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**IMPACT**

**THE INTERNATIONAL HEALTH IMPACT ASSESSMENT  
CONSORTIUM**

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**FINAL**

**A Rapid Health Impact Assessment of Birmingham International  
Airport's Proposed Runway Extension**

**EXECUTIVE SUMMARY**

**February 2008**

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# **Executive Summary**

## **Introduction**

1. IMPACT – the International Impact Assessment Consortium – based in the division of Public Health, a WHO Collaborating Centre at the University of Liverpool, was commissioned by Birmingham International Airport Limited (BIAL) to undertake a Health Impact Assessment (HIA) of the development and operation of proposals to extend the main runway. The HIA is described as a Rapid HIA involving secondary (existing) and some primary (new) data collection and analysis. This HIA has had a regional scope, but also undertook a local analysis of the potential impacts. In addition to assessing the geographical distribution of these potential effects, other variations, e.g., by population sub-groups, have also been considered.

2. HIA is concerned with improving health and reducing health inequalities. The aim of HIA is to inform and influence policy decision-making by enabling decision-makers to consider the health implications of their policies during the policy planning process. It is a systematic process, which aims to identify what the potential health effects of a new policy, strategy, or project, such as the runway extension proposal might be on a particular group of people, such as local residents. HIA can be done at international, national, regional, City or even ward level. It considers which key health determinants, e.g., employment, noise, air quality, will be affected and how this in turn will impact on the health and well being of the population. In addition HIA considers whether the policy will affect our physical, emotional and social well being, as well as possibly affecting ill health. Recommendations are then made to the policy-makers to mitigate against health risks and enhance health benefits.

3. This executive summary outlines the methods and process, the data collected and evidence of impacts (the findings), the conclusion and recommendations.

## **Summary of the Runway Extension Proposal**

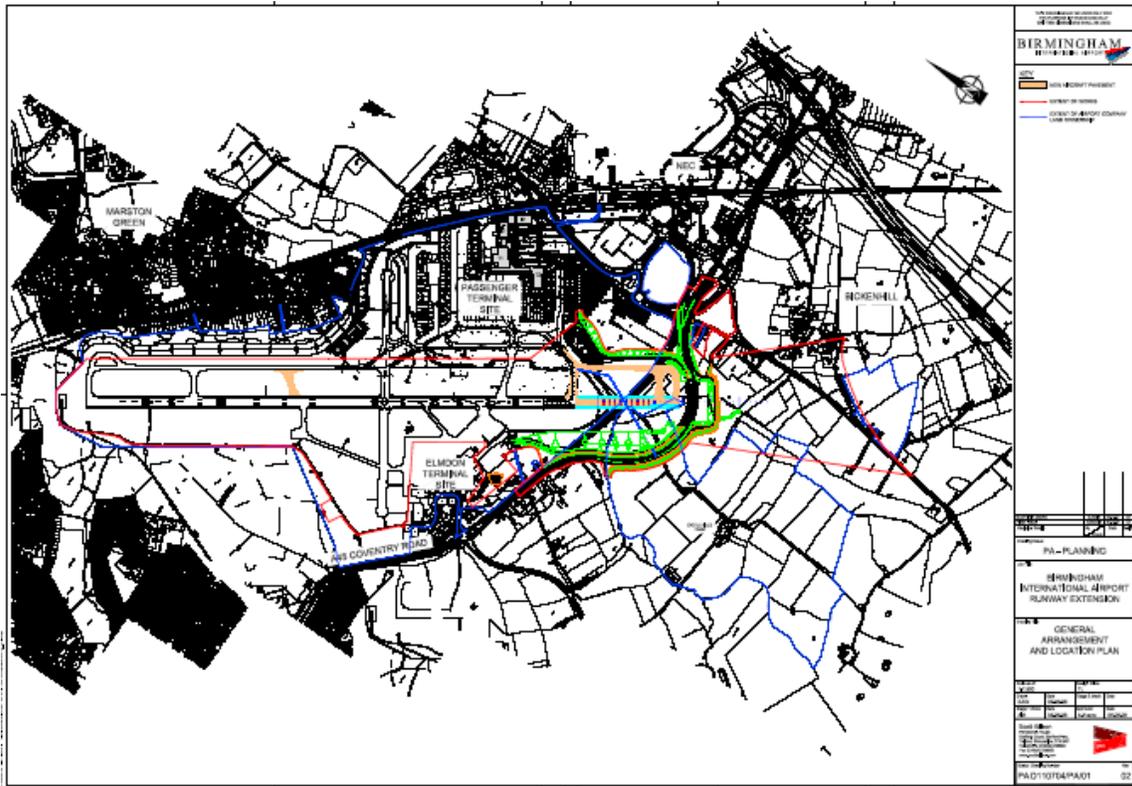
4. Birmingham International Airport Limited (BIAL) is seeking to submit a planning application to extend the Main Runway (Figure 1). The plans for this runway extension were published in BIAL's Master Plan published in November 2007 and having previously been published in BIAL's Draft Master Plan, which was formally consulted on between October 2005 and March 2006.

5. BIAL also acknowledges that Birmingham International Airport's development must be carried out in "an environmentally sustainable way, mitigating impacts on the environment and people, as well as considering climate change".

6. The proposed runway extension is required to remove current operating restrictions enabling the full operation of a range of direct long-haul services. Market analysis indicates demand for such provision, for example, to and from India, China and the Western USA. The development is proposed to take place at the south east end of the Main Runway, and will entail placing the A45 in a new tunnel under the extended runway and on a new, locally diverted alignment. Associated with the extension will be a range of additional requirements, including the need for a Starter Extension, longer Runway End Safety Areas, a new Air Traffic Control Tower, revised Public Safety Zones and treatment of 'Obstacle Limitation Surfaces'.

7. It is anticipated that given the planning, design and construction processes involved, the earliest the runway extension could be operational for could be 2012.

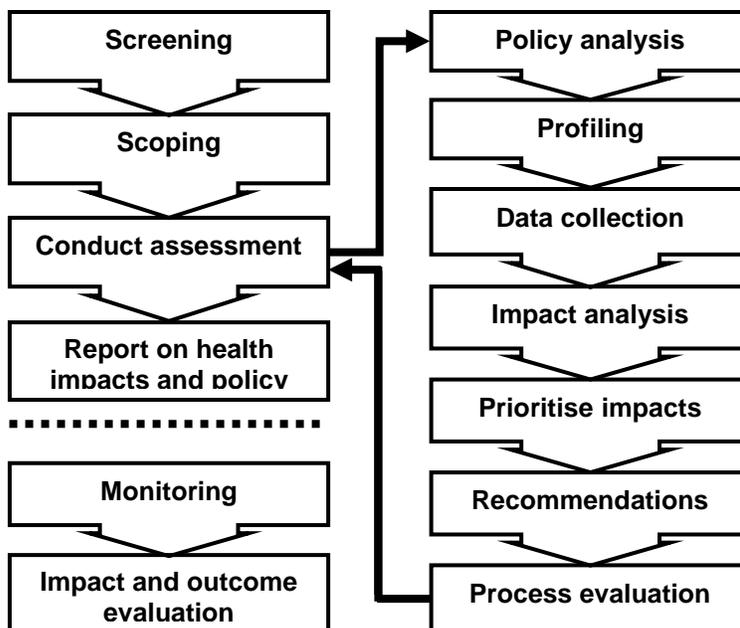
Figure1 Map of the proposed runway extension for Birmingham International Airport (2030)



**HIA methodology**

8. The assessment was conducted using a validated generic HIA methodology (Figure 2) between June and November 2007. IMPACT’s work took approximately 85 days.

Figure 2 A generic HIA methodology



Source: Abrahams et al (2004) EPHIA Guide. [www.ihia.org.uk](http://www.ihia.org.uk)

9. The scope of the assessment was determined by the BIA HIA Steering Group. This HIA is described as a rapid HIA, reflecting the depth of assessment. It involved the collection and analysis of existing and new data, from this the evidence was identified and impacts defined.

10. The policy analysis (section 4) involved the collection and analysis of a range of policy documents to determine the context of the runway extension proposals. Relevant secondary data were identified and retrieved from various sources to develop a profile of the population in Solihull and Birmingham, particularly those residing in the wards close to the airport (section 5). Evidence from the literature was also gathered and distilled (section 6). Stakeholder data were collected via focus groups with local residents and representatives from local community groups, interviews and focus groups with representatives of local organisations and interviews with key informants ('expert witnesses') (section 6). Evidence from all data sources was aggregated and the key health impacts of the runway extension proposals on the local population, including the differential impacts, were characterised in the impact analysis (section 7).

11. There were a number of limitations to this study. In particular there was a reliance on the timely access to data from other impact assessments. In addition it was not possible to validate the assumptions or quality of the data from other assessments. Within the resources available it was not possible to undertake a more comprehensive assessment, including wider ranging participatory approaches; as such, stakeholders self-selected whether they engaged with the project or not. This limited engagement is reported as a potential bias. Similarly modelling and quantification of a wider range of impacts other than noise was not possible, and a sensitivity analysis of the noise-related modelling was not undertaken.

## **Findings**

12. The West Midlands is seriously lagging behind the national levels of employment and economic output; south east Birmingham and north Solihull, areas proximal to the airport are particularly affected. Although there have been significant improvements in educational achievement across the West Midlands in recent years, there are considerable variations across the region, with lower levels of skills amongst the unemployed, ethnic minority groups and populations living in deprived areas; this reflects national trends.

13. Associated with high levels of income deprivation are poor levels of physical and mental health, e.g., circulatory and respiratory conditions, mood and anxiety disorders and life expectancy. Health inequalities are clearly apparent.

14. The runway extension proposals clearly fit with key economic and aviation policies, although less so regarding sustainable transport for sustainable growth and the health inequalities agenda.

15. Although there may be net employment gains for the region resulting from the airport's development, there are a number of issues. This relates to the sensitivity of the employment/income forecasts, the lack of forecast data for the wider employment/income benefits, the lack of forecast data for full environmental, social and health costs, and whether economic activity and income per capita will increase in those areas or groups currently experiencing below the regional average employment or income levels.

16. If there is an increase in employment associated with an increase in per capita income in the region, it is probable that there will be positive impacts on population

health, physical and mental. If there is an increase in employment in those areas or population groups currently experiencing below the regional average employment or income levels, it is probable that there will be a reduction in health inequalities. Similarly, if there are improvements in the local economy, there are also likely to be long term health gains, although there may be a significant lag in when these health improvements occur.

17. The construction phase of the development will involve creating employment opportunities in occupations with particular work hazards but with no greater level of risk than would be expected for similar construction projects. Those jobs that are created as a result of the airport's development will include some high paid, high quality jobs as well as a proportion of low paid, low skill jobs. 'Job quality' is associated with productivity and performance; it is unclear at a national level if job quality is improving. Poor 'job quality' is associated with poor health; low paid, poor quality and precarious jobs have similar health scores to the unemployed.

18. The runway extension proposals will have both positive and negative impacts on social capital (social support/control). At the construction phase, in the absence of any transport forecasts, it is assumed that road congestion will be exacerbated as a consequence of these developments and that the effects on social networks will be predominantly negative. However, when operational there will probably be positive impacts for those people able to use air travel as a result of the enhanced 'connectivity' the runway affords, but negative impacts for those affected by additional traffic, noise and the loss of community facilities. Enhancing social networks and support protects against poor mental and physical health.

19. There is some evidence that a number of residents proximal to the airport do not feel they have been engaged in the development of the runway extension proposal. There is also evidence of an amplified perception of the risks associated with the runway extension; people with low control beliefs and who currently experience psychosocial stress will be particularly affected. In addition to heightened risk perceptions, low control and low involvement in decision-making is associated with negative physical and mental health impacts.

20. There is a very low probability of an aircraft accident with or without the runway extension. Although very low probability, if an aircraft accident occurred it is possible that there would be some third party fatalities. New Public Safety Zones (PSZs) have been developed to the north and south of the runway for the proposed runway extension to 2030 which corresponds to  $10^{-5}$  third party risk contours and prevent new or replacement developments; however the number of existing properties or households affected compared with the 2015 risk contours is not defined. If there are no additional properties/households in the new  $10^{-5}$  risk contours, the potential numbers of casualties in any incident will be maintained. Other accident hazards at the airport, such as the fuel farm, are low risk but will need to be reviewed, e.g., in light of the Buncefield investigation recommendations, as will emergency services preparedness. As described above, for some residents the perception of the risk of an aircraft or other accident is greater than the actual risk, contributing to anxiety and their perceptions of other risks associated with the runway extension.

21. Although road traffic volume and congestion on the surrounding highways and road networks is likely to be only marginally affected by the runway extension when it is operational, it is unclear what the effects of the construction phase will be, or how this is being phased with the other transport infrastructure developments, e.g., on the M42. Once again, there is a perception that the airport contributes more extensively to existing traffic congestion than it actually does. The annoyance in the predicted increase in

background traffic volume up to 2022 may also be directed at BIA. Road traffic accidents (RTAs) may increase with the increase in road traffic volume, but the runway extension's contribution to this is likely to be very low; however, it is likely that children and people living in deprived areas will be most adversely affected by these RTAs.

22. Noise levels will definitely increase with and without the runway extension. This will increase the proportion of the population annoyed by aircraft noise and sleep disturbed. In addition, it will increase the proportion of children whose learning is detrimentally affected by noise. The increase in noise will particularly affect people who are already vulnerable, e.g., older people or people with an existing condition. However, in the long term it could potentially disadvantage those children whose educational attainment may be affected by noise.

23. Air quality will probably reduce slightly with and without the runway extension. This will have a corresponding negative impact on health although this is also assessed to be a marginal effect. However, airport ground workers will have a greater exposure to some pollutants and may be more adversely affected than the population as a whole.

24. The runway extension is likely to contribute to CO<sub>2</sub> and other 'greenhouse' gas emissions and as a consequence climate change and its negative effects on health.

25. While there are both positive and negative health impacts associated with the runway proposal, it is probable that the negative impacts,

- the increase in noise levels,
- the increase (negligible) in risk of accidents (road and third party),
- the increase (negligible) in exposure to air pollutants,
- the reduction in social networking (and support),
- the decrease in personal control,
- the increase in perceived risks.

will be disproportionately, and in some case cumulatively, experienced by children and people living or working close to the airport, people on low incomes or economically inactive, older people, people with poor mental health and people with an existing circulatory or respiratory condition. Many of these groups will be particularly vulnerable to exposure to these health risk factors and conditions. In addition, many of these groups will already be experiencing multiple deprivation, e.g., on low income, above average exposure to noise and air pollutants, and related to this poorer health than national and regional averages. In addition these groups will have less resources or choice to change their circumstances. Conversely, there was insufficient evidence to indicate how many of these disadvantaged groups would particularly benefit from the potential positive impacts of the runway extension, that is, high quality jobs.

## **Conclusion**

26. There is general support for BIA's runway extension proposal – not going ahead with the proposal would potentially disadvantage the West Midlands' economic growth and development even further than it currently is. Furthermore, the notable impacts will occur with or without the runway extension; the difference between the scenarios is relatively small. However, the precautionary principle must be applied; action at local and national levels is needed to address the issues raised, particularly the potential that already disadvantaged areas and groups will be further detrimentally affected, exacerbating health inequalities even further, in the short and long term.

## Recommendations

IMPACTS (section 6 & 7)	Current action	Future action	Recommendations for additional action*	Responsible agencies
<p><b>Noise</b></p> <ul style="list-style-type: none"> <li>• High levels (above 55 dB(A) ) of noise impact negatively on morbidity &amp; mortality;</li> <li>• Population groups particularly affected include unborn babies, infants &amp; children, people with decreased personal abilities (older people, people with mental health problems), people undertaking complex cognitive tasks (e.g., school children), people who are blind or hearing impaired;</li> <li>• Noise levels will probably increase with &amp; without the proposed runway extension;</li> <li>• Increased noise levels will probably have negative impacts on: <ul style="list-style-type: none"> <li>➢ Annoyance</li> <li>➢ Sleep disturbance</li> <li>➢ Children’s learning;</li> </ul> </li> <li>• Increased noise levels will possibly have negative impacts on coronary (heart) health.</li> </ul>	<p>SMBC, Section 106 agreement;</p> <p>BIAL, Noise policy;</p> <p>BIAL, Night flying policy;</p> <p>BIAL, Noise preferential routes (NPRs);</p> <p>BIAL, Engine ground testing controls;</p> <p>BIAL, Noise and track-keeping system;</p> <p>BIAL, Sound insulation scheme;</p> <p>BIAL, Community Trust Fund.</p>	<p>BIAL, Planning Statement, December 2007 - additional 800 properties eligible for noise insulation with runway extension.</p> <p><i>In particular:</i> Make noise and track information publicly available through the ‘webtrak’ system.</p> <p>Work with airlines to encourage further improvements in noise reduction and track-keeping, with a 95% ‘on-track’ target.</p> <p>Conduct noise monitoring studies using the portable noise monitor.</p> <p>Work with National Air Traffic Services to implement Continuous Descent Approaches.</p>	<p><b>Mitigation</b></p> <p>When deciding the boundaries of the sound insulation scheme decisions should be based on the minimisation of negative health impacts:</p> <ul style="list-style-type: none"> <li>• In order to take into account insulation scheme when calculating sleep disturbance convert Lnight inside to Lnight outside using methods recommended by the night noise position paper (European Commission Working Group on Health and Socio Economic Aspects 2004);</li> <li>• It is recognised that international standards and guidelines vary. Until such time that these are incorporated into national policy guidelines, identify examples of best practice consistent with UK policy and where appropriate adapt to the local context (see for example Schiphol Airport);</li> <li>• Future developments involving vulnerable groups such as schools and health care facilities should not take place within the 50 dB(A) daytime contour.</li> </ul> <p><b>Monitoring</b></p> <p>Monitoring of noise should be carried out in such a way that allows for identification and monitoring of potential health impacts:</p> <ul style="list-style-type: none"> <li>• Provide noise measurements for;</li> </ul>	<p>BIAL</p> <p>BIAL</p> <p>BIAL</p> <p>SMBC, BCC</p> <p>BIAL/SMBC</p>

	<p>Revise the noise information booklet. Prepare revised biennial noise contours for 2008 based on actual traffic.</p> <p>Implement the next phases of the Sound Insulation Scheme.</p> <p>Implement the next phase of the Schools Environment Improvement Programme.</p> <p>Apply general principles of construction site noise control according to guidance given in BS 5228: Part 1 (BSI, 1997).</p>	<p>Lday, Levening, Lnight, Lden and LAeq 16h (Defra 2006)</p> <ul style="list-style-type: none"> <li>• Range monitored should include Lden 45-75dB(A) and LNight 40-70 dB(A)</li> <li>• The estimated number of dwellings, people, schools and hospitals in a certain area that are exposed to specific values of the noise indicator (European Parliament 2002)</li> <li>• Consider other measurements where appropriate including Lmax and SEL which could be used for calculating, for example, sleep motility and number of awakenings.</li> <li>• Calculate, monitor and report on annoyance and sleep disturbance using methods recommended by the World Health Organisation (European Commission Working Group on Health and Socio Economic Aspects 2004; Working Group 2 Dose/Effect 2002).</li> </ul> <p><b>Children</b> In order to minimise the potential negative impacts on children, adopt the following recommendations from the RANCH project:</p> <ul style="list-style-type: none"> <li>• In the planning process noise exposure should be considered with other environmental aspects. It is recommended that new schools should not be planned close to existing airports, where noise exposure exceeds the WHO (2000) recommended levels for school playgrounds. It is advised that measures need to be taken to reduce noise in existing schools, where</li> </ul>	<p>SMBC/BCC</p> <p>BIAL/SMBC-</p>
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			<p>noise exposure is excessive.</p> <ul style="list-style-type: none"> <li>Children exposed to adverse environmental conditions, such as aircraft and road traffic noise should have quiet relaxing areas at or near home, e.g., schools, for psychological restoration.</li> </ul> <p><b>Communication and risk perception</b></p> <ul style="list-style-type: none"> <li>Provide an accessible overview (written in plain English) of the relationship between noise and health;</li> <li>Include an assessment of potential health impacts with noise reporting so that public can understand and assess risk for themselves.</li> </ul>	<p>LEAs/BCC-LEAs</p> <p>BIAL/BENPCT/ SCC/ SMBC/BCC</p>
<p><b>Air quality</b></p> <ul style="list-style-type: none"> <li>Air pollution has a negative affect on respiratory and circulatory morbidity and mortality;</li> <li>Population groups particularly affected include unborn babies, infants &amp; children, pregnant women, older people, people with existing respiratory and circulatory conditions;</li> <li>Air pollution will probably, but negligibly, increase with &amp; without the proposed runway extension;</li> <li>Negligible increases in air pollution will probably have corresponding negligible negative impacts on health;</li> <li>Airport ground staff will experience greater exposure</li> </ul>	<p>BCC, Air quality action plan;</p> <p>SMBC, Air quality policy;</p> <p>BIAL, Air quality strategy including access to historical air quality data via the internet, monitoring and sharing of wide range of emissions data</p>	<p>Raise awareness of air quality issues among partner organisations on the Airport site.</p> <p>Conduct a tyre smoke study, investigating air quality impacts with Manchester Metropolitan University.</p> <p>Conduct a biennial Nitrogen Dioxide Study.</p>	<p><b>Mitigation</b></p> <p>The HIA supports the ES recommendations that:</p> <ul style="list-style-type: none"> <li>“Careful consideration to control dust raising activities is recommended through the Construction Environmental Management Plan proposed by BIA for the construction phase”;</li> <li>Measures to reduce the incidence of odour nuisance will be identified and assessed as part of the odour study to be conducted.</li> </ul> <p><b>Monitoring</b></p> <ul style="list-style-type: none"> <li>Include the measurement and monitoring of PM<sub>2.5</sub> as part of routine air quality monitoring.</li> </ul> <p><b>Communication and risk perception.</b></p> <ul style="list-style-type: none"> <li>Provide an accessible overview (written in plain English) of the relationship between air quality and health;</li> <li>Include an assessment of potential</li> </ul>	<p>BIAL</p> <p>BIAL</p> <p>BIAL/BENPCT/ SCT/ SMBC/BCC</p>

to air pollutants and may possibly experience negative health effects.			health impacts with air quality reporting so that public can understand and assess risk for them selves.	
<p><b>Transport</b></p> <ul style="list-style-type: none"> <li>• Road transport has positive and negative impacts on health:</li> <li>• Major determinant of air pollution,</li> <li>• Associated with road traffic accidents - injuries and fatalities, especially affecting people from poorer neighbourhoods and children ;</li> <li>• Enables access to people, places;</li> <li>• Road traffic will increase with and without the proposed runway extension;</li> <li>• Road traffic accident (RTAs) <b>rates</b> from the increased in road traffic are speculated to be equivalent to that of any busy highway;</li> <li>• The <b>number</b> of RTAs are speculated to increase with the additional volume of traffic, but the contribution of the proposed runway extension is speculated to be negligible;</li> <li>• Air transport also has positive and negative impacts on health: <ul style="list-style-type: none"> <li>➢ Aircraft accidents - very low risk, but high impact of passenger and third party casualties;</li> </ul> </li> </ul>	<p>WMRA, Local Transport Plan (LTP);</p> <p>BCC, LTP;</p> <p>SMBC, LTP;</p> <p>BIAL, Surface Access Strategy 2006-2013;</p> <p>BIAL, Transport Forum;</p> <p>BIAL, Travelwise Plus;</p> <p>BIA Employers, Travelwise;</p> <p>BIAL, Public Safety Zones.</p>	<p>BIAL, Runway Extension Travel Plan, December 2007</p> <p><i>In particular:</i></p> <p>Establish the new monitoring procedures set out in the Airport Surface Access Strategy.</p> <p>Establish a Steering Group for the Airport Transport Forum.</p> <p>Produce revised Access, Bus and Rail Guides, where appropriate.</p> <p>Investigate the feasibility of extending real time rail and road information to further locations within the passenger terminals.</p> <p>Complete improvements for cyclists and pedestrians under and near to the</p>	<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• As part of the Construction Methods Mitigation (CMM) develop, monitor and publish a CMM statement on road traffic impacts and mitigation associated with the proposed runway extension's construction phase at the earliest opportunity;</li> <li>• Develop mitigating measures associated with the proposed runway extension's construction phase in BIA's Travel Plan;</li> <li>• Include low emission (noise and air) construction equipment and materials in the runway extension construction contracts and the Code of Construction Practice.</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Define and monitor numbers of properties/households in new 10<sup>-4</sup> risk contours;</li> <li>• Monitor and enforce restrictions of developments in new 10<sup>-4</sup> risk contours.</li> </ul> <p><b>Communication and risk perception</b></p> <ul style="list-style-type: none"> <li>• Monitor and publish traffic information during the construction phase;</li> <li>• Contact transport authorities to request dissemination to both developers and the public of the various transport infrastructure developments close to BIA, e.g., M42, NEC and the likely timing of these.</li> </ul>	<p>BIAL</p> <p>BIAL</p> <p>BCC/ SMBC</p> <p>BIAL</p> <p>BIAL/ SMBC/BCC</p> <p>BIAL/ SMBC/BCC</p>

<ul style="list-style-type: none"> <li>➤ Determinant of noise and air pollution (above);</li> <li>➤ 'Connectivity';</li> <li>• Air traffic movements (ATMs) will increase with and without the proposed runway extension;</li> <li>• The additional risk of aircraft accidents with the proposed runway extension is probably negligible;</li> <li>• The additional risk of third party casualties associated with aircraft accidents with the proposed runway extension is probably negligible.</li> </ul>		<p>Bickenhill Lane bridge. Work with Warwickshire County Council to promote the new journey opportunities created by the new Coleshill Parkway rail station and associated new bus services.</p> <p>Work with DfT and new franchises to develop the potential of Solihull Station for</p>		
<p><b>Social capital</b></p> <ul style="list-style-type: none"> <li>• High levels of social support will protect against poor mental and physical health;</li> <li>• Low control, low involvement in decision-making focused on 'dread' issues is associated with heightened perceptions of public health risk;</li> <li>• Some community stakeholders do not feel engaged with the proposed runway extension and this is possibly contributing to their perception of risks;</li> <li>• It is probable that there will be an increase in accessibility to people and places in the US and far east with the proposed</li> </ul>	<p>BCC, Statement of Community Involvement in Planning;</p> <p>SMBC, Statement of Community Involvement in Planning;</p> <p>BIAL, Community and Environment Action Plans, 2007-8;</p> <p>BIAL, Consultative Committee.</p>	<p>Local Government &amp; Public Involvement in Health Act, October 2007.</p> <p><i>BIAL specific action:</i></p> <p>Maintain an active programme of educational visits and opportunities.</p> <p>In partnership with teachers, develop additional resources that support the delivery of the educational curriculum.</p> <p>Develop an improved</p>	<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• Include a requirement to adopt the 'Considerate Contractors Scheme' standards in the proposed runway extension constructor contracts and the Code of Construction Practice.</li> <li>• Review formal, e.g., BIA Consultative Committee (CC), and informal mechanisms to engage with local residents and communities;</li> <li>• Establish a Health Forum linked to the BIA CC which receives regular reports on health impact data related to the airport's activities;</li> <li>• Support local residents and communities in targeted areas (complementing/liasing with existing resources);</li> <li>• Incorporate 'the development of community enterprise' as a criterion for the Community Trust Fund.</li> </ul>	<p>BIAL</p> <p>BIAL</p> <p>BIAL/SCT/ BENPCT</p> <p>BIAL/SMBC/BCC</p> <p>BIAL</p>

<p>runway extension, however people on high incomes will probably benefit from this most;</p> <ul style="list-style-type: none"> <li>• It is probable that employment associated with the runway extension will facilitate positive mental health linked to new positive social networks for those moving from unemployment into employment; however people with low skills will probably benefit least from these employment opportunities.</li> <li>• It is probable that the increase in noise and traffic with and without the runway extension development will reduce opportunities for social interactions and networking within affected communities, with a negative impact on health and well being;</li> <li>• The runway extension itself will definitely affect opportunities for social interactions for the residents of Bickenhill village with the removal of some facilities and amenities.</li> </ul>		<p>programme of 'community outreach', with planned visits to community groups and local ward meetings, parish councils and community events.</p> <p>Ensure that key shareholder groups are kept informed of developments through the Community Alerting System.</p>	<p><b>Data and monitoring</b></p> <ul style="list-style-type: none"> <li>• Collect data in targeted areas on social capital (social support, integration, networks, control beliefs, involvement in decision-making) mental health and perceived health risks and monitor.</li> </ul> <p><b>Communication and risk perception</b></p> <ul style="list-style-type: none"> <li>• Review and implement BIAL's Community involvement and communications strategy;</li> <li>• Promote the development of local Community involvement and communications strategies.</li> </ul>	<p>BCC/BENPCT /SMBC/SCT</p> <p>BIAL</p> <p>BIAL/SMBC/BCC /BENPCT/SCT</p>
<p><b>Economy &amp; employment</b></p> <ul style="list-style-type: none"> <li>• Higher levels of employment in a population are associated with lower mortality rates; however, employment which is low paid,</li> </ul>	<p>AWM, West Midlands Economic Strategy;</p> <p>BCC, Development Birmingham: an economic strategy for</p>	<p><i>BIAL specific action:</i></p> <p>Incorporate the new NVQ in Aviation into staff training programmes.</p>	<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• Include the requirement for 'Local Labour Agreements' in the constructors' tender specification and contracts the proposed runway extension;</li> <li>• Include the requirement for best</li> </ul>	<p>BIAL</p>

<p>poor quality and insecure is associated with poor health equivalent to unemployed health scores;</p> <ul style="list-style-type: none"> <li>• It is probable that the runway extension will lead to employment opportunities in Solihull, Birmingham and West Midlands;</li> <li>• It is possible that some of these employment opportunities may benefit people currently resident in West Midlands;</li> <li>• It is speculated that an unknown proportion of these jobs will also be filled by people from outside West Midlands;</li> <li>• It is possible that a proportion of those jobs created and obtained by unemployed local people will be poor quality, low paid, fixed term and/or part-time, and may involve hazardous work; if their household income is below that of when they were unemployed it is probable that there will be negative long term health effects;</li> <li>• It is speculated that some population groups, e.g., people with low skills, people with disabilities, ethnic minority groups, may be less able to take up or benefit from the</li> </ul>	<p>the City;</p> <p>SMBC, Economic development strategy for Solihull 2003-2006;</p> <p>BIAL, BIA Masterplan: Towards 2030;</p> <p>BIA Job Centre, Job Junction; BIAL, 'Moving Forward';</p> <p>SMBC, North Solihull Strategic Framework;</p> <p>SMBC, Access to Employment;</p> <p>SMBC, Construction Employment Alliance;</p> <p>BCC, Regeneration Services Business Plan;</p> <p>Connexions, Local Learning Clubs;</p> <p>Solihull College, Routes to work;</p> <p>Groundwork, Environment projects/employment;</p>		<p>practice standards for construction worker health and safety, e.g., IOSH 'Global Best Practice in Contractor Safety', HSE 'Working Well Together', in the constructors' tender specification and contracts for the proposed runway extension including the Code of Construction Practice.</p> <ul style="list-style-type: none"> <li>• Highlight concerns that vulnerable communities may fail to benefit from regional and international economic 'connectivity' in high tech fields without targeted support and interventions;</li> <li>• Promote the need for interventions in targeted local schools, colleges and training providers to promote the development of skills and innovation linked to emerging high technology businesses and occupations;</li> <li>• Promote the need for interventions in targeted communities to develop local entrepreneurs including Airport related service providers;</li> <li>• Define targeted areas in terms of level of deprivation and adverse impacts from the airport's operation.</li> </ul> <p><b>Data and monitoring</b></p> <ul style="list-style-type: none"> <li>• Undertake sensitivity analysis on the direct/indirect/induced employment and income forecasts;</li> <li>• Consider undertaking quantitative modelling with sensitivity analyses to develop forecasts for the wider employment/ income benefits attributed to increased 'connectivity';</li> <li>• Consider the full environmental, social and health costs associated with</li> </ul>	<p>BIAL</p> <p>BIAL/SMBC/ BCC to AWM</p> <p>BIAL/SMBC/ BCC to Airport employers, AWM</p> <p>BIAL/SMBC/ BCC to Airport employers, AWM</p> <p>BIAL/SMBC/ BCC/AWM</p> <p>BIAL</p> <p>BIAL</p> <p>BIAL</p>
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<p>'high tech' employment opportunities the economic 'connectivity' the runway extension affords;</p> <ul style="list-style-type: none"> <li>• It is probable that the economic growth attributed to the runway extension will result in improved health outcomes for the region;</li> <li>• It is probable that the health gains will be experienced by those with increased per capita income;</li> <li>• It is speculated that vulnerable groups in the labour market will benefit least from income growth in the region.</li> </ul>	<p>AWM, Workwise.</p>		<p>the proposed runway extension by undertaking more detailed modelling with sensitivity analyses;</p> <ul style="list-style-type: none"> <li>• Monitor Local Labour Agreements through the Section 106 agreement;</li> <li>• Audit and monitor the relative high/low quality jobs associated with airport operations;</li> <li>• Develop strategies to promote 'job quality' across occupations in the airport context.</li> </ul> <p><b>Communication</b></p> <ul style="list-style-type: none"> <li>• As part of an overall Community communications strategy, promote awareness of the work the airport is undertaking to support local employment and improve the quality of all jobs.</li> </ul>	<p>BIAL</p> <p>Regional observatory</p> <p>BIAL/Airport employers</p> <p>BIAL</p>
<p><b>Climate change</b></p> <ul style="list-style-type: none"> <li>• It is possible that the proposal will contribute to climate change;</li> <li>• It is also possible that this will contribute to a number of current and predicted negative health impacts on vulnerable populations.</li> </ul>	<p>BIAL, Action Energy programme; BCC, Sustainability Strategy &amp; Action Plan; 'See Transport'</p>	<p>SMBC, Draft Sustainable Community Strategy, January 2008;</p> <p>BIAL, Climate Change Strategy, 2008.</p> <p>BIAL commitment to Sustainable Aviation Strategy (with airlines, airports and aircraft manufacturers) <a href="http://www.sustainableaviation.co.uk">www.sustainableaviation.co.uk</a> and 'aviation industry'</p>	<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• Support the development of BIAL's Climate Change Strategy</li> </ul>	<p>BIAL</p>

		action to counter climate change and improve local environmental impacts		
<p><b>Health inequalities</b></p> <ul style="list-style-type: none"> <li>• It is probable that the negative impacts: <ul style="list-style-type: none"> <li>➤ the increase in noise levels,</li> <li>➤ the increase (negligible) in risk of accidents (road and third party),</li> <li>➤ the increase (negligible) in exposure to air pollutants,</li> <li>➤ the reduction in social networking (and support),</li> <li>➤ the decrease in personal control,</li> <li>➤ the increase in perceived risks</li> </ul> </li> </ul> <p>will be disproportionately, and in some case cumulatively, experienced by children and people living or working close to the airport, people on low incomes or economically inactive, older people, people with poor mental health and people with an existing circulatory or respiratory condition. In addition, many of these vulnerable groups have less choice and/or capacity to change their situation, either by finding coping mechanisms or choosing to move house.</p>	<p>WMSHA, Single Equality Scheme (SES);</p> <p>BEN PCT, Local Delivery Plan (LDP);</p> <p>BEN, SES;</p> <p>SCT, LDP;</p> <p>SCT, SES;</p> <p>SMBC, A Place for People: a Community Strategy for Solihull.</p>	<p>BCC, Draft Birmingham 2026, April 2008.</p>	<p>Recommendations to reduce health inequalities by targeting action have been integrated into the above sections.</p>	

<ul style="list-style-type: none"><li>• Many of these groups will be particularly vulnerable to exposure to these health risk factors and conditions:</li><li>• Many of these groups will already be experiencing multiple deprivation, e.g., on low income, above average exposure to noise and air pollutants, and related to this poorer health than national and regional averages.</li></ul>				
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