

6. LONDON LUTON AIRPORT EXPANSION MASTERPLAN CONSULTATION

1.0 PURPOSE OF REPORT

- 1.1 To present the Luton Airport Masterplan (LLA) Consultation Draft.
- 1.2 To facilitate development of an SBDC response to the Luton Airport consultation on this major airport expansion proposal.
- 1.3 This is an Executive Key Decision and has appeared on the Executive Forward Plan.

2.0 RECOMMENDATIONS

- 2.1 That the Council makes the following comments in response to the consultation:
 - 2.1.1 The Council supports the principle of some growth of the airport, however, there is a lack of sufficient information to satisfy all of the council's concerns at this stage.
 - 2.1.2 Airport development in this form, and the required land take and environmental impact in particular, seems at odds with the intent and expectation of the Government's White Paper policy approach.
 - 2.1.3 The Masterplan analysis and options appear to demonstrate that the LLA site and surrounds are highly constrained environmentally, and, given the dependence on an enlarged site, it may actually be unsuitable for a major airport expansion.
 - 2.1.4 Whilst the Council supports the principle of some continued growth of the Airport and recognises that the economic benefits of expansion are important and desirable, it is considered that a lesser scale of growth based on the existing Airport complex could contribute to meeting national aviation needs and deliver an appropriate level of economic benefit. The operator needs to demonstrate why a more modest expansion, focusing on further development of the current "niche" role in low cost/ short haul business and using the existing runway is not appropriate and viable.
 - 2.1.5 Masterplan Option D is unacceptable due to its very large land take and consequent environmental impact, especially in respect of the purpose and function of the Green Belt and serious harm to the landscape archaeology and heritage features of the area, particularly the historic Luton Hoo estate.
 - 2.1.6 Masterplan Options A B and C appear to be unrealistic and environmentally damaging.

- 2.1.7 Further work should be done to explore a variation to Option C involving archaeological investigative works in and around Someries Castle.
 - 2.1.8 Further work should be done to determine the optimum length of runway required.
 - 2.1.9 If a new runway is developed, use of the existing runway should be restricted to emergency use and during periods of essential maintenance only.
 - 2.1.10 Any airport growth should be subject to a legally binding development phasing and infrastructure provision plan, that ties direct development of the airport to specific on and off site surface access improvements (particularly airport site mass transit and wider area public transport) and also to a package of environmental mitigation measures.
 - 2.1.11 Any airport growth should be subject to a legally binding development phasing plan, that links permitted growth to noise control and reduction targets achieved through aircraft fleet mix and business type controls. This should include controls over night flying.
- 2.2 That the additional detailed analysis and comments set out in the full report be agreed as supporting material in respect of the above response.

3.0 REASON FOR RECOMMENDATIONS

- 3.1 To make a response to the consultation.
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4.0 BACKGROUND

4.1 “The Future of Air Transport” White Paper

- 4.1.1 In December 2003, the Government published its white paper, “The Future of Air Transport”, setting out a strategic framework for the development of national airport capacity over the next 30 years. A summary of the white paper is included in Appendix 1.
- 4.1.2 The white paper sets out a framework for airport operators, airlines, regional bodies and local authorities to plan ahead. It emphasises that the airport capacity must not (Council’s underline) be increased regardless of its environmental costs. The benefits of expansion should be considered against the overall aim of reducing the environmental effects of aviation such as air pollution, noise and blight as well as safety and security.
- 4.1.3 A summary of the points in the white paper, relevant to the London Luton Airport Expansion, is listed below:

- There is an urgent need for additional runway capacity in the South East.
- The Government's first priority is to make best use of the existing runways including the remaining capacity at Stanstead and Luton at the major South East Airports.
- Forecasts suggest that there would be sufficient demand to justify expansion of Luton to the full potential of a single runway – about 30 mppa and 240,000 air traffic movements (ATMS) – in the period up to 2030, even with two new runways at other South East Airports.
- The Government supports the growth of Luton Airport to the maximum use of a single full length runway based broadly on the current alignment, on condition that the overall environmental impacts of such development will be carefully controlled and adequate mitigation provided.
- Based on the conclusions of the Civil Aviation Authority (CAA) and the National Air Traffic Services (NATS) that realigning the runway will require major changes in airspace for very little overall gain in capacity, realignment of the runway is not supported
- A second runway at Luton airport is not supported.

4.1.4 It is clear in the White Paper presentation of options for Luton that the new runway option did not envisage a significant enlargement of the Airport's land take.

4.1.5 As a result of the White Paper the Government asked each Airport operation to develop it's own detailed 'Masterplan' for future expansion. This should include details of the necessary environmental controls and mitigation plans, proposals for improved surface access, and where appropriate, measures to address blight. Planning and transport bodies are required to take these into account in their guidance, strategies and decisions, together with the need to protect any land required for future airport expansion, and to provide the necessary airspace.

4.2 **London Luton Airport Masterplan (Project 2030)**

4.2.1 London Luton Airport has prepared a draft Master Plan for the Airport, which has now been published for public consultation.

4.2.2 The draft Master Plan consists of a suite of documents. They include: Core strategy, Sustainability Appraisal, Airport Surface Access Strategy and a Non-Technical Summary document.

- 4.2.3 The Core Strategy summarises how the Airport aims to take forward the Government's strategic framework. It presents a 'plan' for delivering a 30 million passenger per annum airport this includes the construction of a full length 3000 metre runway with its associated infrastructure.
- 4.2.4 The Airport Surface Access Strategy outlines a vision to address surface access issues associated with the development proposals.
- 4.2.5 The Sustainability Appraisal identifies the likely, positive and negative, significant effects associated with the proposals. It analyses the extent to which the implementation of the proposals will achieve environmental, social and economic objectives.
- 4.2.6 The suite of documents also includes a Community Sound Insulation Scheme, which proposes two voluntary schemes to provide sound insulation to noise-sensitive community buildings and residential properties affected by current operations.
- 4.2.7 Extracts from the Non Technical Summary are at Appendix 2. Copies of the full draft Masterplan are placed in the Members' Lounge. They can also be accessed at: <http://www.london-luton.co.uk>
- 4.2.8. The Masterplan considered four runway configurations (Figure 6.1 in Appendix 2) to develop their preferred option, or 'reference case' which is presented for consultation. The four runway options, each designed to provide a full-length 3000-metre runway, are described below:
- Option A** An extension of existing 2,160 metre runway eastwards, satellite piers and aprons to be extended to the east.
- Option B** A new replacement runway approximately 250 metres to the south of the existing runway. Satellite piers and aprons would be extended to the east.
- Option C** A minor realignment of option B, providing a more south-west to north-east alignment. Satellite piers and aprons to be extended to the east.
- Option D** A southern parallel replacement runway approximately 950 metres south of the existing runway centreline, and offset to the east by 330 metres. A second passenger terminal with satellite piers to be built south of the existing runway.
- 4.2.9 The Masterplan concludes that on balance option D offers the best solution and hence it is put forward as the preferred option. The airports 'optioneering matrix' and detailed conclusion of their 'optioneering exercise is in Appendix 2.

4.2.10 LLA is aiming to submit a major planning application with a view to delivering a replacement runway in time for the London Olympics in 2012 (15.3 mppa, 24,000 ATMs).

5.0 LONDON LUTON AIRPORT TODAY

5.1. LLA currently occupies a 235 hectare site to the south east of the Luton, Dunstable and Houghton Regis urban area, predominantly within the unitary authority of Luton Borough Council. Over 7.5 mppa used the airport in 2004 with over 9 mppa expected during 2005. There were 8,200 direct and off site employees.

5.2. There were around 9,000 movements (take offs and landings) at night, which is 25 per night on average. In 2004 there were approximately 63,000 commercial passenger movements, 3,000 cargo and 28,000 other movements, mostly business.

5.3. The existing runway is 2,160 metres long and runs east – west. The parallel taxiway runs for only part of the length of the existing runway.

6.0 VIEWS OF THE ENVIRONMENTAL AND ECONOMY OVERVIEW AND SCRUTINY COMMITTEE

6.1. The Environmental Economy Overview and Scrutiny Committee met on 13 December 2005 to receive a full presentation from LLA on their Masterplan and to make recommendations to Executive on the Council's response to the consultation. All members of the Council were invited to attend this meeting. The minutes of the meeting are at Appendix 3.

7.0 EMPLOYMENT AND ECONOMIC ISSUES

7.1 The proposed expansion of London Luton Airport is seen as the main driver for economic growth in the Luton/Dunstable/Houghton Regis conurbation for the foreseeable future, replacing the previous reliance on the automotive manufacturing base and associated businesses.

7.2 The Bedfordshire & Luton Economic Development Partnership (BLEDP) has carried out research, which indicates that the aviation related sector, focused on the expansion of LLA is likely to provide significant job growth over the next 15 years. An expanded LLA would undoubtedly create additional employment opportunities within the Luton/Dunstable/Houghton Regis and Leighton Buzzard growth area.

7.3 LLA estimates the number of additional jobs directly created to be 12,700 by 2016 and 16,500 by 2030. (BLEDP), in its Joint Economic Development Strategy, (JEDS), for Bedfordshire & Luton estimates that the number of additional jobs created directly as a result of the proposed airport expansion would be 15,000 by 2021.

- 7.4 However, Halcrow in a report commissioned by East of England Regional Assembly (EERA) and entitled “ Employment & Housing Implications of an Extended or Replacement Runway at Luton Airport” (August 2004), estimate that the gross employment impact of the longer runway to be around 8300 jobs more than would be created anyway through the expansion of traffic with the existing runway.
- 7.5 Whilst there appears to be a discrepancy between the job creation figures estimated by LLA and those indicated in the Halcrow report, it is clear that the expansion would nevertheless result in a significant number of new employment opportunities. Furthermore, at this particular time it is difficult to see any other realistic alternative economic drivers, which would have the potential of creating the number of jobs indicated either by LLA or in the EERA (Halcrow) report.
- 7.6 In addition to the direct jobs created, there is a potential for the area to benefit from indirect employment opportunities. This is even more difficult to quantify. A number of recent inward investment companies have indicated that one of the factors in deciding upon locating this business in this locality has been the growing presence of LLA with its associated benefits, (e.g. ease of access to Europe and affordable travel).
- 7.7. One of the main impacts of the proposed expansion of LLA that could have a detrimental impact on the local economy is that of increased traffic congestion on the existing highway network. This would be exacerbated if there is a substantial growth in employment opportunities in the south of the Luton/Dunstable/Houghton Regis conurbation (associated with the airport expansion) and significant housing development in the north of the conurbation as part of the growth area proposals.

8.0 ENVIRONMENTAL AND LAND USE ISSUES

- 8.1. In the Airport’s Core Strategy, environmental and land use planning matters are set out under thirteen headings. These are:
- Aircraft Noise;
 - Ground Noise;
 - Air Quality;
 - Water Environment;
 - Land Take and Land Use;
 - Safeguarding;
 - Energy;
 - Waste;
 - Cultural Heritage;
 - Natural Heritage;
 - Landscape and Visual;
 - Green Belt; and
 - Wider Land Use Effects.

A brief analysis of the likely impact that the Airport expansion proposals will have on each of these elements is set out below. Where relevant this is referenced to Development Plan Policies - South Bedfordshire Local Plan Review, 2004). Where necessary some detailed comments/points of response to the consultation are noted.

8.2. Aircraft Noise

8.2.1 The first objective of the Master Plan is to deliver the Air Transport White Paper. The Sustainability Appraisal claims that this is positively compatible with the objective of minimising the number of people adversely affected by aircraft noise. However the Masterplan acknowledges that during night time there will be an increase in the number of people exposed to higher levels of aircraft noise. LLA predict that, with their preferred Option D, substantially fewer people will be affected by high levels of day time aircraft noise. Even so, whilst fewer properties overall will be affected by day time noise in the future, some properties will experience higher levels of noise than at present because of the greater number of movements occurring.

8.3. Ground Noise

8.3.1 Ground noise from the airport is not something that has previously resulted in complaints to the Council. With Option D the majority of airport ground operations will no longer be within the boundary of Luton Borough Council, but within the neighbouring authorities of South Bedfordshire and North Hertfordshire. The Masterplan states that, as a matter of policy, LLA will attempt to minimise unnecessary and excessive noise where possible. LLA also say that they will work with appropriate authorities to propose measures to mitigate any adverse impacts, including road traffic noise. However no specific details of noise levels have been provided.

8.4. Air Quality

8.4.1 The Masterplan states that aircraft operations invariably have an impact on air quality through direct emissions to air both arising from aircraft landing and take off and through the associated generation of traffic that occurs as a consequence of airport operations. The Masterplan also states that whilst there will be a significant increase in the number of aircraft movements by 2030, this increase will not be proportional in emissions, as aircraft engines become cleaner. However, no details or future projections on emissions are provided. The improvement in air quality resulting from the introduction of cleaner engines for road vehicles has been to some extent negated by the increase in numbers of these vehicles. Future advances in road vehicle engine technology are not expected to achieve the improvements in air quality that the earlier tranche of emission abatement techniques achieved.

In the past 40 years more efficient airframes, larger aircraft and improved engine technology have improved aircraft fuel efficiency and therefore reduced emissions by 70% per passenger kilometre. The same trend may occur with aircraft engines.

8.5 Water Environment

- 8.5.1 The Masterplan states a commitment to ensuring that no materially adverse impact occurs on the water environment as a result of the expansion of the Airport. It is not yet known how appropriate safeguards will be put in place, because a hydrological survey of the existing airport and the proposed development area has yet to be undertaken. Without the completion of this work the evidence base of the Strategy is considered inadequate.
- 8.5.2 The hydrological survey, to be undertaken in collaboration with the Environment Agency, will assess the amount of additional run off that the increase in the areas of hard standing proposed will lead to. Measures are to be derived from this survey that will remove any flood risk by managing water flows on the site through the use of appropriate 'Sustainable Urban Drainage Systems'.
- 8.5.3 The South Bedfordshire Local Plan includes an identified area of Indicative Floodplain to the west of proposed airport expansion area. Until a full hydrological survey of the proposed development is undertaken, any impact on this cannot be assessed.
- 8.5.4 Local Plan Policy IS3 states that proposals involving the raising of land in areas of high flood risk will not be permitted. The Council consider that due to the scale of the expansion proposal this policy ought to be specifically considered.
- 8.5.5 Local Plan Policy IS4 states that where development will generate surface water run off likely to result in unacceptable adverse effects, development proposals must include details of proposed attenuation measures which developers will be expected to fund. The Council considers that the Masterplan fails to satisfy the provisions of this Policy. It is not made clear whether there will be any adverse impacts on the River Lea from potential increases in surface water run-off from the site. Therefore the development may be in conflict with the provisions of Policy NE5, which seeks to protect the amenity of water features and NE7 as part of the river corridor is a County Wildlife Site.
- 8.5.6 It is acknowledged in the Masterplan that activities at the airport have the potential to pollute ground and surface water. It is stated that such activities, both existing and proposed, will be assessed with control and management measures drawn up in conjunction with the Environment Agency.

- 8.5.7 The Masterplan fails to include details of how potential pollution to ground and surface water will be assessed and controlled. Local Plan Policy IS1 aims to prevent unacceptable risk to the quality of surface and groundwater. In the light of this the Council is concerned that there will be increases in ground and surface water pollution.
- 8.5.8 The Masterplan states that the extension of the airport site could increase the load on wastewater treatment facilities. A new facility is proposed.
- 8.5.9 Local Plan Policy IS5 states that new development will only be permitted in locations where foul and surface water can be appropriately dealt with. This has not been adequately demonstrated at this stage.
- 8.5.10 The Masterplan states that the construction of the proposed replacement runway would be in a groundwater Source Protection Zone (SPZ) which supplies water for public consumption. It is considered that the extension of the airport could have a potential impact on the water quality of three public water supply boreholes. It appears that this matter has not been adequately investigated. Investigative work should be carried out to the satisfaction of all stakeholders and appropriate mitigation measures developed together with means of their implementation. Policy IS1 aims to protect public water supply quality.

8.6 Land Take and Land Use

- 8.6.1 The Masterplan acknowledges that there will be a need to acquire land and property in order to implement the proposals and that the interests of others will be affected by airport operations. A commitment to a compensation scheme is made for those affected in such ways although it is not yet known what form it will take.
- 8.6.2 The Masterplan states that an attempt has been made to minimise the amount of land and the number of properties adversely affected by the preferred option. However the area of land identified in the Masterplan as being needed to accommodate the new development is vast. The vast majority of the land needed to implement the draft strategy's preferred option is open countryside which is a valuable and finite resource. If the preferred option were implemented, it is considered that it would result in excessive and unacceptable environmental damage being done to the countryside which it is not possible to adequately ameliorate.
- 8.6.3 The quality and character of the countryside should be protected and, where possible, enhanced, as stated at paragraph 15 of PPS 7, Sustainable Development in Rural Areas, July 2004. Also, Policy NE1 of the adopted local plan review aims to prevent development that would have an adverse effect on the character and appearance of the countryside. The Council consider that the preferred option also fails the tests of both the PPS and this policy.

8.6.4 The Masterplan states that eight roads and ten public rights of way including a section of the Chiltern Way will need to be diverted as a result of the proposed future airport boundary. The Masterplan envisages working with stakeholders to ensure attractive links to the Chiltern Way are preserved. Local Plan Policy R15 states that the Council will seek to retain rights of way and will oppose proposals for their diversion or closure when such proposals are contrary to maintaining and improving access to the countryside for informal recreation. In view of the fact that the Chiltern Way, (a national trail) will be affected in this way, a national trail, the preferred option also fails the tests of this policy.

8.7. **Safeguarding**

8.7.1 The Masterplan preferred option would result in an increased Public Safety Zone (PSZ) in relation to take – off and landing flight paths. This is an area defined by the Department for Transport (DfT) within which existing activities are accepted but new or intensified activities should be resisted so that there is no increase in the number of people living or working in the area.

8.7.2 The expanded PSZ will cover part of the site adjacent to Junction 10 of the M1. This will restrict development potential in this area. This site was under consideration as potentially being a suitable site for the relocation of Luton Town Football Club and the development of associated commercial uses. The intervention of the PSZ is likely to prejudice this development and pressures for development could therefore be shifted to other more damaging or less suitable locations.

8.8 **Energy**

8.8.1 The Masterplan states that the implications of the proposed expansion of the airport on its energy requirements will need to be investigated. It undertakes to maximise the use of alternative energy sources such as solar panels and the use of recycled airport waste. The Council should support the imaginative use of alternative and renewable energy resources and perhaps more opportunities exist for this than those referred to in the Masterplan, (e.g. the potential to make use of Combined Heat and Power (CHP)) Local Plan policy BE8 calls for the use of such energy sources to be maximised so this approach seems to be in accordance with this policy.

8.8.2 The sentiments of the Masterplan to seek to tap into a nearby fuel pipeline are to be supported, as this has the potential to reduce environmentally damaging fuel tanker movements in the area.

8.9. **Waste**

- 8.9.1 The Masterplan says that the airport has a commitment to minimise waste and that recycling programmes have been introduced. New challenging targets and action plans will be drawn up to make the site more sustainable. A joint waste management facility with nearby developers, landowners and Councils is to be investigated.
- 8.9.2 The Masterplan leaves too much for future consideration on this topic.

8.10. **Cultural Heritage**

- 8.10.1 The Masterplan illustrates proposals which will cause serious harm to cultural assets of both local and national importance. The level of information provided with the consultation document is inadequate to allow a proper assessment of the preferred development option.

Somerles Castle

- 8.10.2 Somerles Castle includes the archaeological remains and upstanding ruins of a 15th century magnate's residence. The monument is of national importance as a survivor of this relatively rare building type and as one of the earliest examples of brick building within medieval England.
- 8.10.3 The Masterplan indicates that the preferred option for an additional runway avoids physical encroachment into the designated area of the scheduled ancient monument.
- 8.10.4 However, only the fact that it is a scheduled monument has been considered. Its full special interest, the extent and importance of underground archaeology and its setting have not been fully established or considered. Some of this information is 'known' but has not been identified by LLA or noted in their decision to support Option D.
- 8.10.5 Historic records indicate that Somerles Castle was predated by an earlier medieval Manor House and make reference to an adjacent abandoned medieval village.
- 8.10.6 Very little archaeological investigative work has been undertaken within this location and as yet there is no real information about the nature, extent and location of the earlier Manor House, abandoned village or indeed, any other archaeological assets which may exist with the wider Masterplan area.
- 8.10.7 Similarly, not enough information is currently available to allow an accurate assessment of the full nature and extent of the Magnates residence and associated infrastructure.

- 8.10.8 Further development of the Masterplan must therefore involve archaeological investigative works to establish the full extent of archaeological assets in and around the scheduled ancient monument and across the wider Masterplan area.
- 8.10.9 This investigative work should be used to inform the preparation of detailed development proposals and the final boundaries of the Masterplan area.
- 8.10.10 At present, public access is available to the upstanding ruins of the Magnates residence. However, the preferred Masterplan layout suggest that the existing route for public access will be severed by the proposed new runway. It is of fundamental importance that public access should be maintained and detailed development proposals must secure an alternative route for public access.
- 8.10.11 As noted above, the preferred option for airport development will avoid physical encroachment within the designated area of the scheduled ancient monument. However, the proposed development will radically alter the landscape and environment around the site and this will be harmful to the setting of the monument.
- 8.10.12 Further work is required in order to allow a proper assessment of the impact of the proposed development on the setting of the Scheduled Ancient Monument.
- 8.10.13 Compensatory and mitigation works will be required in respect of Someries Castle. It is suggested that these should include a programme of archaeological investigative works, a scheme of repair and stabilisation works and provision for improved public access and interpretive resources.

Luton Hoo & Listed Buildings

- 8.10.14 Luton Hoo Park is Listed (Grade ii*) in the “Register of Parks and Gardens of Special Historic Interest in England” and is of national importance as a landscape laid out by Capability Brown. It is centred on the magnificent Grade I Listed Mansion, which was originally designed by Robert Adam for the Earl of Bute in the 1760’s.
- 8.10.15 Historic records indicate that the estate extended eastwards cross the Lea Valley to encompass Someries Castle and both Bush Pasture and George Wood. This area was linked by a drive running between Someries and Tank Drive and it is clear that the eastern slopes of the Lea Valley formed an integral park of the estate parkland.

- 8.10.16 Research indicates that Brown may have advised on the treatment of Someries Castle and tree planting within this Eastern Area. Indeed, Someries Castle, Bush Pasture and George Wood formed a fundamental part of Brown's landscape and the setting of the Mansion.
- 8.10.17 Since the 18th Century, development and woodland planting have altered the character of the Estate. However the main view from the Mansion to Bush Pasture and George Wood has survived and is critical to the setting of this Grade I Listed Building.
- 8.10.18 The preferred development option identified in the consultation Masterplan shows a new runway terminated between George Wood and Bush Pasture. The proposed Masterplan area includes part of Bush Pasture and the whole of George Wood and informal enquiries indicate that it is likely that construction of the new runway in this location would necessitate the felling and removal of these areas of woodland.
- 8.10.19 Felling of this woodland, construction of the proposed runway and the visual intrusion caused by aircraft movements would result in the destruction of one of the most important views within Capability Brown's Landscape and would cause material harm to the setting of the Grade I Listed Mansion.
- 8.10.20 In addition to the Mansion Building, the Luton Hoo estate includes a number of other Listed buildings and structures. Whilst the focus of concern must relate to the main Mansion it should be noted that construction of the proposed new runway would also harm the setting of these additional Listed Buildings and structures.

Overall Potential for Mitigation

- 8.10.21 No appraisal of the likely beneficial affects of mitigation has been provided between the differing options. Indeed, although all of the options state that the impact will be minimised, the level of impact and the likely success of mitigation vary between options and no informed comparison can be made.
- 8.10.22 It is essential that LLA should enter in to early discussions with this Council and Bedfordshire County Council to prepare a mitigation strategy for these and other heritage assets within the area and to ensure that positive benefits to the historic environment are secured.

8.11 **Natural Heritage**

- 8.11.1 There are a number of woodland areas affected. Four contain elements of ancient woodland. It is intended to keep the impact of the proposals on the woods to a minimum.

A strategy is to be devised with English Nature to ensure that appropriate replanting (using relocated seed stock from the existing woods) occurs when woodland is unavoidably lost. It is envisaged that extra land will be purchased to allow the planting of replacement woodland.

- 8.11.2 The land to be used for the expansion is to be surveyed for protected species and their habitats. Mitigation measures will be put in place in relation to badgers, bats, ponds and amphibians. The Masterplan undertakes to manage all of the non - operational airport land for nature conservation. The Masterplan contrasts this approach with the current hedgerow and woodland landscape set amid intensively farmed fields.
- 8.11.3 Loss of nature conservation habitat of all kinds, especially rare habitat like ancient woodlands is of serious concern. The Masterplan leaves too much for future consideration for a clear picture to emerge of what the intentions are regarding the natural environment. The Masterplan ought to be clearer in setting out measures to conserve the best existing habitats whilst minimising and ameliorating unavoidable negative impacts on other habitat features.
- 8.11.4 The preferred expansion option is not in accordance with the provisions of Local Plan policies on trees/woodlands biodiversity and nature conservation: Policies NE4, NE6, NE7 and NE8. One County Wildlife Site, George Wood, is adversely affected by the proposal and the Council is unable to assess from the material contained in the strategy whether the benefits of the proposed development outweigh the loss of the substantive nature conservation value of this site.
- 8.11.5 Local Plan Policy NE9 states that steps ought to be put in place to secure public access to sites of nature conservation importance like County Wildlife Sites together with their appropriate management associated with development proposals. The proposals will remove the prospect of public access over wide areas of land.

8.12 Landscape and Visual

- 8.12.1 The Masterplan states that the preferred option will not have a substantial impact on the Chiltern Hills Area of Outstanding Natural Beauty (AONB). It does acknowledge, however, that the preferred option will have an adverse affect on the setting of Luton Hoo together with views from the house to the east. The Park is an Historic Park and Garden registered with English Heritage.

- 8.12.2 The Masterplan also states that the expansion will encroach into a rural scene with some elements of the development having a substantial visual impact. The majority of the area affected by the proposal in South Bedfordshire District is designated Area of Great Landscape Value (AGLV).
- 8.12.3 Clearly there is a very substantial landscape and visual impact on the District. The preferred option is very damaging in respect of this issue.
- 8.12.4 It should be noted that detailed comments that relate to the impacts of the proposal on Luton Hoo, its associated parkland and the scheduled Ancient Monument at Someries Castle have been dealt with under the 'Cultural Heritage' heading above.

8.13 Green Belt

- 8.13.1 The Masterplan acknowledges that the proposed airport expansion area inside South Bedfordshire District is largely within the designated South Bedfordshire Green Belt. Apart from development types specified as permitted within green belts in PPS2 - 'Green Belts', very special circumstances must be demonstrated for all other development. Two options are set out in the Masterplan. The first is that the green belt could be 'rolled-back' to exclude the proposed airport expansion area, in which case replacement green belt land would need to be found. Alternatively the Green Belt could continue to 'wash-over' the site. The way forward remains to be discussed with appropriate bodies including the Council.
- 8.13.2 The White Paper states that new development to serve airports should be consistent with the broad framework of planning policy which includes the protection of green belt. It goes on to say that it may be appropriate to designate green belts around substantial new airport developments to safeguard the countryside from further encroachment.
- 8.13.3 Local Plan Policy GB1 reflects national planning priority. As there appear to be alternative options available to deliver the expansion of the airport either outside the Green Belt, or with a much reduced impact on it, the loss of a large part of the Green Belt between Luton and Harpenden is of serious concern.

8.14 Wider Land Use Effects

- 8.14.1 The Masterplan considers that the effects of airport development will be felt primarily at the local level. LAA offer to work closely with local councils to quantify the effects of any expansion and manage them through the new planning system.

Century Park, Wigmore, Napier Park and Butterfield Green Employment Areas are referred to as being prime candidates for airport related growth as well as the Airport Business Park to the north of the existing site.

- 8.14.2 It is considered that some off-site parking will be required in addition to maximising on-site provision. A planning strategy will be required to deal with how car – parking issues are handled. This will be developed in partnership with local councils.
- 8.14.3 If Airport growth becomes inevitable the LAA commitment on this matter is welcome. Early clarification is required on the uses of land within a much enlarged Airport perimeter, as development of these areas could raise economic and environmental issues.

9.0 SURFACE ACCESS ISSUES

- 9.1 The published Airport Surface Access Strategy states that the overall aim is to sustain investment in transport and to ensure that airport growth is fully integrated with wider development. The Strategy sets out to include clearly defined transport objectives, simple performance targets, tangible transport measures and clear areas of responsibility.
- 9.2 The Council should support the above aims provided that the programme of surface access infrastructure development and the associated soft measures are effectively tied to the stages of any agreed expansion plan.
- 9.3 The Council can also support the objectives of widening travel choice, integration and sustainable accessibility, but suggest that new developments could offer more scope for developing innovative schemes particularly in the area of influencing modal shift. The airport must take advantage of these opportunities to help develop a sustainable surface access strategy.
- 9.4 It is essential that a local traffic model is developed to fully test the effect of the background traffic, airport generated traffic, and traffic related to the growth area on the local and wider road network.
- 9.5 The Council supports the need for the integrated package of transport measures listed as required to deliver the Airport's Surface Access Strategy. It expects that the LAA will fully commit to delivering their contributions to the Strategy when they are needed, and that support will be provided to other authorities in delivery of their schemes.
- 9.6 In particular, any development of this Airport must be subject to the assurance that LAA will:
 - 9.6.1 Co-ordinate access strategy measures with regional and local planning and transport policies through the Airport Transport Forum and the Surface Access Strategy Forum.

- 9.6.2 Work with Network Rail and the DfT Rail to improve interchange facilities.
 - 9.6.3 Deliver, as soon as judged necessary by the Local Planning and Highway Authorities, a tracked transit system between the Parkway Railway Station and the Airport.
 - 9.6.4 Support and help improve public transport connections between the West Coast Mainline Railway and the Airport.
 - 9.6.5 Support improvement to public transport connections between the major London airports and the East Coast and the West Coast Mainline and railway.
 - 9.6.6 Support the Highways Authorities in their proposals to improve accessibility to, from and around the airport and make financial contributions to help bring to fruition the relevant infrastructure schemes. In particular: the East Luton Corridor, Luton Northern Bypass and Translink (if approved), improvements to other public transport facilities, cycling (routes and on site facilities), and pedestrian facilities (on site and around the urban area near the Airport)
 - 9.6.7 Aim to maximise the accommodation of projected parking requirements on site and use innovative and best practice parking management methods to encourage more sustainable means of travel.
 - 9.6.8 Work with bus and coach companies to improve east-west public transport
 - 9.6.9 Work with local bus operators and local highway authorities, and if necessary consider making financial contributions to develop an extended network of bus services to link the proposed growth areas in and around Luton, Dunstable and Houghton Regis with the Airport and surrounding employment areas.
 - 9.6.10 Launch an airport car share scheme, preferably in partnership with nearby work places.
- 9.7 Figure 3.1 in the Airport Surface Access Strategy shows two possible alternative routes joining the proposed Luton Northern Bypass and the Airport. These cannot be relied upon to form part of the Airport surface Strategy because neither is included in any current or future plans of the relevant highways authorities. It is unclear to what extent the Masterplan proposals are reliant on a more or less direct link from the A6 north of Luton via an “Eastern Bypass”. However it is clear that if the claimed economic benefits are dependent upon such a bypass these could be at the cost of significant additional environmental impacts arising from this new road proposal.

- 9.8 The Council welcomes the acknowledgement apparent in LAA's Surface Access Strategy that Luton Airport is also an inter-modal transport hub and accepts its share of responsibility for the Airport problems which are not their direct responsibility, but are nevertheless exacerbated by the Airport functions. Wherever necessary it will be essential for LAA to make financial contributions to help progress the schemes that improve surface access.

10.0 THE COUNCIL'S POSITION TO DATE

- 10.1 The Council has previously supported the more modest expansion of the airport to maintain its 'niche role', indicating a preference for concentrating additional strategic capacity elsewhere in the South East. The Council has been mindful of the potential economic benefits to the sub-region but has consistently raised concerns about the consequential high environmental impact of the more significant expansion plans. This is reflected in the adopted South Bedfordshire Local Plan which states that support for the airport is qualified by its concern that the environmental impact is monitored in consultation with local communities below the flight paths, and minimised so far as possible, and that any future expansion is kept within acceptable environmental limits.

11.0 CONCLUSION

- 11.1. Expansion of the Airport will bring significant local economic development and employment growth opportunities to the sub-region. This is a benefit, particularly when taken in the context of plans for major residential development over the next thirty years.
- 11.2 However, the Masterplan proposals are very different from those that might have been envisaged on the basis of the Government's White Paper ideas. The complete runway relocation, the potential this creates for two runway operation, impact on cultural heritage and the overall landtake, means that the proposals are very damaging environmentally.
- 11.3 The reasoning set out in the Masterplan (which convincingly rejects the previous ideas of runway extension or realignment), almost inevitably leads to a conclusion that the Luton Airport location and site may not offer realistic, and environmentally acceptable, opportunities for major expansion of the type proposed. Certainly the preferred Option D seems very ambitious and damaging given the nature of the area and its environmental constraints.
- 11.4 LLA need to do more to consider whether expansion is possible around existing runway facilities, and/or a more modest development and landtake, in line with the original White Paper ideas. If it is not, then expansion plans should be limited to development based on maximum use of the existing, shorter, runway.

Alternatively, if expansion of this kind is feasible, more detailed consideration of options based on this modest approach is needed. Expansion in a more restricted land area might be something the Council would wish to support. This would also raise the issue of the proposed length of runway. Although the operator has indicated that further work will be necessary to determine the optimum runway length, a longer runway allows year round access to long-haul destinations, lower noise levels through a reduction in use of reverse thrust landing, higher overflying and improved ground operations.

- 11.5 Before reaching this conclusion a further important, and complicating, factor that needs to be considered is noise impact. It would appear that expansion within the existing airport footprint or similar is bound to significantly increase noise impact to large numbers of local residents.
- 11.6 Although the number of exceedances of aircraft noise violation limits is very low and the number of aircraft noise related complaints is decreasing the projected increase in ATMs will undoubtedly counter this trend. The breakdown of complaints for April to June 2005¹ indicates that most (36%) were related to westerly departures, affecting the Caddington, Kensworth, Pepperstock, Slip End and Studham communities of South Bedfordshire.
- 11.7 On the other hand, the preferred option (D) allows a complete resiting of the runway, which minimises over flying of settlements, and this noise impact. It is therefore fair to say that if the Airport is to be allowed to expand to the degree suggested in the White Paper and by LLA, Option D may be preferred in respect of noise impact. Whatever form expansion takes effective, legally binding, planning measures to monitor, control, minimise and limit noise will be required, including the introduction of some restrictions on night flying.
- 11.8 Surface access is a major issue of national and local concern. LLA appear to be ready to commit to assisting in provision of new infrastructure and services, but this is something that needs to be planned and secured in the form of binding agreements linked to planning of airport growth.
- 11.9 Overall, there is much more detailed work to be done in testing environmental impact factors and evidence before decisions are made. More information is needed on the impacts of each option, particularly regarding the physical environment, and whether any other options are less damaging and more acceptable than Option D. This will allow informed judgements to be made so that if sacrifices or compromises are to be reached this can be done in a sustainable manner balancing economic, social and environmental benefits. Variations around all the options presented might reduce environmental impacts and LLA need to explore, and consult on, these.

¹ London Luton Airport Consultative Committee 19th September 2005

11.10 In practice it is likely that all issues will be examined in depth as a result of a planning application and Inquiry. Such an application would be dealt with as a major infrastructure scheme and the final decision taken by the Secretary of State. Unless the concerns raised in this report can be satisfactorily addressed or mitigated, the Council would need to participate in the planning process as an 'opposing' Local Planning Authority. It is likely that this could best be accomplished in a cost share consortium with other objecting local authorities. There will of course be some staff and financial implications arising from this approach.

11.11 In any major development of this scale and impact there are conflicting factors to weigh up and compromises to be made. The main factors in this case are the economic benefits to the sub-region and the environmental impact. The Council's ambitions clearly support increasing prosperity but at this stage, given the heavy environmental impact of the Masterplan, it seems necessary for the council to oppose the preferred option for growth and, by so doing, press for rigorous critical examination of the LLA proposals.

12.0 CORPORATE IMPLICATIONS

12.1 Council Ambitions & Priorities

12.1.1 Future development of the Airport has major implications for the economic development of the District and the Council's 'prosperous' District ambition. Similarly there are major adverse environmental impacts arising from expansion, which affect the 'cleaner/more valued' ambition.

12.2 Financial

12.2.1 Opposition to the Airport's planning application will incur some abnormal costs in respect of technical work and legal representation. These costs can be managed according to the level of participation instructed.

12.3 Environmental Implications Statements

12.3.1 The Masterplan has significant adverse environmental implications which are set out in the report. The recommendations may help eliminate, or at least reduce, the adverse environmental implications of the airport expansion plan.

12.4 Human Resources

12.4.1 Participation in the future planning process will be a significant project, and this will affect human resources decisions in some areas of Council activity, (Development Control, Policy and Regeneration and Environmental Health Services).

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Background Papers:

List of Appendices:

- Appendix 1 Summary of White Paper 'The Future of Air Transport', Key Facts and London Luton Airport Section from the main report
- Appendix 2 Extracts from LLA Masterplan
- Appendix 3 Extracts from Minutes of a Meeting of meeting of the Environment and Economy Overview and Scrutiny Committee held at the District Offices, Dunstable, on Wednesday 13 December 2005
- Appendix 4 Detailed Analyses of Noise and Air Quality Impacts (SBDC Environmental Health Service).

**Extracts from Minutes of a Meeting of the Environment and Economy Overview
and Scrutiny Committee held at the District Offices, Dunstable
on Wednesday 13 December 2005**

29. LONDON LUTON AIRPORT DRAFT MASTER PLAN

The Committee received a presentation from London Luton Airport Operations Ltd (LLAOL) that informed Members of the consultation process being undertaken in relation to the airport expansion.

It was explained that the Government had dictated that the airport would have to expand to cope with the extra flights and that the way this was achieved was up to the airport authority. This had been addressed by an Integrated Master Plan Process.

LLAOL recognised that in any major expansion of this type consultation with members of the public and stakeholders would need to be undertaken and a copy of the Community Newsletter with provision for comments to be made had been distributed to in excess of 20,000 households. Exhibitions informing the public of the proposals within the Master Plan had been held in November and December 2005 at various locations throughout the area affected by the proposals.

Consultation would continue until the end of January 2006 and all responses and suggestions would be taken on board and an open mind approach would be taken until the consultation had been completed.

The National Air Traffic Service had undertaken a review of flight approaches and the Airport had put forward their preferences however no changes had been made to date.

South Bedfordshire would not receive any direct financial benefit from the expansion however there would be plenty of indirect benefits such as jobs and environmental improvement schemes, it would be expected that associated industry would be located within the current employment areas in surrounding Towns such as Dunstable, Leighton Buzzard, Aylesbury and Milton Keynes.

Members suggested that employment opportunities would need to be located close to residential areas and therefore should be considered within the new housing growth area.

Members were advised that the proposal was for a replacement runway, the proposal was for 3,000 metres however this was subject to change. The existing runway use would be discontinued and LLAOL would expect this to be a condition of planning permission.

The airport's current operation was made up of 25% business aviation and this was expected to increase; therefore it was possible that the existing runway could be used for business traffic post 2015. However this formed no part of the current proposals.

LLAOL stated they had an open book approach with other agencies with regard to providing infrastructure, assessing impact, providing solutions and funding a fair share but would hope to see this being integrated within the growth area.

LLAOL assured Members that the airport would make financial contributions towards the cost of surface access infrastructure and that they would consult with stakeholders and take into account all environmental concerns before their plans were finalised.

LLAOL thanked SBDC officers for their contribution and undertook to provide updates whenever required.

Members agreed to support the Officers' response as attached at appendix A.

RECOMMENDED to Executive the Officers' response as attached at appendix A.

DETAILED ANALYSIS OF NOISE AND AIR QUALITY IMPACTS
(SBDC ENVIRONMENTAL HEALTH SERVICE)

The Sustainability Appraisal document states that the Master Plan should aim (amongst other matters) to:

- Minimise aircraft noise and adverse environmental and health effects of aircraft noise
- Ensure statutory limits for air pollutants are met on site

Aircraft Noise

The first objective of the Master Plan is to deliver the Air Transport White Paper. The Sustainability Appraisal claims that this is positively compatible with the Sustainability objective of minimising the number of people adversely affected by aircraft noise.

Baseline data shows that aircraft noise currently affects several thousand people. Data also shows a 16.8% increase in the number of dwellings covered by the 16 hour noise contour (from 1253 to 1562) between 2003 and 2004. The number of people affected increased by 16.4% (from 3241 to 3773)

It stands to reason therefore that by quadrupling the number of passengers carried per annum from 7.5M in 2004 to 30M in 2020 this will inevitably lead to more flights and noise contours extending over greater areas. This will not only lead to more people being exposed to aircraft noise but also to populations being exposed to greater amounts of noise.

In 2004 there were approximately 63000 air transport movements; this is predicted to increase to 216000 by 2020 and 242000 by 2030.

London Luton Airport Operations Ltd's (LLAOL) solution to reducing the number of people affected by high levels of aircraft noise is to move the noise contours away from Luton. This is achieved by constructing the replacement runway some 950m to the south, slightly offset to the east, this is Option D. However this will expose different populations to aircraft noise and populations that had previously been less affected by over flying aircraft.

LLAOL have undertaken a preliminary assessment of the predictive noise impact for 2030. The assessment assumes similar flight paths to those that exist now. As the predictions also assume no improvements in aircraft design and engine technology LLAOL assume these to be conservative assessments.

Option A would obviously result in the currently affected populations being exposed to even greater noise. Comparative data has not been provided for Options A, B and C.

In South Beds the day time noise contours show that with Option D there will be some beneficiaries from the new runway. Kensworth, Whipsnade and Caddington would appear to benefit, however Slip End and Pepperstock would be disadvantaged.

The standard method of aircraft noise assessment in the UK is to produce “equivalent continuous sound level” or Leq contours for the average summer’s day, plotted at 3dB intervals from 57dB(A). The 57dB(A) level corresponds to the on-set of long-term average community annoyance, based on Government research. In the absence of any quoted authority it is assumed that this is based on the 1985 Paper “UK Aircraft Noise Index (CAA: DORA Report 8402)”. This was criticised for being out of date at the Heathrow Terminal 5 Public Inquiry.

Noise contours do not accurately reflect the annoyance caused by individually over flying aircraft. Noise contours are based on the LAeq metric. (LAeqT is the equivalent continuous A-weighted sound pressure level that within a specified time interval, T, has the same mean squared sound pressure as the sound under consideration that varies with time.)

The World Health Organisation (WHO) is critical of the Leq metric when there are distinct events to the noise, such as aircraft, and suggests measures of the individual event be made, for example Lmax, in addition to LAeq,T measurements. The WHO guidelines for moderate annoyance in outdoor living in the daytime and evening is 50dB(A) Leq, 16hour. This is 7dB(A) lower than the lowest quoted noise contour.

The WHO Guidelines for Community Noise identifies sleep disturbance as occurring when, with windows closed, outdoor levels exceed 60dB(A)Lmax and 45dB(A)Leq, 8hour.

A doubling of the number of similar noise sources gives rise to a 3dB(A) increase in noise; a quadrupling of those noise sources is the equivalent of a 6dB(A) rise in noise. A change of 3 to 5dB(A) is a perceivable change in loudness and is noticeable. An increase of 6 to 10dB(A) is a doubling of loudness and it has a significant effect.

In 2004 2653 households and 6731 people were subject to greater than 48dB(A)Leq, 8hour night time contour. The prediction for 2030 is that 6422 households and 16010 people will be affected by night time noise greater than 48dB(A)Leq, 8hour. This is 3dB(A) louder than what the World Health Organisation identifies as when sleep disturbance will occur. Increasing the number of people subject to sleep disturbance is incompatible with the Master Plan aim to minimise aircraft noise and the adverse environmental and health effects of aircraft noise.

On 10 June 2005 the Department for Transport (DfT) issued stage 2 of the consultation on night noise flying restrictions for Heathrow, Gatwick and Stansted. In the consultation document the DfT claims that it is following the White Paper promise “to bear down on noise at night.”

The current night time movement limit at Heathrow, for example, is 5800, with DfT proposing this be increased to 6420. This contrasts with 8908 and 9024 night time air transport movements at Luton in 2003 and 2004 respectively. (Luton is not covered by the night time restrictions placed on the other, BAA, London airports.)

LLAOL forecast 6887 night time air transport movements by 2015 and 7794 by 2030 for the 92 day period June to September.

The Strategic Aviation Special Interest Group (SASIG) of the Local Government Association, of which the Council is a member, issued a press briefing on 5 October 2005 stating that people are more disturbed at night by the number of aircraft and the

generally higher levels of activities around the airports. At the same time SASIG has told DfT that no evidence has been produced by it or the aviation industry to justify claims that night flights have an overall economic benefit to the UK. SASIG considers that the evidence published so far by the aviation industry seems to assume that, if night flights were stopped, then the passengers would not fly during the day. SASIG considers this to be an exaggerated claim.

LLAOL has not considered the airspace change proposal for the extension of the western airspace that is currently being considered by the Directorate of Airspace Policy. A report of which was presented to this Committee on 30 November last year. LLAOL assume that 25-30% of arrivals are when the wind is from the east. By quadrupling the number of air transport movements it can assumed that should the air change proposal be accepted there would also be a proportional increase in the number of flights using this new flight route over Leighton Buzzard. The Director of Airspace Policy has said that subject to satisfactory regulatory consultation he intends to implement the airspace changes on 11 May 2006. He has said if approval is granted Air Traffic Control should not routinely radar vector traffic over Leighton Buzzard, unless tactically unavoidable. No clarification on what is tactically unavoidable was provided.

The White Paper recommends the immediate introduction by airport operators of sound insulation schemes for noise-sensitive community buildings, which are exposed to a certain level of noise. The Government considers that such buildings should benefit from sound insulation schemes if they are located within the 63dB(A)Leq,16hour average summer's day noise contour. The White Paper also supports the operation of voluntary sound insulation schemes for residential properties.

LLAOL propose to introduce two voluntary sound insulation schemes to address noise impacts. These are:

- Residential Sound Insulation Scheme (RSIS)
- Commercial Building Sound Insulation Scheme (CBSIS)

The RSIS would be offered by LLAOL voluntary to provide sound insulation to residential properties within the 2004 63dB(A) noise contour.

If eligible, the RSIS would provide 100% the cost of secondary glazing or high specification replacement double glazed windows for up to a maximum of 5 habitable rooms and subject to a maximum cost of £3000.

To be eligible:

- All or part of the actual dwelling (as opposed to a garden or driveway) would have to be within the 2004 63dB(A) noise contour
- The dwelling would have had to be built or converted to residential use before 16 December 2003 (the date of publication of the White Paper) as LLAOL consider that dwellings converted or erected since then have been built or fitted with appropriate sound insulation measures to reflect the prevailing noise environment
- The scheme would only be available to owner occupiers

Basing eligibility on a noise contour is divisive as one property may be eligible whereas a neighbouring property, only metres away, may not.

The 63dB(A) noise contour shows a high level of received noise. The 57dB(A)Leq, 16hour contour is the level at which the Government claims to be the on-set of long-term average community annoyance; 6dB(A) is a doubling of loudness and has a significant effect.

The RSIS is based only on the 16hour day time contour. No reference is made to the impact of night time aircraft noise. The 63dB(A)Leq, 16hour contour roughly equates to the 57dB(A)Leq, 8hour contour, which is 12dB(A) above the level at which the World Health Organisation identifies when sleep disturbance will occur.

The RSIS is only available to owner-occupiers therefore it discriminates against other types of tenure; the scheme should be made available to all.

The CBSIS would be offered voluntarily by LLAOL to noise-sensitive community buildings within the 2004 63dB(A)leq, 16hour contour.

If eligible, the CBSIS would provide 100% of the cost of secondary glazing or high specification replacement double glazed windows for sensitive rooms, subject to a maximum cost of £10000.

Ground Noise

LLAOL contend that by locating the new south terminal and replacement runway south of the existing runway there will be an improved noise climate for residential areas to the north, east and west of the existing runway. Currently properties in the district are not affected by ground noise. No information on ground noise propagation is provided in respect of the existing runway or the proposed runway or in regard of any of the four Options.

LLAOL say noise from ground operations will be carefully considered as part of their planning applications, and where necessary, will work with the appropriate authorities to mitigate any adverse impacts.

LLAOL say that measures such as fixed ground power, pre-conditioned air and fuel hydrants to reduce the running of auxiliary or ground power units and the use of fuel bowsers will be included. LLAOL say that Option D allows the opportunity to incorporate sustainable practices into the design of the new airport, whereas for Options B and C they say there is limited opportunity but do not elaborate. With respect to Option A, LLAOL say that the runway is closer to residential areas in Breachwood Green therefore impacts associated with ground noise and air quality will be experienced.

LLAOL have predicted potential air quality, noise, water quality and traffic impacts from the importation of fill and say a construction management plan will be prepared in conjunction with the Environment Agency. Construction noise and other nuisance arising from constructional activities are matters that are regulated by the local authority and not the Environment Agency.

Air Quality

The Core Strategy acknowledges that airport operations invariably has an effect on air quality through direct emissions to air both as a result of emissions to air both as a

result of emissions arising from aircraft during landing and takeoff and through the associated generation of traffic that occurs as a consequence of airport operations.

It is also recognised that the development will significantly increase the number of air transport movements and passengers and this will increase overall burden of pollutants despite improvements in aircraft engine technology.

Very little information is provided by the Master Plan. To assess the effects on air quality LLAOL say they will gather more base line data and then model the likely effects. This, they say, will be completed to support the Phase 1 planning application.

Some data is available but not quoted in the Master Plan. Air quality is monitored within and around the airport site. Currently there are 10 nitrogen dioxide (NO₂) diffusion tube sites and a continuous monitor (BAM) recording levels of Particulate Matter (PM₁₀).

The airport's PM₁₀ monitor is of a different type to that used elsewhere in the Herts and Beds Network and can not be directly compared. Once a conversion factor has been officially adopted results from the analyser will be directly comparable to results obtained via TEOM (Tapered Equilibrium Oscillating Microbalance) analysers.

The Government's Air Quality Strategy Objective for annual mean nitrogen dioxide levels is 40ug/m³ (21ppb) to be achieved by the end of 2005. Only one of the airports 10 sites recorded an annual mean above this in 2004 – LA05 (runway apron).

Due to the recently re-introduced of diffusion tube monitoring within the airport perimeter, trend analysis is not possible. However 2004 mean concentrations were similar to those of 2003 but a decrease at LA02 (airport approach road) took it below the objective level; this decrease is likely to be a result of unusually settled weather conditions during 2003 resulting in higher than expected pollution levels.

Around a third of all emissions of oxides of nitrogen from aircraft (including ground level emissions from auxiliary power units, engine testing etc, as well as landing and take off) occur below 100m in height. The remaining two-thirds occur between 100 and 1000m and contribute little to ground level concentrations. However these emissions are still taken into account in deriving the back ground level data for each of the 1x1 kilometre grid squares covering the whole of the country. This data, together with specific emissions from other sources, are subsequently used in calculating whether an Air Quality Objective has been exceeded. The greater the contribution from aircraft sources means that there will have to be fewer emissions from other sources in the vicinity, such as road transport and car parking, to ensure that Air Quality Objectives are not exceeded.

As there is no relevant exposure to target groups on the runway apron no Air Quality Management Area (AQMA) needed to be declared.

PM₁₀ has been monitored at the airport's continuous monitoring site, close to the approach tunnel and control tower, since October 2003.

The Government has set two objectives for PM₁₀; a 24 hour mean of 50ug/m³ not to be exceeded more than 35 times a year and an annual mean of 40ug/m³ – both to be achieved by 2004. Supplementary objectives for 2011 have been provisionally adopted. These cut the number of exceedence days from 35 to 7 and the objective annual mean from 40ug/m³ to 20ug/m³.

All sites within the network recorded levels within both of the exceedence based objectives and within the annual mean objective for 2004. However, monitoring indicates that the 20ug/m³ objective for 2011 is likely to be exceeded in busy roadside locations within the airport. This monitoring does not take aircraft movements within its assessment.

It is unlikely though that there will be relevant exposure to target groups at these locations and as such it is unlikely that an AQMA be declared.

LLAOL propose to reduce the use of auxiliary power units, which contribute to ground level emissions, and instead use fixed ground power units.

Civil Aviation Publication 642 (CAP 642) which covers all aspects of standards and safety on the airfield, includes a requirement for all airside vehicles to comply with MoT certificate emission standards.

The proposed expansion and creation of a new runway will dramatically increase the capacity of the airport with more flights and create greater demands upon local infrastructure surrounding the airport with more traffic that will affect local emissions.

The proposed runway and terminal is within the Council's area and will result in the destruction of a few properties. Some villages are likely to be situated closer to the airport as a result of the proposed runway and may be affected by changes in local infrastructure, such as new access road and more traffic, and increased air traffic, which will have an effect on local air quality emissions. A monitoring regime will record the impact of the development on the local environment.

No residential properties will be situated in the immediate vicinity of the proposed runway and terminal and as such any impact on the air quality should therefore be minimal.

The global impact of the increase in carbon dioxide (CO₂) emissions, which are directly proportional to the amount of fuel used and which will increase as a result of the expansion of the airport is only given passing reference. Because they are emitted at altitude, aircraft emissions have a greater relative climate impact than surface emissions. As well as emitting CO₂, aircraft emit nitrogen oxides, water vapour and particles which form contrails and probably increase cirrus cloud formation, both of which contribute to climate change.

The draft strategy states that whilst there will be a significant increase in the number of aircraft movements by 2030, this increase will not be proportional in emissions as aircraft engines become cleaner. However, whereas the introduction of emission controls on road vehicles resulted in an improvement in air quality the increasing number of vehicles on the road is negating this factor. Future advances in road vehicle engine technology are not expected to achieve the improvements in air quality that the earlier tranche of emission abatement techniques achieved. In the past 40 years more efficient airframes, larger aircraft and improved engine technology have improved aircraft fuel efficiency and therefore reduced emissions by 70% per passenger kilometer. The same trend may occur with aircraft engines.

The draft strategy states that the aviation industry has a key role to play in terms of assisting the Government with meeting its targets for reducing CO₂ emissions

associated with climate change. However research by the Tyndall Centre for Climate Change Research for Friends of the Earth Trust states that the level of aviation growth proposed and supported by the Government in the 2003 Air Transport White Paper is incompatible with its commitments to tackle climate change.