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Non Technical Summary

Background
Jacobs have carried out an Environmental Impact Assessment (EIA) for a proposed runway extension and associated infrastructure for London Southend Airport. The aim of this EIA is to assess the environmental impacts of the proposed development and to propose measures for addressing any adverse impacts identified. The conclusions from the EIA have been reported in an Environmental Statement (ES) which describes the existing environmental conditions, identifies potential impacts, both positive and negative, and describes how these considerations have been taken on board in developing the project proposals. This Non-Technical Summary (NTS) of the ES provides an outline of the proposed development and summarises the key issues.

The proposals accord with existing and emerging national, regional and local policy. In particular the UK government sets out its support for the development of Southend Airport in the Future of Air Transport White Paper (ATWP). The government recognises the valuable role Southend Airport could play in meeting local demand, reducing pressure on other airports, providing capacity for business aviation and contributing to regional economic development.

The potential benefits of the airport to meet local demand, reduce travel to other airports, and to be a catalyst for regeneration and economic development of Southend and the wider Thames Gateway Sub Region, a priority area for urban regeneration under the Government’s Sustainable Communities Plan, is also recognised in existing and evolving policy for the East of England region and the Thames Gateway. This is set out for example in the East of England Plan, Southend on Sea Core Strategy, Saved Policies of the Southend Borough Local Plan, Rochford Replacement Local Plan, the emerging Rochford Core Strategy and the emerging Joint Area Action Plan - London Southend Airport & Environs being prepared jointly by Southend Borough Council and Rochford District Council.

Extensive consultation has been undertaken during the EIA, including a series of Public Exhibitions, and an ‘environmental scoping workshop’ which was well attended by statutory consultees, parish councils and residents associations. Feedback from this consultation was an important factor in the development of the proposals.

The Existing Site and Environmental Conditions
The Airport occupies a site of some 125ha, just to the north of Southend-on-Sea. The majority of the Airport lies within the administrative area of Rochford District Council, but the south western extremity of the Airport (including the site of the proposed runway extension) lies within the administrative area of Southend-on-Sea Borough Council.

In 2008, about 42,000 aircraft movements a year used the Airport, 55% of which comprise flying club movements and 35% business aviation. About 48,000 passengers per year used the Airport and around 500 tonnes of cargo were
transported through the Airport in 2007. The Airport is also a major base for the maintenance, repair and overhaul of aircraft.

The Airport is situated on flat, open and sparsely vegetated land between the urban areas of Southend-on-Sea to the south, and the town of Rochford to the north. An industrial/business park area lies to the north-west with open agricultural land beyond. A strip of high grade agricultural land lies immediately to the south, between the Airport and the A127, with the urban areas of Prittlewell beyond. St Laurence Park, an important local amenity area, is located in this strip of land. The eastern boundary of the Airport is bounded by the mainline railway with a small residential area beyond. Further east lies open agricultural land bounded to the north by the Roach Estuary. The estuary is an important ecological site with international designations for nature conservation. The majority of the undeveloped area surrounding the Airport is covered by Metropolitan Green Belt, but this does not include the area proposed for the runway extension.

The Proposed Development

Development and growth of the Airport will proceed even without the runway extension. A new rail station is currently under construction and a new terminal building is to be built during 2010/11, for which planning permission has already been granted. The ‘base case’ for the EIA has therefore assumed these developments are in place. Passenger growth is therefore forecast to increase to around 740,000 passengers per year by 2020 without the runway extension.

An extension of the runway by about 300 metres plus an 80m starter strip, together with associated facilities, would support the growth of the Airport to around 1.97 million passengers per annum (mppa) by 2020. The runway extension would allow larger, more modern and quieter aircraft, such as the Airbus 319, to be served. The planning application which this ES supports is seeking permission for the following:

- Runway extension and repositioning of landing lights;
- Diversion of Eastwoodbury Lane as this currently crosses the site of the proposed runway extension;
- Alterations to the pedestrian and vehicular access to St Laurence and All Saints Church, and removal and reinstatement of part of the churchyard wall;
- Drainage facilities for the extended runway and road diversion;
- Demolition of four cottages on the south side of the runway extension area, and an additional two on the north side.

In years to come, additional supporting infrastructure will be needed as the passenger volume rises towards 2 million. This would include an extension to the terminal building, new aircraft taxiways and aircraft stands, additional car parking, relocation of flying clubs to another location within the Airport, and environmental enhancement works to provide improved drainage, vehicular access, landscaping etc. These would all be provided on the eastern side of the Airport towards the existing terminal/rail facilities. Although details of this supporting infrastructure are only in outline at this stage, the EIA has included a consideration of their potential impacts, but in less detail than the development proposed in the planning application.
The proposed diversion of Eastwoodbury Lane, illustrated above, includes the following:

- Relocation of the children’s play area and basketball area
- Additional compensatory open space to the east of the existing park
- New footpath/cycleway diversion along the south side of the new road
- Creation of informal amenity area to north of new road
- Landscaping with ground re-profiling and tree/shrub planting
- Replacement car parking

Alterations to the access at St Laurence and All Saints Church, illustrated below, include the following:

- Removal of a 38m length of the graveyard wall required for safety reasons and its reinstatement to the western boundary of the churchyard to replace a fragmented hedge
- Provision of early mature yew hedge to replace the section of wall that is removed
- Provision of further hedging across stopped up road to provide a more secluded, tranquil area in front of the church entrance
- Provision of new turning circle for wedding cars and hearses
- Reuse of the churchyard wall to replace a fragmented hedge in the car park
The overall construction phase is anticipated to take around 12 months commencing in early summer 2010. The aim would be for the runway extension to be commissioned prior to the 2012 Olympics.

**Potential Environmental Impacts**

The most significant environmental impacts identified during the EIA process are outlined below.

**Traffic and Access**

A revised Surface Access Strategy has been prepared for the Airport as part of the EIA process. This identifies measures to promote sustainable access to the airport alongside planned growth to 1.97 mppa by 2020. In addition to a dedicated airport railway station, currently under construction, other proposed measures identified in local plans include improved pedestrian and cycle facilities, a park and ride site adjacent to the airport and future integration with the planned South Essex Rapid Transit (SERT) bus network.

Traffic modelling undertaken for this EIA has shown that the development would result in less than a 5% increase in traffic on all roads except Eastwoodbury Lane which would experience a 7.7% increase. This is assessed as a negligible increase. There would be some temporary impacts due to increased Heavy Goods Vehicle traffic during the 12 month construction phase but this would primarily be confined to a short period of 10 weeks or so during import of aggregate for the road and runway construction.
**Noise**
A runway extension would see more aircraft movements; however they would tend to be quieter and be flying higher over Southend and Rochford to a wider range of destinations. The assessment indicates that for day-time aircraft movements, there would be a small number of properties that would be exposed to increased noise levels which would warrant sound insulation treatment. This will be provided through a Noise Insulation Grant Scheme. At night, a new limit is proposed to be imposed on the number and types of aircraft permitted to operate such that there would be a reduction in the number of people exposed to night-time noise that could give rise to sleep disturbance. The noise assessment also indicates that there would be negligible impact from road traffic noise.

**Air Quality**
No significant air quality impacts have been identified either from the increased aircraft movements or associated traffic accessing the Airport. The air quality in the vicinity of the airport is good and there would be negligible risk of breaching air quality standards and objectives. Potential exists for dust impacts during the construction phase and these would be controlled through good construction working practice.

**Land Use, Recreation and Amenity**
During the construction phase there would be temporary disruption, particularly to St Laurence Park and St Laurence and All Saints Church. However mitigation measures would be adopted to limit these short-term impacts. These would include minimising temporary work areas, the preparation of the compensatory amenity area at St Laurence Park as an early activity in the construction phase, the relocation of the children’s play area as an early activity to ensure that the play area remains open throughout, protection of the kick-about football pitch, and the provision of appropriate footpath diversions.

Landscape and visual impacts will result due to the new road; however the compensatory open space proposed to the east of the park provides an opportunity to create new areas with appropriate landscaping. In addition the area of existing park to the north of the new road will be enhanced to provide a more informal area of public open space with wildflower grassland and picnic areas.

At St Laurence and All Saints Church, noise and air quality impacts due to road traffic will reduce due to the diversion of Easwoodbury Lane. Potential impacts to the setting of the church arise from removal and reinstatement of the churchyard wall, demolition of the cottages, and the proximity of new development associated with the runway extension and associated lighting. However mitigation in the form of the reconfigured church entrance, with new hedging, turning circle and gates will provide an overall enhancement in relation to the tranquillity of the area.

The loss of six cottages would be a permanent impact but the occupiers would be compensated for in an appropriate manner.

**Cultural Heritage**
St Laurence and All Saints Church dates back to the 12th century and is a Grade 1 Listed Building. The development will have no direct impact on the church building.
The removal of the section of churchyard wall, although not listed itself, would have a moderate to slight adverse impact on the setting of the church. This needs to be balanced against the potential benefits described above of creating a more tranquil, secluded area in front of the church entrance, following the closure of Eastwoodbury Lane. Potential disturbance to unknown buried artefacts could occur during excavation work, and the risk of this will be investigated further through pre-construction ground investigations.

**Ecology**

There are no designated nature conservation sites within close proximity to the Airport. The development will result in the loss of some habitat including grassland, sections of hedgerow and a small number of trees. These could provide habitat for protected species, including badgers, bats, reptiles and breeding birds. Surveys have identified badger and bat activity in the area, while a small population of reptiles has been found on the site. These will need to be moved to a suitable receptor site nearby before any works begin. Further surveys will be required for bats and badgers prior to construction and these will be agreed with Natural England. Any vegetation clearance will be required outside of the bird breeding season. With such mitigation measures in place, the habitat losses and associated ecological impacts are not considered to be significant.

The Crouch and Roach Estuaries, approximately 1.3km to the east of the Airport, is a designated nature conservation site of European importance (Natura 2000 site), harbouring important bird populations. Assessment and consultation with Natural England has led to the conclusion that no significant impacts should result on this site from increased noise levels as a result of increased frequency of flights, provided flight paths remain the same.

**Water and Ground Conditions**

During construction, controls need to be put in place to protect the Eastwoodbury Brook, which runs along the northern boundary of the Airport, from pollution. This brook feeds into the afore-mentioned Roach Estuary. Impacts could otherwise arise from release of silts if it rains while excavation works are taking place. They could also occur as a result of an isolated pollution incident, such as spillage or leakage of oil or chemicals. These impacts would be controlled through a Construction Environmental Management Plan, which would ensure that the contractor adhered to best practice guidance for working close to watercourses, and that no poor quality water was allowed to reach the brook.

A flood risk assessment has been undertaken for the proposed development which has shown that the characteristics of the site are such that there is no significant flood risk from the proposed development. Drainage attenuation ponds will also be provided to ensure that surface run-off from the site is maintained at the existing 'greenfield' rates, therefore minimising impacts on the brook. The attenuation ponds will also provide a means of control in the event of accidental spillage of aviation fuel or other pollutants.

A ground investigation has been carried out to identify any contaminated material in the soils to be excavated. No significant evidence of contamination was present at
levels to cause any concern to people or the environment; however further testing will be undertaken prior to and during the construction phase.

**Landscape and Visual**
There would be temporary visual impacts during the construction phase, but once commissioned the development would have limited landscape and visual impacts. There would be an adverse impact on St Laurence Park and the adjacent properties along North Crescent due to the road diversion, but provision of the compensatory amenity area, with appropriate landscaping and tree planting would reduce the impacts to slight in the longer term. The proposed changes to the entrance area of St Laurence and All Saints Church would cause landscape and visual impacts, although the provision of new hedging, combined with the closure of Eastwoodbury Lane would provide some benefit through the creation of a more secluded tranquil area dedicated to the church.

**Third Party Risk**
Third Party Risk includes the risks to persons on the ground from an aircraft accident and the risk of damage to property due to the descent to ground level of air vortices generated by aircraft in flight (known as wake vortices). Government has recognised that the risk to people on the ground increases with proximity to airports and that development in areas immediately around airports should be controlled so as to limit, and ideally reduce, the number of people living or working in such areas. This policy is applied through the establishment of Public Safety Zones (PSZs).

Modelling of PSZs undertaken as part of the EIA demonstrated that, at all places around the airport, the level of risk is tolerable and does not materially change as a result of the proposed development. The runway extension would also enable the installation of an Instrument Landing System (ILS) for aircraft arriving from the south west. This would improve safety beyond that demonstrated by the modelling.

In respect of the risk caused by wake vortices, there has been no known damage to property in the vicinity of the airport in recent years from vortex strikes. The risk assessment reports the possibility that the increased proportion of larger aircraft in the development case compared to the base case could increase the risk of vortex strike although the risk is still expected to be small. Even so, to address this risk, LSA has agreed to the introduction of a repair scheme which would ensure that should there be any wake vortex strikes in the future, the airport would meet the costs of repairing any damage to property.

**Sustainability and Climate Change**
An outline Sustainability Appraisal has been undertaken to assess the proposed development in the context of relevant sustainability criteria. It was concluded that the development would provide a net overall benefit in sustainability terms, consistent with Government sustainability objectives. This primarily relates to the significant socio-economic benefits the development would bring (see below), while at the same time mitigating any potential adverse environmental impacts.

An assessment of the carbon footprinting impacts of the proposed development show that there would be reduced carbon emissions with the development case because there would be more aircraft that would need to comply with the carbon offsetting...
rules embodied in the European Union Emissions Trading Scheme (ETS). The ETS does not capture all the smaller aircraft that would continue to use the airport without the implementation of the development. There would also be reduced carbon emissions due to reduced road travel for passengers in Essex who would normally use Stansted, Gatwick or another regional airport.

**Potential Benefits**

The Airport expansion will result in significant socio-economic benefits. In terms of permanent ‘airport related’ employment, the growth of Southend airport will generate an additional 1,130 jobs and £32M income in the local area. In the TGSE and East of England Region the benefits of the development would increase further to 1,260 jobs / £35.6M and 1,490 jobs / £41.4M respectively. In overall terms, accounting for the 2,400 jobs that would be created without the runway extension, the airport would then be the generator of nearly 4,000 direct, indirect and induced jobs bringing in nearly £108M in income per year into the economies of the East of England, TGSE and local area.

The wider catalytic opportunities that would flow from the development of the airport would generate a further 2700 jobs locally, with £76 m annual income. The development will provide a catalyst for transformational changes to the local and regional economy.

Analysis shows that over 400,000 people live within a 30 minute drive time of the Airport. This includes Southend, Rochford, Castle Point and Basildon. In 2006 four million passengers travelling to scheduled short haul destinations had a surface origin / destination in Essex and it is estimated that Southend is the most convenient airport location for at least 0.6million people.

**Conclusions**

Mitigation measures have been proposed to address the significant adverse impacts identified. The appointed Contractor for the construction phase will be required to produce a Construction Environmental Management and Action Plan for approval by Southend Borough Council and statutory consultees. This will include method statements for pollution control, agreed working hours and permissible noise emission levels, a soils handling strategy, and a traffic management plan and a site waste management plan.

Once in operation, the principal impacts of the scheme relate to increased aircraft and road traffic movements and associated noise impacts. However the conclusions from the impact assessments presented in the ES show that increased road traffic from the expanded airport operations will comprise a relatively small proportion of the base case projected road traffic. Associated road traffic, air quality and noise impacts have been assessed as not significant. Ongoing noise and air quality monitoring will be carried out to assess the impact of the scheme going forward.

Increased aircraft movements are demonstrated to have an insignificant impact in relation to air quality. The noise impact assessment shows that there will be a small number of properties where significant impacts would result due to day-time aircraft movements. Sound insulation will be made available for these properties. At night,
the number of people exposed to noise levels which may cause sleep disturbance should reduce.

**Obtaining Further Information**

A planning application has been submitted for the runway extension project. Southend Borough Council will formally consider and consult on the planning application leading to a report to the Planning Committee, which will decide whether or not to grant planning permission.

A complete set of planning application documents including plans and the ES can be viewed on the Airport’s website at:

www.flysouthend2012.com

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