rates at Southend-on-Sea are higher than the national average and at Rochford are about the national average. Local residents are considered to commute outside the Boroughs for work due to unavailability of appropriate jobs to suit their skills. Continuation of just the airport activity without any driver for inward investments (such as scenarios above) is unlikely to create opportunities for new employment and contribute to wealth creation.</p>
SOCIAL		
<p><i>Human Health, Safety and Risk-</i></p> <p>To improve overall levels of health, create safe environments by reducing crime/fear of crime</p>	?	<p>The level of health provision and access to these services determine the rate of success in building sustainable communities. Provision of such services or improvement to these services around the study area will have a positive or negative effect depending on the location and related accessibility to these services. As the nature of the wider Borough proposals on Health services is unknown the effect is uncertain.</p> <p>Southend Borough has records for high crime offences particularly on public transport, an indication of social deprivation. In the absence of a proposal for JAAP area, these could be influenced by wider policies in the Borough or through other developments in the vicinity of the study area. The nature of these policies and plans are not known at this stage therefore effect of this scenario is uncertain.</p>
<p><i>Education and Skills-</i></p> <p>To improve the education and</p>	?	<p>In the absence of any residential users within the JAAP (except to the southern section) a do-nothing scenario is likely to have a neutral impact on education (school and university), however provision of skill training (relating to MRO sector) for local residents may be required to prepare</p>

Sustainability theme/Objective	Performance	Commentary
to assist people gain skills to fulfil their potential and increase their contribution to the community		them for available aviation jobs. No information on future proposals to address such specialist training programmes is unknown at this stage, therefore effect uncertain.
<i>Community –</i> To nurture a sense of belonging in a cohesive community where people will want to live and work	0	Existing JAAP does not house any resident users and in a do-nothing scenario provision or non-provision of community facilities within the area is unlikely to have a neutral impact against this objective.
<i>Housing-</i> To provide opportunity for people to meet their housing needs	?	No data on the proposals relating to identification of potential housing sites within the JAAP area is known at this stage. They may or may not be identified and released for such purposes in the future by the Boroughs based on studies like the Strategic Housing Land Availability Assessment.
ENVIRONMENT		
<i>Biodiversity-</i> To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.	?	Although no international or national designated areas of nature conservation importance is located at the site, some species of district and county level importance have been spotted at the site, including water voles (priority species by the local Biodiversity Action Plan). In the absence of any intervention the existing biodiversity value is likely to be maintained or enhanced depending on the ecosystem's relationship with the species that is not predictable at this stage. A detailed ecological assessment and management plan shall be required to predict and influence the biodiversity structure in the JAAP area

Sustainability theme/Objective	Performance	Commentary
<p><i>Water-</i></p> <p>To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible</p>	-	<p>The airport will continue discharging waste water into the brooks within the site through the interceptor. Any natural growth of the airport activities is likely to decrease or maintain the current bad water quality in the brooks.</p>
<p><i>Climate Change, Energy Efficiency and Flooding-</i></p> <p>To reduce contributions to climate change as well as guard from the effects of climate change and</p> <p>To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area</p>	+	<p>The current levels of aviation emissions and transport emissions are likely to continue under a do-nothing scenario; however there could be opportunities for some areas in the Green belt, that fall within a flood risk zone to be used for flood attenuation or storage purposes, subject to their viability. These areas can potentially be converted to leisure sites in the future.</p>
<p><i>Soil and Use of Previously Developed Land-</i></p> <p>To ensure preservation of Greenfield land as well as enhance quality of soils, wherever possible</p>	-	<p>Under no development, the JAAP area loses an opportunity for contamination remediation of the area, although it is acknowledged that a do-nothing scenario shall help retain the top-soil intact, wearing away from any development</p>

Sustainability theme/Objective	Performance	Commentary
<p><i>Transport, Air and Noise-</i></p> <p>To ensure high quality environment for the residents and users and</p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	-	<p>A current level of air quality is observed to be low, particularly in Laurence Ward (south of the airport). The noise levels are also found to be high especially in residential properties located in the vicinity and along the flight path. Under a do-nothing option, current trends in air and noise quality are likely to continue or worsen. It does not discuss on promotion of sustainable transport like buses or cycling.</p>
<p><i>Waste and Material Assets-</i></p> <p>To ensure high quality environment for the residents and users</p>	?	<p>Both Boroughs within the Joint Area have demonstrated improving trends in waste recycling and it is likely to continue in the future; however the level of commitment from the airport operations towards waste handling and management is unknown. Given majority of the study area is occupied by the airport, the performance in the future under a do-nothing scenario is uncertain.</p>
<p><i>Accessibility-</i></p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	-	<p>The area will lose opportunity for traffic and transport improvements, including public transport strengthening that may affect accessibility to services, therefore performance of a do-nothing scenario is negative against this objective.</p>
<p><i>Landscape and Townscape-</i></p>	0	<p>The option is likely to retain the existing green belt and maintain current landscape character within</p>

Sustainability theme/Objective	Performance	Commentary
To maintain the quality and setting of landscapes and townscapes		the JAAP area unless any specific landscape enhancement measures are implemented.
<i>Archaeology and Cultural Heritage-</i> To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Borough Council	NR	No relation

Scenario 1: Low Growth (do-minimum) includes following Areas for Change-(iv) and (vi)

Issue 1 (i): Continue current airport model

Issue 2(i): Low scale employment growth

Sustainability theme/Objective	Performance	Commentary
ECONOMIC		
<p><i>Population and Local Economy-</i></p> <p>To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth</p>	0	<p>Limited investments and limited growth in the JAAP area is likely to bring only about 620 additional jobs, that is not considered a significant variation when compared to continuation of the business as usual scenario. In the absence of significant economic drivers, the prospect of the hospitality industry (for which planning permission exists) is unknown.</p> <p>This development is unlikely to bring mixed land use with additional housing and community facilities. No change to the existing services and housing numbers is proposed therefore development under this scenario will potentially have a neutral impact on local economy.</p>
<p><i>Employment and Wealth Creation-</i></p> <p>To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to</p>	0	<p>The employment forecast under this scenario considers that the area is likely to support light industrial sectors and provide a secondary role in accommodating office based professional sectors. A slow incremental airport growth under this scenario is unlikely to create interest in developers casting doubts on prospects of inward investments. It is acknowledged that there will be an intensification of the existing land, but majority for employment use and not for mixed-use, thereby limiting opportunity to add vibrancy and vitality to the area.</p> <p>The levels of employment and encouragement to inward investment are likely to continue on the business as usual basis, therefore economic objective under this scenario is assessed to be</p>

Sustainability theme/Objective	Performance	Commentary
attract investment		neutral.
SOCIAL		
<p><i>Human Health, Safety and Risk-</i></p> <p>To improve overall levels of health, create safe environments by reducing crime/fear of crime</p>	0	Although the employment areas may not be used after working hours the airport premises are likely to be under surveillance and secure implying potentially less or no occurrence of crime. The development scenario however does not discuss or implicitly state any contribution towards improvement to health facilities or improvement to healthy lifestyle of area users.
<p><i>Education and Skills-</i></p> <p>To improve the education and to assist people gain skills to fulfil their potential and increase their contribution to the community</p>	0	The scenario does not discuss educational or cultural aspects therefore the impact of such a development at the JAAP area will be neutral.
<p><i>Community –</i></p> <p>To nurture a sense of belonging in a cohesive community where people will want to live and work</p>	0	No change to the existing community facilities or aspects relating to community participation is likely to occur under this scenario

Sustainability theme/Objective	Performance	Commentary
<p><i>Housing-</i></p> <p>To provide opportunity for people to meet their housing needs</p>	0	<p>The East of England Development Authority Revised RSS (2008) identifies London Southend Airport as having a regional role in meeting needs of the local and niche economic markets and that it will be supported by neighbouring areas for housing needs. The demand for housing and the need to fulfil this demand by the JAAP area is therefore considered limited and a low growth scenario does not contribute to any change in housing in the area</p>
ENVIRONMENT		
<p><i>Biodiversity-</i></p> <p>To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.</p>	?	<p>No part of the site falls within any International or Nationally designated sites of environmental importance, however the Roach Estuary, a designated RAMSAR site is located only about 1 km from the JAAP area.</p> <p>It is observed that the proposed Areas for Change under this option are intensification of existing Aviation Way Business Park and existing Northern maintenance zone, both areas do not appear to be of significant biodiversity value; however the Cherry Orchard Country Park is located adjacent to the proposed Areas for Change. The construction impact on the flora and fauna of this park during the intensification process is unknown. It is recommended that a detailed ecology survey and Ecology Management Plan is integrated with the detailed development plans for these areas.</p>
<p><i>Water-</i></p> <p>To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible</p>	-	<p>Current water quality of the Eastwood Brook and Rayleigh Brook that converge finally into River Roach ranges from Fair to Poor. Part of the brook passes through proposed Areas for Change. The airport drainage system discharges via interceptors into the abovementioned brooks and this option does not discuss ways to improve discharge water quality and in turn protect or enhance the river water quality, therefore the effect is assessed negative. It is imperative for the detailed development plans to set out strategies to ensure the water quality is maintained.</p> <p>Given the scale of growth under this scenario is limited and largely relating to industrial use the level of water consumption is likely to be limited, however new development should promote water</p>

Sustainability theme/Objective	Performance	Commentary
		efficiency measures.
<p><i>Climate Change, Energy Efficiency and Flooding-</i></p> <p>To reduce contributions to climate change as well as guard from the effects of climate change and</p> <p>To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area</p>	0	<p>Part of the JAAP area falls within a medium flood risk zone implying constraints to future development. The JAAP options do not refer to ways to address this issue, although it will be critical for the development to refer to the Thames Essex SFRA and maybe draw a Flood Risk Assessment prior to construction. The JAAP should encourage incorporation of Sustainable Urban Drainage Systems (SUDS) as an effort to reduce chances of internal flooding.</p> <p>The JAAP Issue 4 on Transport discusses the need for any development proposed within the area to draw a transport strategy that shall encourage public transport and limit car usage, implying reduced CO2 emissions.</p> <p>Residential development proposed under area (i) will be required to account for atleast 10% energy sourced from renewable energy under the National Renewables Obligation. The development should aspire to include energy efficiency designs to support this objective.</p> <p>While the option is assessed to have a negative effect against flood risk, it scores a positive for addressing transport and emissions, therefore the overall score is neutral</p>
<p><i>Soil and Use of Previously Developed Land-</i></p> <p>To ensure preservation of Greenfield land as well as</p>	+	Scenario 1 builds on intensification of existing land, supporting the sustainability objective

Sustainability theme/Objective	Performance	Commentary
enhance quality of soils, wherever possible		
<p><i>Transport, Air and Noise-</i></p> <p>To ensure high quality environment for the residents and users and</p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	0	As the level of intensification of the existing Aviation Way and Northern service area is not significant, the increase in vehicular traffic and therefore emissions is not considered high assuming that the development will include noise abatement measures that will help mitigate existing noise impacts.
<p><i>Waste and Material Assets-</i></p> <p>To ensure high quality environment for the residents and users</p>	?	Development under this scenario will generate both construction and operational wastes, however the management method of such waste is not known, therefore the effect of these options is assessed to be uncertain. The JAAP options should support management of material assets such as use of local resources, maximise resource efficiency (of construction materials) and adopt Code for Sustainable Homes standards for new housing development and BREEAM or equivalent for commercial developments.
<p><i>Accessibility-</i></p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport</p>	0	A low growth option does not propose any improvements to accessibility, particularly to services that would benefit resident population; however it is acknowledged that round about and junction improvements proposed under this scenario shall help ease the traffic within the JAAP

Sustainability theme/Objective	Performance	Commentary
measures		
<i>Landscape and Townscape-</i> To maintain the quality and setting of landscapes and townscapes	?	Impact on Cherry Orchard Lane unknown
<i>Archaeology and Cultural Heritage-</i> To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Borough Council	NR	No aspect of visible archaeological or cultural significance is found within the JAAP, therefore assessed to have no relation

Scenario 2(a): Medium Growth includes following Areas for Change- (i), part (ii), (iv), (v), (vi), (ix) and (xi)

Issue 1 (i): Continue current airport model

Issue 2(ii a): Low scale employment growth

Sustainability theme/Objective	Performance	Commentary
ECONOMIC		
<p><i>Population and Local Economy-</i></p> <p>To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth</p>	+	<p>Although this option supports limited investments and incremental growth, the proposal to host a small business park alongside the Aviation Way will potentially encourage accommodation of new portfolio of supporting business, currently lacking in the area. It is estimated that intensification of the Aviation Way coupled with additional capacity in part area (ii) shall bring about 2,600 additional jobs. Provision of employment land is appropriately balanced with proposed residential at the old Bricks Works site (area i) thus encouraging mixture of land use potentially increasing the vitality and viability of the airport area.</p> <p>The level and kind of environmental enhancements to change areas v and ix is unknown, however it is acknowledged that any improvement to these areas will benefit the existing residential areas adjacent to these areas as well as create pleasing landscapes near the airport</p>
<p><i>Employment and Wealth Creation-</i></p> <p>To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to</p>	+	<p>The scenario proposes incremental expansion of the airport business without any radical change to the existing model. The proposed small business park will provide new employment land allocations, potentially bringing in expansion of services and creating job opportunities in the area. It is unclear if the existing residents shall have the required skills for future jobs; however the capacity to attract inward investments is dependent on investments to transport and supporting infrastructure.</p> <p>Given the scale of predicted increase in employment and business opportunities, it is assumed that sufficient investments in transport shall occur. The JAAP Options Paper, in principle, supports</p>

Sustainability theme/Objective	Performance	Commentary
attract investment		implementation of an appropriate transport strategy that will promote public transport and improve accessibility to the JAAP area.
SOCIAL		
<i>Human Health, Safety and Risk-</i> To improve overall levels of health, create safe environments by reducing crime/fear of crime	+	Development under this scenario promotes mixed land-use near area (i) and (v). Mixed land-use provision that is typically ensures movement of traffic and people, thereby limiting the occurrence and fear of crime. The issue is particularly relevant to the employment areas that are likely to be less accessed out of working hours. The development should consider adopting 'Secured by Design' standards given the remote location of the proposed residential development in area (i).
<i>Education and Skills-</i> To improve the education and to assist people gain skills to fulfil their potential and increase their contribution to the community	?	Proposals under this scenario discuss on potential creation of new jobs, improvements to existing spaces in the JAAP area and addition of new houses, however no specific mention towards enhancement of local skills or provision of education facilities have been made. One of the key issues in the existing JAAP area relating to employment of local residents is the mismatch of the skills between the residents and those required for the available aviation jobs. The JAAP should recognise this need and suggest options to address this issue.
<i>Community –</i> To nurture a sense of belonging in a cohesive community where people will want to live and work	+	<p>Although the level of provision of services (health, education and others) in the proposed residential area (i) is unknown it is assumed that the improvements to accessibility to this site off Cherry Orchard Way, capacity improvement and other round about enhancements is likely to connect the mixed use area to services in the wider areas of Southend-on-Sea and Rochford. It is recommended that the residential and the commercial Areas for Change are linked to the wider transport network through a reliable public transport system.</p> <p>Improvements to area (v) are likely to result in enhancement of public amenity spaces and spaces</p>

Sustainability theme/Objective	Performance	Commentary
		<p>of flora and fauna interest. These areas potentially encourage interaction within community members, thus supporting this objective. It is recommended that the enhancements proposed in area (v) should include provisions that will enhance community participation and respect multi-cultural faith.</p> <p>Overall, assuming that the connectivity to area (i) shall be good to increase accessibility to services, and improvements to area (v) and (ix) is likely to make a positive change to youth and adult outdoor play space and urban green space, this scenario is assessed to have a positive impact against this objective</p>
<p><i>Housing-</i></p> <p>To provide opportunity for people to meet their housing needs</p>	+	The option proposed additional housing development in order to support future employment growth, which in turn shall help fulfil the districts' and region's housing targets therefore assessed positive
ENVIRONMENT		
<p><i>Biodiversity-</i></p> <p>To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.</p>	0	<p>The site in general is observed to have flora and fauna of district and county level importance, particularly along the brooks (passing through proposed area vi) and close to the disused brick kiln (area i). The actual location of these species and habitat within the Areas for Change is unknown and the Areas for Change land take up is not significant; however, if such species are located future development may affect the habitat in the absence of an Ecological Management Plan. Conversely this scenario supports environmental enhancements to areas (v) and (ix). These areas could be viewed as potential sites for compensatory habitats for the species that may be affected during the development, if feasible. As the effects of the proposal across the site is both positive and negative, the overall performance score for scenario 2 against biodiversity is assessed to be neutral</p>

Sustainability theme/Objective	Performance	Commentary
<p><i>Water-</i></p> <p>To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible</p>	-	<p>The JAAP IOP does not discuss methods to prevent deterioration of water quality in the brooks. Development under scenario 2 will increase water demand both from the residential and employment sectors. No policies or methods that support water efficiency within the site have been proposed or discussed under this option, therefore option is assessed to obtain a negative score</p>
<p><i>Climate Change, Energy Efficiency and Flooding-</i></p> <p>To reduce contributions to climate change as well as guard from the effects of climate change and</p> <p>To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area</p>	0	<p>Sections of the proposed Areas for Change (i), (iv) and (vi) fall within a medium flood risk zone indicating the future development could be constrained and subject to a sequential testing and other policies of the PPS25 as well as the Thames Essex SFRA. The JAAP IOP does not explicitly address this issue, therefore assessed negative. Application of SUDS is recommended for this option in order to limit surface run-off therefore the risk of internal flooding.</p> <p>Residential development proposed under area (i) will be required to account for at least 10% energy sourced from renewable energy under the National Renewables Obligation. The development should aspire to include energy efficiency designs to support this objective.</p> <p>The increased accessibility proposed alongside the Cherry Orchard Way and potential increase in the employment is likely to bring more traffic into the JAAP therefore transport emissions however the IOP supports modal shift from cars to sustainable transport the level of CO₂ emissions. It is assumed that an appropriate implementation of the public transport mode within the JAAP is drawn along with the development proposals. The scenario is likely to maintain the existing air quality if not enhance it, therefore effect is considered neutral.</p>

Sustainability theme/Objective	Performance	Commentary
<p><i>Soil and Use of Previously Developed Land-</i></p> <p>To ensure preservation of Greenfield land as well as enhance quality of soils, wherever possible</p>	++	<p>In addition to intensification of existing land and enhancing existing open spaces the proposed development at the Brick Kiln is likely to encourage remediation of this potential contaminated site. Thus the option shall maintain and enhance the soil resources. The identified site (v) comprises of agricultural grade 2 land and it is assumed that the proposal for environmental enhancements in this area will help retain the top soil. It is recommended that the enhancements make the best use of this land without affecting the ecosystem in this area.</p>
<p><i>Transport, Air and Noise-</i></p> <p>To ensure high quality environment for the residents and users and</p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	0	<p>Although the development is likely to bring junction and accessibility improvements, it is considered that there will be an increase in car and other vehicular traffic, implying increased traffic related noise. However the junction and roundabout improvements is likely to relieve congestion and help maintain air quality.</p>
<p><i>Waste and Material Assets-</i></p> <p>To ensure high quality environment for the residents and users</p>	?	<p>Development under both options will generate both construction and operational wastes, however the management method of such waste is not known, therefore the effect of these options is assessed to be uncertain. The JAAP options should support management of material assets such as use of local resources, maximise resource efficiency (of construction materials) and adopt Code for Sustainable Homes standards for new housing development and BREEAM or equivalent for commercial developments.</p>
<p><i>Accessibility-</i></p>	+	<p>Improvement to existing access roads and provision of new access roads off the roundabout at Cherry Orchard Way, to the west of the JAAP is critical to realise benefits of the proposed Areas</p>

Sustainability theme/Objective	Performance	Commentary
To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures		for Change under this scenario. These proposals supported by improvements to the public transport (as identified in the IOP under Issue 4) will potentially improve accessibility to the JAAP area.
<i>Landscape and Townscape-</i> To maintain the quality and setting of landscapes and townscapes	?	Scenario 2 does not discuss any guidance for public realm, urban design or landscape planning, therefore effect of intensification of existing employment land and design of the Areas for Change on the Cherry Orchard Park and the Countryside is unknown
<i>Archaeology and Cultural Heritage-</i> To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Boroughs	NR	No aspect of visible archaeological or cultural significance is found within the JAAP, therefore assessed to have no relation

Scenario 2(b): Medium Growth- ‘Aviation Cluster’ includes following Areas for Change- (i), (ii a-d), (iii) to (ix) and (xi)

Issue 1(ii): Airport growth with existing runway and new facilities

Issue 2(ii b): Medium scale employment growth

Sustainability theme/Objective	Performance	Commentary
ECONOMIC		
<p><i>Population and Local Economy-</i></p> <p>To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth</p>	+	<p>Under a medium growth scenario, the airport is expected to widen its base to accommodate more passenger aircrafts and expand aviation services thus potentially bringing at least 1,180 additional direct jobs and potentially 2,600 additional jobs in the long term. A new railway station and additional terminal proposed shall improve connectivity and facilities in the airport. This growth will potentially provide a spin-off to other supporting industries within the JAAP area and in Southend-on-Sea and Rochford Borough areas like hospitality, railway station related employment.</p> <p>It is to note that the economic growth projections under this scenario assume that commercial flight operators will be interested in operating from Southend Airport. The economic reality being, larger and more efficient aircrafts cannot be accommodated with the existing runway length at Southend which is seen as a constraint to attract commercial operators. However in the short and medium term the intensification of existing land will potentially bring additional jobs into the area, as envisaged under Scenarios 1 and 2(a). In the long term the scenario may bring a significant positive impact provided there is a good take up of the airport services by the commercial flight operators</p>

Sustainability theme/Objective	Performance	Commentary
<p><i>Employment and Wealth Creation-</i></p> <p>To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to attract investment</p>	+	<p>The nature of the development proposed in the area focuses more on employment use which fits with the EEDA RSS. The intensification of existing employment land and inclusion of additional land for new facilities, including a business park will potentially provide up to 64,000 sq m of new floor space for office and light industrial use to accommodate about 2,600 new jobs in the medium to the long term and attracting inward investments within the JAAP and the wider borough area assuming that commercial operators will operate passenger flights as envisaged. Development under this scenario is considered to bring benefits to the wider sub-region, however there are doubts about it benefiting the immediate residents as it is uncertain if the local residents possess the skills required for the aviation jobs.</p> <p>The new railway station, if materialises will generate potential commercial development within the JAAP</p>
SOCIAL		
<p><i>Human Health, Safety and Risk-</i></p> <p>To improve overall levels of health, create safe environments by reducing crime/fear of crime</p>	0	<p>Although majority of the development within the JAAP relates to employment use, the option proposes mixed land use with residential development at (i) in order to support growth. Environmental enhancements to area (v) will potentially encourage existing residents (south of the study area) to use open green spaces contributing to healthy lifestyles. While a positive effect may occur in part of the JAAP area, there may be increasing problems relating to traffic and noise for the resident users that may have a negative effect on human health and safety in the medium to the long term. As the effect on health and lifestyle is mixed across the area over time, the effect against this objective is considered neutral.</p>
<p><i>Education and Skills-</i></p> <p>To improve the education and to assist people gain skills to fulfil their potential and</p>	?	<p>It is acknowledged that development under this scenario shall bring economic benefits to the sub-region and to the JAAP area and the jobs will require varied skills particularly with respect to the aviation sector. A mismatch of existing resident skills and the skills required for the available jobs at the airport is already considered an issue in the Boroughs and the JAAP IOP development proposals does not have sufficient information relating to addressing this issue therefore</p>

Sustainability theme/Objective	Performance	Commentary
increase their contribution to the community		performance score is uncertain
<p><i>Community –</i></p> <p>To nurture a sense of belonging in a cohesive community where people will want to live and work</p>	+	Although the level of provision of services (health, education and others) in the proposed residential area (i) is unknown it is assumed that the improvements to accessibility to this site off Cherry Orchard Way, capacity improvement and other round about enhancements is likely to connect the mixed use area to services in the wider areas of Southend-on-Sea and Rochford. It is recommended that the residential and the commercial Areas for Change are linked to the wider transport network through a reliable public transport system. Improvements to area (v) will potentially encourage residents adjacent to this area to use and interact among each other, thereby creating opportunities for community interaction.
<p><i>Housing-</i></p> <p>To provide opportunity for people to meet their housing needs</p>	+	The option proposes additional housing development in order to support future employment growth, which in turn shall help fulfil the districts' and region's housing targets therefore assessed positive
ENVIRONMENT		
<p><i>Biodiversity-</i></p> <p>To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.</p>	-	The proposed Areas for Change (i), (ii a-d), (iii) and (iv) abuts the Rayliegh and Eastwood Brook that are considered to provide habitat for water voles and other species of district and county level importance. The challenge with the provision of a compensatory habitat under this option is that both areas running along the brook will be taken up under Areas for Change making it difficult to find an appropriate location. No designated sites of national or international importance are located within the site, nevertheless the Roach Estuary is located only a km away and the impact of a significant increase in number of aircrafts on the existing habitats could be significant, however clarity over the actual impact on the estuary should be established. In addition to the potential negative impacts on the river habitats, expansion of development into the greenbelt area shall

Sustainability theme/Objective	Performance	Commentary
		consume some arable land (currently not used for agriculture) as well as amenity grassland.
<p><i>Water-</i></p> <p>To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible</p>	--	At present the airport discharges waste water through interceptors into the brooks within the study area. Intensification and future expansion of the airport operations will continue this discharge practice potentially polluting the surface waters of River Roach. The JAAP IOP does not discuss methods to prevent deterioration of water quality in the brooks.
<p><i>Climate Change, Energy Efficiency and Flooding-</i></p> <p>To reduce contributions to climate change as well as guard from the effects of climate change and</p> <p>To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area</p>	-	<p>The airport under this scenario is looking to operate about three flights an hour by 2030 implying increase in aviation emission (considered a highest contributor to GHG). Additionally the development shall increase traffic flow into the airport area implying increased transport emissions.</p> <p>Parts of the Areas for Change (i), (ii), (iii), (iv) and (vi) are located within a medium risk flood zone. The development proposal may fail flood risk sequential testing posing constraint to the development. It is recommended that the option should refer to the region's SFRA and incorporate SUDS in the design.</p> <p>Residential development proposed under area (i) will be required to account for atleast 10% energy sourced from renewable energy under the National Renewables Obligation. The development should aspire to include energy efficiency designs to support this objective.</p>
<p><i>Soil and Use of Previously Developed Land-</i></p> <p>To ensure preservation of</p>	-	Intensification of development in areas (iv) and (vi) will ensure reuse of previously developed land thus supporting this objective; however the positive effect is limited only to this area. Development under a Medium Growth scenario will consume arable land and amenity grassland potentially removing the top soil in the short to medium term, depending on the phasing of 'Areas for Change' development. In the absence of appropriate soil management mechanisms potential hazardous

Sustainability theme/Objective	Performance	Commentary
Greenfield land as well as enhance quality of soils, wherever possible		material used during operations phase of the airport may contaminate the soil in the long term.
<p><i>Transport, Air and Noise-</i></p> <p>To ensure high quality environment for the residents and users and</p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	-	<p>The significant passenger aircraft growth proposed under this option will increase aviation emissions in the future. The significant expansion of the airport base, increase in passenger aircraft services and inflow of passenger and commercial services (area xi) will witness increased HGV (freight) and car (passenger) traffic into the JAAP implying increased transport emissions. It is acknowledged that the JAAP IOP supports a transport strategy with an emphasis to public transport.</p> <p>The airport expansion will increase noise and vibration in the long term unless appropriate measures are taken to contain the noise. It is acknowledged that proposed enhancements to areas v and ix can potentially serve as noise barriers to residential receptors located in the south and east of the study area.</p>
<p><i>Waste and Material Assets-</i></p> <p>To ensure high quality environment for the residents and users</p>	?	No specific consideration to this aspect is found in the JAAP IOP. The airport expansion both during construction and operations is likely to increase consumption of material and generate waste (construction and operational) and it is critical to address these issues in order to maximise resource efficiency and minimise waste generation. It is recommended that residential buildings should adopt the Code for Sustainable Homes and the commercial buildings should attempt to incorporate sustainable construction methods (e.g., adopt BREEAM standards). A complete waste management plan should be in operation when the airport is in operation.
<p><i>Accessibility-</i></p> <p>To enable people to have similar and sufficient levels of access to services, and to</p>	+	Improvement to existing access roads and provision of new access roads off the roundabout at Cherry Orchard Way, to the west of the JAAP is critical to realise benefits of the proposed Areas for Change under this scenario. These proposals supported by improvements to the public transport (as identified in the IOP under Issue 4) will potentially improve accessibility to the JAAP area. The proposed train station within the study area is likely to increase accessibility to services

Sustainability theme/Objective	Performance	Commentary
promote sustainable transport measures		for the airport users as well as the wider area within the boroughs. The train linkage will potentially encourage a modal shift in work related travel which is currently very high for car users.
<i>Landscape and Townscape-</i> To maintain the quality and setting of landscapes and townscapes	-	Although no designated areas of landscape value are located within the site, the series of hedge grows, scattered trees, ruderal vegetation and other greenery within the greenbelt area provides a landscape character to the area which will be reduced under this proposal. Enhancements to areas v and ix provide compensation to this significant negative effect, therefore the medium growth scenario is marked negative against this objective
<i>Archaeology and Cultural Heritage-</i> To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Borough Council	NR	The site does not comprise of known sites of archaeological or conservation interest therefore no relation could be established. However, the JAAP should incorporate policies or guiding principles that respect the local architecture character and cultural heritage of the surrounding area, this is with particular reference to the Rochford Conservation Area is located adjacent to the northern airport boundary.

Scenario 3: High Growth includes the following Areas for Change- (i) to (xi)

Issue 1(iii): Airport growth with extended runway and new facilities

Issue 2 (iii): High scale employment growth

Sustainability theme/Objective	Performance	Commentary
ECONOMIC		
<p><i>Population and Local Economy-</i></p> <p>To improve the vitality and viability of the airport, and to achieve sustainable levels of prosperity and economic growth</p>	++	<p>In terms of strategic fit for employment, a high growth option will potentially bring an additional 1180 direct jobs and about 5,000 indirect jobs from the wider business (e.g., business park allocations), an opportunity that will have a significant positive impact on the local and the sub-region's economy. By extending the runway, the airport will overcome the risk identified under Scenario 2 and will be able to accommodate commercial aircrafts potentially creating interest among commercial operators. This shall in turn increase opportunities for supporting business activities, thereby attracting inward investments, including the hospitality industry.</p> <p>The potential risk involved with this development is that the investments could focus much into the JAAP area and could create an imbalance within the overall borough area. The employment land policies and development control should consider this aspect in order to ensure a justified distribution of inward investments. This scenario is likely to bring a significant positive impact from the short term through to the long term.</p> <p>It is acknowledged that the airport development focuses on economic growth, however it encourages mixed use wherever possible (i.e., area (i) and residential area near (v)).</p>

Sustainability theme/Objective	Performance	Commentary
<p><i>Employment and Wealth Creation-</i></p> <p>To maximise economic benefits of the thriving airport, enhance wealth creation factors and emphasise local strengths and qualities to attract investment</p>	+	<p>As discussed above, this scenario is likely to command the most inward investments to the JAAP area compared to other scenarios. It is considered that this option is likely to bring the most direct and indirect jobs to the area, however it is uncertain that these jobs will be available to the local residents. The reason being aviation related jobs might require specific set of skills that may not match with those of local residents. Therefore the performance score is reduced to a mild positive.</p>
SOCIAL		
<p><i>Human Health, Safety and Risk-</i></p> <p>To improve overall levels of health, create safe environments by reducing crime/fear of crime</p>	?	<p>A high growth scenario is likely to increase the connectivity to and from the JAAP area implying increased access to community and health services. The provision of additional health facilities within the proposed airport expansion area is unknown at this stage; however such a provision is likely to have a significant positive effect on the local residents and airport users. The environmental enhancements and improved community facilities like the rugby field in area ii(b) are likely to encourage resident users and other users to take up walking and other sports thus encouraging healthy lifestyles.</p> <p>The level of growth proposed under this option will increase aircraft emission from the short term. In addition such growth is likely to add to the traffic volume on the roads to the airport implying increased noise and traffic emissions which is likely to have a long term effect on health of the residents. It is acknowledged that the proposal recommends adoption of appropriate abatement measures; however the extent to which these measures will address long term air emissions (especially from aircrafts) is unknown.</p>

Sustainability theme/Objective	Performance	Commentary
		A mixed land-use of the proposed residential area in area (i) is considered to limit occurrence of crime due to movement of people throughout the day. In spite of majority of the area under employment land may not be used after working hours it is assumed that the airport premises shall be secure with appropriate security arrangements, therefore helping in preventing the occurrence of crime.
<p><i>Education and Skills-</i></p> <p>To improve the education and to assist people gain skills to fulfil their potential and increase their contribution to the community</p>	?	A mismatch between the required skills in the aviation sector and skills of the Southend-on-Sea and Rochford residents has been identified in the current baseline within the Borough and the JAAP area. Although the high growth scenario is likely to bring additional jobs, the proposal does not explicitly discuss options to address this issue. In addition to a likely proposal for education facilities within the proposed area (i), it is recommended that suitable area should be allocated for training purposes and the airport could support such training as part of a regeneration effort of the Borough.
<p><i>Community –</i></p> <p>To nurture a sense of belonging in a cohesive community where people will want to live and work</p>	+	The airport under this scenario is likely to improve connectivity to the JAAP area as well as improve public transport linkages, including the new rail station implying improvement in access to services in the wider area. The mixed land-use proposed in area (i) and community and environmental enhancements to areas ii(b) and v are likely to benefit the residents both within the JAAP and in the immediate vicinity. It is assumed that the mixed use development at area (i) will include community and social facilities that is likely to encourage community interaction.
<p><i>Housing-</i></p> <p>To provide opportunity for people to meet their housing needs</p>	+	The East of England RSS identifies Southend Airport to have a key role in improving the sub-regional economy and the rest of the Borough areas are expected to support the airport through housing. Therefore the role for the JAAP to meet the regional and sub-regional housing targets is limited, however the proposal under this scenario makes provision for residential accommodation within the JAAP area, thus secures a positive score against this objective.

Sustainability theme/Objective	Performance	Commentary
ENVIRONMENT		
<p><i>Biodiversity-</i></p> <p>To maintain and enhance areas of nature conservation including species diversity, as an integral part of economic and social development.</p>	-	<p>Although the site does not comprise of any areas of national or international nature conservation interest, River Roach Estuary located within 1 km of the site area is likely to have negative impact under a high growth scenario. The site is reported to be habitat to animal and bird species of district and county level importance, particularly along the Rayleigh and Eastwood Brooks. An expansion into these areas, particularly with airport operations is likely to negatively affect these habitats. In overall terms the severity of the impact is considered to be reduced due to the proposals for environmental enhancements within the JAAP, which could also be considered as sites for compensatory habitat, if required. A detailed ecological study documenting potential impact of this scenario within the JAAP and in the nature designated sites at the Roach Estuary should be undertaken to ascertain the actual impact of this proposal on various habitats and species</p>
<p><i>Water-</i></p> <p>To maintain and enhance the quality of surface and ground water and sustain good water, wherever possible</p>	--	<p>At present the airport discharges waste water through interceptors into the brooks within the study area. Intensification and future expansion of the airport operations will continue this discharge practice potentially polluting the surface waters of River Roach. The JAAP IOP does not discuss methods to prevent deterioration of water quality in the brooks.</p>
<p><i>Climate Change, Energy Efficiency and Flooding-</i></p> <p>To reduce contributions to climate change as well as guard from the effects of climate change and</p>	-	<p>The airport under this scenario is looking to operate about three flights an hour by 2030 implying increase in aviation emission (considered a highest contributor to GHG). An increase in traffic volume will be inevitable under this scenario from the short term, implying increase in transport emissions.</p> <p>Parts of the Areas for Change (i), (ii), (iii), (iv) and (vi) are located within a medium risk flood zone. The development proposal may fail flood risk sequential testing posing constraint to the development. It is recommended that the option should refer to the region's SFRA and incorporate</p>

Sustainability theme/Objective	Performance	Commentary
To increase opportunities for renewable energy generation, increase energy efficiency in all activities within the plan area		<p>SUDS in the design.</p> <p>Residential development proposed under area (i) will be required to account for at least 10% energy sourced from renewable energy under the National Renewables Obligation. The development should aspire to include energy efficiency designs to support this objective.</p>
<p><i>Soil and Use of Previously Developed Land-</i></p> <p>To ensure preservation of Greenfield land as well as enhance quality of soils, wherever possible</p>	--	<p>It is acknowledged that the scenario option considers intensification of employment land in sections of the JAAP area, however as large sections of arable land of agricultural grade 1 (areas ii, and xi) proposed for development under this option a high growth scenario is considered to have a significant negative impact from the short term to the long term against this objective</p>
<p><i>Transport, Air and Noise-</i></p> <p>To ensure high quality environment for the residents and users and</p> <p>To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures</p>	--	<p>A high growth scenario is likely to increase incoming traffic (both freight and passenger) which shall include LGVs and HGVs. A surge in traffic inflow into the area may have impacts in the wider area road network. Access via already dense and important locations like the Rochford Town Centre (north of the site) should be avoided.</p> <p>The public transport options like a new train station, improved bus services are likely to reduce the number of cars and other private vehicles, however the volume of traffic is likely to be high in the medium term and therefore increase transport emissions. The park and ride facility proposed in area (xi) is likely to encourage public transport within the JAAP area; however it shall not preclude more private cars from entering the Boroughs (i.e. wider area of the JAAP area).</p> <p>The aircraft emissions is likely to increase as the airport will reach its high growth capacity from the medium term to the long term indicating increase in air emissions and noise impacts. It is</p>

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		considered that abatement measures over the required minimum should be considered to minimise these identified impacts. An effect transport strategy with appropriate traffic management schemes should be drawn prior to development under this scenario.
<i>Waste and Material Assets-</i> To ensure high quality environment for the residents and users	?	No specific consideration to this aspect is found in the JAAP IOP. The airport expansion both during construction and operations is likely to increase consumption of material and generate waste (construction and operational) and it is critical to address these issues in order to maximise resource efficiency and minimise waste generation. It is recommended that residential buildings should adopt the Code for Sustainable Homes and the commercial buildings should attempt to incorporate sustainable construction methods (e.g., adopt BREEAM standards). A complete waste management plan should be implemented when the airport is in operation.
<i>Accessibility-</i> To enable people to have similar and sufficient levels of access to services, and to promote sustainable transport measures	+	A high growth scenario shall bring positive benefits to connectivity to and from the JAAP area, particularly through the railway. The area is likely to see an improved access to Aviation Way and a new roundabout off Cherry Orchard way. The Cherry Orchard Way itself is likely to be upgraded with 2 lanes on each side. Overall this growth will increase the accessibility of the resident users to services and facilities. Appropriate strategy to include the disabled users should be drawn at the detailed development stage for the airport expansion.
<i>Landscape and Townscape-</i> To maintain the quality and setting of landscapes and townscapes	--	Although no nationally designated sites of Landscape value are located within the site, the existing JAAP area is considered to comprise of good landscape features that would be significantly affected by the proposed high growth scenario. Any future buildings or structures that will be built to support airport related activities are likely to conflict with the existing visual amenity the Green Belt provides by reason of siting, design and material, particularly in areas (ii) and (iii). A detailed landscape strategy combined with design guidelines on height, massing, siting, and

Sustainability theme/Objective	Performance	Commentary
		building/finishing material should be produced in order to mitigate this negative effect.
<p><i>Archaeology and Cultural Heritage-</i></p> <p>To maintain and enhance cultural heritage of the area, supporting objectives of the District of Rochford and Southend-on-Sea Borough Council</p>	0	<p>The site does not comprise of any known structures of archaeological or heritage interest. The Rochford Conservation area located to the north of the site is unlikely to be affected directly under this proposal; however the detailed proposal should consider the potential effect on views of the airport development on these conservation areas. Appropriate design principles should be drawn in order to respect the cultural heritage of the Boroughs.</p>

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