

West Midlands Regional Assembly – Regional Planning Body

This report has been prepared on behalf of the West Midlands Regional Assembly, the Regional Planning Body, as technical advice to inform the Regional Spatial Strategy Revision process. It is one of a suite of technical reports commissioned to inform the development of spatial policy as part of Phase Two of the Revision of the West Midlands Regional Spatial Strategy.

Every effort has been made to verify and check the contents of this report including all figures and tables. However the West Midlands Regional Assembly can not accept any responsibility for errors or inaccuracies.

Further information and details of the West Midlands Regional Strategy and the Revision process can be found on our web site www.wmra.gov.uk

West Midlands Airports
Environmental Baseline
Reference Document

December 2006

1. Purpose

1.1 This paper has been prepared by the Regional Assembly to assist the Phase Two Revision of the Regional Spatial Strategy (RSS) relating to Policy T11 Airports.

2. Background

2.1 The West Midlands Regional Assembly is tasked with reviewing Policy T11: Airports (see Appendix A) of the Regional Spatial Strategy. *“The review is to establish the implications of the Airports White Paper for the Region and subsequent master planning, including:*

- *The future roles of Birmingham International Airport, Coventry, Wolverhampton and Cosford,*
- *Any necessary Revision of Policy T11,*
- *The wider spatial and economic impacts of any proposed airport expansion, and*
- *The policy changes necessary to support and mitigate any such development.”*

2.2 The Phase Two Revision is in line with PPS 11: Regional Spatial Strategies, particularly Annex B, paragraph 24 which states:

“The Government has published the air transport White Paper, ‘*The Future of Air Transport*’ which sets out a long-term framework for the development of air services in the UK. Future reviews of the RSS will need to be consistent with the conclusions of the White Paper. In the case of the RTS, RPBs will need to address in conjunction with the HA and SRA the surface access issues, including freight access and requirements for development of airports in their region. The RPBs should, in this respect, work closely with the Airport Transport Forums, which are responsible for drawing up airport surface access strategies (ASAS) with targets for increasing the proportion of journeys to airports made by public transport.”

2.3 The Air Transport White Paper sets out the DfT’s thinking on environmental impacts of aviation in Chapter 3, the Objectives are shown in Appendix B. At present only Birmingham International Airport is required to prepare a Master Plan.

2.4 The Revision will also take account of a wide range of land-use, economic, social and environmental factors, and the Preferred Option which will be submitted to the Secretary of State will be accompanied by a Sustainability Appraisal which also meets the requirements of the Strategic Environmental Assessment Directive.

2.5 The purpose of this paper is to provide a reference document relating to the environmental impacts of development of facilities or services at any of the 4 main airports within the West Midlands:

- Birmingham International Airport;
- Cosford;
- Coventry; and
- Wolverhampton Business Airport

2.6 The environmental impacts of any airport development would depend on the:

- (a) Existing environmental conditions at the airport – baseline environmental position.
- (b) Size and nature of any development (including associated infrastructure and off-site development such as access roads, car parking, service facilities and warehousing), and
- (c) Mitigation measures introduced to minimize any environmental impact.

3. Airport Development Aspirations in the West Midlands

3.1 In recent years all of the 4 main airports in the Region have publicly indicated aspirations to develop their facilities and / or services in the future. These are summarised below:

Birmingham International Airport

3.2 In October 2005 Birmingham International Airport issued “Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands”. The Draft Master Plan provides the Airport Company’s long-term vision for the phased developments it thinks will be required to provide for the anticipated air transport needs of the Midlands by 2030, including:

- Extension / relocation of taxiways;
- Extension to main Runway;
- Building a second Runway;
- Network of Taxiways;
- Extension of Passengers Terminals and New Terminal;
- Engine Ground Running Area;
- New Fuel Farm;
- Air Traffic Control Tower;
- New Fire Station and Fire Training Area;
- Diversion of A45; and
- Additional Car Parking Capacity.

Cosford

3.3 In September 2005 Defence Estates published “Cosford Masterplan Volume 2: Main Report”.

3.4 Cosford airport does not provide passenger services for the public. The Ministry of Defence provides specialist training on a tri-Service (RAF, navy and army) basis. At present the MOD provides training from more than 40 sites located across the UK, often on a single Service basis.

3.5 Under the Defence Training Review (DTR) Rationalisation Programme, the MOD intends to streamline training into 6 training streams on a Defence basis.

3.6 Options range from relocating all of the current specialist training away from Cosford, through to co-locating more than one stream of specialist training at the site.

3.7 Co-location at Cosford would involve an expansion of the training facility, including:

- Accommodation and Mess Facilities for additional on- and off-site residents;
- New support facilities (medical, chaplaincy, bars, clubs etc);
- New sports facilities; and
- Additional car parking.

3.8 The Masterplan does not include proposals to extend the length of the runway, and does not indicate any increased air activity.

Coventry

3.9 In October 2004 West Midlands International Airport Limited (WMIAL) submitted a planning application on behalf of Coventry Airport to Warwick District Council for:

- A Permanent Passenger Terminal to cater for 2 million passengers per annum;
- Additional Car Parking Spaces; and
- Apron Extension.

3.10 In April 2006 the Secretaries of State for the Environment and Transport granted permission for an Interim Passenger Facility at the airport, subject to a number of conditions.

3.11 The proposed provision of a new passenger terminal is currently the subject of an appeal following the non-determination of the application by Warwick District Council. The appeal has been the subject of a Public Inquiry since January 2006. The Planning Inspector will submit a recommendation to the First Secretary of State and Secretary of State for Transport in early 2007, and a decision is anticipated by autumn of 2007.

Wolverhampton Business Airport

3.12 In June 2004 Wolverhampton Business Airport submitted a planning application to South Staffordshire Council for:

- A New Runway;
- Engine Testing Facility; and
- Removal of condition limiting the use of jet aircraft.

3.13 The planning application was subsequently withdrawn by the airport.

4. Environmental Impact of Airport Development

4.1 To accompany the Master Plans and planning applications all the airports have prepared environmental impact statements or reports outlining the key environmental impacts of the development proposed in the view of the promoters.

4.2 The environmental impact of airports differs from one airport to another, as would the impact of any development proposals. There are, however, a number of environmental impacts that are common to most airports.

4.3 These “common” environmental impacts are identified in the West Midlands Regional Sustainability Forum and East Midlands Transport Activists Round Table’s “The Midlands’ Aviation Masterplan: Managing Midlands’ Air Transport Sustainably for the 21st Century”, published in 2005. The document indicates that, apart from the global impacts of aviation, the local environmental impact of airports typically include:

- Noise;
- Air Pollution;
- Pollution of watercourses and underground water sources;
- Noise and pollution from additional traffic;
- Biodiversity;
- Loss of landscape and settlement character, rurality and tranquility;
- Impact on heritage, listed buildings and archaeological sites;
- Loss of green belt, productive agricultural land and other open land from airport and associated development; and
- Increased risk of flooding.

4.4 Whilst the airports have provided information on what they perceive to be the potential environmental impacts of their development aspirations, the Regional Assembly is aware of other technical work relating to the environmental impacts at the airports. For example, other bodies have prepared technical work in relation to Coventry Airport’s planning application, and South Staffordshire Council commissioned a review of the Environmental Statement prepared by Wolverhampton Business Airport.

4.5 Information provided by the airports focuses on the potential “local” environmental impacts of development. There is currently no information available on the potential “global” impacts, including contribution to climate change. Estimates of the potential contribution of the aviation industry worldwide to climate change are indicated on page 13 of “The Midlands Aviation Masterplan: Managing Midlands’ Air Transport Sustainably for the 21st Century”.

4.6 Reference material on the environmental baseline position and potential environmental impact of airport development is summarised in the following section.

Birmingham International Airport

4.7 Information on the environmental baseline position, together with an indication of the potential environmental impact of airport expansion is outlined in:

- (i) Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands

4.8 The table below indicates, by environmental indicator, what information has been published by Birmingham International Airport relating to the baseline environmental position and potential impact of expansion. For ease of reference, the table also indicates key paragraphs from the Draft Masterplan , and Appendix C includes extracts from these sources.

Environmental Indicator	Source & Reference
Noise	(i) Paras: 10.5-21
Air Pollution	(i) Paras: 10.33-41
Pollution of watercourses and underground water sources	(i) Paras: 10.46-50
Noise and pollution from additional traffic	(i) Paras: 10.22-32
Biodiversity	(i) Paras: 10.52-57
Loss of landscape and settlement character, rurality and tranquillity	(i) Paras: 10.61-64
Impact on heritage, listed buildings and archaeological sites	(i) Paras: 10.58-60
Loss of green belt / productive agricultural land etc	
Increased risk of flooding	See pollution of watercourses above
Energy Consumption	(i) Paras: 10.4
Surface Access	(i) Paras: 9.9-12; 9.22-34
Waste Management	(i) Paras: 10.51
Social and Community	(i) Paras: 10.65-72
Voluntary Compensation Scheme	(i) Paras: 11.3-5

Cosford

4.9 Information on the environmental baseline position, together with an indication of the potential environmental impact of the proposed development is outlined in:

- (ii) Cosford Masterplan Volume 2: Main Report – September 2005
- (iii) Cosford Masterplan Volume 3: Annexes – September 2005

4.10 The table below indicates, by environmental indicator, what information has been published by Defence Estates relating to the baseline environmental position and potential impact of development. For ease of reference, the table also indicates key paragraphs from the above documents, and Appendix D includes extracts from these sources.

Environmental Indicator	Source & Reference
Noise	(iii) Paras: D.20-21
Air Pollution	
Pollution of watercourses and underground water sources	(iii) Paras: B.22-24
Noise and pollution from additional traffic	
Biodiversity	(iii) Paras: D.16-19
Loss of landscape and settlement character, rurality and tranquillity	(iii) Paras: D.9-15
Impact on heritage, listed buildings and archaeological sites	(iii) Paras: D.5-8
Loss of green belt / productive agricultural land etc	(iii) Para: A.51
Increased risk of flooding	
Surface Access	(ii) Paras: 6.4-6.6 (iii) Paras: C.1-11; C.57-87

Coventry Airport

4.11 Information on the environmental baseline position, together with an indication of the potential environmental impact of airport expansion is outlined in:

- (iv) Coventry Airport: New Passenger Terminal - Environmental Statement – October 2004
- (v) Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – October 2004
- (vi) Coventry Airport: New Passenger Terminal – Supplemental Environmental Statement – Non-Technical Summary – August 2005

4.12 The table below indicates, by environmental indicator, what information has been published by West Midlands International Airport Limited relating to the baseline environmental position and potential impact of expansion. For ease of reference, the table also indicates key paragraphs from the above documents, and Appendix E includes extracts from these sources.

Environmental Indicator	Source & Reference
Noise	(v) Paras: 6.1-8
Air Pollution	(v) Paras: 7.1-6
Pollution of watercourses and underground water sources	(v) Paras: 11.1-5; 12.1-3
Noise and pollution from additional traffic	
Biodiversity	(v) Paras: 8.1-7
Loss of landscape and settlement character, rurality and tranquillity	(v) Paras: 9.1-9
Impact on heritage, listed buildings and archaeological sites	(v) Paras: 10.1-4
Loss of green belt / productive agricultural land etc	
Increased risk of flooding	
Surface Access	(v) Paras: 5.1-5
Waste Management	(v) Paras: 13.1-3
Construction Effects	(v) Paras: 14.1-3

4.13 It should be noted that the above documents have been challenged by Third Parties at the recent Public Inquiry in to the proposed new passenger terminal.

Wolverhampton Business Airport

4.14 Information on the environmental baseline position, together with an indication of the potential environmental impact of airport expansion is outlined in:

- (vii) Wolverhampton Business Airport – Environmental Statement – May 2004

4.15 The table below indicates, by environmental indicator, what information has been published by Wolverhampton Business Airport relating to the baseline environmental position and potential impact of expansion. For ease of reference, the table also indicates key paragraphs from the Environmental Statement, and Appendix F includes extracts from these sources.

Environmental Indicator	Source & Reference
Noise	(vii) Paras: 8.7.1-6; 8.7.9-12; 8.7.17
Air Pollution	(vii) Paras: 9.10.1-8
Pollution of watercourses and underground water sources	
Noise and pollution from additional traffic	
Biodiversity	
Loss of landscape and settlement character, rurality and tranquillity	(vii) Paras: 10.4.1-5; 10.4.8-14; 10.5.2-4; 10.6.1-5; 10.7.1-3; 10.9.1; 10.10.1-7; 10.11
Impact on heritage, listed buildings and archaeological sites	
Loss of green belt / productive agricultural land etc	(vii) Paras: 10.9
Increased risk of flooding	
Construction Effects	(vii) Paras: 10.4.6-7

4.16 It should be noted that South Staffordshire Council reviewed the Airport's Environmental Statement in Autumn 2004.

5. Conclusions

5.1 The development of airports has significant environmental impacts. This is reflected in the current wording of policy T11 in RPG 11 which requires proposals to be the subject of rigorous environmental assessment.

5.2 The precise impacts would depend on the prevailing environmental circumstances at an airport, the scale and nature of any development and what mitigation measures were implemented to minimise the impacts. It is clear, however, that any development would have a local environmental impact on at least some, if not all, of the environmental factors outlined in paragraph 4.3. The importance and weight attached to each factor would be a matter of judgement for each person. As noted in paragraph 4.5 above, the expansion of aviation in the West Midlands would also be expected to contribute to climate change and other global environmental problems. It was, however, outside the scope of this document to estimate the extent of this contribution.

5.3 This document aims to provide a source of reference relating to the environmental circumstances at the Region's airports, together with an indication of the scale and nature of development proposals.

5.4 Considerable caution needs to be exercised in attempting to compare or cumulate the potential environmental impacts of the airports in the Region because:

- (a) The aspirations of the airports may not be realised.
- (b) The methodologies and key indicators vary.

5.5 Finally, it should be noted that the process of developing and refining options relating to Policy T11 (Airports) as part of the Revision of the Regional Spatial Strategy will include a Sustainability Appraisal that meets the requirements of the European Sustainability Environmental Assessment (SEA) Directive.

References:

Regional Planning Guidance for the West Midlands (Regional Spatial Strategy), June 2004 - www.wmra.gov.uk/page.asp?id=47

Air Transport White Paper, December 2003 -
http://www.dft.gov.uk/stellent/groups/dft_aviation/documents/divisionhomepage/029650.hcsp

PPS 11: Regional Spatial Strategies, 2004 -
http://www.communities.gov.uk/pub/844/PlanningPolicyStatement11RegionalSpatialStrategiesPDF2594Kb_id1143844.pdf

Birmingham International Airport:

- (i) Draft Master Plan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – www.bhx.co.uk/Planning/85.pdf
- (ii) Birmingham International Airport: Environment & Community Report – 2004-2005 – <http://www.bhx.co.uk/Environment/190.pdf>

Cosford:

- (iii) Cosford Master Plan Volume 2: Main Report – September 2005
- (iv) Cosford Master Plan Volume 3: Annexes – September 2005

Coventry:

- (v) Coventry Airport: New Passenger Terminal - Environmental Statement – October 2004 – www.warwickdc.gov.uk/WDC/Environment/Planning/Land+use+planning/Coventry+Airport.htm
- (vi) Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – October 2004 - www.warwickdc.gov.uk/WDC/Environment/Planning/Land+use+planning/Coventry+Airport.htm
- (vii) Coventry Airport: New Passenger Terminal – Supplemental Environmental Statement – Non-Technical Summary – August 2005 – <http://www.warwickdc.gov.uk/WDC/Environment/Planning/Land+use+planning/Coventry+Airport.htm>

Wolverhampton Business Airport:

- (viii) Wolverhampton Business Airport

“The Midlands Aviation Masterplan: Managing Midlands’ Air Transport Sustainability for the 21st Century”, published by the West Midlands Regional Sustainability Forum and East Midlands Transport Activists Roundtable - www.foe.co.uk/resource/briefings/mids_masterplan_brief.pdf

Wolverhampton Business Airport: Review of Environmental Statement, prepared for South Staffordshire Council by Atkins Consultants, December 2004

Regional Spatial Strategy (RSS 11)

Airports

9.84 Birmingham International Airport (BIA) is located centrally within the Region. There are also a number of airports and airfields across the Region providing a range of business, leisure and military facilities. The central location of the West Midlands also results in the use of other UK airports by people and businesses from within the Region, particularly Manchester and East Midlands together with those located in the South East.

9.85 Given its central location and close proximity to the rail and motorway network, BIA presents an opportunity to provide for more of the Region's air transport needs. Its growth will also benefit the Region's economy. A Surface Access Strategy has been developed in partnership with the National Exhibition Centre in order to provide a framework within which the two organisations can work together to achieve the modal change targets required of them. The strategy includes major infrastructure projects and a variety of smaller measures that can combine to improve the choice of means of access to sites, particularly by public transport.

9.86 Nationally, air transport has been examined through a series of studies, (i.e. The Future of Aviation consultation document and the Regional Air Services Studies) all of which suggest that there will be a major increase in the demand for air transport in the future. These studies informed the White Paper on Air Transport which was published in December 2003. Policy T11 will need to be reviewed when the RPB has considered the implications of the White Paper.

9.87 There is also a need to consider the general aviation needs of the Region. These needs will increasingly be provided for by the smaller airfields across the Region which are generally located in rural areas. Development of these facilities will need to be accompanied by appropriate access improvements and controls.

9.88 Air transport has a major impact on the environment. It is important that any development is designed to minimize environmental impacts and that access by public transport is maximised.

POLICY T11:

A. Birmingham International Airport (BIA) will continue to be developed as the West Midlands' principal international airport with appropriate facilities in order to increase the extent to which it serves a wider range of global destinations to meet the Region's needs.

B. The planning permission for expansion of BIA has a target to achieve a public transport mode share of 20% (passengers, employees and visitors) by 2005 or 10 mppa whichever is the later.

C. To accommodate future significant levels of growth additional passenger terminal facilities would be required. Also, to serve more distant international destinations an extension to the main runway would be required. Development plans in Solihull and neighbouring authorities should include policies to provide for the assessment of proposals for the expansion of the airport to meet the demand. Criteria for

development proposals should include the requirement that they be subject to rigorous environmental assessment and must demonstrate:

- i) that both economic benefits and harmful environmental impacts have been assessed, in line with the principles of sustainable development;
- ii) that unavoidable harm be reduced through mitigation; and
- iii) where harm cannot be avoided or mitigated, it should be compensated for.

D. Satisfactory provision should also be required for improved surface access including:

- i) improvements where necessary to the M42; and
- ii) an increase in the percentage public transport mode share for passengers, employees and visitors – supported as necessary by improved public transport services.

E. Consideration should also be given to the provision of remote check-in and parking facility to serve BIA and the need for bus-based Park & Ride facilities to serve BIA/NEC.

F. Coventry Airport, as primarily a freight airport, provides a complementary service to those at BIA. Development plans for Warwick District and neighbouring authorities should include policies for the assessment of proposals for the expansion of Coventry Airport. Criteria should require the approach to environmental assessment and impacts set out for BIA above; and any proposals for use of Coventry Airport by charter or scheduled passenger flights should be subject to the availability of public transport to serve the airport.

G. The further development of other airports and airfields in the Region providing complementary services to those at BIA, will be supported providing that proposals can be justified following rigorous environmental assessment; mitigation or compensation can be provided for unavoidable, harmful environmental impacts; and any proposals for charter or scheduled passenger services are subject to the availability of public transport.

H. Local transport plans and the Airport Surface Access Strategies should aim to ensure that improvements to strategic and local transport networks and interchanges are provided in order to ensure continued access by all modes to airports is maintained. Within these plans and strategies, challenging targets should be set to encourage a greater percentage of trips, by passengers, visitors and staff, by more sustainable modes.

I. The Region should also work with other regions to develop improved public transport access to other key airports beyond the Region, as appropriate.

9.89 In the short to medium term, further passenger terminal capacity is being provided at BIA with improved access provided by the multi-modal interchange at Birmingham International Station which incorporates a people-mover link to the terminals, and improved links to the A45.

Extract from ATWP Chapter 3, Environmental Impacts

3.1 The balanced strategy set out in the previous chapter requires that we do more to reduce and mitigate the environmental impacts of air transport and of airport development.

3.2 One of the features of air travel is that while many of the benefits are spread across society as a whole, many of the adverse impacts are distributed unevenly. People living near airports have to live with the immediate effects of aircraft noise, air quality problems and increased congestion on local roads. Urbanisation sometimes associated with airport development can also have adverse impacts on landscape and habitats. Action can be taken to mitigate these adverse effects, but it is seldom possible to eliminate them altogether.

3.3 At the global level, the greenhouse gases emitted from aircraft engines into the atmosphere make a significant, and growing, contribution to climate change.

3.4 In many respects, the international nature of the aviation industry means that action to tackle these problems must be taken in collaboration with governments and institutions world-wide. The Government will ensure that we meet our international commitments and obligations; and we will continue to play a major role in seeking to develop new solutions and stronger actions by the appropriate international bodies.

3.5 At the local level, decisions about the amount and location of future airport capacity must properly reflect environmental concerns. Adverse impacts should be controlled, mitigated and, where relevant, made the subject of suitable compensation. The following basic principles are fundamental to achieving these objectives. They provide an essential framework within which additional local controls should operate to manage the local environmental impact of aviation and airport development:

- we will respect targets on air and water quality which have been agreed to protect human health and the wider environment;
- we will require that airport developments are consistent with existing arrangements for the control of the noise impacts of aviation;
- we will work constructively with our European and, where appropriate, international colleagues to develop further procedures and regimes for managing noise, including night noise.

3.6 Local controls should operate within these principles to manage the environmental impact of aviation and airport development so that:

- noise impacts are limited, and where possible reduced over time;
- local air quality is maintained within legal limits across all relevant pollutants in order to protect human health and the wider environment;
- loss of landscape and built heritage is avoided wherever possible, and otherwise minimised and mitigated to the greatest extent possible;
- all relevant water quality and other mandatory environmental standards are met;
- surface access to airports is designed to help limit local environmental impacts (see also Chapter 4); and

- impacts on biodiversity, such as disturbance of habitats and species, are minimised.

3.7 A wide-ranging and balanced approach will be needed to deliver these objectives, including:

- applying increasingly stringent technical standards to limit emissions and noise at source;
- encouraging airport operators, airlines and air traffic managers to adopt the cleanest and quietest operational practices;
- the withdrawal of the noisiest and dirtiest aircraft, and replacing them with aircraft capable of better environmental performance;
- using economic incentives to encourage noise and emissions reductions, and the use of best available technology (see box);
- working with industry and universities to research, develop and introduce cleaner and quieter technology; and
- using land-use planning and management measures at and around airports, including avoiding new housing development in areas exposed to high levels of noise.

These measures will be applied with full regard for safety considerations, international obligations, technical feasibility, and economic reasonableness, including international equity.

3.8 Finally, we will work to ensure that aviation meets its external costs, including its environmental and health costs. The aviation industry has a responsibility to reduce its impacts under the 'polluter pays' principle. The biggest impact in monetary terms is aviation's contribution to climate change, and a longer term solution is set out in paragraphs 3.35 to 3.40 and Annex B. In the meantime we expect the aviation industry and international bodies to address the 'polluter pays' problem seriously, responding creatively to the common challenge of global warming.

Birmingham International Airport

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 33

6.5 Environmental Issues

6.5.1 *The Airport Company will continue to seek and promote environmental improvement through the continuous development of an Environment Management System, including:*

- *To mitigate noise disturbance by operating a comprehensive Noise Management Programme that reflects industry good practice, including the operation of a strict Night Flying Policy and the minimisation of ground noise through continued restrictions on engine ground running.*
- *To operate a Sound Insulation Scheme that benefits local residents.*
- *To minimise the impact of construction projects.*
- *To provide a Vortex Protection Scheme.*
- *To measure, monitor and report on ambient air quality levels and share this data with local authorities and other interested parties.*
- *To impose operational measures to improve local air quality.*
- *To improve energy efficiency by introducing new technology, promoting energy awareness among staff, setting improvement targets and reporting on progress.*
- *To provide an attractive landscape consistent with airport safety requirements and define the effects of airport activity on local ecology, conserving plants and wildlife and avoiding ecological disturbance during both normal airport operations and any development works.*
- *To encourage understanding of, and support for, environmental issues, amongst airlines and other stakeholders.*
- *To manage surface water quality on-site to ensure compliance with agreed consent limits and maintain improvements to surface and foul water drainage systems.*
- *To impose operational controls to assure surface water quality.*
- *To maintain a policy of water and solid waste minimisation by continuing with the maximum recycling of waste as an Airport wide target.*
- *To carry out environmental appraisal of items procured.*
- *To publicly report environmental performance.*

6.5.2. *An Environmental Assessment of the proposals set out in this Draft Master Plan is provided (in Section 2 – Policies) in Chapter 10 – Environmental Impacts & Mitigation, together with the Airport Company’s programme of mitigation measures to address the environmental impact.*

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 84

10. Environmental Impacts & Mitigation

Introduction

10.1 *The Airport Company has now been operating a ‘good neighbour’ policy for over ten years, and is committed to mitigating the environmental impacts of the Airport. In*

assessing future growth and development, emphasis is placed on environmental issues. The environmental impacts of the Airport's existing operations are already mitigated, and there is a policy of continuous environmental improvement. The Airport Company is aware of the environmental concerns of local communities, and recognises that there will be concerns over the effects of future Airport development.

10.2 *The White Paper places a high priority on environmental management, and the Airport Company believes that a coherent, comprehensive and effective policy, which deals with the environmental impact of the Airport's operations and its future growth and development, is essential. An assessment of the environmental impact will enable the Airport Company to develop a management policy and programme of mitigation as part of a 'balanced approach' to development.*

10.3 *As the first stage in determining a new policy, a clear understanding of the current environmental situation was required. This has been achieved through a series of environmental reviews. The objectives of the environmental reviews were to:*

- *Identify existing environmental baseline features within the proposed future Operational Area and the immediate surrounds.⁴⁵*
- *Identify any significant environmental constraints in order to inform the Draft Master Plan.*
- *Provide baseline information in sufficient detail to undertake an Environmental Assessment for the Draft Master Plan.*
- *To identify any potentially significant environmental impacts with the Draft Master Plan and outline a mitigation strategy. Studies for the following environmental issues were undertaken:*
 - *Noise*
 - *Air quality*
 - *Water Resources*
 - *Ecology*
 - *Archaeology*
 - *Landscape and Visual*
 - *Community Facilities*

10.4 *The environmental impact studies have been undertaken at a strategic level, which has enabled broad impacts and effects to be identified and a programme of mitigation to be proposed at an outline level. Further, more detailed, environmental studies will be required to fully assess development proposals, should they proceed to planning application stage. A summary of the environmental features within the vicinity of the Master Plan proposals is shown on the Airport Master Plan, Summary Environmental Features drawing in Section 3.*

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 85-88

1. Aircraft Noise

Air Noise

10.5 *The Civil Aviation Authority's Environmental Research and Consultancy Department (ERCD) was commissioned to undertake an Air Noise Study, in order to*

assess the impact of the proposals in this Draft Master Plan. The work utilised ANCON, the UK civil aircraft noise model. ANCON has been employed for the production of noise contours at Birmingham International Airport, and other UK airports, over many years. The contours were calculated for the peak period of airport operation.⁴⁶

10.6 The ERCD Study modelled the proposed development programme set out in this Draft Master Plan: the existing runway system in 2010; an extension to the Main Runway of 400 m with a 150 m Starter Extension in 2015; a new 2000 m, segregated mode Second Runway with Starter Extensions in 2020 and fully independent mixed mode operations on both runways in 2030.

10.7 The aircraft flight tracks and dispersions for 2010 were based on existing mean flight tracks, devised from an analysis of radar data. For 2015, 2020 and 2030, new departure routes were modelled by NATS as described in Chapter 8 modelled on P-RNAV procedures (an enhanced method of air navigation which enables aircraft to follow flight paths with greater accuracy). Radar data was also used to forecast average departure profiles of height, speed and thrust. To reflect a 'worst case scenario', reverse thrust is assumed for all day and night landings (current local instructions require a sympathetic use of reverse thrust and prohibit use during the Night Period).

10.8 The noise contours were produced assuming a long term average of runway splits for day and night. The daytime modal splits are 65% NW / 35% SE and nighttime 75% NW / 25%SE. The effects of surrounding topography were also included in the modelling.

10.9 The study assumed current aircraft types and noise assumptions in 2010, 2015 and 2020, but a 14dB improvement, relative to the 'Chapter 3' noise certification standard for aircraft types, is assumed in 2030 (the 14dB figure is the cumulative noise reduction achieved at the three noise measurement points used during noise certification). This assumption relates to the future noise improvements that are expected to be achieved from advances in aircraft engine technology. The ERCD study is rather cautious in its assumptions pre-2030. Although it is still not absolutely certain that all aircraft types would achieve the 'Chapter 3 14dB' improvement by 2020, many (or most) aircraft types will. Therefore this study represents a 'worst case Scenario' pre-2030.⁴⁷

Footnote 46: i.e. the 92 day summer period from 16 June to 15 September. The forecast summer day period is calculated as 0700 to 2300 hours and the night time period is 2300 to 0700 hours.

Footnote 47: Advisory Council for Aeronautics in Europe (ACARE) and National Aeronautics and Space Administration (NASA) expects a 10dB reduction in take-off/landing noise by 2020

Page 86 – Figure 10.1 – Forecast Summer Day Air Noise Contours 2030

Noise Mitigation

10.10 Estimated areas, populations and households included within the contours were calculated for 2010, 2015, 2020 and 2030. A summary, indicating day noise contours for 2030, is set out in the table below, with the population levels relative to the noise contours for the Birmingham Alternative

and the Government Consultation Document 'The Future of Air Transport in the United Kingdom :

Page 87 – Table indicating day noise contours

Note 1 The population numbers for the proposed new Second Runway are included, but in detail are 69dBA zero; 66dBA zero; 63dBA 750. It is not possible to separate 57dBA.

10.11 *The noise contours, therefore, show a significant decrease compared to both the 'Birmingham Alternative' and the original Government wide-spaced second runway option. This decrease is primarily driven by the forecast reduction in Air Transport Movements (ATMs) in this Draft Master Plan, compared to the White Paper, and the proposed usage of the new Second Runway for overspill operations only. The contours are set out in Figure 10.1.*

10.12 *The noise contours can also be compared over time as shown in the table below. The increase in ATMs from 2010 through to 2030 leads to an increase in populations exposed to corresponding day and night noise contours, although it should be noted that the proposed new Second Runway will not be operated during the Night Period.*

Page 87 – Table indicating potential noise contours over time

10.13 *The 66dB(A) Leq contour for 2020, which is assumed as the first year of operation of the proposed new Second Runway, covers a lower population than the equivalent 2017 Leq 'Birmingham Alternative' noise contour (this was the assumed year of opening for the proposed new Second Runway in the White Paper). There are two reasons why the Draft Master Plan 2020 Leq noise contour is lower, namely a lower number of ATMs and the proposal that the Second Runway would be used in segregated 'overspill' mode in the early years of operation.*

10.14 *The White Paper stated that it would be necessary to limit the numbers of properties exposed to new noise impacts. The proposals in this Draft Master Plan show a significant reduction in noise impacts and the number of properties affected, compared to the White Paper forecasts.*

10.15 *The night noise contours reflect a growth in average noise over the period 2010 to 2030. The night Quota Count for 2030, however, would be within the current limit in the Night Flying Policy.*

Noise Mitigation

10.16 *The White Paper expects airport operators to offer noise mitigation measures to households experiencing 69dB(A) Leq or more, and assistance with relocation costs and acoustic insulation to noise sensitive buildings exposed to 63 dB(A) Leq or more. The White Paper commended the Airport Company for its existing noise mitigation programme for schools. The Airport Company's proposals for assistance with relocation are targeted to meet the Government's expectations and are set out in a separate consultation document, "Support & Guidance : Property Valuation Support Scheme".*

10.17 *To address the impacts of future growth, the White Paper expects that airport operators would purchase properties experiencing from 69 dB(A) Leq or more and offer acoustic insulation to properties experiencing 63dB(A) Leq or more. The*

acoustic insulation standard is accepted by the Airport Company and a scheme covering the more onerous 63dB(A) scheme has already been implemented for the existing Main Runway. The proposals for future purchase of properties are targeted to meet the Government's expectations and are set out in a separate consultation document, "Support & Guidance : Property Valuation Support Scheme".

10.18 The results of the air noise study show that, whilst the noise contours are forecast to increase with air traffic growth up to 2030, the calculated noise impact is much lower than in the Government Consultation document and in the 'Birmingham Alternative'. In particular, the impact of the proposed new Second Runway has been severely constrained by the Airport Company's proposals that the proposed new Second Runway be limited to quiet aircraft types only (QC count of 0.5 or below), the Second Runway only be used in overspill mode and the Second Runway be closed at night. In addition, the assumptions made with regard to future engine technology improvements have been conservative and the Airport Company is confident that the noise impact will be less than is demonstrated in the ERDC study.

Night Flying Policy

10.19 Birmingham International Airport has one of the most stringent Night Flying Policies of any UK Airport; . The Night Flying Policy is based on a Section 106 Planning Agreement with Solihull MBC and has a number of measures to mitigate the impact of aircraft noise at night. It sets a maximum noise level of 87 dB(A), which aircraft must not exceed during the Night Period (23:30 to 06:00). Any aircraft exceeding this noise level will be surcharged a full runway charge.⁴⁸ The Night Flying Policy also restricts the number and types of aircraft operating during the Night Period, through a Night Movement Limit for Air Transport Movements and an Annual Noise Quota Limit.

10.20 The Airport Company recognises the importance of the Night Flying Policy as a key element in its overall programme of noise management and mitigation. Therefore, the Airport Company proposes that the Night Flying Policy should continue, based on the existing terms, but it is recognised that it will need to be kept under regular review. In future, the Night Flying Policy will be reviewed every two years, until such time as the Airport Company and Solihull MBC agree a revised basis for subsequent reviews, or new legislation is introduced with regard to night flying in the UK or Europe.

10.21 As previously highlighted, the noise impact of the proposed new Second Runway would be significantly mitigated by the Airport Company's proposals that the proposed new runway would not be used at night.

2. Air Quality / Pollution

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 91-93

Air Quality

10.33 Local air quality is affected by emissions of chemicals and particles resulting from natural sources and from human activity. The UK Government published its

strategic policy framework for air quality management in 1995, establishing national strategies and policies on air quality which culminated in the Environment Act, 1995 and subsequently The Air Quality Strategy (DETR, 2000, DoE, 1997).⁴⁹

The Air Quality Strategy sets out the pollutants of concern and provides a framework for air quality control through air quality management. The Air Quality Strategy also sets out air quality standards and objectives for these pollutants designed for the protection of human health and the environment.

10.34 *The important air pollutants are those which, for overall emissions from all sources, may lead to concentrations in the atmosphere which approach, or exceed, limits or guideline values set for the protection of the environment or human health. In the immediate vicinity of airports, emissions of oxides of nitrogen (NO_x, the sum of nitric oxide, (NO) and nitrogen dioxide, (NO₂)), sulphur dioxide (SO₂), carbon monoxide (CO), hydrocarbon (HC) compounds (especially benzene and toluene) and particulate matter (PM₁₀) are considered to be contributors to local air quality concerns.*

10.35 *Aircraft are not usually the major source of local emissions. Indeed, aircraft entering today's fleets are 70% more fuel efficient, emit 50% less CO, and 90% less unburnt HC and smoke, compared with the 'first generation' fleets of the 1960s.⁵⁰ Airports are a complex source of air pollutants. They are developing into major multimodal public transport hubs, accommodating air, rail, metro and road networks. In terms of local air quality, this increases the complexity of determining the contribution of various emission sources. It should be noted that, in general, airport related emissions are very low compared to other sectors in the UK, for example airport related emissions contributed less than 4% NO_x and less than 5% PM₁₀ in 2002.⁵¹ Research programmes aim to achieve a further 50% fuel saving by aircraft, and a consequent 80% reduction in NO_x, by 2020.⁵²*

Footnote 49: <http://www.defra.gov.uk/environment/airquality/strategy/>

Footnote 50: IATA Environmental Review 2004

<http://www.iata.org/ps/publications/9486.htm>

Footnote 51: <http://www.naei.org.uk>

Footnote 52: ACARE & NASA goals

10.36 *The Centre for Air Transport and the Environment (CATE) at Manchester Metropolitan University were commissioned to undertake an Air Quality Study to assess the impact of the proposals in this Draft Master Plan. The study assessed the effect of the Master Plan proposals on air quality in 2010, 2015, 2020 and 2030 compared to a base year of 2003. The study also examined the contribution of various sources to total air pollution concentrations. Total air pollution concentrations are also compared with UK Air Quality Standards.*

10.37 *Emissions of air pollutants from airport related sources arise principally from landside motor vehicles (e.g. passengers, airport employees, freight vehicles etc entering and leaving the Airport), airside support vehicles, aircraft engines, and other sources such as heating/power generation and plant and petrol storage).*

10.38 *In order to assess ambient air quality concentrations, emission data needs to be entered into a dispersion model. Emissions were therefore calculated from airport related sources (including the M42) and are summarised in the following table:*

Page 92 – Table indicating Emissions

10.39 *The results of the air quality study do not predict any future year exposure air quality standard exceedences. The results generally show increases in emissions, in line with expectations that would result from increased air and road traffic.*

10.40 *Although the study demonstrates that the 2030 position will be compliant, it is important to understand that the figures derived present a ‘worst case’ scenario regarding aircraft emissions. This is because the data was obtained by projecting forward an aircraft fleet mix based on current types. New aircraft types coming ‘on stream’ (for example the Embraer 195, Boeing 787, and Airbus A350) could generate less emissions and these reductions, along with other examples, have not been subtracted from the forecast fleet mixes (likewise, types likely to be ‘retired’, such as the MD87, have been left in the calculations). ICAO has recently established a new, more stringent, NOx standard that will apply to all newly certified aircraft engines from 2008.⁵³ Also, there are ACARE targets of an 80% reduction in NOx emissions for new aircraft in 2020 (relative to new aircraft in 2000).⁵⁴ None of these reduction standards or targets has specifically been built into this air quality study.*

Footnote 53: IATA Environmental Review 2004

<http://www.iata.org/ps/publications/9486.htm>

Footnote 54: <http://www.acare4europe.com/docs/ASD-Annex-final-211004-out-asd.pdf>

10.41 *The Airport Company will undertake further analysis of revised fleet mixes and latest standards and targets, and undertake an additional air quality emissions scenario to assess the potential reduced impact. Nevertheless, it is reasonable to assume that the actual 2030 position will be one of lower emissions. In order to manage air quality, the Airport Company will:*

- *Continue to undertake 24 hour air pollution monitoring at its site.*
- *Continue to raise general awareness of air quality issues.*
- *Provide Fixed Electrical Ground Power on aircraft stands and restrict the use of Ground Power Units and Aircraft Auxiliary Power Units.*
- *Ensure cleaner and more efficient ground services equipment by auditing airside vehicles and compliance with MOT standards.*
- *Conserve energy in buildings.*
- *Promote the use of public transport for passengers, visitors and staff.*
- *Encourage and specify the use of emerging technologies*

3. Pollution of Watercourses and Underground Water Sources

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 94

Water Resources

10.46 *The proposals in this Draft Master Plan have the potential to impact upon both surface and groundwater resources in the proposed future Operational Area. There are two surface watercourses likely to be affected by the proposals: Low Brook and Bickenhill Brook.*

10.47 *The bedrock underlying the Operational Area comprises the Mercia Mudstone, a formation classified as a Non Aquifer. The Alluvium within the valley floors of the*

Low Brook and Bickenhill Brook is classified as a Minor Aquifer. There is only one groundwater abstraction within 3 kilometres of the area. The area is not located within any current Groundwater Source Protection Zones.

10.48 Based on the environmental information on water resources collated to date, it is clear that the existing surface watercourses within the catchments affected by the proposals in this Draft Master Plan generally have good water quality. A number of factors, however, have affected water quality, including leachate from previous landfill. Groundwater is considered to be less sensitive, as the underlying Major Aquifer is generally protected from surface contamination by the thick layer of generally impermeable Mercia Mudstone. The principal changes which may result in impacts on surface water and groundwater features include:

- An increase in impermeable surfaces. This will lead to increased volumes (peak flows) of water entering the system more rapidly than the current situation.
- Operational run-off will require retention and treatment.
- Accidental spillage.
- Permanent diversions of Low Brook and Bickenhill Brook.
- Relocation of the Fuel Farm.
- Groundwater and surface water affected by the proposed realignment and tunnelling of the A45.
- Changes in ground water recharge and flow patterns.
- Linear barriers or preferential conduits resulting from construction.
- Water quality issues during construction, particularly vegetation and soil removal; dewatering; contractors' compounds and storage areas; pollutants; obstructions to watercourses; and any diversions and culverting of Low Brook and Bickenhill Brook.

10.49 Mitigation measures to minimise the impact on water quality and water management issues will include the minimisation of culverting and realignment, with the design of the watercourse diversions and overall drainage of catchments to be agreed with the Environment Agency.

10.50 An operational 'water treatment plan', or processes, and water retention systems will need to be developed in detail and agreed with the Environment Agency. A full operational water management system will need to be developed, and the water management regime in the whole area will need to be structured to avoid significant changes to the groundwater regime, particularly in relation to sensitive ecological resources.

4. Noise / Pollution From Additional Traffic

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 89-91

Ground Noise

10.22 Airport ground noise is defined as noise generated by aircraft taxiing, aircraft auxiliary power units (APU's) and the ground running of aircraft engines. It excludes air noise which is measured as aircraft in flight, taking off or landing (including aircraft on the ground at start of roll or end of landing phase).

10.23 *Although there is no requirement in the DfT's guidance on the preparation of airport master plans to undertake a ground noise study, the Airport Company considers it is important that a study to assess the ground noise impact of the proposed new Second Runway and its taxiway links was undertaken. Consequently, a ground noise study was commissioned. The study also examined mitigation measures that could be put in place with specific reference to the proposed new Second Runway.*

10.24 *The existing Main Runway already has in place apron and parallel taxiway noise bunds that currently provide significant noise mitigation. As airport traffic using the existing Main Runway grows, these bunds will continue to provide important mitigation against ground noise.*

10.25 *A previous study has advised on engine ground running and shown that a dedicated Engine Ground Running facility is technically feasible and would provide noise mitigation. A dedicated Engine Ground Running facility at the Elmdon Terminal Site has therefore been proposed and is shown in the Proposals Map.*

10.26 *The ground noise study focussed on aircraft ground noise and did not specifically undertake a ground noise study of road noise. The re-alignment of the A45 is not expected to increase the overall noise impact because of its location within a tunnel and in cutting.*

10.27 *It should be noted that there are no definitive methods for the assessment of the impact of ground noise. The ground noise study results are presented in the form of ground noise contours, based on the '92 day summer period' as used for air noise contours. The assessment criterion has been considered in terms of LAeq,16h (dB) (0700 – 2300) daytime. Night noise contours have not been calculated as it is not proposed to operate the proposed new Second Runway at night.*

10.28 *In evaluating the impact, it could be compared to the predicted noise level against benchmark values, such as those proposed by World Health Organisation (WHO) 'Guidelines for Community Noise'. The WHO guidelines suggests that 'to protect the majority of people from being seriously annoyed during the day time the sound pressure level in outdoor living areas should not exceed 55 dB LAeq,16h'. It also suggests that 'to protect the majority of people from being moderately annoyed during the day time the sound pressure level in outdoor living areas should not exceed 50 dB LAeq,16h'. The guidelines are considered very onerous.*

10.29 *The results demonstrate that the unmitigated noise levels at the worst affected residential areas are all below the 'moderate annoyance' criterion. At worst, the noise levels are no higher than 48 dB LAeq,16h which is not substantial having regard to the predicted background noise levels.*

Page 90 – Map indicating Forecast Summer Day Ground Noise Contours for Second Runway 2030

10.30 *The main method to mitigate against aircraft ground noise is by the provision of noise bunds. Two options were examined:*

- *By means of an earth bund to the western perimeter of the proposed future Operational Area boundary, proposed to run along the full length of the proposed new Second Runway. It is not possible, for safety reasons, to locate the bund close to the taxiway as it would interfere with the runway, but it has*

been designed to be as close to the runway as safeguarded surfaces would allow. This is referred to as the 'parallel bund'.

- An alternative of placing a number of bunds very close to residential properties was also examined. This bund is referred to as the 'idealised bund'.

10.31 The predicted improvement afforded by these bunds, compared to the unmitigated option is no more than 5 dB and is typically in the region of 3 dB. The 'idealised' bund typically provides up to 1 dB more attenuation than the 'parallel' bund.

10.32 If a bund were to be employed for the proposed new Second Runway, it is estimated that there would be an insignificant difference in ground noise terms between the two alternatives. Consequently, the location of the bund should be selected based upon its impact on visual amenity and ecology alone. The preferred option, therefore, is to provide a parallel bund that is contained within the proposed Airport boundary appropriately landscaped to provide visual amenity.

5. Biodiversity

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 95-97

Ecology

10.52 The proposed future Operational Area, and immediate environs, contains a number of sites of ecological interest. This includes the Bickenhill Meadows Site of Special Scientific Interest (SSSI) situated within the proposed future Operational Area, and the Shadowbrook Lane Meadows SSSI situated to the east of the proposed future Operational Area. There are also Sites of Importance for Nature Conservation (SINCs). The full list of ecologically sensitive sites includes:

- Bickenhill Meadows SSSI (national value).
- Shadowbrook Lane Meadows Nature Reserve SSSI (national value).
- Greens Ward (part of Shadowbrook Lane Meadows Nature Reserve) SINC (county value).
- Remaining parts of Shadowbrook Lane Meadows, i.e. those parts not SSSI or SINC) Eco-site (county value).
- Castle Hills Farm Meadows SINC (county value).
- Fields at Clock Lane Meadows, (i.e. those not part of Castle Hills meadow SINC Eco-site (county value).
- Part of 'meadows to the east of the Jungle', i.e. parts not SINC Eco-site (county value).
- Hampton and Elmdon coppice SINC (county value).
- Elmdon Park. Eco-site (county value).
- Elmdon grasslands Eco-site (county value).
- Low Brook and Kingshurst Brook Eco-site (county value).
- Barbers Coppice Eco-site (county value).
- Elmdon Manor LNR/Eco-site (county value).
- Elmdon Church Eco-site (county value).

10.53 During development of this Draft Master Plan, the aim has been to minimise impacts on important ecological features, particularly SSSIs. As such, neither of the SSSIs will be directly affected by the proposals. The major, indirect impact on both

SSSIs is the potential for the hydrogeological regime to change due to surrounding infrastructure and changes in infiltration patterns. This could affect the structure of their flora.

10.54 Whilst the SSSIs are not directly affected, there will be areas of land take from the SINC's and Eco-sites. Preliminary indications of landtake include:

Page 96 – Table indicating land-take from SINC's and Eco-sites

10.55 The land take of designated sites will primarily result in a loss of nationally important grassland communities (National Vegetation Classification type MG4 and some small areas of MG5),⁵⁷ as well as some woodland (e.g. The Jungle) and significant lengths of hedgerow. This cumulative effect on designated sites across this area is significant. The initial estimate of land take from designated areas is 65.5ha. The loss, or alteration, of watercourses is also considered significant primarily due to the presence of water voles and native white-clawed crayfish.

10.56 In addition, some off-site areas, particularly Barber's Coppice, will be affected due to obstacle clearance issues, related to the proposed new Second Runway, which will result in some trees being cut in height.

Footnote 57: <http://www.jncc.gov.uk/page-2166>

10.57 With regards to rare and protected species, mitigation must be made for badgers, great crested newts, bats, water voles, white-clawed crayfish and three species of rare plants, as well as significant bird, terrestrial invertebrate and aquatic invertebrate communities. The Airport Company is committed to offset the ecological impacts of the Master Plan proposals. The mitigation strategy will include:

- Habitat compensation for the loss of designated sites of county value. A 'compensation plan' will be developed in partnership with relevant wildlife trusts. The proposed compensation ratio should be 2 hectares for every 1 hectare lost. This would result in a compensation site (or sites) of somewhere in the region of 130 hectares being created.
- Translocation of some of the habitats and species. Grassland habitats can be translocated directly, i.e. via cutting turfs. It may be better to accumulate seed from the areas to be lost, to use for sowing at the new receptor site. The creation of a compensation site would require research to look at the suitability of the site and the best methods of establishing new habitats. The compensation site should be as near as possible to the Airport, without compromising the operational safety of the Airport. The initial investigations for developing this large compensation plan would have to happen several years in advance of the proposed development, in order to allow appropriate times for pilot studies and translocations to take place.
- Ground water and botanical monitoring will be necessary at the SSSIs and surrounding SINC's in order to detect any unforeseen changes in water tables as a result of the proposed development. A 'water resource management plan', which can react to changes in ground water levels, will be put in place to protect the SSSIs from drying out and losing their value.
- The brooks will be protected, where possible, to try and retain their value (e.g. for white-clawed crayfish). Culverting and realignment will be minimised. Off site compensation for the loss of watercourse habitat will be investigated.

- *For each of the rare and protected species potentially affected by the proposed development, a phased plan of surveys will take place to assist in identifying the most appropriate mitigation plan, which could include translocation.*

6. Loss of landscape and settlement character, rurality and tranquillity

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 98-99

Landscape and Visual Impact

10.61 *The landscape character of the proposed future Operational Area is principally a farmland plateau characterised by an enclosed and gently undulating landscape, defined by woodland edges and belts of trees and hedgerows. The proposals in this Draft Master Plan would directly change this landscape character through regrading of the site, loss of trees and airport development. Other areas of distinct landscape character surround the proposed future Operational Area (e.g. Bickenhill Village and Elmdon Park) and these would be affected indirectly to varying degrees.*

10.62 *Due to the relatively flat topography, hedges and woodland belts within the landscape, the Zone of Visual Influence is not likely to extend significantly beyond the proposed future Operational Area. The Zone of Visual Influence will extend to the Grand Union Canal to the south, Sheldon to the west, Lea Hall to the North, and Bickenhill to the East. The most significant visual impacts would result from the loss of agricultural land and the overall reduction of mature vegetation within the rural areas to the immediate south of the extended Airport boundary. The principal issue will be effects upon permanent views of residents. Transient views associated with footpath users, motorists and those in vehicles are less sensitive.*

10.63 *Therefore, the design will be developed to maximise the amenity of remaining resources and develop positive contributions to the conservation and enhancement of the wider landscape. Mitigatory screen planting will be necessary at key locations. In addition, appropriate landscape planting will be developed for noise bunds. In other areas, particularly off-site compensation areas, appropriate mitigation will be developed in concert with mitigation for ecological impacts.*

10.64 *There are no over-riding international or national designations associated with landscape or visual issues.*

Landscape Issues

- *Loss of existing trees, woodland copses and hedgerows over the proposed future Operational Area.*
- *Indirect landscape impact at Bickenhill Village and sensitive parkland and residences at Elmdon Park.*
- *Diversion of public rights of way across the proposed future Operational Area.*
- *Loss of rural setting north of Grand Union Canal.*
- *SSSIs and SINCS within the proposed future Operational Area are extremely sensitive to direct or indirect impacts resulting from the implementation of the Master Plan proposals.*

Visual Issues

- Views from the northwest, west and south, (Elmdon Park/Heath/Catherine de Barnes) will generally be affected by the loss of rural setting and introduction of Airport infrastructure. However, views will be screened and obscured to varying extents by existing planting.
- Views from Bickenhill Village are likely to be mitigated to some extent by the dense nature of existing planting.
- Implementation of the Master Plan proposals is likely to have a relatively limited effect on the urban area north of the existing Airport boundary by further extending the urban fringe into existing rural areas.
- Views from public rights of way in rural areas between Catherine de Barnes Lane and the M42 will be affected by Master Plan proposals.
- Longer distance views from the east and north-east to the proposed future Operational Area will also be affected to a lesser extent, due to the distance from site.
- The effects upon recreational users of footpaths and open land will vary according to the proximity of users to the proposed extension of the Airport boundary as well as the intervening vegetation. Views from footpaths within the proposed future Operational Area, which will need to be diverted, will clearly be affected.

7. Impact on heritage, listed buildings and archaeological sites

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 98

Archaeology and Cultural Heritage

10.58 *There are a number of archaeological features within the proposed future Operational Area, including a variety of ridge and furrow features, relict stream courses, linear features and remains associated with existing built heritage. Based on the information collected to date, these features will not be significantly impacted by the proposal in this Draft Master Plan. There are no Scheduled Ancient Monuments (SAMs) within the proposed future Operational Area, however it does contain a number of identified archaeological features, plus a number of possible sites of interest (e.g. crop marks). A number of these sites have already been disturbed by landfill, quarrying, modern construction and buildings, road improvements and landscaping.*

10.59 *Archaeological mitigation will generally include the investigation, documentation and photographic recording of sites of importance. In addition, some exploratory excavation in areas of archaeological potential would be considered. The scope and extent of further investigations will be determined during any future detailed planning application process. A suitable strategy for Castle Hills, Elmdon Lodge and Bickenhill Village Conservation Area will be developed in liaison with English Heritage to mitigate these impacts.*

10.60 *In terms of Built Heritage, there are two Grade listed buildings (Castle Hills Farmhouse and Elmdon Hall Lodge), plus Hargrave Hall, within the proposed future Operational Area, which have the potential to be directly affected by this Draft Master Plan. There are a number of other important*

buildings adjacent to the proposed future Operational Area which may be indirectly affected. This includes the Bickenhill Village Conservation Area (including the grade listed buildings of St Peter's Church and Grange Farmhouse).

8. Loss of Green Belt, productive agricultural land and other open land

9. Increased risk of flooding from water run-off

See 3 Pollution of watercourses and underground water sources

OTHER ENVIRONMENTAL & SOCIAL CONSIDERATIONS

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 93

Energy consumption

Energy Use and Climate Change

10.44 *Airports already have clearly-defined responsibilities with respect to the European Union emissions trading scheme. In effect, currently, where airports have energy infrastructure exceeding a 20-megawatt threshold, they will participate in the European Union Emissions Trading Scheme from 2005. Current usage at Birmingham International Airport is in the region of 7-megawatts, and it is anticipated that future capacity will cross the threshold, during the plan period for this Master Plan.*

Surface Access

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 73, 75-76

Current Surface Access Arrangements

9.9 *In 1996, as part of a Section 106 Agreement with the Outline Planning Approval for the Expansion of the Passenger Terminal Facilities, a Public Transport Modal Share target of 20% was set for surface access to the Airport³⁴.*

“The Airport Company shall use all reasonable endeavours to achieve a Public Transport Modal Share of 20% by 31 December 2005 or when the number of passengers is at the rate of 10 million passengers per annum whichever occurs later.....”

9.10 *In 2004, (when the Airport handled 8.8 million passengers) surveys as part of the Airport Company's annual programme, identified the following modes of surface access for all users of the Airport (i.e. passengers, employees and visitors):*

Page 73 – Table indicating modes of surface access for all airport users in 2004

9.11 *For 2004, the modes of surface access for each category of user were:*

Page 73 – Table indicating modes of surface access by category of user in 2004

N.B. For Passengers, Courtesy Bus includes access by Courtesy Bus from Off-Site Car Parks.

9.12 *In the first two quarters of 2005, the annual rolling public transport modal share has increased to 16.7% and 18.0% respectively.*

9.22 *Currently, the M42 and J6 incur congestion at peak times (particularly when the NEC is busy), which affects access to and from the Airport. The Airport Company recognises the potential which the newly installed ATM system will provide in terms of additional capacity on the M42, when it is fully operational. However, it is currently a pilot scheme by the Highways Agency, the success of which will not be assessed until 2008. There are also some further improvements to J6 being considered, by the Agency, to increase the capacity and improve the junction performance.*

9.23 *In the longer term, beyond 2011, the M42 and J6 are expected to have insufficient capacity and are unlikely to be able to accommodate the forecast growth in road traffic for the M42 corridor – unless some form of road pricing or other traffic constraint measures are introduced. Therefore, additional link capacity on the M42 and a new or improved junction south of J6 is expected to be required in the future, together with new or improved link roads to the Passenger Terminal Site. Studies will continue with the Highways Agency and other interested parties to assess and develop potential phased schemes to improve capacity on the M42 and J6.*

9.24 *The proposed extension of the Main Runway would necessitate the local realignment of the A45 in a tunnel, for a short length, below the Runway End Safety Area (RESA). At a later stage, the proposed new Second Runway would also require some additional sections of tunnel to accommodate new taxiway links, together with a new junction to replace the existing A45/Damson Parkway Junction and the realignment of Damson Parkway.*

9.25 *Beyond 2015, it is estimated that the Clock Junction will have insufficient capacity without further improvement or some form of restraint in the growth of background traffic. The Clock Junction would need improving to provide further capacity and to include potential new and improved access roads for the Passenger Terminal Site and the realigned A45. The B4438 would need to be realigned to allow for the expansion of the Passenger Terminal Facilities across the NEC Western Car Park. This route will be maintained to provide access between North and South Solihull and access to Birmingham International Station and Trinity Park.*

9.26 *The Airport Company proposes to revise the internal landside circulatory road network within the Passenger Terminal Site, in order to facilitate access for the proposed further development of Terminals 1 and 2, together with the proposed new Terminal 3. It is proposed that the gyratory system for the Passenger Terminal Site will be maintained, but extended to reflect the expansion of the Passenger Terminal Facilities and to provide full access to all the landside facilities, and also to support the development of public transport facilities and encourage modal shift.*

Car and Vehicle Parking

9.27 *Parking at the Airport includes facilities for passengers, staff, and visitors, together with areas for car hire 'pickup and return', buses and coaches. The on-site car parking is managed by National Car Parks, as a concession, on behalf of the Airport Company. There are also two 'off-site' car parks, which are independently owned and operated by Airparks, at Garretts Green in Birmingham, and Airport Parking & Hotels (APH), at Hams Hall in Coleshill.*

9.28 Demand for parking is directly influenced by the method of surface access, and in particular the level of public transport utilisation, together with the mix between different types of air passenger – business/leisure, inbound/outbound, short/long stay etc. Over the longer term, the demand will also be impacted by socio economic changes and economic issues such as the price of fuel and the relative costs of private car usage compared with public transport.

9.29 Indicative forecasts of parking demand have been prepared for this Draft Master Plan to give an indication of the potential land requirements for car parking. The actual demand over the 25 year plan period will continue to be monitored and adjusted through the period.

9.30 Based on the long term passenger forecasts and the 25% Public Transport Modal Share target set in the White Paper³⁷, the following parking demand is forecast for 2030:

Page 76 – Table indicating forecast parking demand for 2030

9.31 The majority of car parking for the Passenger Terminal Site is currently provided within the Airport's Operational Area, and is largely provided as surface level car parking. However, for the future, the forecast growth in demand is proposed to be provided as a combination of:

- Short & Long Stay Multi-Storey
- Long Stay Surface Level

9.32 In order to meet the forecast growth in car parking demand for passengers and visitors, the Airport Company proposes, initially, to provide sufficient car parking spaces at the Passenger Terminal Site. This will require the safeguarding of the existing multi-storey car parks and parts of the existing surface level car parks, along with the safeguarding of new sites for both surface level car parking and multi-storey car parking on the current NEC Western Car Park. The Airport Company will also need to provide for additional surface level car parking elsewhere, within the extended Operational Area, including land to the south of the existing alignment for the A45.

9.33 Additional 'off-site' car parking (i.e. by Airparks at Garretts Green and by APH at Hams Hall) is outside the control of the Airport Company. The development of these sites is subject to local authority planning policies. The Airport Company considers it most effective to maximise the amount of car parking provision provided at the Passenger Terminal Site. The Airport Company proposes that it should work with local planning authorities to seek proper conditions on 'off-site' car parks, in order to ensure that their operations are compatible with local planning policies and the local communities which could suffer disturbance from their operations.

9.34 The Airport Company will continue to encourage the use of public transport by employees for their journeys to/from work, in order to reduce the overall demand for staff car parking. However, it is still anticipated that a significant number of spaces will be required for staff car parking at both the Passenger Terminal Site (based on current forecasts, a maximum of 5,600 spaces by 2030, compared with the existing 1,850 spaces) and the Elmdon Terminal Site. Therefore, the Airport Company will continue to provide staff car parking in the future, but, through the Surface Access Strategy and 'Green Travel Plans', it intends to reduce the overall need for staff car parking.

Waste Management

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 95

Waste Management

10.51 *The Airport Company already has measures in place to minimise waste and to recycle waste, wherever possible. It also encourages tenants to participate in waste recycling schemes. In 2005, the Airport Company will be developing a new Purpose Built Waste Management Facility, at the Elmdon Terminal Site, to handle Airport waste. In the future, the Airport Company will continue with policies to minimise and recycle waste, as part of its overall approach to sustainability and in line with Government policies concerning sustainability.*

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Pages 99-100

Social and Community

10.65 *The proposed future Operational Area has a range of community facilities and features, including footpaths and bridleways, some local businesses, sports and playing fields and areas of public open space. Adjacent to the future Operational Area there are a number of residential areas including the villages of Bickenhill and Catherine de Barnes.*

10.66 *Extensive changes are likely to be made to the A45 in the vicinity of the Airport. This will include a southerly realignment to accommodate an extension to the existing Main Runway. However, the impacts will be temporary, occurring during construction only, which may cause delays.*

10.67 *Damson Parkway will be re-routed, to the west of the proposed Airport boundary, through Elmdon Park. Old Damson Lane will be lost to the development. This is not regarded as significant, since it is not a through road and the locations it serves will also be lost.*

10.68 *The track linking Woodhouse Farm to Catherine de Barnes Lane will be lost.*

10.69 *Where Public Rights of Way are lost to the proposed development and the loss is regarded as significant or potentially significant, it should be possible to re-route them around the new Airport boundary without substantial diversions. The only exception is the footpath between Bickenhill and Elmdon Park (SL6, M113 and M113A).⁵⁸ Footpaths SL5, SL6, M104, M105, M112, M113 and M113A will be lost or partly lost. Bridleway SL1 and footpath M106 will be lost for part of their lengths. Other Public Rights of Way in the area will remain in use. The effect on footpaths SL6, M113 and M113A is significant because these form part of the 'Solihull Way'. Other potentially significant losses include the footpaths linking Bickenhill with Elmdon Park (M112), along with the bridleway SL1, Elmdon Park to the A45.*

10.70 *Some residences, businesses and other amenities within the proposed future Operational Area will be lost to the proposed development. Significant losses to the proposed development include the three sports fields and the eastern portion of Elmdon Park.*

10.71 *The remaining area of Elmdon Park would be impacted by noise from the proposed new Second Runway. Solihull Borough Football Club would also experience impacts from noise. The proposed development has been specifically designed to avoid any land-take from Bickenhill itself. Some 390 hectares of agricultural land would be lost to the proposed development. Minor additional land-take from road improvements might also be expected.*

10.72 *Mitigation measures during the construction of the roads infrastructure will be necessary. The usual means of reducing impacts of construction on the community is to agree a traffic management plan and a construction environmental management plan governing a range of issues, including working practices, hours of operation, construction traffic routing.*

Voluntary Compensation Scheme

Source: Draft Masterplan – Towards 2030: Planning a Sustainable Future for Air Transport in the West Midlands – Page 103

11.3 *In the White Paper, the Government asked airports to address the issue of “generalised blight” associated with future airport development. Whilst generalised blight has no legal definition, it is viewed as the impact on property values, resulting from proposals for future development, before statutory protection is available. The Airport Company has accepted the principle that the people most directly affected by the proposals in this Draft Master Plan should have some form of redress and has, therefore, developed draft Voluntary Compensation Schemes.*

11.4 *An initial consultation on such schemes was carried out by the Airport Company between July 2004 and January 2005. Consultation responses were received from a wide range of interested parties and individuals. The consultation process also included the establishment of a Compensation Working Group, to consider the draft Voluntary Compensation Schemes proposed, membership of which included representatives of the consultees and other interested parties. The Airport Company considered the comments raised during the initial consultation process and has amended the draft Voluntary Compensation Schemes for this Draft Master Plan.*

11.5 *The revised draft Voluntary Compensation Schemes have now been published for further consultation, in parallel with this Draft Master Plan. Details of the Voluntary Compensation Schemes are set out in a separate consultation document, “Property Valuation Support Scheme” 60, which can be obtained from the Airport Company and is also available on the Airport Company’s website. The Airport Company would welcome separate consultation responses on the revised proposals for the draft Voluntary Compensation Schemes (although they can also be included as part of consultation responses on this Draft Master Plan), which should be sent to.*

Airport Master Plan (Voluntary Compensation Schemes) Birmingham International Airport Limited Birmingham International Airport Birmingham B26 3QJ

Cosford***Environmental Impacts***

Source: Cosford Masterplan Volume 2: Main Report – Page 31

6.7 An informal Environmental Assessment (EA) has been undertaken of the main environmental issues: heritage; landscape and visual; nature conservation and ecology, and noise and amenity impacts. No major impacts or constraints have been identified. The main conclusions of this impact assessment are:

*a) The site is largely contained visually due to topography and woodland belts along its boundaries with the exception of a clear view of the airfield from the north western edge of Albrighton village and from the railway line. The area to the west of the site is identified as an Area of Special Landscape Character in the Local Plan. To mitigate the impact of redevelopment proposals which are sensitive to views to and from these areas, then consideration will need to be given to the introduction of strategic belts of native tree planting where necessary (subject to operational needs) (See **Figure 09**);*

Map – Figure 09

b) The River Worfe which runs along the southern boundary of the airfield site together with its tributary and the associated belts of woodland and riparian vegetation are important for nature conservation. They should be maintained and safeguarded as part of any redevelopment proposals. A buffer zone of 15-20 metres should remain undeveloped to protect these valuable habitats (See Annex D);

c) As the site generally has a low value for nature conservation (there are no national designations or confirmed habitats for protected species), redevelopment proposals should be seen as an opportunity to improve the ecological value of the site in discussion with Shropshire Wildlife Trust.

d) BDC has confirmed that they hold no records of noise complaints associated with the operational activities of Cosford;

e) Any new tree planting schemes should be made up of native tree species, which where possible should be sourced locally, to reflect the range of existing tree species within the woodlands to the west and south of the site; and

f) Any development of this site would be sensitive to any landscape or ecological designations.

Source: Cosford Masterplan Volume 3: Annexes – Page 40

D.2 Other environmental matters such as air quality, contamination and ground conditions and water quality were considered, but at this stage it was concluded that the development proposals contained in the Masterplan were unlikely to have a significant impact with respect to these matters. Similarly, the construction impacts of the development proposals were not considered to be significant, and could be addressed through the application of good Practice guidelines.

Source: Cosford Masterplan Volume 3: Annexes – Pages 44-45

Key Issues

D.22 As a result of the analysis of existing documentation and on-site investigations, key issues and constraints have been identified for consideration as part of the long-term development potential of Cosford as follows:

- The site is largely contained visually due to topography and woodland belts along its boundaries with the exception of a clear view of the airfield from the north-western edge of Albrighton village and from the railway line. Consequently redevelopment proposals should be sensitive to these views, and consideration given to the introduction of strategic belts of native trees where necessary and where training and operational requirements allow;*
- The River Worfe which runs along the southern boundary of the airfield site together with its tributary and the associated belts of woodland and riparian vegetation are important for nature conservation. They should be maintained and safeguarded as part of any redevelopment proposals. A buffer zone of 15-20 metres should remain undeveloped to protect these valuable habitats;*
- As the site generally has a low value for nature conservation, redevelopment proposals should be seen as an opportunity to improve the ecological value of the site. Shropshire Wildlife Trust will be consulted in order to suggest appropriate conservation measures;*
- If future development proposals require the use of the airfield resulting in its closure, this would result in a great improvement to the noise conditions and consequently the residential amenity of local residents.*

1. Aircraft Noise

Source: Cosford Masterplan Volume 3: Annexes – Page 44

Noise Pollution

D.20 The guidance as set out in PPG24: Planning and Noise should be used to decide the appropriate action for noise levels on potential development sites. The principle sources of noise within Cosford are moving aircraft and aircraft testing associated with the airfield, and the firing range located on the northern edge of the airfield.

D.21 BDC has confirmed that they hold no records of noise complaints associated with Cosford. However, on-site personnel do receive a small number of complaints each year (approximately 30) from local residents in connection with both aircraft directly associated with the site and visiting aircraft. Should future development take place on the airfield resulting in its closure, then this would result in a great improvement to noise conditions and consequently the amenity of local residents.

2. Air Quality / Pollution

3. Pollution of watercourses and underground water sources

Surface Water Drainage

B.22 The existing establishment is serviced by a system of gullies and catch pits linking to a network of vitrified clay and concrete pipes of varying sizes. The existing surface water drainage system discharges via soakaway and direct discharge to local watercourses through a number of oil interceptors. The system underwent a major programme of repair/upgrade during 1999 and is in a generally satisfactory-to-good structural condition. However, it is understood that there is a known flooding problem in the vicinity of the hangars during high intensity rainfall events. It is suggested that consideration be given to some form of flow attenuation upstream of the area prone to flooding.

B.23 The development proposed in the Masterplan will require a significant expansion of the surface water drainage system. A new network of gullies, catchpits and connecting trunk sewers will be required across Site B (Airfield) to serve the proposed expansion. Due to the nature of the underlying strata (sandstone) it is recommended that the majority of the surface water runoff be discharged to soakway if practicable in accordance with Sustainable Urban Drainage Systems (SUDS) source control principles. Provision of adequate oil interception will be required across the new development in order to prevent pollution of the underlying aquifers and watercourses. The use of swales, filter strips and infiltration basins for the drainage of roads and car parking areas is recommended.

B.24 Any positive discharge from the site to nearby watercourses will need to be designed so that discharge rates are equal to 'greenfield' runoff rates. Given the scale of the proposed development this will most likely require the use of attenuation devices such as throttled oversized pipes, or on or off-line storage tanks.

4. Noise & pollution from additional traffic

5. Biodiversity

Nature Conservation and Ecology

D.16 The Bridgnorth Local Plan confirms that there are no designated areas for nature conservation within the site. However, the woodland areas along the western and southern boundaries associated with the River Worfe and its tributary form important habitats. They are mostly made up of native tree species, which connect to the wider landscape, providing movement corridors for wildlife. The woodland areas contain bats, a species protected under the Wildlife and Countryside Act, and also provide a good habitat for breeding birds. The river and its tributary contain water voles, also a protected species, as well as native freshwater crayfish. The Environment Agency is actively encouraging management agreements with landowners to protect and enhance this riparian zone and its vegetation. These areas are of very good nature conservation value and should be retained as part of any future development proposals.

D.17 A recent ecological survey undertaken by Defence Estates reported on but does not confirm the possible presence of newts. One was sighted in a pond situated on the extreme south western edge of the airfield. This area falls well outside that part of the site being considered under the masterplan and therefore would be unaffected by any development proposals. Nonetheless, the pond is to be managed under a local management conservation plan. Consideration of the need for a further survey is being made.

D.18 The remaining areas of the site appear to have limited conservation value as the large open areas of grassland tend to be heavily mown. The native tree groups and avenues within Sites A and C will have some nature conservation value as they provide habitats for birds and insects. Generally the site has a low conservation value with good potential for improvement as part of any redevelopment proposals.

D.19 Shropshire Wildlife Trust was commissioned by BDC to undertake a biological data search for protected species and others identified under the Shropshire Species Action Plan (SAP) within the Cosford site. Freshwater Crayfish were recorded in the tributary of the River Worfe (within the section that runs along the western edge of the runway the site). Brown Long Eared Bats and Pipistrelle were also found in the houses close to the main entrance in the northern section of the site, which may use the site for feeding. The results are shown in the table below.

6. Loss of landscape and settlement character, rurality and tranquillity

Source: Cosford Masterplan Volume 3: Annexes – Pages 41-43

Landscape and Visual Impact

D.9 Cosford lies within the Mid Severn Sandstone Plateau character area (66), as defined by the Countryside Agency, an attractive mainly agricultural landscape context interspersed with groups of woodland and hedgerows. The land adjacent to the western boundary of the site is designated as an Area of Special Landscape Character. The site lies mainly over the Lower Kemper sandstones with a small area of Upper Mottled Sandstone in its eastern part. The River Worfe is situated close to the western boundary of the airfield with an unnamed tributary running in a relatively deep channel along the southern boundary.

*D.10 The landscape and visual assessment was prepared according to the methodology set out in the Guidelines for Landscape and Visual Impact Assessment jointly published by the Landscape Institute (LI) and the Institute of Environmental Assessment (IEA) and is summarised below (refer **Figure 6** of the Main Report). The assessment was carried out during spring and summer when vegetation was in full foliage, and consequently when visual exposure for views into and out of the site was at its lowest. Visual exposure may increase during the late autumn and winter months as some of the vegetation surrounding the site is broad leaved and will be without foliage during this period.*
Map – Figure 09

D.11 The site has a low lying and generally flat topography and is sited within the gently sloping valley of the River Worfe and its tributaries. The airfield is placed at 78m AOD (Above Ordnance Datum) with the land rising to the north reaching 90m AOD along the north boundary. Beyond the southern boundary to the land rises to

reach a high point of 100 AOD. The combination of topography and existing woodland vegetation results in the site being visually contained from the wider landscape context especially from the north, west and southwest. The majority of Sites A (Main Site) and B (the airfield) are not visible from the M54 motorway as this runs in a cutting where it passes close to the northern boundary. Brief glimpses of the north-eastern part of Site A only can be seen from the A41, the western edge of Site C (Officers' and SNCOs' mess site) is also partly visible from the A41.

D.12 However the technical areas (of Site A) and the airfield are highly visible from the access road to the main gate, Cosford railway station and the RAF Museum as well as from the railway line itself, which is elevated on an embankment. Parts of the airfield are also visible from the northwestern edge of the village of Albrighton.

D.13 Sensitive receptors in relation to Cosford include residents within the north western edge of the village of Albrighton and those within properties scattered close to the southern boundary of the site as well as users of the public road accessing the site and RAF Museum and the railway. The Zone of Potential Visibility (ZPV) gives an indication of the most visually sensitive parts of the site. However, the full extent of the Zone of Visual Influence (ZVI) will depend on a full analysis of each specific project, including the size and layout of the elements to be assessed.

D.14 The woodlands and linear groups of trees associated with the River Worfe and its tributary form the most important landscape feature of the site. They contribute to the overall landscape character of the area and should be retained as part of any future development proposals, concurrent with a programme of new tree planting to build on the existing landscape structure.

Avenues and groups of trees within Site A help to conceal and soften the built environment especially along the northern boundary. The existing topography, concurrent with the landscape framework, does result in the assimilation of the built development of the site within the surrounding rural landscape context.

D.15 Consequently, open areas within Site A have good development potential as do parts of the airfield (Site B) concurrent with a programme of strategic native tree planting to soften existing views in from the south and south east.

7. Impact on heritage, listed buildings and archaeological sites

Source: Cosford Masterplan Volume 3: Annexes – Page 41

Heritage

D.5 There are no listed buildings within the site. However, English Heritage has recommended the Listing of the Fulton Block at Grade II. This is a large accommodation block (21,651m²) on three floors built in Art Deco style and opened in 1938. Groups of Listed Buildings occur in and around Albrighton to the south east and Tong to the north-west, but are probably too far removed from potential development on the airfield to be affected by any setting considerations.

D.6 The Shropshire County Sites and Monuments Record (SSMR), compiled and maintained by SCC, does not list any known archaeological sites, historical sites or find spots within Cosford. There are two Scheduled Ancient Monuments (SAM)

located in the wider landscape to the east of the site, but again expansion of Cosford onto the airfield is unlikely to affect the setting of these SAMs.

*D.7 The results of the archaeological assessment carried out by Wessex Archaeology in May 2004 concluded that 'overall, the archaeological potential of the Site should be regarded as low to moderate, with the most significant known remains being the structures associated with the development and use of the airfield'. The study did identify two areas of high potential within the boundary of the site. The first is the Fulton Block and the second is the site of the buildings formerly known as 'Top Buildings' along the south western boundary (refer **Figure 4** of the Main Report) – this area is unlikely to be affected by any development proposals. The Donnington Parish Field Map of 1837-53 depicts a structure marked as 'Cosford' within this area.*

Map – Figure 04

D.8 The report concludes that 'a number of structures and buildings erected during the lifetime of the base have intrinsic historical and archaeological importance on their own right', but does not provide a list of specific buildings. The report states that any proposed development within the site will require some form of archaeological mitigation, possibly involving a more detailed assessment of the likely truncation and archaeological potential of the particular area concerned. This could in turn lead to further archaeological mitigation works in the form of an evaluation, excavation or standing building recording exercise.

8. Loss of Green Belt, productive agricultural land and other open land

Source: Cosford Masterplan Volume 3: Annexes

Green Belt

A.51 Cosford lies entirely within designated green belt where Policy CE4 of the adopted District Local Plan applies. This establishes a presumption against the construction of new buildings, or the change of use of existing buildings or land within the Green Belt unless special circumstances apply. However, whilst Policy S3 in the RDLP relating to development in the green belt repeats this presumption, this policy identifies a number of exceptions when development in the green belt will be allowed. One such exception proposes to permit the principle of defence-related development and museum related development at Cosford, subject to certain criteria, as follows:

'POLICY S3 - within the Green Belt planning permission will not be given, except in very special circumstances, for:

- new buildings other than:
defence-related development within the military base at Cosford and museum related development at the Royal Air Force (RAF) museum which is of a scale, siting and design that minimises its impact on the surroundings and does not lead to a major increase in the developed portion of the base and the museum.'

9. Increased risk of flooding from water run-off

OTHER ENVIRONMENTAL & SOCIAL CONSIDERATIONS

Surface Access

Source: Cosford Masterplan Volume 2: Main Report – Page 29-31

Transport

6.4 An initial transport assessment (Annex C) has been undertaken to determine the impact of the increased site population on the external road network and site access arrangements. It has also examined car parking and public transport provision. The key conclusions of this assessment are:

- a) The proposed co-located specialist training establishment is unlikely to cause significant impact on Junction 3 of the M54;*
- b) The A41/Worcester Road junction may experience peak time queuing problems on some arms, although there are long lengths of carriageway available for queue storage. The junction could be improved by either increasing the cycle time from 90 to 100 seconds, or for the p.m. peak amending the traffic signal operation such that the A41 northbound right turn becomes an 'indicative arrow' movement;*
- c) Increased traffic movements on Friday afternoons may be a problem when a large proportion of trainees may go home for weekends. Assuming a worse case scenario with around 75% of trainees leaving on Friday afternoons, there may be a requirement to provide an additional 50 meter long left turn lane along Worcester Road at the junction with the A41. Phasing the departures on Friday afternoons would reduce the problem considerably;*
- d) With respect to the A41/Long Lane junction, this has adequate capacity to cope with any increased movements associated with the co-located specialist training establishment;*
- e) Analysis of road traffic data suggests that there are no accident problems in the vicinity of the site; and*
- f) There are likely to be a number of issues that will need to be resolved with respect to access to the airfield site, where most of the new development in the later phases will be concentrated. These include access for over-sized vehicles, including HGVs and the provision of pedestrian linkages between sites.*

6.5 The transport impacts of the co-located specialist training establishment on the local road network can be accommodated. The greatest concerns would appear to relate to pedestrian crossings of the railway and the provision of alternative access arrangements to Site B (airfield) for large vehicles. The proposed additional use of spare capacity at the railway station will enhance the sustainability of the proposed development. It is recognised that the facilities at the railway station are rather basic and in need of improvements, such improvements are expected to be carried out through partnership working involving key stakeholders.

6.6 Further discussions with the Highways Authority will determine whether or not a transport assessment will be required to support any future planning application.

Coventry Airport

Description of the Development

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Pages 3-4

2.14 Phase 1 of the New Passenger Terminal (see Figure 2.2), which will be constructed in 2006, will comprise a single storey building to the north-east of the aircraft apron. The building will be capable of handling up to 1 mppa. Merlin House will be used as an Arrivals Hall.

2.15 Phase 2, to be completed in 2009/10 (see Figure 2.3), will be a two storey building on the site of Merlin House, which will be demolished. When this phase is completed the Terminal will be capable of handling up to 2 mppa.

2.16 The Terminal will be a modern steel framed structure of similar external appearance to other buildings in the Middlemarch Business Park.

2.17 Vehicles will travel around the development using a one-way system, entering Airport South from an existing spur on the Siskin Parkway West roundabout, and leaving using the existing access point to the south of the roundabout.

2.18 Additional passenger car parking is proposed at Airport South and adjacent to the Tollbar End Roundabout up to 3,350 spaces.

1. Aircraft Noise

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 6-7

6. Noise

6.1 Noise impacts arising from the New Passenger Terminal been considered, including those arising from airborne aircraft, increased levels of road access traffic and on-site physical developments. Noise is mainly assessed with respect to its effect on local people.

6.2 The operation of the New Passenger Terminal results in a significant change in the types of aircraft used at the Airport, an increase in annual Air Traffic Movements (ATMs) and use of quieter jet aircraft.

6.3 The daytime aircraft noise produced by operations at the Airport during the baseline scenario year of 2003 was small. No local residents were subject to high or moderate 'annoyance' levels and only 50 individuals were exposed to low 'annoyance' levels of noise.

6.4 With the New Passenger Terminal in operation, noise generated during the daytime increases by approximately 5 dB and the number of people exposed to low 'annoyance' levels of noise is 2124. This impact is small when compared with the

populations so exposed near other long established UK airports, and compared with the general exposure in UK to environmental noise. Only nine houses are exposed to moderate 'annoyance' levels. Using standard guidance, the noise impact is considered to be minimal.

6.5 The proposed development is predicted to result in an increase in night-time noise in the area of the southern part of Baginton of 7 dB, and a lower increase in the area of Willenhall (where the majority of properties exposed to nighttime noise exist) of 2 dB. The number of properties affected by night-time noise is predicted to increase from 21 properties during 2003 to 278 properties with the New Passenger Terminal in full usage. Suitable mitigation measures to minimise night-time noise should be implemented.

6.6 Increased traffic levels due to the New Passenger Terminal will give rise to imperceptible increases in noise levels at properties. The New Passenger Terminal will reduce the impact of ground noise levels at the Airport due to the introduction of quieter aircraft. The daytime and night-time ground noise levels will generally be acceptable.

6.7 A Noise Management scheme will be implemented at the Airport in order to reduce the impact of the New Passenger Terminal. Measures will include the use of Preferential Noise Routes, noise monitoring, prohibiting the use of noisy aircraft at night and the operation of a Public Noise Complaints Handling Service.

6.8 Due to the large separation between the proposed New Passenger Terminal and the nearest residential properties no significant impact is predicted due to its construction.

2. Air Quality

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Pages 7-8

7. Air Quality

7.1 Government guidance to local authorities suggests that small airports with less than 5 mppa do not need to take account of potential air pollutants during assessment of impacts. If throughput is greater than 5 mppa then assessment is required for nitrogen dioxide, and if greater than 10 mppa, assessment needs to consider both nitrogen dioxide and fine particulates. Studies have shown that aircraft above 100 m altitude make a negligible contribution to ground level air quality. The ES assesses impacts on air quality as a result of the New Passenger Terminal, focusing on the impacts of road traffic but also considering impacts arising from aircraft. Potential pollutants assessed include nitrogen oxides, nitrogen dioxide, fine particulates (from both vehicle and aircraft emissions) and odour from aviation fuel.

7.2 Baseline air quality monitoring data has been obtained from Coventry City Council and Warwick District Council.

7.3 Forty sensitive receptors for air quality are identified, including properties within 30 m of roads and sensitive locations close to runways and take-off/ approach areas.

7.4 Concentrations of pollutants are estimated for 2012 both with and without the New Passenger Terminal, and compared with 2003 baseline concentrations.

7.5 Predicted total emissions of nitrogen oxides and fine particulates for 2012 show that the operation of the New Passenger Terminal will cause an increase in total emissions but in the context of district-wide emissions these changes are small. The predicted change in emissions will lead to a small increase in nitrogen dioxide and PM10 concentrations in 2012, however concentrations at sensitive receptors will be within statutory objectives.

7.6 There will be a reduced risk of odours from aircraft due to the introduction of newer freight aircraft as a consequence of the proposed mitigation contained in the Section 106 Agreement, if planning permission is granted for the New Passenger Terminal.

3. Pollution of watercourses and underground water sources

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Pages 10-11

11. Water Resources and Quality

11.1 The existing surface and groundwater conditions were determined through the completion of a desk-based study and site based investigation.

11.2 The River Avon and the River Sowe are the two main watercourses in the area. The water quality in both rivers has been continually improving since 1990. There are also a number of ponds within the study area including a private pond to the south, a series of landscaped ponds at the entrance to the Middlemarch Business Park and a number of lagoons associated with Rock Farm Sewage Treatment Works.

11.3 At present surface water from the site discharges to soakaways on Siskin Parkway West where passes into the ground through oil interceptors. The increased runoff from the development will be discharged in the same way. The foul water (sewage) from the site is transported via the foul sewer system to be treated at Finham Sewage Treatment Works. The increased volume of foul water from the New Passenger Terminal will be also discharged to Finham Sewage Treatment Works, which is large enough to deal with the larger volume.

11.4 The study area lies outside of the 1 in 100 year floodplain and the 1 in 200 year floodplain and is therefore considered to have little or no risk of flooding.

11.5 The study suggests that the potential for impacts on watercourses, waterbodies and groundwater within the area of the New Passenger Terminal is low and of minimal significance. Groundwater monitoring will be undertaken near to and downstream of the soakaway to prevent impacts on groundwater quality. No mitigation is required in respect of the surface water or foul drainage.

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 11

12. Ground Contamination and Soil Quality

12.1 Previous land uses at the site have been considered by studying historic and other maps, limited data from previous investigations and a visual site inspection. These information sources do indicate the presence of potentially contaminated land at Airport South. However, the impacts to human health and the wider environment are generally assessed as not significant within the context of the proposed development.

12.2 In the small number of scenarios in which the potential impacts are identified as significant, for example the exposure of contaminated soils during construction works, then the adoption of appropriate mitigation measures would result in non-significant impacts.

12.3 The mitigation measures proposals include the use of dust suppression and drainage management during construction.

4. Noise & pollution from additional traffic

5. Biodiversity

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 8

8. Ecology and Nature Conservation

8.1 Potential impacts on features of importance for ecology and nature conservation are considered in this chapter. The features, including designated sites of importance for nature conservation and protected species are identified through both a desk-based study and field surveys. The results of a badger survey and assessment of any impacts on badger are detailed in a confidential badger report. As is usual, this report is issued separately to the main Environmental Statement in order to minimise the risk of illegal persecution of any badgers that might be present.

8.2 Impacts may arise as a result of habitat loss, habitat fragmentation and indirect effects such as disturbance from increased noise, vibration and dust.

8.3 There are no designated sites of nature conservation importance associated with land to be affected by the New Passenger Terminal. Two non-statutory sites (Ecosites) lie approximately 500 m and 750 m from Airport South, but will not be affected by the operation of the development.

8.4 Whilst any issues associated with badger are dealt with in a confidential appendix, no other protected species have been recorded on site or in areas that have the potential to be affected by the New Passenger Terminal. Although often common where it exists, the lesser marsh grasshopper has a relatively limited distribution within the UK. This species is understood to be widely present on the Airport site. In the context of the proposed development, it is considered to be of local importance to nature conservation. however, the New Passenger Terminal is predicted to have a negligible effect on the population present.

8.5 The value of the site to birds is limited because the site is already an active Airport, and bird scaring and bird dispersal measures are a routine and effective part of the Airport's operation.

8.6 Habitats present are dominated by a mixture of improved and semi-improved neutral grassland, tall herbs and scrub. In places, hedgerow and woodland are also present.

8.7 All ecological features affected by the New Passenger Terminal development are evaluated to be of local or less than local importance for nature conservation, and any predicted impacts are of low or no significance.

6. Loss of landscape and settlement character, rurality and tranquillity

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 9

9. Landscape and Visual Effects

9.1 The assessment of landscape and visual effects focuses on three principal areas of concern:

- the general landscape and visual effects of the New Passenger Terminal and car parking;
- the effects of lighting associated with the New Passenger Terminal and car parking; and
- the visibility of the increased frequency of low-level aircraft during ascent and descent.

9.2 Effects are considered in terms of impacts on the landscape character and impacts on views from sensitive local receptors, such as residential properties and public spaces.

9.3 The Airport lies within the Dunsmore landscape character area defined by the Countryside Agency, which comprises the low ridges and valleys lying around Leamington Spa, Coventry and Rugby.

9.4 Visual receptors (e.g. local housing / footpaths) in the vicinity of Airport South are very few due to the plateau location and screening provided by large buildings at Middlemarch Business Park.

9.5 The New Passenger Terminal and car parking at Siskin Parkway West is assessed to have a negligible impact on the local landscape character and visual receptors. Parking to the west of the Parcelforce building will have a low adverse effect on landscape character and visual receptors.

9.6 The assessment of lighting concludes that there will be a negligible impact on local visual receptors and additional lighting using flat glass lanterns with a very low ULR (Upward Light Ratio) will make a negligible contribution to sky glow.

9.7 Increased numbers of low-flying aircraft are assessed to have a minor/moderate adverse impact on visual receptors within Willenhall, Baginton and Stoneleigh.

9.8 Construction impacts are considered to be of negligible significance for landscape and visual receptors.

9.9 Mitigation will be provided in the form of a hard and soft landscaping scheme around the entrance, car parking and New Passenger Terminal at Siskin Parkway West. Certain types of lanterns (flat glass) are recommended to minimise the contribution of the development to sky glow, and lighting columns should be 6 m or less.

7. Impact on heritage, listed buildings and archaeological sites. Cultural heritage

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 10

10. Cultural Heritage

10.1 An archaeological desktop study and walkover survey were undertaken in order to identify sites of importance for archaeology and cultural heritage within 1.5 km.

10.2 Relatively little archaeological investigation has been undertaken in the area since it lies in an area developed as a military airfield in 1934. Investigations that have been undertaken in the vicinity of Baginton found evidence of prehistoric, Roman and Anglo-Saxon settlements.

10.3 Ground investigations were undertaken at Airport South in 1989 on behalf of Coventry City Council but the logs were unavailable for review at the time of the assessment. However, the New Passenger Terminal buildings are located on disturbed ground with low potential for significant archaeological remains and impacts are considered to be minimal. The proposed car park to the west of Parcellforce lies on an area of land, part of which is likely to have been subject to previous disturbance, however the potential for archaeological remains is unknown and further investigation is recommended prior to construction.

10.4 There are seventeen listed buildings within a 2 km radius of Airport South, mainly within the villages of Baginton and Bubbenhall. Impacts on these built heritage features are negligible due to visual screening provided by other buildings and landscape features.

8. Loss of Green Belt, productive agricultural land and other open land

9. Increased risk of flooding from water run-off

OTHER ENVIRONMENTAL & SOCIAL CONSIDERATIONS

Surface Access

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 6

5. Surface Access

5.1 The findings of the Traffic Assessment undertaken by RPS Consultants have been used to assess the impacts of traffic growth on the local road network that may result as a consequence of the New Passenger Terminal.

5.2 Access to Airport South is via Siskin Drive and Siskin Parkway West through the Middlemarch Business Park. The Airport is linked to the trunk road network at Tollbar End roundabout, where the A45(T) and A46(T) meet. The A45(T) links with the M40 to the west and the A46(T) links with the M69 to the north-east. The Highways Agency proposes to make improvements to the Tollbar End A45(T)/A46(T) junction in 2008/09.

5.3 There is no railway station near to the Airport so public transport links are limited to bus and coach services for the foreseeable future. Bus services currently serving Middleton Business Park and the Tollbar End junction provide public transport access, but no dedicated Airport service is currently in operation.

5.4 Formal cycle/ pedestrian pathways are provided along the approaches to the Tollbar End junction with pedestrian routes available along Siskin Drive and Siskin Parkway West.

5.5 Predicted percentage traffic increases on local roads have been considered for 2007 and 2012. Impacts of traffic generated by the New Passenger Terminal on the Tollbar End junction are not significant. All traffic to the New Passenger Terminal will use Siskin Drive, but this is easily accommodated by the existing road, and there are no significant increases in traffic through Baginton.

Waste Management

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Page 11

13. Waste Management

13.1 Solid waste will be produced as a result of the New Passenger Terminal, including aircraft waste, terminal waste, freight waste, office and administrative waste, apron waste and oil waste. Waste materials will also be generated during the construction phase, for example as a result of the excavation of the tunnel for car park access.

13.2 The volume of waste produced will increase as passenger numbers increase, however, the existing waste disposal facilities in the area have capacity to deal with the waste that will be produced. Construction waste can also be disposed of within the local area. By treating waste locally, the sustainable waste management principle of regional self-sufficiency is achieved.

13.3 Soil and rock produced during excavation work will be re-used on site wherever possible to minimise the volume of waste generated during construction. Waste minimisation schemes will be implemented during the operation of the New Passenger Terminal to encourage waste reduction, re-use and recycling.

Construction effects

Source: Coventry Airport: New Passenger Terminal - Environmental Statement – Non-Technical Summary – Pages 11-12

14. Construction Effects

14.1 As detailed in Chapter 2 above, construction will occur in two phases – Phase 1 in 2006 and Phase 2 in 2010. The first construction phase is anticipated to last 9-12 months.

14.2 Construction will include topsoil stripping, excavation, demolition, earth moving and storage of materials – all of which have the potential to cause adverse environmental impacts without appropriate mitigation measures.

14.3 Mitigation proposals have been identified as part of the EIA process and the contractor will be required to prepare a Construction Management Plan detailing mitigation measures specific to the site and the activities involved in the construction of the New Passenger Terminal and car parks.

Wolverhampton Business Airport

1. Noise

Source: Wolverhampton Business Airport: Environmental Statement – Page 8.20-21

Aircraft Noise + Noise & Pollution from additional traffic?

8.7.1 The basic circumstance to be considered for this project is what would the implications be if commercial flights were introduced to allow for up to 500,000 passengers per annum. To accommodate the new commercial flights, alterations would be made to the current 16-34 runway that would effectively be the construction of a new, replacement, runway slightly realigned to be designated 15-33. The existing runway 04-22 would be decommissioned as part of the proposals so the effect would be assessed inherently in both cases. GA movements on 10-28 would also reduce.

8.7.3 There are also proposals for engine testing facilities that would be associated with the planned maintenance capabilities to be provided as part of the proposals. This has also been assessed.

Annoyance

8.7.4 In terms of annoyance criteria, the "high" annoyance contour is completely within the confines of the airport for both the existing and future cases. The "moderate" annoyance contour for the existing case does not encompass any residential properties except part of the Blacklands/White Cross properties. In the future case these properties are outside this contour, only just within the "low" annoyance contour.

8.7.5 For existing case the "low annoyance" contour extends just beyond the airfield boundaries. The principle properties that fall within the contour are 'Claire Hayes', Grange Farm and part of the Blakelands property. In the future case the contour shape is significantly different due to the aircraft mix and runway utilisation. In the future, the property 'Claire Hayes' is outside the low annoyance contour, experiencing an improvement in noise level. In the future there will be more residential properties within the "low" annoyance contour but it will miss pockets of denser residential properties and Highgate Common.

8.7.6 In both existing and future cases the commercial buildings on the airport are beyond the low annoyance contour.

Source: Wolverhampton Business Airport: Environmental Statement – Page 8.21-22

Changes in Noise Level

8.7.9 When considering specific locations and change in noise levels at these, there are some areas that will experience what is deemed as a "moderate" impact. The main reason for this is the new runway, which will bring aircraft closer to the properties to the south-east of the airfield, around the Highgate Farm area.

8.7.10 The different aircraft mix and the predominance of the new runway will cause aircraft to fly closer to Admoor, which is the property experiencing the greatest change to the north west.

8.7.11 However, no properties assessed have impacts that are considered "major" and the properties immediately around the airport will experience little change.

Engine Test Facility

8.7.12 The engine test facility will be sited well away from residential properties. The area will have a barrier around it and the orientation of the aircraft can also be used to mitigate noise.

Source: Wolverhampton Business Airport: Environmental Statement – Page 8.23

8.7.17 The majority of the surrounding area is will be below the "low annoyance" criteria and amount of residential properties within the "moderate annoyance" criteria is minimal. No residents will be subject to noise levels in the "high annoyance" criteria.

2. Air Quality

Source: Wolverhampton Business Airport: Environmental Statement – Page 9.22-23

9.10.1 An air quality assessment of the redevelopment proposals and the use of commercial jet airliners for Wolverhampton Airport has been undertaken for:

- 2004 (base year assessment)
- 2011 (opening year)
- 2021 (future year).

9.10.2 Air quality has been modelled using EDMS, to define airport emissions, alongside AERMOD for dispersion of these emissions, as well as ADMS-Roads for emissions and dispersion from main road sources surrounding the airport.

9.10.3 The impact of these sources on local sensitive receptors has been evaluated and compared during the opening and future years for both a baseline and 'with development' scenario.

9.10.4 The base year assessment identified that there are currently no exceedances of air quality objectives outlined within the National Air Quality Strategy.

9.10.5 An evaluation of air quality impacts of lorry movements during the construction phase identified that there would be a minor increase in both PM₁₀ and NO₂ at the nearest sensitive receptors along the selected routes. The increases in both PM₁₀ and NO₂ were assessed as insignificant when the advice from the DTLR 'Guidance on the methodology for multi modal studies' is considered.

9.10.6 Demolition and construction activities at the airport have the potential to emit dust. If these processes are not mitigated, there is a potential for a significant impact to arise. In general, impacts from construction and demolition dust can occur within 100m - 200m of the above activities taking place if no mitigation strategy is put in place. Mitigation proposals have been outlined to address dust emission and reduce the impact to insignificant.

9.10.7 Comparison of results for both 2011 and 2021 between the baseline and development scenarios have identified that that there is no significant increase in either the annual average or percentile for PM₁₀ or NO₂.

9.10.8 The development of Wolverhampton Airport would not, therefore, have a significant impact on ground level PM₁₀ or NO₂ concentrations.

6. Loss of landscape and settlement character, rurality and tranquillity

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.8-9

10.4 PREDICTED VISUAL IMPACTS AND EFFECTS

Main Visual Impacts and Effects

10.4.1 The main visual impacts are those which affect those receptors within the visual envelope where views are obtained from properties, both residential and commercial, highways and public footpaths. The results are shown in **Table 10.1**.

Sensitivity of the Receptor

10.4.2 The different categories of sensitivity are based on the LI/IEEM Guidelines for Landscape and Visual Assessment in a hierarchy according to the relative importance of the effects on the receptor. This hierarchy is set out in **Table 10.3**.

Magnitude of the Effects

10.4.3 The magnitude of the visual effects depends on a number of factors.

- The number of receptors affected
- The distance of the receptor from the source of impact
- The extent of the change in the view for the receptor including
- Immediate mitigation
- The long term mitigation effect.

10.4.4 The above factors are then graded as shown in Table 10.4. The resulting degree of magnitude is based on a combination of the visual effects, the numbers affected and the distance from the source. It is necessarily a subjective assessment but one based on a professional judgement.

10.4.5 The evaluation of the combination of factors would be that the combination of substantial changes in view for many properties that are close would be Major. Whereas the combination of small changes in view for few properties in excess of 1000 metres would be **Minor**. Combinations between these two extremes would be shown as **Some**.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.10

Overview of the Predicted Visual Impacts and Effects

10.4.8 The main impact will be that of the runway closer to the houses on Gospel Ash Road and its extension over Water Lane. The properties on Gospel Ash Road will have primarily first floor views of the runway particularly those properties near to Forest Lane. Properties on the western side of the road have views over the airport which are largely screened by planting within their gardens. The new runway will be closer than at present.

10.4.9 Except for Leaton Lodge the properties on Crab Lane are screened by the existing buildings and vegetation and have no views worth noting.

10.4.10 The properties on Six Ashes Road except for Blakelands and Blacklands Farm have no view. Blakelands and Blacklands Farm currently have open views over the existing airport and the new runway will be further away from these properties.

10.4.11 Long range views from the north will see the new runway south of Water Lane but set in the context of the existing airport the change in view will be insignificant.

10.4.12 There will be no views of the runway from Bobbington.

10.4.13 At night the light spillage will be extended by the lights on the runway but will have a minor change on the present situation.

10.4.14 Highgate Common to the south will not be affected by the construction of the new runway except for an increase in construction traffic for a limited period. This would in any effect be subject to a construction traffic movement plan to be agreed with Staffordshire County Council and South Staffordshire Council. Chapter 7 of this ES assesses this aspect of the proposal.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.11

Overview of the Predicted Landscape Impacts and Effects

10.5.2 The overall effect of the proposal on the landscape will be the loss of hedgerows along Water Lane and Gorse Covert, together with trees within the field. The loss of the latter is necessary on safety grounds. A very large Horse Chestnut tree would also be lost. The agricultural quality of the land is 3A as shown in the Agricultural Land Survey and is used for commercial benefit of the farm. It will be replaced by land re-graded to a new profile and seeded, then closely maintained.

10.5.3 The loss of trees will be replaced by planting along Gospel Ash Road. Generally the proposal will fit into the character of the airport as it now exists except for the low embankment on Crab Lane which has limited impact and effect.

10.5.4 The construction of a new roundabout at the junction of Crab Lane and Six Ashes Road will result in the loss of two lengths of hedgerow. All of the additional land required is either Highway Land or in the ownership of the airport.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.11

10.6 EVALUATION OF VISUAL EFFECTS OF THE NEW RUNWAY

Criteria

i) The criteria for the evaluation are as set out in **Tables 10.5** and **10.6** In the case of properties and business thresholds of significance have been used as recommended by the LI/IEEM as follows.

- MAJOR High sensitivity or magnitude
- MINOR Medium Sensitivity or some magnitude

- NOT SIGNIFICANT Low sensitivity or minor magnitude

10.6.2 The results of this assessment for the properties and receptors within the visual envelope are shown in **Table 10.7**.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.12

Summary of Visual Effects

10.6.3 The new runway extending south of Water Lane will change the landscape character of the area insofar as it changes agricultural land into airport land. However the number of receptors affected by the development are small and already have views over the existing airport. The main impact will be on pedestrians using Crab Lane or Footpath 22 and motorists using Crab Lane. Even this impact is limited because of the nature of the existing road and screening by vegetation and Leaton Lodge.

10.6.4 Tree planting along Gospel Ash Road will mitigate the impact and if required the hedges along the road can be managed to grow to a height which would screen first floor views from the houses on the eastern side of the road.

10.6.5 Long range views from the north see the existing airport and the new runway will on completion have an insignificant impact.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.12

10.7 EVALUATION OF LANDSCAPE EFFECTS

Criteria

10.7.1 The significance of the landscape effects is a combination of the sensitivity of the landscape and the magnitude of the change. **Table 10.7** categorises the degree of sensitivity while **Table 10.8** shows the degree of magnitude.

Significance of Effects

10.7.2 The significance of the effect is a combination of the landscape sensitivity and the magnitude and these have been categorised as follows:-

- **Major** Any combination of high or medium sensitivity with high magnitude
- **Minor** Medium sensitivity and magnitude or low sensitivity with high magnitude
- **Not significant** Low sensitivity or magnitude. The results of the evaluation is shown in **Table 10.9**.

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.13

Summary of Landscape Effects

10.7.3 The landscape character of the site is determined by the major part of the site being the existing airport. The construction of the new runway into land south of Water Lane will extend the airport operations into the site and will change its character and appearance. However in the long term it will be seen as an integral part of the airport and the overall significance within the landscape will be minor.

Visual Impacts and Effects

10.9.1 The main visual impact will be caused by the extended runway and its lighting. The effects on receptors which have a view of the runway are

- Properties on the hillcrest of Crab Lane
- Properties on Gospel Ash Road.
- Properties on Six Ashes Road.
- Leaton Lodge with oblique view.
- Footpath users at the eastern end of Footpath 22.
- Footpath users in Forest Lane.
- Motorists using Crab Lane and very long range views from the north.
- The night-time effect will marginally increase due to the increased length of the runway.

Landscape Impacts and Effects

- Overall the landscape impacts once the construction phase is complete are minor.
- There will be a loss of hedgerows and trees and there will be a loss of some agricultural land.
- Additional planting on Gospel Ash Road will add to the landscape resource.
- Overall the extension of the runway will have a minor impact on the landscape.

10.10. Visual Impact of Aircraft in Flight Using the Airport

Flight Path

10.10.1. The main flight paths for both take-off and landing are roughly north-west to south-east and they are indicated on **Drawing 10.11**.

10.10.2. The aircraft proposed for the development approach the airport for landing reducing in height at the rate of 300 feet per mile. Whereas aircraft taking off climb at the rate of 900 feet per mile.

10.10.3. Measurements in aviation still remain in Imperial terms. Drawing 10.11 shows the heights of aircraft at one mile intervals for a distance of 6.0 miles. The figures to the left indicate landing heights and the figures to the right indicate take-off heights.

Settlements

10.10.4. On the northern flight path the settlements located within 0.5 miles of the flight path are Heathton, Upper Aston, Upper Ludstone with Hill End, Chesterton and Burnhill Green.

10.10.5. On the southern flight path the settlements located within 0.5 miles of the flight path are Stourton and possibly Whittington.

10.10.6. Properties which lie within the visual envelope will see the aircraft where they have an open view such as from Long Common Road.

10.10.7. Table 10.10 lists settlements and their distances from the flight path. It does not necessarily mean that the settlements will see the aircraft as at ground level visual intrusion will be mitigated by landform, vegetation and buildings.

10.11 Conclusions

- During the construction period there will be an increase in the visual intrusion of the activities on the airport particularly when seen from Gospel Ash Road. This will end with the completion of the works.
- There will be a loss of agricultural land and the hedgerows along Water Lane. There will be no significant impact on the wildlife and ecology of the area.
- Water Lane will be closed and this will affect drivers, pedestrians and others currently using the route to link Crab Lane and Gospel Ash Road.
- There will be a change in the landscape with the construction of the roundabout on Six Ashes Road.
- There will be an increase in impact on the properties on Gospel Ash Road and at its junction with Six Ashes Road.
- The runway proposals will have no impact on Highgate Common.
- There will be a reduction in the number of recreational flights from the airport.
- There will be an increase in the number of commercial flights.
- The visual intrusion of the aircraft will primarily be within the visual envelope as the landform screens many views.
- The settlements that are affected by visual intrusion are Heathton, Draycott, Upper Ludstone with Hill End and Chesterton to the north with Enville and Stourton to the south.
- Because of the runway lengths it is unlikely except in extreme emergencies that other runways on the airport would be used by the commercial aircraft. They will continue to be used by the present general aviation aircraft now using the airport.

8. Loss of Green Belt, Productive Agricultural Land and Other Open Land

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.13

10.9 SUMMARY OF KEY ISSUES

Baseline Studies

- The new runway extending to the south is necessary for the safe operation of the airport in accordance with the requirements of the Civil Aviation Authority.
- The aircraft currently permitted to use the airport will use the new runway but on a reduced scale. The use of the airport for commercial traffic will mean that larger aircraft will use the runway.
- The construction of the engine testing area with its noise protection bund will be an alien feature in the landscape.
- There will be a loss of an area of Grade 3A farmland.
- There will be a loss of hedgerows on Water Lane.
- There will be the loss of the trees in Gorse Covert and the large Horse Chestnut but in order to comply with the CAA requirements these trees will be lost in any event.
- Few properties are affected and these already over-look the airport.

Construction Effects

Source: Wolverhampton Business Airport: Environmental Statement – Page 10.9

10.4.6 The airport currently has landing lights which operate on Runway 10-28 up until 10.00 pm. The new runway extending beyond Water Lane will require the provision of landing lights for the length of the runway. The overall impact although greater than at present would not be significant. The lighting would be seen within the wider landscape but as part of the airport operation.

10.4.7 During the construction process there will be periods of night-time working and this will involve a high level of illumination for health and safety reasons. Such periods will be subject to notice to the residents and will be kept to a minimum.