



London
BAA Gatwick 

**GATWICK AIRPORT
SUSTAINABLE
DEVELOPMENT
STRATEGY**

JULY 2000

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Paragraph 1.7 explains the rationale for the sequence in which issues are addressed.

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The following Appendices are to be found in a separate volume of the Strategy:

- A **Gatwick's history**
- B **Derivation of the Strategy from the draft consultation documents**
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FOREWORD

For the past three years my colleagues and I have been undertaking a detailed study of how Gatwick might be developed and managed during this first decade of the new millennium. The publication of our Sustainable Development Strategy marks the culmination of that work.

It is not, however, just our work. We have placed great emphasis on the involvement of our key stakeholders, particularly the local authorities and communities around Gatwick and our partners in the civil aviation business. A key stage in our process was last summer's consultation on a number of draft Strategy documents, on which we received a wide variety of comments and suggestions. We are indebted to all those who responded, or who have in other ways assisted our work. They kept us on our metal, and many of their propositions quite rightly cut to the heart of our business, confronting BAA Gatwick's board with difficult decisions on how best to address various issues associated with Gatwick's future growth.

That growth, from 31 to around 40 million annual passengers, will see Gatwick fulfilling its role in the London airport system as a single runway, two terminal, airport, in line with national airports policy. Our Strategy also accommodates our development needs within the airport boundary defined in the Crawley Borough Local Plan.

However, our Strategy is much more than a land use plan. It addresses the sustainable development agenda, embracing social, economic and environmental issues, and our various draft Strategies are now integrated into a single document. It contains almost 150 Commitments that describe ways in which we will manage and develop the airport responsibly, and seek a sustainable balance between Gatwick's effects – pro-actively tackling environmental and surface access impacts whilst realising the social and economic benefits of air travel and employment.

Our future investment in environmental management and airport development will be increased by our many Commitments. In addition, we have resolved to establish a Community Trust Fund, with a guaranteed budget of £100,000 per annum for nine years, to support projects of benefit to communities in the sub-region around Gatwick.

We intend to underpin a number of our Commitments, including that to the Community Trust Fund, with obligations in a legal agreement with West Sussex County Council and Crawley Borough Council. We expect this to be brought into effect towards the end of this year, provided that the Borough's proposed Supplementary Planning Guidance for Gatwick gives us a reasonable expectation of implementing this Strategy. Development will, of course, be subject to such conditions and further Agreements as may reasonably be attached to specific planning permissions.

I sincerely hope that our partnership approach to the preparation of this Strategy will pave the way for a continuing partnership in its implementation. If we and our neighbours have created the opportunity for Gatwick to grow and operate in harmony with their interests, without recourse to the adversarial public inquiry process, that will be success indeed.

JANIS KONG MANAGING DIRECTOR GATWICK AIRPORT LIMITED



1 INTRODUCTION

BACKGROUND

1.1 The modern Gatwick airport has existed for over 40 years (see *Appendix A* for a short resumé of its history); now, as the UK's second busiest airport, it is a key component of the country's civil aviation infrastructure, used by 31 million air passengers, and handling over 300,000 tonnes of air cargo, in the past year. The airport's single runway operation has the potential, before the end of this decade, to serve around 40 million annual passengers and almost a doubling of cargo tonnage, but the increase in aircraft movements will be relatively modest at around 14%, with no requirement for any relaxation of the government's limits on night flights.

PREPARATION OF THE STRATEGY

1.2 Given this potential for growth, BAA Gatwick has for some time been studying the economic, environmental and social implications of that growth, to inform the Company's consideration of how best to develop additional airport facilities, and how best to manage the airport's operation, over the coming years. This approach is rooted in the national, regional and local planning context for sustainable development, addressing the overall quality of life of our nation's population. This is conveniently explained by the government's four objectives for sustainable development:

- social progress which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources; and
- maintenance of high and stable levels of economic growth and employment.

1.3 Throughout our period of study our aim has been, and remains, to research, plan and achieve the sustainable development of the

airport in partnership with the many stakeholders in its future. It also incorporates the principle of seeking mutual benefit for the maximum number of stakeholders, whose diversity is considerable, eg:

- central government;
- local government;
- BAA;
- airlines;
- business partners and suppliers;
- investors and shareholders;
- air passengers;
- staff;
- local residents;
- environmental groups.

1.4 A key stage in our process was the publication in 1999 of a variety of documents, explaining our draft proposals for the airport's future development, including a wide variety of Commitments, particularly on environmental and surface access issues. The ensuing period of dialogue and consultation provided the opportunity for stakeholders to meet and discuss matters with us, and to submit detailed written representations on the content of the draft strategy documents. Much of this final Strategy has also been canvassed, in draft form, with local authorities and a number of the other stakeholders, whose comments have been of considerable assistance to our decisions on how best to present its content.

1.5 The most significant outcome of the process has been the decision to replace our draft documents, ie:

- the Development Strategy;
- the Environment Strategy;
- the Environment Strategy's Technical appendix;
- the Landscape Strategy;
- the Transport Strategy; and
- the Employment Impact Assessment.

With a single 'Sustainable Development Strategy', comprising this volume and a supporting volume of appendices. Given its

length, a Summary is also available and, in line with government guidance on Transport Plans, the Transport Strategy is available as a free-standing document as well as being incorporated into this document.

1.6 The amalgamation of the draft documents into one, coupled with the extensive review of its content in response to the views of consultees, means that the Sustainable Development Strategy's derivation from its predecessors is not always obvious. *Appendix B* provides cross references between the draft strategies and the contents of this document, to enable readers to understand how our original thinking has altered.

1.7 Our decision to adopt this different format was strongly influenced by our involvement with a Sustainability Review of the draft strategy documents, undertaken at the suggestion of Surrey County Council and further explained in §1.14 to 1.16 below. The new format seeks to demonstrate more clearly than its predecessors the inter-relationships between the many characteristics and consequences of Gatwick's growth and development. It seeks also to present information in a sequence that best reflects the process of assembling a strategy that follows the principles of sustainable development. That sequence:

- ▶ begins with an explanation of the forecasts of the scale and nature of activity capable of being serviced by Gatwick's single runway, and accommodated within the existing airport boundary, the principle of which is in line with government airports policy;
- ▶ then uses those forecasts as the foundation for assessing and addressing those implications of Gatwick's growth which are inherently a function of the scale of activity, and which are little if at all influenced by the disposition of land uses within the airport boundary, ie:
 - ▶ social, economic and employment issues;
 - ▶ surface access;
 - ▶ air quality;
 - ▶ air noise;
- ▶ then considers the need for, and the broad character and disposition of, the airport facilities and activities that are likely to be required in order to accommodate the forecast growth, with due regard to the implications of initiatives relating to the foregoing four assessments;
- ▶ then considers those implications of Gatwick's growth which are influenced by

the disposition of facilities and activities within the airport boundary, ie:

- ▶ ground noise;
- ▶ landscape and ecology;
- ▶ water quality management; and
- ▶ resource use (waste management and energy use (climate change));
- ▶ and, finally, addresses the implementation of the Strategy, and its monitoring.

1.8 Many of the chapters contain Commitments by BAA Gatwick, a compilation of which is provided in *Appendix C*. Their purpose is to provide stakeholders with assurances as to the manner in which our management of the airport's operation, and our planning and development of new facilities, will pursue the objectives of sustainable development, delivering the social and economic benefits associated with air travel and airport employment whilst using all reasonably practicable means of minimising the associated impacts on the environment, on the number of road journeys and on resource use. Our Commitments will, as appropriate, drive the introduction of action plans and the setting of annual targets, and the adoption of best practice approaches to environmental management.

1.9 A number of the Commitments are to be given added legal force, as obligations in a Section 106 Agreement which is proposed

between BAA Gatwick, Crawley Borough Council and West Sussex County Council.

1.10 The civil aviation industry is subject to much regulation, as elaborated in *Appendix D*, and BAA Gatwick has accordingly had regard in its Commitments, and in the Strategy as a whole, to the functional and legal limits on its responsibilities as airport operator. The Company is not, for example, responsible for airspace policy or air traffic control, which respectively lies with the UK Government and National Air Traffic Services. It is for such reasons that, in a proportion of its Commitments, BAA Gatwick is unable to enforce its position on other parties, and is instead obliged to focus on an 'influencing' role.

1.11 This Strategy has also been prepared in the context of national/regional and local planning policies, which are respectively elaborated in *Appendix E* and *Appendix F*. In particular, the Strategy's proposals have been developed:

- ▶ to conform generally with the requirements of Policy T12 of the West Sussex Structure Plan 1998 (unadopted);
- ▶ to satisfy the requirement of Policy GAT2 in Crawley Borough Local Plan 2000, relating to the agreement of environmental and other improvements to accompany the growth in airport business;



- to inform the adoption by Crawley Borough Council of Supplementary Planning Guidance (SPG) relating to the airport, following a period of consultation in Summer 2000.

1.12 BAA Gatwick recognises that, despite making its many Commitments, and ensuring their consistency with the legal, policy and organisational framework within which the airport exists and operates, it will not be possible for us wholly to eliminate Gatwick's impacts on neighbouring communities. Aircraft will still be audible; air quality will still be affected; some staff will still use rural roads for their journeys to and from work. We recognise that people in affected areas may welcome some investment in community projects, bringing benefits that in some way offset their circumstances. We do not, however, believe that we alone should select the projects deserving of investment; therefore, subject to the sealing of our legal Agreement with Crawley Borough Council and West Sussex County Council, BAA Gatwick commits to:

CS1 Establish a Community Trust Fund, and appoint up to nine Trustees (including at least one from the Company) to select projects in the general locality of Gatwick for which they will provide financial support; and to make an annual contribution of £100,000 to the fund over the nine year period ending 31st March 2009, plus the revenue raised from supplementary charges on those aircraft that infringe any departures noise limits set by the UK Government.

1.13 This Commitment, which will be elaborated in the legal Agreement, corresponds with that for a Fund established by Manchester Airport, saving that it is not contingent on BAA Gatwick obtaining planning permission for any particular airport development (the Manchester Fund was associated with planning permission for a second runway). BAA Gatwick considered suggestions that, based on a principle of 'the polluter pays', its payments into the fund should include penalties if, for example, certain environmental targets were not met. The suggestions were in large measure impractical, because they related to issues outside our direct influence or control. Moreover, we believe our focus should be to

invest in environmentally beneficial infrastructure and management, rather than to budget for failure, and we have consequently not adopted the suggested penalties regime.

SUSTAINABILITY REVIEW

1.14 The Sustainability Review was carried out by external consultants, Stanger Science and Environment, on behalf of BAA Gatwick and a Steering Group comprising representatives of Surrey County Council, West Sussex County Council, Crawley Borough Council and the sustainable development charity, Forum for the Future. The methodology agreed through the Steering Group was based on an assessment of the alignment of BAA Gatwick's four draft strategy documents with the objectives and indicators for sustainability developed by the UK Government and the communities of Crawley, Surrey and West Sussex. The full report of the review is reproduced as *Appendix G*, which contains further information about the assumptions and exclusions from the review. For example, the review focused predominantly on the local rather than the global issues associated with airport development.

1.15 The output of the review has shown a positive alignment with economic sustainability indicators as a result of the predicted increase in employment and economic growth associated with the expansion of airport operations. It is also clear that the airport plays an important role in strengthening local social sustainability indicators through its role in the local community, such as working with schools (education and qualifications indicators) and initiatives such as the BAA Gatwick Youth Games (recreation and leisure indicators). In addition, positive alignments were identified with some environmental sustainability indicators because of the opportunities which new development brings to improve performance, such as increased use of public transport, the wider influence of the airport in encouraging improved environmental performance amongst its suppliers, improvements to local river quality through advancements in Gatwick's pollution control infrastructure, and increased efficiencies in waste, energy and water consumption.

1.16 The review also identified where further work was needed to improve negative

alignments with environmental indicators which were identified in order to help prioritise resource and effort, such as in the areas of absolute levels of resource use, energy, waste, water, landscaping and ecological management associated with the airport development.

1.17 As a direct result of the Sustainability Review, and a variety of revisions to our proposals and Commitments that have been made during the course of completing this Strategy, alignments with sustainability indicators in all these areas are improved. The Strategy now includes, in Chapter 3, information on our Community Support Strategy, together with additional chapters on water quality management and resource use (CO₂ emissions associated with energy consumption from buildings). Our review of employment issues has also been strengthened to include information on BAA's objectives to realise the full potential of all our employees and ensure that we are a 'preferred' employer within our communities. This includes our policies on equal opportunities, bullying and harassment, learning and development and the work-life balance (family friendly approaches to work).

1.18 The following general recommendations resulted from the review and have been included in Gatwick's overall approach to its community programme and environmental management system:

- documentation of Gatwick's stakeholder dialogue process;
- further development of existing environmental, social and ethical supply chain management systems, to actively engage others in the process of making the airport more sustainable;
- environmental assessment of projects in order to maximise opportunities for integrating sustainable solutions into the design and construction of the expanded airport;
- assessment of further opportunities for BAA Gatwick and the local and wider community to work together to develop innovative solutions to meeting local needs and global concerns regarding the expansion of airport operations.

1.19 Progress will be publicly reported in our annual Sustainability Report, which is verified by independent consultants prior to publication. The Report will also encompass an external audit of performance against our annual indicators and targets.



2 GATWICK'S TRAFFIC AND FORECAST GROWTH

2.1 This chapter of the Strategy briefly describes the current character of aviation activity at Gatwick, and presents BAA's forecasts of future growth and potential change in that activity. These matters are elaborated in *Appendix H*.

GATWICK'S CURRENT TRAFFIC

2.2 Gatwick is currently the world's sixth busiest airport for international passenger traffic. In 1999/2000 it handled a total of 30.4 million passengers of whom:

- ▶ 91% travelled on international and 9% on domestic services;
- ▶ 64% travelled on scheduled services and 36% on charters;
- ▶ 20% were travelling on business and 80% for leisure purposes (1999 data);
- ▶ 24% were transfer passengers making flight connections at the airport (they represented 37.5% of passengers on scheduled flights) (1999 data);
- ▶ 63% were resident in the UK and 37% overseas (1999 data).

2.3 These passengers were carried on 243,783 passenger air transport movements (an average load of 125), there being a further 12,439 aircraft movements for other purposes.

2.4 Almost 305,000 tonnes of cargo were flown to or from Gatwick in 1999/2000, some 94% of this being transported in the belly holds of passenger aircraft, with the number of 'whole plane' cargo flights being just 3,599.

FORECASTS

2.5 BAA's latest (1999) forecasts signify a potential for the combined passenger throughput of Heathrow, Gatwick and Stansted to increase from 102.6 million in 1999/2000 to 137.1 million in ten years time (2009/10). Gatwick has scope to accommodate some of that growth and BAA's forecasts, which assume the availability of appropriate passenger handling capacity, show a progressive increase of the airport's annual passenger throughput, to around 40 million.

2.6 The forecast does, however, reflect the constraint of the runway's capacity, as the number of aircraft movements edges closer to the number of runway slots available at times that are commercially suitable for the airlines. The number of passenger air transport movements is consequently only expected to grow by some 15% (to around 280,000 per annum). This situation diminishes the significance of additional aircraft movements as a driver of passenger growth; increases in the average number of passengers per flight make a greater contribution to the forecast passenger growth of just over 30%.

2.7 The proportion of Gatwick's passengers travelling on scheduled (as opposed to charter) services is expected slowly to increase, with an associated upwards influence on transfer passenger traffic, to around 28% of the airport total. Growth in the proportion of business as opposed to leisure passengers is likewise envisaged, albeit



that the latter will continue to outnumber business passengers by around four to one.

2.8 BAA anticipates an ongoing decline in the use of freighter aircraft at Gatwick, and

that growth of the airport's air cargo business will be strongly influenced by the availability of freight capacity in the belly holds of passenger aircraft, which will increase as the proportion of wide-bodied aircraft increases.

BAA consequently forecasts that, by 2008/09, Gatwick's annual cargo throughput will lie in the range 500-550,000 tonnes.

2.9 During the course of our consultation on the draft Development Strategy a number of parties requested information about the sensitivity of our various forecasts to changing circumstances. They wondered, for example, whether British Airways' review of its fleet plans might slow the pace of growth of Gatwick's passenger throughput.

2.10 In so far as the mix of aircraft in airline fleets may differ from our assumptions, the most significant difference is a possible reduction in the number of B747 flights, offset by rather more by aircraft such as the B777. Environmentally such a change would have a downwards influence on air noise, but it does not imply that passenger numbers would necessarily be lower than anticipated, because any down-sizing of aircraft on a route would be to optimise the 'fit' between seating capacity and demand, ie to reduce the number of unoccupied seats on flights to and from Gatwick.

2.11 The forecasts presented in this Strategy are for future annual levels of activity at the airport, and they lie behind a variety of more detailed forecasts that were produced as input to our consultants' assessments of such matters as road traffic, air noise and air quality. If the pace of Gatwick's growth were to be slower than forecast the probability is that the airport's impacts would slightly lessen. However, since many of the impacts are assessed in relation to busier periods of airport activity, which are the periods least sensitive to changes in annual forecasts (because any lowering of airport activity most affects off-peak periods), we would not expect the difference to be significant. Equally, if a hypothesis of an annual passenger throughput significantly greater than 40 million were to be studied, the additional activity would be strongly biased towards off peak periods, and we would not expect a material difference in activity or impacts during busier periods.

2.12 For these various reasons we believe that our forecasts provide a reasonable basis for the production of impact assessments that already tend towards being a 'worst case', and we have not included sensitivity tests in this Strategy, although some were used for detailed roads assessments, to meet Highways Agency requirements.



3 SOCIAL PROGRESS, EMPLOYMENT AND GATWICK'S ROLE IN THE COMMUNITY

3.1 This chapter of the Strategy focuses on matters of relevance to two of the government's objectives for sustainable development; firstly, 'social progress which recognises the needs of everyone'; secondly, 'maintenance of high and stable levels of economic growth and employment'. It outlines Gatwick's contribution to social progress, with a particular emphasis on the airport's role in the community, whose needs and concerns are central to BAA Gatwick's mission to be a successful business. The Chapter also explains the airport's relationship with the local and sub regional economy, notably through the job opportunities attributable to the airport.

SOCIAL PROGRESS

3.2 During the past 30 – 40 years air travel has increasingly become a feature of our lives, primarily by creating the opportunity for fast, low cost, long distance travel which, in combination with a general increase in the standard of living, has facilitated a previously inconceivable increase in peoples choice of holiday destinations. Civil aviation has thus become a vehicle for social inclusion, through its transformation of the affordability of long distance travel.

3.3 Within the UK, airports such as Gatwick have consequently had a pivotal role in enabling civil aviation to contribute to social progress. Gatwick's ongoing operation and development, to accommodate a passenger throughput of around 40 million before the end of this decade, complemented by growth

in the use of airports elsewhere, will maintain that role.

3.4 Social progress associated with Gatwick is not limited to the benefits realised by air travellers. The airport is an integral part of the infrastructure of South East England and in many ways influences the lives, and the livelihoods, of people living in much of Sussex, Surrey and neighbouring areas. Its influence on social progress is closely associated with employment and wealth creation and, for our neighbours, Gatwick's most manifest benefit is the jobs it creates, producing aggregate earnings of around £10 million per week for those working within the boundaries of the airport itself. The airport enhances the area's attractiveness to other sectors of the UK economy, thus further contributing to prosperity and near full employment, and assisting in minimising the proportion of the sub-region's population living in deprived circumstances.

AIRPORT EMPLOYMENT

3.5 Airport and airport-related employment is considered as falling in one or other of four categories, as follows:

- (i) Direct on-airport employment: persons employed by businesses whose activity is directly and solely related to Gatwick, whose jobs are based within the airport boundary;
- (ii) Direct off-airport employment: as above, but with jobs based outside the airport boundary, notably related to flight

catering, hotels, freight services, car parks and airline offices;

- (iii) Indirect employment: employment in local firms supplying goods and services to the businesses at the airport;
- (iv) Induced employment: employment supported by persons employed directly and indirectly who spend part of their incomes in the local area.

3.6 For the purposes of this Strategy, BAA Gatwick surveyed and forecast the first of these employment categories and appointed DTZ Peda to study the remaining three, with the conclusions of the work subsequently being reviewed by consultants (Cambridge Econometrics – ‘CE’) appointed by West Sussex County Council on behalf of a consortium of local authorities. *Appendix J* provides a detailed explanation of the employment studies.

3.7 The table at the foot of this page summarises the existing employment and the forecasts of airport and airport-related employment growth associated with the increase in Gatwick’s passenger throughput to around 40 million in 2008.

3.8 CE’s review of these forecasts suggested that the traffic and productivity growth assumptions were pessimistic; they presented a scenario which forecast a direct on-airport employment total of 33,700 associated with a passenger throughput greater than 40 million in 2008. Their conclusion on total employment, derived from a different methodology than DTZ Peda’s, was that the number of jobs attributable to Gatwick would increase by 12,400 rather than 10,800.

3.9 BAA cannot endorse CE’s scenario, since it is reliant upon a growth in aircraft movements to a level that does not reflect the capacity constraint of Gatwick’s single runway operation. If, however, their expectation of greater productivity growth is valid, the implication is that BAA has

overestimated the direct on-airport employment associated with a 40 million passenger throughput in 2008. We conclude that BAA/DTZ Peda’s and CE’s forecasts of the scale of employment growth are inherently of similar magnitude.

EMPLOYMENT IMPACT

3.10 Consideration of employment impact focused on a Study Area comprised of thirteen unitary and district council areas, which together were home in 1997 to 80% of the on-airport workforce. The growth of total Gatwick related employment by 10,810 to 51,810 over the eleven year period from 1997 to 2008 represents an increase of 26.4% on the base figure of 41,000. The forecast increase is equivalent to 1.3% of the Study Area’s 1997 labour force of 849,000, and to about 12% of the employment growth anticipated in the Study Area over the eleven year period.

3.11 CE’s study nevertheless poses concerns about the relationship of airport-related employment growth with the wider economy. A ‘base scenario’ shows overall employment growth outpacing the local authority projections of growth in the local labour force, but CE note that those projections expect a fall in local activity rates, whereas CE themselves project an increase in the comparable participation rate in the South East; their alternative scenario suggests that the future labour demands in West Sussex can be met through changes in commuting patterns and activity rates, but a balance is more difficult to achieve in Surrey. The scenarios do not take into account the implications of the additional housing provision being planned for in the current review of the West Sussex Structure Plan.

3.12 BAA Gatwick’s conclusion, with the advice of its consultants, is that the airport’s additional recruitment needs within the Study Area are capable of being assimilated into its economy, without the need for any greater a level of housing provision than that already in existence or planned. Our conclusion reflects the facts that:

- ▶ the economically active population in the Study Area is forecast to increase;
- ▶ the Study Area has a flexible labour market and has in the recent past accommodated annual employment changes larger than the total increase in Gatwick-related employment forecast to occur over an eleven year period;
- ▶ there could be opportunities for increased labour supply through increased activity rates, which are lower in parts of the Study Area;
- ▶ likewise, through reduced out-commuting from the Study Area, which is currently a net exporter of labour or through increased in-commuting, preferably by public transport.

3.13 The Study Area can consequently be expected to remain home to the great majority of future airport and airport-related employees, with the inner parts of the Area being relatively more important than its periphery. Nevertheless, for communities on the Sussex Coast, and in areas of south London, the net benefit of Gatwick recruitment could be positive, ie there is potential for a slight increase in their share of the workforce, particularly if transport initiatives can assist sustainable and affordable travel to work. There will also be benefit in any dispersal of Gatwick’s benefits through job creation in the economically less buoyant parts of the Study Area, notably the coastal towns.

3.14 More locally to Gatwick itself, a number of local authorities are concerned as to the adequacy of the supply of housing at prices affordable by lower paid airport employees – a concern that likewise applies to employees in other sectors of the economy. Local authority planning policies, and the planning permissions relating to future housing development, provide the means of identifying and providing the mix of housing that reflects the area’s needs. BAA Gatwick does not itself own or have interests in land allocated for housing development.

TABLE REF: 3.7

GATWICK RELATED EMPLOYMENT, 1997 AND 2008				
	1997 NUMBER	1997%	2008 NUMBER	2008%
DIRECT ON-AIRPORT	27,184	66.3	34,100	65.8
DIRECT OFF-AIRPORT	4,160	10.1	5,100	9.8
INDIRECT	1,720	4.2	2,580	5.0
INDUCED	7,940	19.4	10,030	19.4
TOTAL	41,000	100.0	51,810	100.0

SOURCE: DTZ PEDA

COMMUNITY STRATEGY

3.15 BAA Gatwick is committed to being a good neighbour and a good employer and we recognise that we have a responsibility to develop our business with respect for, and with the support of, the local community. We have for some years been working with local organisations and groups to form community partnerships, listening and acting upon ideas and concerns and so working together to effect positive, lasting change with maximum mutual benefit.

3.16 This approach remains central to the way we will continue to do business in future, but gains added significance in the context of the growth of airport employment, and the concern of local authorities and other parties that the economies in towns closest to the airport could be at some risk of overheating. Further afield the growth of airport and airport related employment is seen as an opportunity, with the potential to assist the more fragile economies of Sussex's coastal towns, and areas of South London, in moving towards fuller and more stable employment. This opportunity is not only associated with the growth in employment identified in this Strategy, but also with the possibility that those areas' relative proximity to Gatwick may contribute to their locational attractiveness to inward investors, and feature in the marketing of the areas by the relevant local authorities and other agencies.

3.17 BAA Gatwick's Community Strategy addresses the airport's relationship with social, economic and employment issues in the sub-region in a number of ways. From the social perspective, as a leading company in a 'people' business, we recognise our aptitude, and that of our staff, to engage more broadly in community life. This underlies the overall objective of our community strategy, which is **'to make a positive contribution to the quality of life of the local community'**. In support of this objective we commit to:

CS2 Work in partnership with local authorities and representatives of the local community to jointly identify and deliver each year a range of projects which meet specific needs and add to the quality of peoples lives.



CS3 Provide support to maximise the involvement of BAA Gatwick staff, who can bring to projects the resources of time, specialist skills and expertise, as well as providing financial support through BAA Gatwick's sponsorship and charitable giving programmes.

CS4 Maintain a regular programme of communication and consultation about airport related issues with local authorities and other community representatives.

3.18 Our community activities will focus on the three key principles of sustainability – social, economic and environmental. They are reflected in a number of further commitments, with those for each area seeking to support the work of the others.

The context for much of our activity is that:

- as a key player in the economy of the sub region we are alert to the overall need for its population to have, and to take advantage of, the opportunity to acquire and develop the skills that will support and enhance the success of local businesses and employers, and which will enable people to live satisfying lives;
- we are likewise alert to concerns about the availability and cost of housing, and to the importance of increasing the sustainability of commuter journeys to Gatwick, by achieving greater use of public transport;

- as employer of a proportion (about 7%) of the on-airport workforce we have a direct interest in our ability to recruit and retain the staff we need to run our business;
- as owner of the airport we also have an interest in our business partners' ability to recruit and retain the staff they need for their businesses.

3.19 Our social commitments are to:

CS5 Deliver an education programme that supports specific needs in the community, as identified by the local education authorities.

CS6 Develop projects which support the national curriculum, particularly focused at raising achievement.

CS7 Tackle areas of social deprivation through an 'opportunities for all' approach in consultation with local authorities, investing in all areas of the educational system.

CS8 Provide local housing authorities and other affordable housing agencies with available information on the size and character of the airport workforce, to assist their identification of the local housing needs not likely to be met through market housing provision.

3.20 Our **economic commitments** largely revolve around employment issues, first of which is our approach to our own staffing. We must realise the full potential of all our employees and ensure we are a 'preferred' employer within our communities; key to this is BAA's Equal Opportunities Policy, which applies to all aspects of employment in BAA Gatwick and states that:

CS9 We are committed to equal opportunities and oppose any form of direct or indirect discrimination, harassment or bullying of employees or job applicants on the grounds of: sex; ethnic or national origin; race; nationality; class; colour; sexual orientation; transsexuals; disability; marital or family status; religious beliefs; employment status; membership or non-membership of a trade union; HIV status; or any other unjustifiable condition.

3.21 Looking more broadly at the total airport picture, initiatives are required that assist the integration of the airport's employment needs with the economy of the sub-region and avoid pressure for a future level of housing provision greater than that identified in Regional Planning Guidance and Development Plans. BAA Gatwick commits to:

CS10 Continue to seek membership of sub-regional and local economic partnerships and pro-actively participate in their work.

CS11 Establish an Airport Employment Forum with local authorities and other interested parties, to meet annually until the year ending 31/03/2009; through the Forum, and directly with its members and other stakeholders, BAA Gatwick will seek to identify projects that assist Gatwick recruitment, particularly in areas of unemployment, supported by opportunities for access to sustainable modes of travel to work.

CS12 Maintain or form partnerships with organisations working in areas of unemployment to identify and help to deliver projects which support the development of skills for those seeking employment and the re-skilling of the unemployed.

3.22 Detailed environmental commitments, relating to particular aspects of Gatwick's operation, are set out elsewhere in this Strategy. Our Community Strategy includes three **environmental commitments** of broader relevance, which are to:

CS13 Continue to work with local organisations to support the delivery of quality environmental projects around the airport.

CS14 Identify and help to deliver projects which maximise links with the national curriculum and raise awareness of the environment.

CS15 Identify and help to deliver projects which help to improve the quality of the environment for the local community.

3.23 Our Community Strategy will be evaluated and reported annually in our Sustainability Report.





4 SURFACE ACCESS

INTRODUCTION

4.1 This chapter of the Strategy addresses the issue of Gatwick's surface access impact, and serves to summarise BAA Gatwick's Transport Strategy, the full text of which is reproduced in *Appendix K*. As well as being a key component of this document, our Transport Strategy responds to the Government's requirement that one be prepared by most airports in England and Wales.

4.2 The main theme of the Government's 1998 Transport White Paper is integration – integration that promotes 'seamless' interchange between various transport modes, and integration of land use and transport planning. BAA Gatwick's Transport Strategy has accordingly been prepared as a key input to the Local Transport Plans for the area around the airport and to build upon the major improvements to public transport proposed in those plans. As such its targets, objectives and component strategies dovetail with the Crawley/Gatwick/Horley Integrated Transport Strategy.

CURRENT SITUATION

4.3 In 1999 some 67.5% of air passengers chose to travel to the airport either by private car, hire car or taxi; 32% used public transport. Of staff, in 1997 some 79.5% drove their own car to the airport or took a taxi, 12% used public transport, 5% car shared and 2.5% either cycled, walked or used motorcycles (percentages rounded).

Other road trips include air cargo, retail deliveries, trips undertaken on the airport landside roads and ones by people making connections with rail and express coach services.

4.4 Gatwick Airport has good strategic transport links inherently well suited to the needs of air passengers. These comprise the rail network and the national motorway system (serving express coach services as well as cars). Locally, however, the shortcomings of bus services in the Crawley/Gatwick/Horley area, for example in relation to service frequency, integration and operating hours, result in their not providing many people with a credible public transport alternative to use of their cars for airport journeys.

VISION, OBJECTIVES AND TARGETS

4.5 Our overall transport vision is '**to maintain Gatwick's position as one of Europe's most successful airports for the proportion of air passengers choosing public transport, and to achieve one of the lowest proportions of airport employees travelling to work alone by car in Europe**'.

4.6 Our Transport Strategy is built around the theme of growing Gatwick Airport's business in a responsible and sustainable manner. The achievement of that aspiration is dependent on effective partnerships with key stakeholders such as local authorities, transport providers and businesses (both at

the airport and in the local area). It is also contingent on Government providing a favourable national framework that will enable our transport policies and strategies to be effective in the manner intended.

4.7 The principal objective of the Airport Transport Strategy, in common with Government objectives, is to reduce the growth of future road trips such that environmental and social objectives are achieved without prejudicing economic growth. BAA Gatwick has consequently set two headline targets relating to the number of airport-related road trips in the highways morning peak hour, in 2008, commensurate with the airport handling around 40 million passengers:

- i) the number of trips to and from Gatwick should not exceed 7,850;
- ii) the number of trips to and from Crawley and Horley should not exceed 1,000.

4.8 These targets are predicated on the successful attainment of two supporting targets:

- ▶ to seek to achieve a 40% proportion of non-transfer air passengers choosing to use public transport for journeys to and from Gatwick by 31st December 2008, commensurate with the airport handling around 40 million passengers;
- ▶ to seek to achieve 12% of all airport staff living in the Crawley/Horley area (within ten minutes walking distance of local bus routes) choosing to use local bus to and from Gatwick Airport, within three years of the successful implementation of FastWay.

4.9 It is intended that these headline and supporting targets, together with related public and staff car parking commitments, will be regularly reviewed. These reviews will ensure that our Strategy remains up-to-date and, with the agreement of the principal local authorities and the Gatwick Area Transport Forum, could lead to both of the headline targets being adjusted.

STRATEGY

4.10 In order to achieve the vision, targets and car parking commitments, our Strategy requires a partnership approach to two core strands of work, to enable a reduction in the growth of road trips through:

- ▶ **making more efficient use of the current and planned future strategic road and rail transport infrastructure;**

- ▶ **achieving a truly high quality local bus system and a supporting cycle network that create attractive transport alternatives in the local area.**

4.11 Stakeholder analysis of the former has established that:

- ▶ there are a good number of rail and express coach services available to passengers and staff travelling from outside the local area surrounding Gatwick Airport;
- ▶ it is necessary to significantly improve the customer experience of people using the rail and express coach facilities;
- ▶ it is necessary to accommodate any residual road trips to the airport by complementing the existing strategic road network with some small scale highway measures.

4.12 Turning to the second strand of work, stakeholders' analysis of both current and future situations in the Crawley/Gatwick/Horley area has established that, in order to reduce the growth of local road trips:

- ▶ more attractive transport alternatives need to be created;
- ▶ a truly high quality local bus system (called FastWay) should be implemented;
- ▶ a supporting network of cycle routes should be implemented.

4.13 These principles guide the detail of our Transport Strategy, and its 33 Commitments, as elaborated in the remainder of this chapter.

DEMAND MANAGEMENT

4.14 Lying at the heart of our Transport Strategy is management of the demand for current and future surface travel at the airport, such that it is consistent with economic, business and environmental objectives.

4.15 Our Strategy focuses on initiatives that enhance or create acceptable alternatives car travel. As such it is consistent with Government policy, where there is a clear emphasis on reducing peoples' private car dependency through the provision of a greater choice of alternative. We also recognise the importance of ensuring that any unintended consequences of our actions are minimised, an example being the doubling of road trips generated by an air passenger if

he/she switches mode from self-drive to 'kiss & fly' or taxi rather than to public transport.

4.16 BAA Gatwick's Demand Management Commitments are to:

TS1 Review annually its Company Travel Plan in line with 'best practice' and feedback from staff.

TS2 Nominate a member of staff as Company Travel Plan co-ordinator to work with major on-airport employers and assist at least five to produce their own Company Travel Plan in each of the three years ending 31st March 2001, 2002 and 2003.

TS3 Maintain until 2008, at no less than 2000/01 levels, a levy applied to on-airport public car park users and staff car park passes, and hypothecate the levy funds to finance initiatives to increase the use of alternative modes of transport.

TS4 Survey the reasons for air passengers travelling to the airport by private car and taxi and by March 2002 develop a strategy seeking to reduce the use of these modes.

TS5 In conjunction with Reigate and Banstead Borough Council and Crawley Borough Council, ascertain the extent to which airport staff and passengers park in residential areas of Horley and Crawley.

TS6 Research, implement and review incentives encouraging staff to car share.

ACCESSIBILITY AND INTERCHANGE

4.17 BAA Gatwick recognises that, in order to encourage people not to use their private cars, it is important that there is good accessibility and integration to and between the different modes of surface transport, for air passengers, for staff and for those people

transferring from one mode of public transport to another.

4.18 Our Strategy seeks to improve accessibility and interchange, with a particular focus on the design of the facilities, the ability of staff to travel around the airport without having to use their private cars, and the provision of good information to enable air passengers and staff to make choices about their travel plans.

4.19 BAA Gatwick's Accessibility and Interchange Commitments are to:

TS7 Nominate a member of staff to develop and implement a strategy to enhance the public transport information sources available for airport passengers and staff including the use of publications and the Internet.

TS8 Seek to ensure that on-airport transport interchange facilities are safe and fully accessible to all users.

FASTWAY, LOCAL BUS SERVICES AND CYCLING AND WALKING

4.20 Around one third of airport staff live in the Crawley/Horley area, yet only 5% of airport staff use local buses from these towns, and only around 2% cycle or walk to work.

4.21 Airport staff use of these modes directly relates to the local road trip target. As such an 'area-wide' approach has been taken for all of these modes of travel, to enable the implementation of complementary initiatives that should facilitate a significant change in travel habits in the Crawley/Gatwick/Horley area, and achieve a reduction in the growth of road trips.

4.22 The linchpin behind the airport's local bus strategy is FastWay, a high quality system with a core route from the west side of Crawley, through Gatwick, to Horley, operated with specialist vehicles and benefiting from extensive bus priority measures and state of the art information displays. The initiative is the product of a partnership between West Sussex and Surrey County Councils, Crawley and Reigate & Banstead Borough Councils, BAA Gatwick



and British Airways. Our Strategy also maintains a focus on other local bus services, to consider opportunities for their improvement.

4.23 Equally important are the opportunities for staff to cycle and walk to Gatwick from nearby neighbourhoods, which requires partnership effort to plan and develop a co-ordinated network of routes to and within the airport.

4.24 BAA Gatwick's Commitments in relation to local travel modes are:

FASTWAY

TS9 In conjunction with the FastWay partners, continue to seek government approval of FastWay, subject to which BAA Gatwick will undertake the following to enable FastWay to achieve maximum benefit to the local area:

- ▶ identify a member of staff to help co-ordinate the project and implement the programme for on-airport works;
- ▶ facilitate an efficient on-airport routing for FastWay;
- ▶ implement initiatives that maximise 'connectivity' between the FastWay route and other on-airport employment centres.
- ▶ make a direct financial contribution of up to £3m for on-airport elements of FastWay and up to £1m for agreed off-airport infrastructure improvements.

OTHER LOCAL BUS SERVICES

TS10 Subsidise by around £1.2m a new quality bus service on an agreed route in the Crawley/Horley area from May 2000 until April 2002, when FastWay services are anticipated to start.

TS11 Research and develop a strategy to maximise 'connectivity' between on-airport employment centres for staff choosing to use modes other than private car.

TS12 Maintain its support for the Horley/Gatwick/East Grinstead bus service at least until 31st March 2001 when the service will be reviewed in conjunction with West Sussex County Council.

TS13 Work with Surrey and West Sussex County Councils to evaluate the potential for effective local bus operations from the Tandridge, Reigate and Banstead, Mid Sussex and Horsham District areas to Gatwick.

TS14 Work in partnership with bus and coach operators to maintain current and develop further initiatives to encourage the greater use of bus and coach services for journeys to and from the airport by airport staff.

TS15 Require all local buses accessing the airport to register for a licence annually, but to continue to waive charges for that licence for a period of two years to coincide with the planned introduction of FastWay.

CYCLING AND WALKING

TS16 Work with the FastWay partners to investigate the case of an 'at grade' signalised cyclist and pedestrian crossing of the A23 at Longbridge roundabout and, if appropriate and subject to a satisfactory safety audit, designate an on-airport cycle route to connect the North Terminal to Longbridge roundabout.

TS17 Support the surrounding local authorities and other interested groups in the planning and co-ordination of the local cycling and footpath network and actively promote its use through Company Travel Plans.

RAIL AND COACH

4.25 Currently 32% of Gatwick's non-transfer passengers use rail or express coach services to travel to/from the airport. The assumption underlying the achievement of the airport road trip target is that the proportion of non-transfer passengers using rail and express coach services will increase to 40% by 2008.

4.26 Given the relatively large number of existing rail and express coach services, generally with high frequencies, our Strategy concentrates on initiatives to encourage their greater use, supplemented by any new services that operators judge to have commercial potential.

4.27 Another common principle for both the rail and coach strategies is the need to improve the customer experience of people using the rail and coach stations, thereby encouraging them to use public transport. The main aim is for both Railtrack (for the rail facilities) and BAA Gatwick (for the express coach facilities) to work with industry partners and together provide facilities that enable

people to interchange seamlessly with the airport and between modes.

4.28 BAA Gatwick's Rail and Coach Commitments are to:

RAIL

TS18 Work in partnership with the Train Operating Companies in the identification of marketing strategies and campaigns aimed at increasing air passengers' use of Gatwick's rail services.

TS19 Work in partnership with the Train Operating Companies to maintain current and develop future initiatives to encourage the greater use of train services for journeys to and from the airport by airport staff.

TS20 Provide rail ticket desks in airside locations of both terminals on a 'rent free' basis until October 2001 when the effectiveness of the initiative will be reviewed with the Train Operators.

TS21 Work closely with Railtrack and the Train Operators to assist Railtrack in identifying a strategy for further enhancing the rail station and thereby encouraging 'seamless' interchange between facilities. In particular, BAA Gatwick will:

- ▶ provide information on current/future air passengers using the rail station;
- ▶ part fund an agreed survey of non-airport users of the rail station;
- ▶ identify the facilities and processes supporting a 'seamless' interchange between the airport and rail station;
- ▶ provide expertise to help devise project plans for the rail station.

TS22 Actively support the implementation of the Thameslink 2000 project through membership of the consortium.

COACH

TS23 Work with stakeholders to develop a strategy for medium and long term improvements to the coach station facilities at South Terminal and, in summer 2000, trial a scheme allowing all express coaches to 'drop off' at the Upper Forecourt.

TS24 Work in partnership with the express coach operators to identify potential new routes and ways of increasing air passengers' use of Gatwick's express coach services.

ROADS AND CAR PARKING

4.29 Our road trip targets rely upon the delivery of Strategy components relevant to the reduction in the growth of road trips by 2008. The resultant road and car parking elements of our Strategy support these road trip targets and associated strategy components.

4.30 For the passenger and staff trips that use the strategic road infrastructure, the Strategy requires some small scale improvements of junctions close to the airport. Future growth in airport-related trips on local roads, which are predominantly by staff, will be offset by the introduction of FastWay and does not justify highway measures to increase road capacity for private vehicles.



4.31 Notwithstanding the targeted outcome of our initiatives to reduce the proportional use of private cars for surface journeys to and from Gatwick, some increase in public and staff car parking provision is expected to be required, but is considerably less than would be the case in the absence of our initiatives. The land use implications of this requirement are elaborated in chapter 7 of this document (§7.39-40 and 7.68-71).

4.32 BAA Gatwick's Road and Car Parking Commitments are to:

TS25 Provide funds, subject to all relevant approvals being received to enable the airport to develop to around 40mppa, for the construction of the following off-airport highways measures that have been agreed by the Highways Strategy Task Group:

- ▶ improvements to Junction 9 of the M23 during 2000/01;
- ▶ improvements to Junction 9a Roundabout (at the South Terminal) at around 35mppa;
- ▶ a new access off the A23 as a means to relieve Airport Way West Roundabout (North Terminal) at around 35mppa.

the exact timescales and implementation details of these measures to be determined via bilateral cost sharing agreements between the relevant parties and BAA Gatwick.

TS26 Manage and as necessary improve the airport's on-airport road system so as to ensure that it continues to accommodate traffic flows safely and efficiently.

TS27 Restrict access to the airport via Povey Cross to local buses and a maximum of 750 staff car pass holders, according to specified criteria. The use of these passes to be monitored.

TS28 As at 31st December 2008, to provide no more on-airport public car parking spaces than necessary to achieve a total on- and off-airport supply that is commensurate with 40% of non-transfer passengers choosing to use public transport for their surface journeys. Current forecasts of passenger characteristics in 2008 would indicate this to be no more than 26,300 on-airport long stay public car parking spaces and 6,200 on-airport short stay public car parking spaces.

TS29 As at 31st December 2008, to provide no more BAA Gatwick managed on-airport staff car parking spaces than justified by a formula agreed with Crawley Borough Council accounting for an increase in staff numbers and reduced car dependency, subject to the successful implementation of FastWay and there being no obligation on BAA Gatwick to reduce the provision below the current total of 6,400 spaces. Current forecasts of staff characteristics in 2008 would indicate this to be no more than 7,500 BAA Gatwick managed on-airport staff car parking spaces.

4.35 BAA Gatwick's Monitoring and Review Commitments are to:

TS30 Undertake surveys to ascertain staff trip trends in 2002 and 2005. Both these surveys and air passenger trip trends (obtained from regular CAA surveys) will be made available to enable the updating and production of relevant Local Transport Plans.

TS31 Produce an annual report charting progress on commitments, action plans, the number of air passengers using public transport and the number of staff taking advantage of the initiatives available (eg car sharing, Travelcard, Traincard, motorcycling, cycling and walking).

TS32 Convene two meetings each year of the Gatwick Area Transport Forum, and stage a Gatwick Area Transport Conference no less frequently than every three years beginning in 2000.

TS33 Formally review and update the Airport Transport Strategy in 2003 and 2006.

MONITORING AND REVIEW

4.33 BAA Gatwick will regularly monitor our Strategy's performance in delivering the headline road trip targets and supporting targets, and we will collate our monitoring data on particular initiatives in an annual report to the Gatwick Area Transport Forum. Subject to the agreement of all relevant stakeholders we will seek to make appropriate use of any new data sources that become available, particularly from the 'area-wide' strategy work by West Sussex and Surrey County Councils.

4.34 We intend to undertake full reviews of the Airport Transport Strategy every three years. These will be supported by appropriate surveys and will, for example, take stock of progress on our targets and Commitments as well as serving as an input to the review of Local Transport Plans.



5 AIR QUALITY

5.1 This chapter of the Strategy addresses the issue of air quality, which is elaborated in *Appendix L*.

WHAT IS AIR QUALITY?

5.2 The quality of air is affected by chemicals emitted into the atmosphere by activities such as transport and power stations. Airports are one contributor to this, but by no means the only one, with the largest single contributor in the UK currently being road traffic. The government, in the UK National Air Quality Strategy (NAQS), defines objectives for eight pollutants and the evaluation described below compares future levels around Gatwick with these objectives and also with existing levels of pollution in the area.

SOURCES

5.3 Airports are a complex source of air pollutants, consisting of many individual mobile and stationary sources. The pollutants emitted from airports may be categorised into three principal sources:

Aircraft Operations: main and auxiliary engines (including engine testing); fuel storage tanks; evaporation during refuelling.

Road Vehicles: airside and landside vehicles; petrol evaporation in filling stations; car parking.

Miscellaneous: boiler houses; simulated fire training exercises; construction.

5.4 The evaluation of air quality around Gatwick was undertaken by AEA Technology. It included emissions from all the above sources, ie including road vehicles, and covered not only airside road traffic but also traffic on the public roads (both related and unrelated to Gatwick), in an area defined by the model used in the Transport Strategy (see chapter 10 of that Strategy, reproduced in *Appendix K*). AEA Technology concentrated on nitrogen dioxide and particulate matter because:

- ▶ they are the two pollutants which are least likely to achieve the NAQS objectives across the entire UK;
- ▶ airport activities are expected to contribute a clearly identifiable level of emissions;
- ▶ monitoring of carbon monoxide, benzene and 1,3-butadiene at Gatwick since 1995 and 1998 respectively shows that concentrations are already well below the NAQS objectives;
- ▶ modelling of carbon monoxide for 1996/97 also shows that concentrations were well below the NAQS objectives;
- ▶ airports are not major emitters of lead or sulphur dioxide; and
- ▶ the effect of ground level ozone concentrations is a national and regional issue and is being considered at this level rather than at a local one.

WHAT WILL AIR QUALITY BE LIKE AROUND GATWICK?

5.5 Compared to today, levels of particulate matter around Gatwick in 2008 will be much lower while levels of nitrogen dioxide will be about the same, largely due to a reduction in road vehicle emissions. In terms of the NAQS objectives, both of those related to PM₁₀ will be met. However, despite NO₂ levels remaining constant the objective for nitrogen dioxide is not forecast to be met. This situation mirrors that across most conurbations in the UK and is a reason why the Government has introduced its Air Quality Strategy.

HOW MUCH IS DUE TO GATWICK SOURCES?

5.6 In terms of particulate matter, airport-related sources currently contribute approximately 9% on average to concentrations at the airport's boundary. In 2008 this contribution is likely to be slightly smaller (8%) as a result of decreased road vehicle emissions. Airport activities contribute a greater proportion to the concentrations of nitrogen dioxide at the boundary, currently on average approximately 61%. The evaluation has shown that without the strategy set out below, this contribution might grow to around an average of 80%.

HOW CAN AIR QUALITY CONCENTRATIONS AND EMISSIONS BE REDUCED?

OBJECTIVES

5.7 BAA plc and BAA Gatwick are committed to reducing the emissions generated from airport operations and BAA has set the following objective for air quality in which BAA Gatwick will play a key role:

By using its influence and practical measures within its control BAA aims to achieve industry good practice in airport air quality management, including management strategies, measurement and action programmes, including the promotion of alternative fuels and emissions abatement technology for vehicles operating on airport.



5.8 In addition BAA Gatwick will work with others to play its part in achieving the following objective by 2005:

To work with local authorities and the airport community to seek to achieve the NAQS objectives.

TARGETS

5.9 These objectives will be challenging and will require annual action between 2000 and 2005. BAA Gatwick will therefore set annual targets to act as stepping stones to achieving the overall objectives, with monitoring and review mechanisms, and reporting procedures, that are further referred to at the end of this chapter and in Chapter 12 of this Strategy.

ACTION PLAN

5.10 In order to achieve its targets, BAA plc and BAA Gatwick will undertake the actions detailed in the 30 Commitments in the remainder of this chapter. Those Commitments marked with an asterisk are ones that will have a secondary benefit of reducing odour nuisance, which is an issue specifically referred to in §5.13.

SOURCES

AIRCRAFT – OPERATIONAL PROCEDURES

AQ1/GN1 Retrofit FEGP to all existing stands which currently do not have access to a supply by 31/03/05, subject to any approvals necessary to maintain the required number of operational aircraft stands.

AQ2/GN2 Fit FEGP to all new common user aircraft stands, (except maintenance parking areas)*.

AQ3/GN3 Review by 31/03/01 and thereafter ensure compliance with rules:

- ▶ limiting the use of ground power units (GPUs) to times when FEGP is not serviceable; and
- ▶ setting out optimum usage times of APUs, satisfying operational requirements*.

AQ4/GN4 Review charging structures for FEGP to minimise the use of APUs and consult with airline users by 31/03/01*.

AQ5/GN5 Maintain the FEGP supply in good working order and restore 98% of faults within four hours*.

AQ6/GN6 Work with NATS, Eurocontrol and airlines to investigate the advantages of introducing varied taxiing times for different stand areas to reduce emissions and the duration of ground noise on departure*.

AQ7 When considering operational procedures to minimise air noise, seek to identify any beneficial or adverse impacts on air quality*.

AQ8 Investigate the potential to introduce differentials for 'clean' aircraft to encourage their use by 31/03/10* (BAA Group responsibility).

AIRCRAFT – INFLUENCING

5.11 The following commitments make up part of BAA plc's air quality strategy and are repeated here to record the role that BAA will be playing in influencing the industry's longer term performance:

AQ9 Continue to press aircraft and aircraft engine manufacturers to encourage development of low emissions technology* (BAA).

AQ10 Develop relationship with UK and EU representatives at ICAO to encourage the setting of continuously more stringent aircraft emissions standards* (BAA).

AQ11 Through BAA's participation on the Airline Operators Association Environment Working Group, encourage the industry to purchase low emission aircraft* (BAA).

ROAD VEHICLES – AIRSIDE

AQ12 Maintain the supply of alternative fuels (ie LPG and electric) and encourage the acquisition of alternatively fuelled vehicles by business partners.

AQ13 Maintain rules which set standards for the use of ultra-low sulphur diesel, maximum permissible age of various categories of vehicles, and diesel engine design standards.

AQ14 Continue to record vehicles which are left unattended with their engines running and review enforcement rules.

AQ15 Maintain the regime of checking emissions of airside vehicles until 31/03/09.

AQ16 Consider by 31/03/02 the feasibility of designating airside terminal areas as Low Emission Zones, involving controls on vehicle technology, speeds, etc.

AQ17 Review in consultation with users the case for restructuring charges for airside road vehicle licences to penalise the most polluting vehicles.

ROAD VEHICLES – LANDSIDE

5.12 The Transport Strategy describes the objectives and actions BAA Gatwick will take to reduce peoples' reliance on private cars for airport journeys. These actions, by increasing the attractiveness, availability and use of other modes of travel, with encouragement of greater car sharing by those staff who do use cars, will reduce the volume of emissions relative to that which would occur in the absence of a modal shift away from car usage: the Transport Strategy will consequently have a positive effect on air quality. The actions in the following Commitment also specifically relate to landside transport and air quality.

AQ18 Work with local bus operators to encourage use of clean vehicle technology such as Euro 3 standard vehicles, particulate traps, cleaner fuels, eg LPG.

MISCELLANEOUS

AQ19 Rebuild the fire training facilities to use mainly liquid petroleum gas as opposed to kerosene at the earliest feasible opportunity*.

ODOUR AND OILY DEPOSITS

5.13 Odour is mainly created by the burning of kerosene. Thus many of the above actions will reduce the odour nuisance. Rather than repeating them here, they have been highlighted with an asterisk above. In addition, actions related to reducing kerosene vapour, a secondary source of odour, are set out in the following Commitments:

AQ20/WQ6 Maintain guidance on the storage of fuel and the reporting of spillages, thereby encouraging best practice.

AQ21 Ensure that best practice methods for cleaning up spillages are employed at all times.

AQ22 Collate and monitor and publish records of all Gatwick-related emergency fuel jettisoning incidents collected by the London Air Traffic Control Centre.

AQ23 In consultation with local authorities, take samples from local community properties and analyse them for aircraft pollutants by 31/03/02.

AQ24 Establish a group of local community representatives to keep odour diaries and report results annually.

AQ25 Encourage the Gatwick aviation fuel consortium to fit vapour recovery equipment on all new above ground fuel storage.



AQ28 Consider the relevance to the airport's operation of any new pollutants identified in NAQS.

COMMUNICATION AND REPORTING

AQ29 Assist the relevant local authorities (eg Reigate & Banstead BC and Crawley BC) with the development and implementation of a Local Air Quality Management Area action plan addressing air quality in Horley.

AQ30 The following indicators will be reported:

- ▶ number of exceedances of NAQS guidelines for NO₂ and PM₁₀ (annually);
- ▶ tonnes of emissions of NO_x and PM₁₀ (every three years);
- ▶ tonnes of emissions of NO_x and PM₁₀ per air passenger (every three years).

MONITORING AND MODELLING

5.14 BAA Gatwick has been continuously monitoring air quality at the airport since 1992. Also, in 2000, in recognition of Reigate and Banstead Borough Council's interest in air quality nearby, we funded 75% of the cost of installing a nitrogen dioxide monitor in Horley.

AQ26 Refine and republish the emissions inventory and dispersion model by 2002 and 2005.

AQ27 Continue to review Gatwick's air quality impact through:

- ▶ the use of continuous and ad hoc monitoring of carbon monoxide, PM₁₀, oxides of nitrogen/nitrogen dioxide, and grab samples of benzene, 1,3-butadiene and of other hydrocarbons;
- ▶ three yearly emission inventories for PM₁₀ and oxides of nitrogen (2002, 2005);
- ▶ three yearly dispersion modelling for PM₁₀ and nitrogen dioxide (2002, 2005).



6 AIR NOISE

6.1 This chapter of the Strategy primarily considers air noise, which is further elaborated in *Appendix M*. However, given its association with aircraft flight, it also refers in its final section to the issue of risk to third parties.

WHAT IS AIR NOISE?

6.2 The term air noise refers to noise from aircraft that are airborne, on their ground roll during take-off, or decelerating along the runway after landing. The total air noise to which local communities around the airport are exposed over a given period depends on the noise emitted by individual aircraft movements (arrivals and departures) and the total number of aircraft movements in that period. The accuracy of aircraft track-keeping along air routes is an important influence on noise exposure on the ground. An overall measure of air noise exposure can be depicted by noise contours, and noise footprints relating to particular aircraft types can depict single events.

RESPONSIBILITY FOR THE CONTROL OF AIR NOISE

6.3 Gatwick, along with Heathrow and Stansted, is designated under section 80 of the Civil Aviation Act for the purposes of the control of noise. This means that the government (DETR) has taken responsibility for the control of aircraft noise around these airports. It is therefore the DETR that formally decides the location of Noise Preferential

Routes (NPRs) for aircraft departures, and which sets departure noise limits and the night movements limit and night noise quotas for the airports.

6.4 The DETR and its predecessors have for many years commissioned and published the annual actual daytime noise contours for the designated airports. DETR intends, as BAA's environmental regulator, to retain the commissioning responsibility for those contours.

6.5 Whilst BAA Gatwick's degree of direct control over the noise climate is limited, this Strategy sets out a range of actions which BAA Gatwick can take to reduce the impact of air noise, through encouraging the use of best practice from a noise perspective.

HOW MUCH AIR NOISE WILL THERE BE IN THE FUTURE?

6.6 During the course of preparing this Strategy BAA Gatwick commissioned DORA, who produce the annual actual contours for DETR, to produce forecasts of daytime air noise contours for 2003 and 2008. They were based on BAA Gatwick's forecasts of the number of aircraft movements and the mix of aircraft types in those years. The forecast contours show, between 1996 and 2008, a reduction in the area of the 57 Leq contour of approximately 50%, from 90 km² to 45 km².



6.7 In light of these forecasts, BAA Gatwick makes the following commitment:

AN1 Within the limits of its authority and subject to compliance with relevant legal requirements to:

- ▶ **beneficially influence the night noise climate; and**
- ▶ **use all reasonable endeavours to secure a significant reduction of the area contained within the daytime 16 hour 57 dB Leq contour, with the objective of seeking reasonable comparability, in 2008, between the actual contour and this Strategy's forecast contour for that year.**

6.8 Further Commitments in this chapter identify a variety of specific initiatives which BAA Gatwick will pursue, in partnership with stakeholders, in furtherance of the foregoing Commitment.

6.9 Our draft Environment Strategy included a suggestion that BAA Gatwick might invite the Secretary of State to limit the area of the 57 Leq contour in 2008 to that of the equivalent 1996 contour. Responses to our consultation did not generally consider our proposition to be worth pursuing in the light

of our Commitment (AN1) to seek significant improvements in the overall air noise climate, and we have accordingly not done so.

6.10 Aircraft noise at night is regulated by means of night restrictions set by the DETR. These restrictions set limits on the number of aircraft movements and the noise exposure (measured in quota count points) which can occur in each Summer and Winter season – respectively seven and five months in length. After consultation, the current five year scheme was introduced on 31st October 1999; its movement and QC point allocations are tabulated at the foot of this page.

6.11 The DETR does not commission or publish noise contours of night noise, and it is clear that BAA Gatwick, as a designated airport, does not have the authority to do so. Given (i) that the scale of night activity is DETR's responsibility, (ii) that there are no actual contours for comparison with any forecasts that might be produced, and (iii) that there is no authoritative basis for interpreting such contours' meaning in terms of community disturbance, BAA Gatwick has not produced night contour forecasts for future years. It is to be emphasised, however, that this Strategy neither presumes nor requires any greater number of night movements than currently allowed.

*TABLE REF: 6.10

WINTER	QC POINTS	MOVEMENTS	SUMMER	QC POINTS	MOVEMENTS
1999 – 2000	6,820	5,250	2000	9,550	11,200
2000 – 2001	6,820	5,250	2001	9,550	11,200
2001 – 2002	6,680	5,250	2002	9,060	11,200
2002 – 2003	6,660	5,250	2003	9,030	11,200
2003 – 2004	6,640	5,250	2004	9,000	11,200

ANNUAL TARGETS

6.12 For some years, BAA Gatwick as set and reported on annual targets relating to aspects of air noise and track-keeping, aimed at improving the overall noise climate. We will continue to do so, aimed at meeting our objectives for air noise.

HOW CAN AIR NOISE BE MINIMISED?

6.13 The most effective means of minimising air noise is to encourage airlines to operate the quietest types of aircraft, in the quietest way possible. The first priority must be to minimise the amount of noise generated by aircraft and our Commitments in this Chapter of the Strategy focus on actions addressing that priority.

6.14 However, in some circumstances it may be desirable to minimise the amount of noise received by providing noise insulation. BAA Gatwick therefore commits to:

AN2/GN11 Complete a study, in consultation with neighbouring local authorities to:

- ▶ **establish whether there is a case for a future BAA-funded noise insulation scheme for existing residential properties; and**
- ▶ **if a case is established to identify the details of such a scheme; within six months of signing the proposed legal agreement with West Sussex County Council and Crawley Borough Council.**

MEASUREMENT AND MODELLING

6.15 Air noise contours are generally accepted as the most appropriate means of measuring trends in the overall air noise climate over time. BAA Gatwick therefore commits to:

AN3 Encourage the DETR to publish each year's actual summer daytime noise contours by 31st March of the following year.

AN4 Review and publish its forecast summer daytime noise contours for 2008 every three years, by 31/12/02 and 31/12/05.

6.16 In addition, BAA Gatwick recognises the value of undertaking exercises to measure the noise climate directly. We therefore commit to:

AN5 Work with stakeholders through groups such as NaTMAG, to:

- review the programme for the deployment of existing mobile noise monitors and the analysis of the data collected from such monitors; and
 - establish whether there is a need for a programme for the deployment of additional mobile noise monitors and for the analysis of the data collected from such monitors;
- by 31st March 2001.

6.17 Our various other Commitments, appearing in the remaining sections of this chapter, have the common theme of seeking to achieve quieter operations, for example by encouraging manufacturers to design quieter aircraft, encouraging international organisations to set tougher standards for aircraft noise and by encouraging airlines to operate quiet aircraft in addition to penalising those who infringe the noise limits.

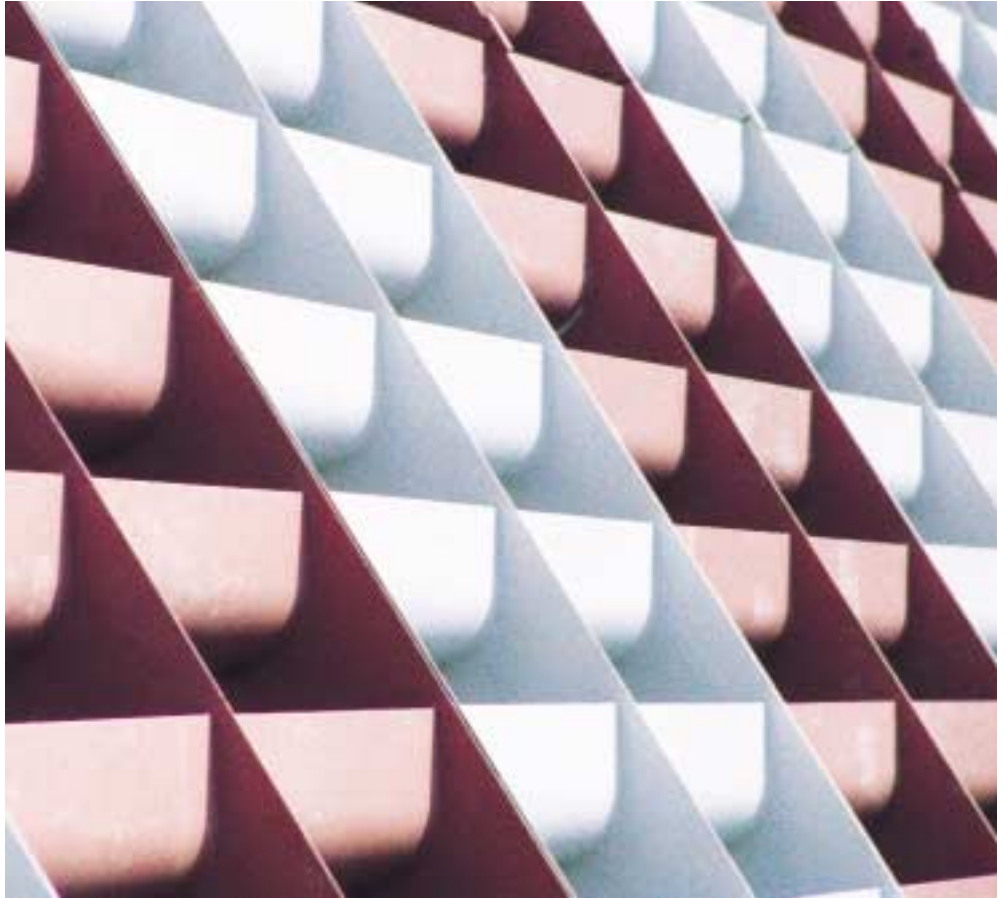
PERFORMANCE IMPROVEMENT

6.18 As a Group, BAA's objective is to be recognised as an example of industry good practice in airport noise management. BAA Gatwick has a role to play in ensuring that this group objective is met and has a significant contribution to make to achieving the five year performance improvement targets set for the group as a whole.

6.19 One of BAA's Group objectives is for:

AN6 BAA UK airports to promote year on year reductions in the overall number of infringements of the noise limits at night to zero by 2005.

6.20 In order to contribute to the achievement of this Group objective, BAA



Gatwick will set annual targets to reduce the number of night time infringements each year. Alongside this target BAA Gatwick commits, subject to any requirements imposed by the CAA under Part 4 of the Airports Act 1986, to:

AN7 Review the charging structure for noise supplements (fines) no less frequently than every three years, in order to provide a continuing incentive to airlines to minimise departures noise.

6.21 The DETR has yet to make an announcement regarding the outcome of its proposals to reduce the departures noise limits. BAA Gatwick will apply noise supplements to aircraft which infringe the new noise limits once they are introduced.

INFLUENCING – CHARGING STRUCTURE

6.22 For some time BAA has applied a differential charging structure for aircraft landing fees in order to encourage airlines to operate quieter aircraft types. One of BAA's group objectives is to promote a reduction by

2005 in the number of flights by the noisiest Chapter 3 aircraft at BAA's airports, to less than 1% of the total. BAA Gatwick commits, therefore, to:

AN8 Continue to apply charging differentials between quieter and noisier aircraft types, to encourage airlines to use quieter aircraft, and to review them every three years. Subject to any requirements of the CAA under Part 4 of the Airports Act 1986, measures will include:

- maintaining the differentials between the airport charges levied on Chapter 2 and Chapter 3 aircraft types;
- reviewing these differentials with a view to accelerating the total phase out of Chapter 2 aircraft;
- maintaining the differential between the airport charges levied on Chapter 3 and 'Chapter 3 low' aircraft;
- reviewing the charges for Chapter 3 aircraft, to identify a sub group classification for the noisier Chapter 3 aircraft and differentiate charges accordingly.

INFLUENCING – NIGHT TIME NOISE

6.23 BAA Gatwick recognises local community concerns about the operation of aircraft at night and the impact this can have. Whilst the DETR has responsibility for setting the night movement and night quota limits, BAA Gatwick commits to:

AN9 Work with airlines towards a voluntary ban on scheduling QC4 aircraft for new services from Winter 2000/01 and to seek to achieve the phasing out of scheduled QC4 movements during the night quota period, prior to Summer 2002.

INFLUENCING – WORKING IN PARTNERSHIP WITH STAKEHOLDERS

6.24 BAA Gatwick recognises that, in order to achieve its primary objective of ensuring reasonable comparability in 2008 between the actual and forecast contours for that year, it needs to work in partnership with other stakeholders. BAA Gatwick will:

AN10 Continually work with relevant stakeholders through groups such as FLOPC, to:

- ▶ **identify best practice departures procedures, including track keeping performance, to minimise departures noise throughout the day and night;**
- ▶ **develop by 31st December 2000, and thereafter monitor, a code of practice for arriving aircraft which, by including such procedures as Continuous Descent Approaches, will aim to reduce the impact of arrivals noise;**

subject to maintaining the highest standards of air safety.

6.25 Such stakeholder dialogue also has the potential to identify specific issues or operational measures that merit further investigation. It is through working in partnership that BAA Gatwick has identified the actions in the following Commitments:

AN11 Work with others to assess by 31st March 2001 the feasibility and benefits to the surrounding area of raising from 3,000 feet to 4,000 feet the minimum altitude at which NATS may vector aircraft from the NPRs; and use all reasonable endeavours to encourage the DETR to so raise that altitude if this is shown to be safe and to have no adverse effect on London airspace capacity.

AN12 Undertake a study into the current use of reverse thrust during the night and by 30th September 2000 assess the feasibility of undertaking a similar study in the daytime; thereafter to work with airlines through FLOPC to establish whether the use of reverse thrust can be reduced and, if so, by 31st December 2000 develop a plan to communicate this to the wider airline community with the aim of reducing its use.

6.26 BAA Gatwick also commits that it will be party to BAA plc Group initiatives to:

AN13 Provide support to the DETR, as required, to enable it to conclude its sleep disturbance study as early as possible.

AN14 Continue to press airframe and engine manufacturers to reduce noise emissions, especially on arrival.

AN15 Continue to press the national representatives of ICAO for a certification standard which is more stringent than Chapter 3, to ensure continuous improvement in noise emissions.

THIRD PARTY RISK

6.27 Aviation activity exposes third parties to a degree of risk, both near airports and elsewhere. Looking specifically at the interests of third parties who might be affected by an accident or incident involving an aircraft operating to or from Gatwick, *Appendix N* describes the changes in risk which would arise as a result of the growth of the airport's annual passenger throughput to around 40 million.

6.28 The finding is that the development of Gatwick in line with this Strategy, with its associated increase in aircraft movements and passengers, would not increase significantly the present small risk to people living in the vicinity of the airport.



7 AIRPORT LAND USE

INTRODUCTION

7.1 Gatwick Airport's existing layout is depicted on **Plans 1 and 2**, the former illustrating, in colour, eight broad categories of land use, and the latter showing the disposition of facilities in more detail. The character of those facilities, and any need for them to be materially altered or enlarged over the coming years, is described in this chapter of the Strategy, and elaborated in *Appendices P – V*.

7.2 The chapter then explains how BAA Gatwick has reconciled the competing future land requirements of airport activities and facilities. It presents two conceptual land use strategies for accommodating those requirements and enabling Gatwick to handle around 40 million passengers per annum with a quality and efficiency of operation befitting the needs and expectations of Gatwick's future users. The process for selecting our preferred Concept is noted in Chapter 12.

CONSTRAINTS ON LAND USE

7.3 BAA Gatwick's principal land use Commitment, which sets the overall context for our decisions on the future disposition of airport activities and facilities, is to:

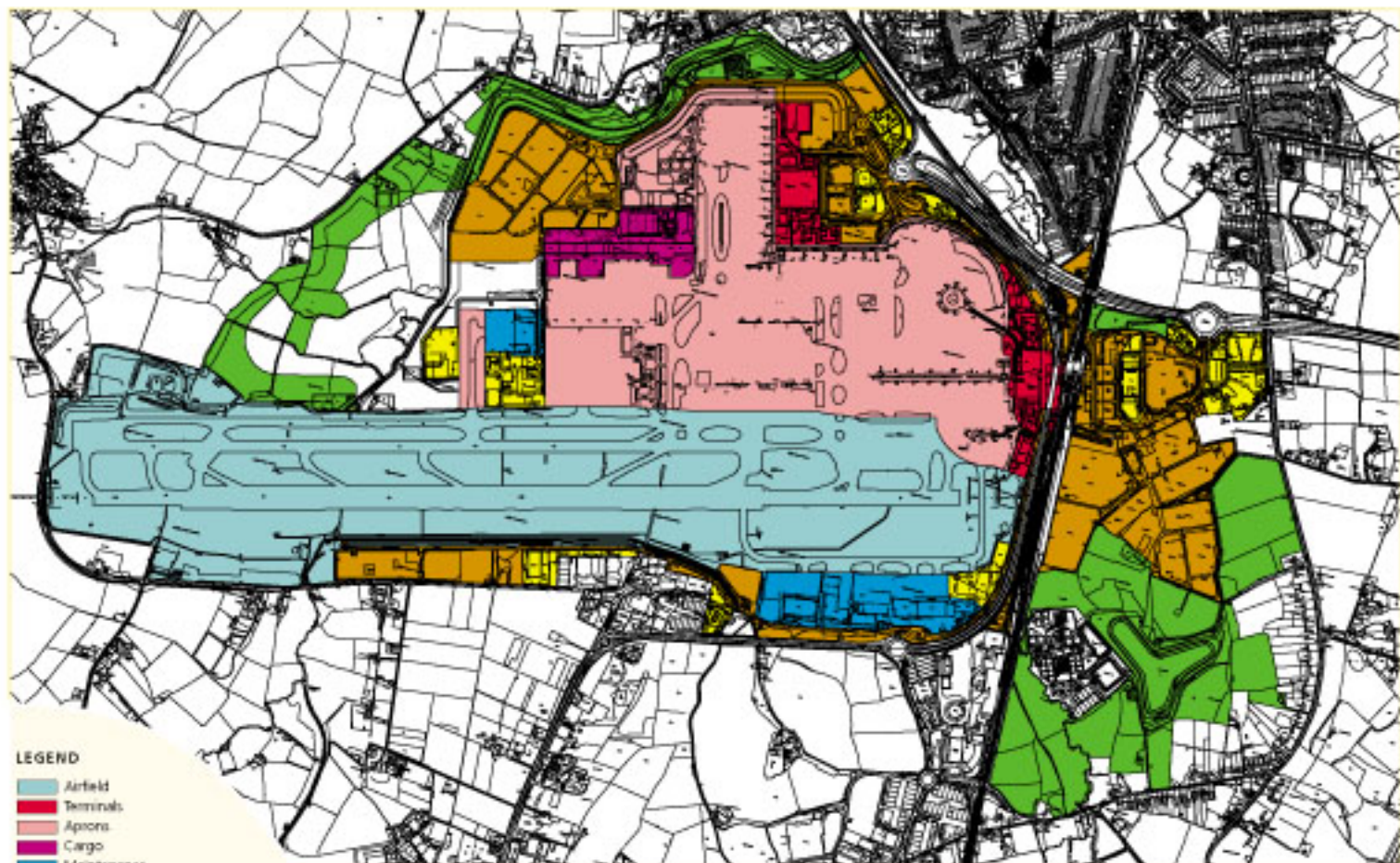
LU1 Contain, within the airport boundary defined in the Crawley Borough Local Plan 2000, the development necessary to support the full utilisation of capacity available from Gatwick's single runway operation.

7.4 This commitment is a key constraint on our land use planning, as also are:

- ▶ the location of the London-Brighton railway, and the consequent division of the airport into two parts, effectively leaving the smaller part (east of the railway) unavailable for 'airside' facilities or activities;
- ▶ the location of the external road network and its junctions serving the airport.

7.5 The area consequently available for airport activities and facilities is approximately 674 hectares, of which:

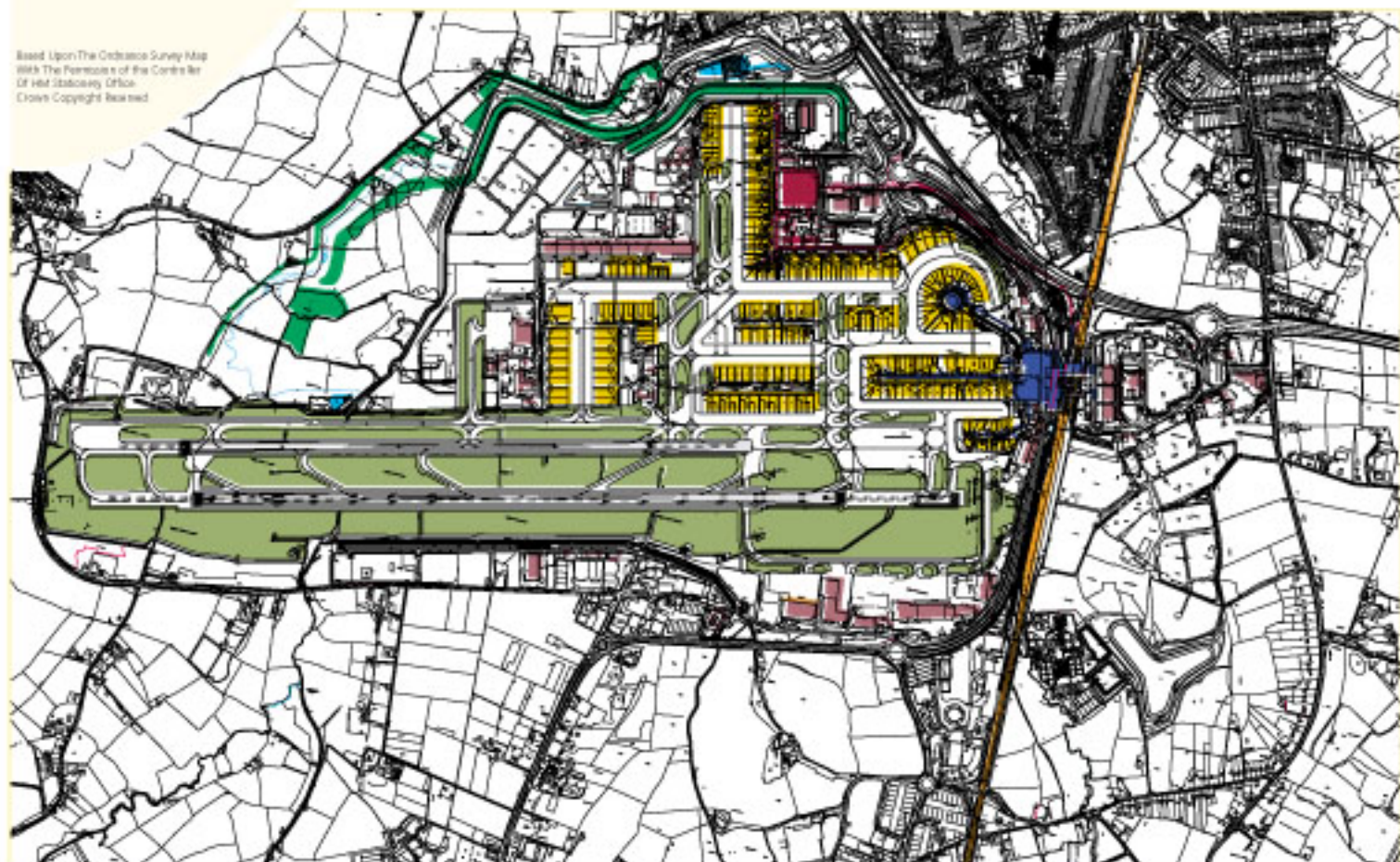
- ▶ 581 hectares (86%) is already developed or in use for airport purposes;
- ▶ 46 hectares (7%) form the landscape zone inside the airport's northern and north-western boundary, along the course of the River Mole;
- ▶ an undeveloped area of 47 hectares (7% of the total) is potentially available for development in the Northwest Zone, and would represent an 8% addition to the area already in use for airport purposes. Part, between Brockley Wood and the realigned River Mole, is likely to be required for balancing ponds and will be added to the landscaped zone. There are also opportunities for land use to be



- LEGEND**
- Airfield
 - Terminals
 - Aprons
 - Cargo
 - Maintenance
 - Ancillary
 - Surface Transport Facilities
 - Major Landscape Areas

PLAN 1: CURRENT LAND USE

PLAN 2: EXISTING LAYOUT (APRIL 2000)



Based Upon The Ordnance Survey Map
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intensified or altered elsewhere, notably in areas used for car parking.

7.6 For the avoidance of doubt it may also be noted that:

- 74 hectares east of the railway, lying outside the designated airport boundary, form BAA Gatwick's rural landholding, to be managed as part of the strategic gap between the airport and Crawley;
- the airport boundary, as defined in the Crawley Borough Local Plan, includes an aggregate of 18 hectares in enclaves just inside that boundary, but outside the operational airport perimeter; of that area, around 12 hectares are in BAA ownership;
- BAA's property subsidiary, Lynton plc, owns a 9 hectare off-airport site, centred on Gatwick's pre-war 'Beehive' passenger terminal, which has consent for development as a 46,470 m² Business Park;
- approximately one hectare of BAA Gatwick's land, currently forming part of a staff car park, lies in Reigate and Banstead Borough Council's administrative area.

AIRFIELD FACILITIES – CHARACTER AND NEED

7.7 The airport's 'airfield' extends over an area of approximately 225 hectares – a third of the land within the airport boundary. It contains the airport's main and northern runways, the northern parallel taxiway ('Juliet'), and extensive grass areas surrounding these particular facilities. *Appendix P* provides further details.

7.8 BAA Gatwick's future requirement is to ensure that the airfield continues to provide for safe and efficient aircraft operations. This can be accomplished without need for any material change in the size of the area occupied by airfield facilities.

7.9 Our Commitment regarding the provision of airfield facilities is to:

LU2 Maintain and, when necessary, modernise or renew Gatwick's airfield facilities so as to facilitate the safest standards of operation whilst minimising the time spent on the runway by both arriving and departing aircraft.

7.10 The airfield is a fixed component of our future land use plans. It cannot be materially reduced in size, since the extent of the open area around the runway and taxiways is largely immutable. It is the one zone of the existing airport where facilities are unaffected by requirements directly associated with Gatwick's growth and, indeed, this Strategy does not anticipate any major changes to airfield facilities. Implementation of the airfield policy will, however, involve the updating of navigational and other technical aids and BAA Gatwick's fire training area, and potentially include modifications to the runway entrances and exits. The configuration of taxiways at the runway's eastern end may, for example, be altered in the event of Pier 1 being demolished, and could create an opportunity for a slight addition to the length of runway available for westerly take-offs.

7.11 The airfield also has three important influences on the feasibility and character of development in adjacent areas, in that:

- there are regulatory constraints on the height of buildings outside the area of the airfield itself, associated with the licensing of the runways and with radar installations;
- the CAA generally embargoes developments that would tend to increase the number of people 'congregating' in Public Safety Zones (PSZs) defined beyond each end of the main runway, around its extended centre line. The PSZ lying to the west of the runway is not a material constraint on airport development, as it is almost entirely outside the airport boundary; that to the east affects parts of the airfield and of South Terminal's public long stay car park, and likewise extends beyond the airport boundary;
- the intensity of runway activity largely severs Gatwick's southside from the airport's main operational areas, with daytime aircraft movements across the runway (to/from the maintenance area) being subject to lengthy delays.

PASSENGER TERMINALS – CHARACTER AND NEED

7.12 Gatwick's two terminal zones currently cover an area of approximately 19 hectares. They contain the North and South Terminals and a variety of adjacent buildings and airside equipment parking areas directly associated with the operation of the terminals

themselves. Further details are provided in *Appendix Q*.

7.13 The flattening of Gatwick's traffic peaks (peak spreading) will in time enable the existing terminal facilities to accommodate around 35 million passengers per annum at current standards of service. However, the terminals' ageing facilities require an ongoing programme of refurbishment and renewal. Changing passenger expectations (eg higher standards of service), and our policy to support the full utilisation of capacity available from Gatwick's single runway operation, will justify a variety of extensions to the terminals.

7.14 BAA Gatwick's Commitment in relation to the provision of passenger terminal facilities is, in consequence, to:

LU3 Maintain Gatwick as a two terminal airport and, as appropriate, refit and extend the two terminals, and the buildings and facilities allied to them, in order to match their capacity with that of the runway and provide passengers and BAA's business partners with facilities and services that meet their needs whilst adding to BAA shareholder value.

7.15 In preparing our future land use plans, the location of the two passenger terminals and their supporting infrastructure (eg landside forecourts) determines that additional terminal capacity and facilities should be built in their immediate vicinity. Given the intensity of terminals' land use, the additional land requirement will be insignificant in comparison with the overall scale of the airport land use, extending the existing 19 hectare use by around 3 hectares.

APRONS AND PIERS – CHARACTER AND NEED

7.16 Gatwick's apron area currently extends over some 150 hectares and its character is described in detail in *Appendix R*. The defined area includes facilities such as the fuel farm and the airport fire station, as well as taxiways, stands and piers. There are 107 aircraft stands, of varying sizes, 54 of which are remote from the terminal piers and reliant on passenger use of buses during the embarkation and disembarkation process. The 53 pier-served stands, situated around five

piers (two at North Terminal and three at South), are insufficient in number to enable BAA Gatwick to achieve its standard of providing pier-service (non-use of buses) to 90-95% of passengers in each terminal; in 1999 we achieved 86.8% for the airport as a whole, with comparative figures of 96.5% for South Terminal but only 75.2% for North Terminal's passengers.

7.17 Our demand forecasts indicate a requirement for the total number of stands to be increased to around 120 by the time that Gatwick's annual passenger throughput reaches 40 million. As indicated below, there is also a need to plan for a different mix of stand sizes, to suit the upwards trend in the average size of aircraft in future airline fleets, and the greater proportion of aircraft that require 'Jumbo' stands.

	CURRENT SUPPLY	2000 DEMAND	2008 DEMAND
JUMBO	52	38	50
LARGE	30	21	36
MEDIUM	11	15	26
SMALL	14	41	7
TOTAL	107	115	119

7.18 BAA Gatwick's Commitments in relation to the provision of apron and pier facilities are to:

LU4 Provide aircraft stands sufficient in number and size to match the airline requirements arising from their full use of available runway capacity, and configure the apron (ie stands and taxiways) in a manner that optimises efficiency and provides for safety in use.

LU5 Seek to provide pier and satellite facilities that ensure pier service to 90-95% of passengers at both North and South Terminals and, in doing so, provide facilities and services that meet passenger and airline expectations whilst adding to BAA shareholder value.

7.19 In preparing our future land use plans the location of aprons and piers will, as now, be determined by the need to locate all passenger aircraft stands and associated taxiways north of the airfield, to facilitate ease of movement of aircraft to and from the runway and of passengers and baggage between the aircraft and the terminal facilities. Key objectives, in planning the apron layout, are:

- to minimise any impact on existing piers and pier-served stands;
- to provide alternate taxiway routes to aircraft stands, to facilitate efficient aircraft movement during normal operations and to ensure that stands remain accessible when any section of taxiway is closed for maintenance or repair;

- to ensure that a safe and efficient apron operation is capable of being maintained throughout the period of construction of new taxiways, stands and piers.

7.20 Implementation of our policies and adherence to these objectives will result in our needing to extend the apron/pier area by up to 33% (ie from the current 150 hectares to a maximum of around 200 hectares), the actual increase being dependant on the chosen layout.

CARGO FACILITIES – CHARACTER AND NEED

7.21 The airport's World Cargo Centre is some 11 hectares in extent and situated immediately north west of the terminal zone; it is further described in *Appendix S*. Its dominant feature is some 23,759m² of cargo shed floorspace, with a throughput now exceeding 300,000 tonnes per annum, 95% of which is transported in the holds of passenger aircraft.

7.22 These facilities are now operating close to capacity and, in comparison with Europe's other major airports, are inefficient and becoming increasingly obsolete; this obsolescence may, in time, warrant the total replacement of the existing transit sheds. Our forecasts indicate a potential cargo throughput of 500-550,000 tonnes in 2008, which will require substantial investment in Gatwick's cargo facilities, to provide greater capacity as well as promising greater cargo handling efficiency (an increase in the tonnage of cargo handled per square metre of floorspace).

7.23 BAA Gatwick's Commitment in regard to the provision of cargo facilities is to:

LU6 Develop, or facilitate the provision of, cargo facilities suited to the secure and efficient handling of such volumes of cargo as will in future be shipped in the holds of aircraft flying on passenger services to/from the airport.

7.24 Given the age and increasing obsolescence of the existing cargo facilities, their current location is not regarded as one that need be retained in the future land use plan if relocation should assist BAA's planning of extensions to Gatwick's apron/pier layout.



Implementation of our policy justifies the designation of an extended/new cargo area of around 17 hectares, to accommodate a predominantly single level handling operation in buildings that could be some 15 metres in height. The objectives, in locating that area, are to:

- place it astride a landside/airside boundary and avoid excessive connection times between the facilities and the passenger aircraft stands;
- achieve good airside road connections to the apron areas and landside road connections to the M23;
- facilitate the expansion of capacity, and any necessary re-provision of existing capacity, in a manner that satisfactorily maintains the existing operation during the course of construction.



AIRCRAFT MAINTENANCE – CHARACTER AND NEED

7.25 Aircraft maintenance is currently undertaken in two zones within the airport, southside of the runway (16.5 hectares) and northside (4 hectares). British Airways is the principal occupant of the facilities, with other interests being held by FLS Aerospace and JMC. The facilities, and the nature of their use, are further described in *Appendix T*.

7.26 There are exacting safety-driven standards for aircraft maintenance, ranging from pre-flight checks to major servicing, approximately every five years, which takes 20-25 days to complete on large aircraft such as the Boeing 747. Airlines with a large fleet based at a major airport commonly require their own maintenance base, where they can undertake the necessary work, much needing to be under cover, in hangars. An airport must also provide adequate opportunity to undertake routine checks and remedy defects on other operators' aircraft, to ensure their air-worthiness.

7.27 Given the overall scale of aviation activity at Gatwick, and the forecast growth in aircraft size and airline fleets, provision for aircraft maintenance will be a key feature of the airport's future operation, with facilities needing to be matched to airline needs both in terms of their size and character and, potentially, to accommodate some increase in the number of aircraft being maintained at any one time. Given that the existing hangars in the southside zone are of insufficient size

to fully enclose large aircraft such as the B747 and B777, there is a prospect of their needing to be upgraded and/or replaced within the timeframe of this Strategy.

7.28 BAA Gatwick's Commitment in regard to provision for aircraft maintenance activity is to:

LU7 Provide sites sufficient to accommodate airlines' needs for the maintenance of Gatwick-based and visiting aircraft, with an emphasis (i) on their use for ramp and service checks and casualty maintenance and (ii) on the operators' adoption of maintenance regimes that avoid the significant use of runway capacity for runway crossings or for empty positioning flights by aircraft being maintained at Gatwick or elsewhere.

7.29 As further explained in *Appendix T*, the implementation of this policy requires 24 hectares of the airport to be allocated for aircraft maintenance, inclusive of a site for a ground run pen for engine testing. There is a potential to reduce this requirement to 21 hectares, should British Airways choose to pursue, and be able to secure planning permission for, a project to relocate the entirety of their maintenance activity into a new base north of the runway, thereby achieving a more efficient land utilisation. In identifying areas for aircraft maintenance it is appropriate to ensure their capability of

satisfying the site requirement for such a British Airways' project (around 11 hectares), whilst also recognising that there is no certainty of its being implemented and that some other outcome is possible.

7.30 In identifying the zones for aircraft maintenance our strategy needs to:

- be compatible with runway and radar-related restrictions on the height of buildings and parked aircraft;
- avoid reliance on a disposition and/or massing of hangars which could materially vary the pattern and strength of cross winds affecting the runways, so compromising air safety;
- avert any material increase in daytime runway crossings by aircraft moving to/from the southern maintenance base;
- enable hangar facilities for rapid turn-around and 'casualty' maintenance to be provided north of the runway, so avoiding the delays associated with runway crossings to/from the southern maintenance base;
- be capable of accommodating individual operators within single sites;
- during the course of the development of new maintenance or other airport facilities, avert any loss of maintenance capacity that would be detrimental to airline needs;
- allow for the replacement of Hangar 7 (the current northside maintenance zone) in the event of its ultimately being demolished to facilitate the development of apron and pier facilities;

- ▶ provide a site for an aircraft ground run pen that is readily and swiftly accessible for a majority of the aircraft requiring an engine test;
- ▶ recognise the community concerns about maintenance activity, particularly in relation to the potential visual impact of large aircraft hangars.

ANCILLARY ACTIVITIES – CHARACTER AND NEED

7.31 Gatwick's operation creates needs for a variety of office, hotel, 'industrial' and other functions to establish themselves within or close to the airport, to support the airport's and airline operations. A number of separate on-airport sites, in aggregate utilising some 30 hectares, are home to such ancillary activities, which are further explained in *Appendix U*. Off-airport sites are also in use, notably for flight catering kitchens, airline offices and hotels.

7.32 Gatwick's growth will be accompanied by some increase in such ancillary activities. In the context of local authority planning policies, which tend to prefer on-airport to off-airport sites as a location for airport-related businesses, it will be necessary for BAA to have land available for such of those businesses as may need them, including any that may seek to move into the airport from elsewhere.

7.33 BAA Gatwick's Commitment in regard to provision for ancillary activities is to:

LU8 Seek to meet on-airport the requirements for sites or premises for occupation by businesses directly involved with the airport's operation.

7.34 In our land use planning process, the allocation of sites for new ancillary activities, or for any displaced by redevelopment of their existing sites, is of lesser priority than meeting the locational requirements of other airport land uses. Implementation of the Commitment will also involve the negotiation of mutually acceptable leases with prospective tenants. Given that opportunities exist for some of them to obtain operationally satisfactory off-airport sites, the land area required for additional ancillary activities within the airport is uncertain. It does, however, seem unlikely that the aggregate area will ultimately be significantly greater than 38 hectares, compared with the current

30 hectares. The new allocations will, however, exceed 8 hectares if any existing ancillary activities need to be relocated as a result their existing sites being used for other aspects of the airport's development.

SURFACE TRANSPORT FACILITIES – CHARACTER AND NEED

7.35 Gatwick's surface transport facilities are varied, but principally comprise on-airport roads, car parks and facilities for coaches, taxis and car rental; they are described in detail in *Appendix V* and in aggregate occupy some 125 hectares of airport land.

7.36 The growth of Gatwick's passenger throughput, and the increase in the number of airport employees, will be accompanied by increases in the number of surface trips by passengers, by people meeting passengers or seeing them off on their air journeys, and by staff. The purpose of BAA Gatwick's Transport Strategy (*Chapter 4; Appendix K*) is to increase the proportion of airport-related surface journeys made by modes other than the car, and so result in a lower number of car/taxi trips to or from the airport than would be the case were passenger and staff modal splits to remain unchanged.

7.37 Our Transport Strategy contains 33 Commitments addressing a wide spectrum of surface access issues; its assumed success is a significant influence on our future need for on-airport transport-related infrastructure. For the purposes of our land use planning our focus is expressly on Commitments relating to the provision of on-airport surface transport facilities, which are to:

LU9 Manage and as necessary improve the on-airport road system so as to ensure that it continues to accommodate traffic flows safely and efficiently.

LU10 Develop a strategy for medium and long term improvements to the coach station facilities at South Terminal and, in doing so, seek to realise opportunities for better interchange with rail and other non-car modes of surface transport.

LU11 Work closely with Railtrack and the train operators to assist Railtrack in identifying a strategy for further enhancing the rail station and thereby encouraging 'seamless' interchange between facilities.

LU12/TS28 (Part) Provide no more on-airport public car parking spaces than necessary to achieve a total on- and off-airport supply that is commensurate, as at 31st December 2008 and subject to a review mechanism, with 40% of non-transfer air passengers choosing to use public transport for their surface journeys.

LU13/TS29 (Part) Provide no more BAA Gatwick managed on-airport staff car parking spaces than justified, as at 31st December 2008, by a formula accounting for an increase in staff numbers and reduced car dependency, subject to the successful implementation of FastWay and there being no obligation on BAA Gatwick to reduce provision below the current total of 6,400 spaces.

7.38 So far as surface transport facilities other than car parks are concerned, space requirements are in aggregate judged unlikely to increase significantly in future.

7.39 Our forecasts of the justifiable future scale of car parking provision, derived from our car parking commitments, are subject to a review mechanism. They currently indicate that:

- ▶ there will be a total requirement for 45,000 long stay public car parking spaces (on- and off-airport), compared with 51,500 were there to be no demand management initiatives to increase public transport mode share to 40%; compared with current capacity (40,781 authorised spaces in 1999) the increase in provision is around 40% of that which would otherwise be needed. We assume that, in the context of local authority policies relating to off-airport provision, our land use plans must be capable of accommodating the increased space requirement on-airport;
- ▶ we should have capacity to accommodate short stay public parking demand for some 4,200 vehicles (passenger-related use);



THE DEVELOPMENT STRATEGY

7.43 BAA Gatwick's June 1999 draft Development Strategy contained three alternative concepts for developing the airport to handle around 40 million passengers per annum, their differences being driven by different proposals for pier service, with consequently significant differences in their apron layouts. Responses to our consultation confirmed BAA's own unease about Concept 1's reliance on coaching of passengers to remote 'satellite' piers, but revealed no clear preference between Concepts 1a and 2.

7.44 Both those Concepts have been further studied, and modified, and their resultant land use zoning achieves considerable common ground (over 96% being identical). Concept 1a, though modified, proposes three separate satellite piers connected to North Terminal via passenger walkways, and thus retains the basic principle of the layout presented in the draft Development Strategy. Concept 2 has been more significantly amended and is now superseded by concept 2a, which provides two satellite piers, one of which also features in 1a and the other of which is a three-arm pier derived from the 'cruciform' pier that was the key feature of Concept 2.

7.45 Concepts 1a and 2a are both presented in this strategy since, taking all issues and opinions into consideration, comparisons between them have yet to establish which is ultimately to be preferred. The future process for choosing between the two concepts is noted in Chapter 12 (Implementation); the remaining paragraphs of this chapter explain, for each of the eight airport land use categories, the characteristics of the two concepts, which are illustrated on the following four plans:

PLAN 3	1a – LAND USE
PLAN 4	1a – ILLUSTRATIVE LAYOUT
PLAN 5	2a – LAND USE
PLAN 6	2a – ILLUSTRATIVE LAYOUT

there will be a requirement for around 7,500 on-airport staff parking spaces managed by BAA Gatwick, compared with 6,400 at present; in the absence of our initiatives the requirement would be for around 8,800 spaces. The number of staff spaces controlled by tenants is assumed to remain constant at around 4,200.

7.40 These forecasts of the required future car parking capacity assume no encouragement of the use of our public car parks for purposes unassociated with air travel, and that they will be developed and operated in a manner seeking to avert a proportional increase in 'kiss and fly' trips. Our land use plans will need to recognise that public long-stay and staff car parking, like ancillary activities, are of generally lower priority than other airport land uses when our layout plans are being compiled. As such, and because all other uses' aggregate requirement for additional land exceeds the remaining developable area within the airport boundary, our land use plans will need to achieve a generally more intensive use of public long-stay and staff car parking sites than currently prevails.

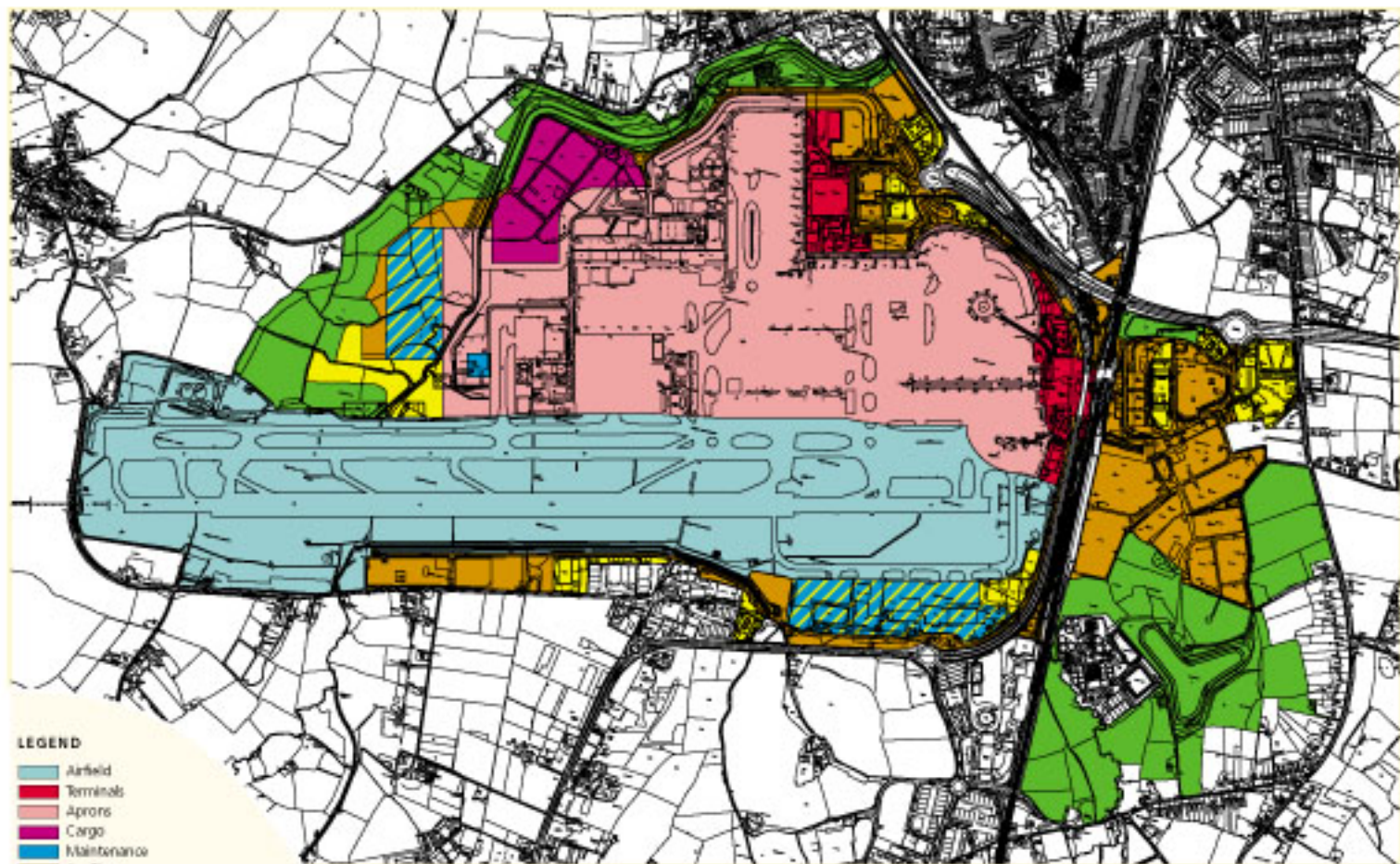
PERIMETER LANDSCAPING – CHARACTER AND NEED

7.41 BAA Gatwick's landholding currently includes some 167 hectares of undeveloped land or perimeter landscaping – east of the

railway, in the north-west zone and alongside the River Mole. In addition, the 225 hectare airfield has a generally open aspect, with grassland comprising a majority of its area. Elements of formal and informal landscaping exist within the developed areas of the airport. The airport's landscape and ecology are more fully described in Chapter 9 and *Appendices X and Y* of this Strategy.

7.42 BAA Gatwick recognises the importance needing to be attached to landscaping and ecological issues throughout the future development and management of the airport. Some 47 hectares of the north west zone are allocated and available for airport development, to meet needs identified in the preceding seven subsections of this chapter. Our 'land use' Commitment in relation to perimeter landscaping is to:

LU14 Maintain a landscaped zone along the airport's northern and north-western boundary, centred on the course of the River Mole, separating airport activity in the north west zone from adjacent rural areas and providing protection for communities in Surrey; BAA Gatwick's rural landholdings east of the railway (outside the airport boundary) will be managed as part of the 'Strategic Gap' between the airport and Crawley.

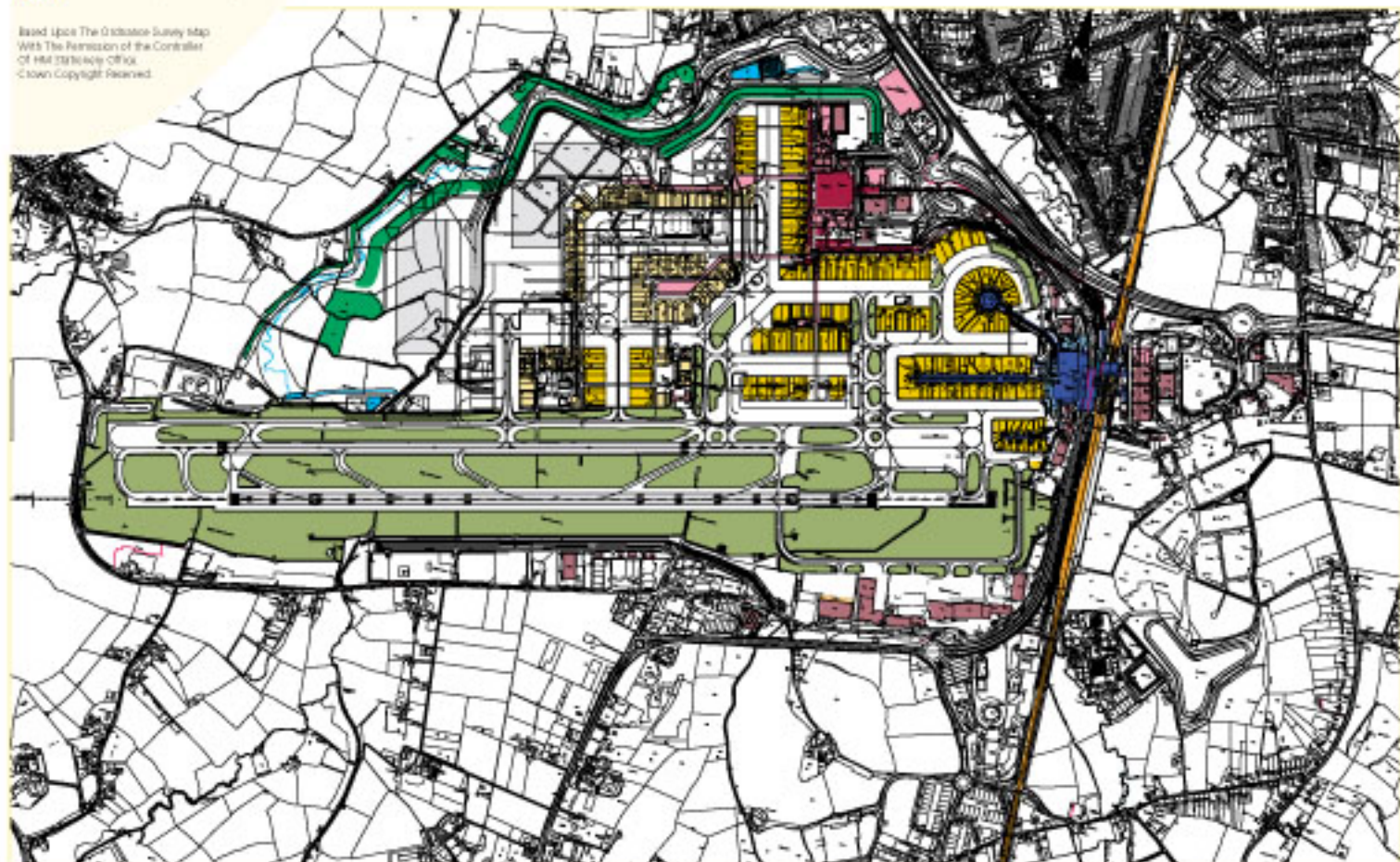


LEGEND

- Airfield
- Terminals
- Aprons
- Cargo
- Maintenance
- Ancillary
- Surface Transport Facilities
- Major Landscape Areas
- Maintenance, Some Ancillary

CONCEPT 1a PLAN 3: Land use
 PLAN 4: Illustrative layout

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AIRFIELD FACILITIES – STRATEGY

7.46 The airfield strategy is common to both Concepts. The definition of the zone is unchanged from that of today, although minor adjustments may emerge in the course of time, for example in the event of Pier 1 and its stands being reconfigured or in the event of the staff car parking area south of the runway being extended westwards from the River Mole towards the boundary with BCP's 'off airport' car park.

PASSENGER TERMINALS – STRATEGY

7.47 BAA Gatwick's strategy for aligning terminal capacity with passenger and airline demands is likewise common to both concepts, saving some variation at North Terminal at its interface with the links to the piers peculiar to each concept, and possibly some difference in their baggage handling solutions.

7.48 Having regard to the mix of airlines at Gatwick, and our forecasts of passenger traffic, our strategy is to expand the facilities of both terminals in a manner that enables each to handle approximately 20 million passengers per annum, although the ultimate distribution of passenger traffic between the two terminals will be kept under review. Their size and character will, however, differ, to reflect their distinctively different passenger mixes. North Terminal's passengers will predominantly be users of scheduled services, with a higher proportion of transfer passengers than South Terminal, where a majority of the passengers will probably be users of charter services. North Terminal will have the greatest need for extension, given that it is currently the smaller of the two.

7.49 The main characteristics of the terminal developments are as follows:

- North Terminal is expected to require some extension of most if not all of its component facilities, with new construction being likely to be biased towards the southern side of the existing building, eg baggage reclaim, the landside arrivals concourse, check-in and the current project to extend the International Departures Lounge (IDL). To the Terminal's north, there will be an increase in the area devoted to baggage sorting facilities,



which will probably enforce the closure of staff car park 'M';

- South Terminal's key areas for enlargement are on the arrivals side of the building, where the reclaim hall requires extension and reconfiguration to provide additional, more widely separated carousels, with a need also for an enlarged arrivals concourse. On the departures side, additional check-in and baggage sorting facilities are anticipated, and a further extension of the IDL may be contemplated at some future date.

APRONS AND PIERS – STRATEGY

7.50 Layout Concepts 1a and 2a respectively provide 118 and 117 aircraft stands, a level of provision which is in line with the stand demand forecast given in §7.17. Concept 1a has marginally the greater total apron area (198 hectares compared with 192 hectares for Concept 2a), principally because of the need to safeguard an area for the possible

relocation of the Fuel Farm. The tabulation on this page details the actual mix of stands illustrated on Plans 4 and 6.

7.51 The proposals for pier service to passengers are, in respect of Piers 1 – 5, the same for both Concepts. The circumstances of those five piers are more fully explained in *Appendix R* (§R10); in summary

- there is a prospect of Pier 1 being redeveloped, to segregate arriving from departing passengers and to serve fewer, larger, stands than currently, suited to future airline fleets;
- substantial modification of Piers 2 and 3 may be required, to introduce physical segregation of arriving and departing passengers. Stand layouts may in any event be reconfigured, eg to facilitate greater use by the B777, with associated alterations to stand interfaces with the piers;
- stand layouts alongside Piers 4 and 5 may likewise be subject to some reconfiguration.

STAND	NORTH TERMINAL (PIER SERVED)		SOUTH TERMINAL (PIER SERVED)		REMOTE		TOTAL	
	1a	2a	1a	2a	1a	2a	1a	2a
Jumbo	34	35	14	14	12	12	60	61
Large	8	9	10	10	16	13	34	32
Medium	6	7	4	4	4	6	14	17
Small	4	2	5	5	1	0	10	7
Total	52	53	33	33	33	31	118	117

Since the precise extent and nature of such changes is as yet unknown, Plans 4 and 6, and the tabulation in §7.50, describe the existing stand layout of Piers 1 – 5.

7.52 Concepts 1a and 2a are identical in proposing that South Terminal's pier-served stands should continue to be focused around Piers 1 – 3.

7.53 The Concepts also have a common first phase in their initial provision of additional pier served stands for North Terminal, involving the construction of a satellite pier, south of the terminal, in the centre of an area currently containing 11 remote stands. The satellite is to be connected to Pier 4 via passenger walkways bridging over the intervening taxiway. When completed, with associated modifications to the stand layout, this Pier will provide pier service to 10 stands. The reconfiguration of the stands will occur in two phases, the second of which will enlarge the stands on the satellite's southern side, with associated reconfiguration of the taxiway and remote stand layout to their south. This end state is illustrated on Plans 4 and 6.

7.54 Concept 1a proposes that subsequent additions to the number of pier-served stands for North Terminal would be focused around two further satellite piers situated within walking distance of the Terminal, with subways or bridges providing the means of connection.

7.55 Concept 2a instead proposes a single, larger, satellite pier, situated further west and connected to North Terminal via an elevated airside tracked transit system, similar to the terminal's landside connection with the South Terminal.

7.56 Both Concepts have consequential impacts on other airport facilities; both require the demolition of Hangar 7; Concept 1a also requires the complete relocation of the existing cargo facilities and, possibly, the fuel depot, whereas Concept 2a requires the relocation of only a small proportion of the cargo facilities. The resolution of these impacts is described in the following subsections of this chapter.

CARGO FACILITIES – STRATEGY

7.57 The conclusion of our studies of possible cargo area locations, which were fully integrated with our consideration of the requirement for apron and aircraft maintenance facilities, is that Concepts 1a and 2a require the allocation of different sites for Gatwick's future cargo facilities:

- Concept 1a entails the demolition of all existing cargo facilities, and their relocation north-westwards, into a larger site occupying much of the North Terminal's current long-stay public car park;
- Concept 2a allows the retention of most of the existing area, albeit that it is likely in time to be redeveloped with facilities better suited to future needs. The area's extension north-westwards allows for the necessary increase in handling capacity.

AIRCRAFT MAINTENANCE – STRATEGY

7.58 The assessed requirement is for the airport land use plan to allocate 24 hectares for aircraft maintenance (inclusive of a site for a ground run pen). Given that the existing southside maintenance base is only 16 hectares in extent, and that there is no prospect of significantly increasing its size (primarily because other airport areas south of the runway lack the proportions necessary for maintenance development), there is a need for this Strategy to identify, north of the runway, at least 7 hectares for aircraft maintenance. In practice, an area of 11 hectares needs to be demarcated, equating to that which would be occupied by British Airways were they to bring forward, and secure planning permission for, a scheme to relocate and consolidate their maintenance activity into entirely new facilities. There is a further requirement, north of the runway, for a 1 hectare site for a ground run pen (GRP).

7.59 The conceptual layouts both designate a site for that GRP on the western edge of the apron zone, identifiable on Plans 3 and 5 as a small blue square. The development of the GRP on the designated site is, however, dependant upon the local planning authorities' acceptance of the principle of development of the northside maintenance zone.

7.60 The identification of a location for the northside maintenance zone is a significant

challenge, given the airport constraints on siting (§7.30). For some of Gatwick's neighbouring communities it is undoubtedly the most controversial aspect of our land use planning, primarily because of the potential visual impact of large aircraft hangars. It is, however, incumbent on BAA Gatwick to ensure that this Strategy provides scope for the development of hangars providing fully enclosed accommodation for a wide range of maintenance procedures on the largest aircraft types, such as the B747-400, and it is inevitable that any such hangars will be large buildings. This strategy identifies a northside zone, west of the future apron areas, which is common to the two layout Concepts and some 500 x 220 metres (11 hectares) in extent. The zone's proximity to the airport boundary has brought visual impact to the forefront of discussions with local authorities and communities but, in the context of achieving a disposition of airport land uses that achieves the best balance between their many, often conflicting, siting requirements, no alternative location is available for aircraft maintenance. The need to study the potential for development in the zone to be concealed by bunding and landscaping is acknowledged in Chapter 9 and *Appendices X and Y* of this Strategy (see in particular Commitments LE2 and LE7).

7.61 BAA Gatwick is neither proposing nor presuming any particular form of maintenance development within the northside zone. We recognise that many local residents, and the councils that represent them, are very concerned about the potential obtrusiveness of aircraft hangars, which was highlighted by reactions to British Airways' study of how they might seek to develop the zone. In due course, when firm proposals for development within the zone do exist, their implementation will be dependant on planning permission, and it is clear that the case for development, and the acceptability of the form of development proposed, will need to be evaluated and proven against relevant planning policies.

7.62 This Strategy cannot definitively foresee, or prescribe, the eventual distribution of aircraft maintenance activity between Gatwick's northside and southside zones, which will itself influence the total site requirement. Airlines and maintenance contractors will individually consider their business needs; it will be their conclusions and requests that trigger BAA Gatwick's identification of the sites within the two



zones on which those needs can be met, subject to the airlines/contractors securing planning permission for any necessary developments. The outcome of that process will determine the eventual form and distribution of Gatwick's aircraft maintenance facilities, with the location of British Airways' base being of particular significance. Three possible outcomes are set out below, but are not to be construed as representing all possibilities or as implying that they are equally acceptable outcomes for the various stakeholders.

Scenario A: 24 hectares (British Airways 'south')

- ▶ British Airways remain wholly in the Southern Maintenance Zone, but with some re-organisation to achieve a single contiguous site area (remaining at 14 hectares);
- ▶ ground run pen built within Southern Maintenance Zone (1 hectare);
- ▶ around 1 hectare of Southern Zone released for other purposes;
- ▶ Northern Maintenance Zone developed to meet others' needs (9 hectares).

Scenario B: 23 hectares (British Airways 'split')

- ▶ BA meet part of their needs on a site north of the runway (6 hectares), which also accommodates some others' needs (4 hectares) (a total Zone of 10 hectares);
- ▶ ground run pen built north of the runway (1 hectare);
- ▶ BA reduce their southern site to around 7 hectares;
- ▶ other maintenance needs occupy 5 hectares of Southern Zone;
- ▶ around 5 hectares of Southern Zone are released for other uses.

Scenario C: 21 hectares (British Airways 'north')

- ▶ BA occupy new Northern Maintenance Zone (11 hectares);
- ▶ ground run pen built north of runway (1 hectare);
- ▶ other maintenance needs met in part of current Southern Maintenance Zone (9 hectares);
- ▶ remainder of current Southern Maintenance Zone released for other uses (7 hectares).

7.63 Given this uncertainty as to the eventual distribution of aircraft maintenance activity between Gatwick's northside and southside zones, the notation on Plans 3 and 5 illustrates substantial areas as allocated for either aircraft maintenance or ancillary use. The notation is not to be construed as suggesting that the aggregate area required for aircraft maintenance will be less than 21-24 hectares.

ANCILLARY ACTIVITIES – STRATEGY

7.64 Both Concepts' land use allocation for the apron area results in a loss of some existing sites in use for ancillary activities, principally those south of Hangar 7, including BAA Gatwick's and Servisair's vehicle maintenance depots and the airport's Snowbase and recycling centre. Layout Concepts 1a and 2a respectively both allocate some 38 hectares for existing, relocated or additional ancillary airport land uses. Detailed proposals, including an explanation of the need for ancillary developments, will be



submitted to the local planning authority as and when such needs arise.

7.65 With few exceptions, ancillary activities require landside sites. Some, eg hotels and many office buildings, have inter-relationships with Gatwick's passenger handling activity that justify comparatively close proximity to one or other of the terminals and/or to public transport facilities. We anticipate that some increase in hotel facilities will be warranted, and that office demands may ultimately warrant the construction of two or three additional buildings, with an aggregate floor area of

10,000 – 20,000 m². If and when sites are required:

- ▶ additional hotel facilities could be developed on the site of Le Meridien Hotel's car park;
- ▶ hotel and/or office development in the airspace above Gatwick Station may be an appropriate/necessary component of a financially viable project for the station's redevelopment, possibly in conjunction with such use of adjacent areas in BAA Gatwick's ownership, such as staff car park B;
- ▶ any future requirement for additional on airport offices could be accommodated on

land west of the Edgeworth Club (adjacent to the entrance to South Terminal's long-stay car parks) and/or by use of the sites of staff car parks B (South Terminal) and J (North Terminal).

7.66 Such possibilities apart, the two layout concepts similarly identify two new allocations for ancillary activities of a more industrial character, such as flight catering and those requiring relocation from the vicinity of Hangar 7. The allocations are somewhat imprecise at the current time, because they are inter-related with the ultimate split of aircraft maintenance activity between the northside and southside zones; they do, however, foresee some redundant areas of the current southside maintenance zone being used for ancillary purposes, and the designation of between 9 and 11 hectares for ancillary use in the North West Zone.

SURFACE TRANSPORT FACILITIES – STRATEGY

7.67 Neither Concept 1a nor Concept 2a delineates any changes in the current zoning of land for surface transport facilities other than car parks, since their land requirements are modest and are judged unlikely, in aggregate, to increase significantly in future. It is, however, to be recorded that:

- ▶ existing on-airport roads and junctions may require comparatively minor improvements to maintain highway safety and ease any adverse localised congestion, but the width of adjacent verges will generally be more than adequate to accommodate any appropriate alterations;
- ▶ a requirement for the northern perimeter road to be extended into the North West Zone, and to be realigned in association with redevelopment of the current North Terminal long-stay car park, will be readily accommodated in the overall land use plans for those areas;
- ▶ the location of the coach and taxi feeder parks will be reviewed in conjunction with studies of future options for enhancing/replacing the South Terminal coach station, including any associated changes in the allocation of forecourt facilities;
- ▶ no change in the location of car rental facilities is currently anticipated.

7.68 BAA Gatwick will maintain its long-standing safeguarding of sites for two additional multi-storey car parks, one at each

terminal, primarily to serve public short-stay parking requirements. It is anticipated that both car parks will ultimately be built, potentially increasing their capacity to around 6,200 spaces. This is likely to exceed short stay public demand by some margin unless capacity should be needed to accommodate a diversion into the car parks of 'kiss and fly' traffic from the terminal forecourts. That apart, 'surplus' multi-storey spaces may appropriately be justified for use by commuters and for premium priced car parking both for public long stay and staff use.

7.69 All public long-stay and staff car parking spaces at Gatwick are currently provided at surface level. The on-airport capacity requirement currently assumed for the purpose of our car parking strategy is for 26,300 public long stay spaces and 7,500 BAA managed staff spaces (in addition to 4,200 tenants' staff spaces) – respectively increasing current total space provision by 4,770 (12%) and 1,100 (10.4%). The overall land use plan will, however, see the loss of some existing spaces to other uses, the most notable change being the loss or reduced size of North Terminal's long-stay public car park (Concepts 1a and 2a respectively), associated with cargo development.

7.70 Set in the context of BAA Gatwick's other land allocations, the airport's available development area is insufficient to meet the need for public long-stay and staff car parking spaces entirely at ground level. Our car parking strategy consequently anticipates the decking of substantial areas of some car parks, with public long-stay car parks remaining a predominantly self parking operation, albeit with a potential for some 'block' parking during the summer peak.

7.71 At this stage in the planning process it is important that we retain flexibility in the location and use of our various car park developments, eg to help avoid nugatory investment in the event of the ultimate capacity requirement being reduced. Flexibility to switch spaces between long-stay and staff use, and to manage demand so as to make effective use of any surplus capacity available in our short-stay public car parks, will also assist the phasing of development and minimise total space provision.

PERIMETER LANDSCAPING – STRATEGY

7.72 BAA Gatwick's detailed proposals and Commitments in relation to landscaping and ecology, which encompass circumstances both on- and off-airport, are explained in Chapter 9 and *Appendix X* of this Strategy. In terms of airport land use zoning, Plans 3 and 5 (Concepts 1a and 2a) both identify some 128 hectares as major landscape areas, with 74 hectares being land outside the airport boundary to the east of the railway. The principal other area (52 hectares) is focused along the River Mole corridor on the north and north western side of the airport; its precise boundary will be identified at the time of detailed planning of developments in the North West Zone, particularly in the context of the northside/southside disposition of aircraft maintenance and ancillary development and its affect on their total land requirement. The area as illustrated on the two Plans includes around 3 hectares between the River Mole and the western edge of Brockley Wood, for use for balancing ponds associated with drainage from the North West Zone; such ponds already exist elsewhere in these major landscaped areas.

CONCLUSION

7.73 Chapter 12 of this Strategy addresses the issue of the implementation of Gatwick's development, including BAA Gatwick's intended process for selecting the preferred land use plan to guide that development. The retention of some flexibility in our planning will, however, be essential to BAA's ability to respond to sometimes unforeseen changes in the character of airport and airline operations, often triggered by regulatory or business changes of an international character.

7.74 Development itself will be undertaken step by step as and when the need for particular facilities arises. As such, site-specific plans will not be finalised until planning permission needs to be sought for a particular part of the airport's development, as the precursor to its implementation. Our detailed planning will continually seek to reduce the extent of future development to the minimum size compatible with its function, and the location of the boundaries between land uses may require some adjustment as a result of such work, or more significant review in the event of a failure to secure planning permission for a major facility. The planning application process will also ensure that, when permission is granted, development will only proceed subject to such conditions and legal agreements as the local planning authority may reasonably consider to be necessary.





8 GROUND NOISE

8.1 This chapter of the Strategy considers the issue of ground noise, which is covered in greater detail in *Appendix W*.

WHAT IS GROUND NOISE?

8.2 Noise generated other than by aircraft in flight or taking off or landing is termed ground noise. The main sources of airport ground noise are:

- ▶ aircraft taxiing between the runways and aircraft parking positions – this includes all holding, engine start-up and shut-down procedures during taxiing;
- ▶ auxiliary power units (APUs) on aircraft for air conditioning the aircraft cabin while on stand, for supplying electrical power and other aircraft services, and for engine start-up;
- ▶ ground running of aircraft engines during maintenance and testing;
- ▶ mobile ground equipment such as ground power units which provide power supplies to aircraft on stand;
- ▶ road vehicles, both airside and those travelling to and from the airport;
- ▶ construction.

8.3 Airport ground noise exists in the context of off-airport noise sources, termed background noise. Generally, the most dominant contributor to the noise climate in residential areas is road traffic. Around Gatwick, airport ground noise is audible from time to time within a limited radius of the airport boundary, particularly at night. Taxiing noise is by far the most significant airport source although engine testing at settings

above idle (high power) can generate higher noise levels than taxiing, but it is of limited duration and infrequent.

8.4 In terms of perceiving noise, expert opinion is that, when comparing individual noise events, a change in noise of around three decibels or less is not significant. In addition louder noise sources will mask quieter ones, and thus the effects of noise cannot be calculated by adding all the separate noise sources present.

HOW MUCH NOISE WILL THERE BE?

8.5 Ground noise from **taxiing, APUs and mobile equipment** was evaluated by Ian H Flindell and Associates who modelled the future (2008) noise levels and compared them against:

- ▶ existing (1997) modelled levels generated solely by the airport;
- ▶ existing (1999) measured levels generated by both airport and non-airport sources, but excluding the more prominent events (ie LA₉₀ background noise);
- ▶ benchmarks which are consistent with Government Planning Policy Guidance 24, which in turn is consistent with World Health Organisation guidelines.

8.6 Noise from **engine testing** was evaluated by Wimtec Environmental Ltd on behalf of British Airways, comparing future noise from the proposed ground run pen (GRP) against existing airport levels.

8.7 Finally, BAA's surface access consultants Oscar Faber carried out an assessment of **road traffic noise** from the roads surrounding Gatwick, compared with existing levels and background levels.

8.8 The results of each study are shown separately because, as described above, if different noise sources were added together, the addition could diminish the apparent impacts of changes in noise levels associated with the less dominant noise sources.

TAXIING, APUs AND MOBILE EQUIPMENT NOISE

8.9 Future noise was assessed against each of the three comparisons described in §8.5 above for 26 community locations around Gatwick, for both westerly and easterly operations, during the day, the evening and the night. This approach provides much more information than would be available about the detailed impact of airport operations on ground noise than if the information had been combined into noise contours.

8.10 The assessment indicates that, over the period of the airport's development (to 2008), there will be small increases in ground noise compared to existing (airport generated) levels in 1997. The increases are typically between 1 and 2 decibels during the day, around 3 decibels during the evening and around 1 decibel at night. However, as mentioned above, it is difficult to notice a

change of noise of around three decibels or less, especially over a ten year period. However, for some residents around the future development (mainly in the Charlwood Horley Road to Povey Cross area) there are larger potential additions in ground noise, up to around 10 decibels. It is, however, to be emphasised that these findings make no allowance for the benefits of mitigation measures to reduce off-airport exposure to ground noise.

8.11 The significance of increases over existing airport levels depends on the background noise context against which they might be heard (comparison 2) and on the comparison against benchmarks (comparison 3).

8.12 The areas where levels will be higher than benchmarks are:

- ▶ south eastern fringes of Charlwood;
- ▶ locations on the Charlwood Horley Road to Povey Cross Road;
- ▶ southern part of Horley Gardens Estate; and
- ▶ locations on the south side of the airport.

ENGINE TESTING

8.13 Change in noise from engine testing at the three most currently used airfield locations, and for engine testing inside the proposed GRP, was also assessed for each of the 26 community locations. With the GRP, noise from engine testing will reduce

by a discernible amount against existing noise levels and noise levels will be significantly below benchmarks at all residential locations.

ROAD TRAFFIC

8.14 For the comparison of future levels against existing road traffic noise, Oscar Faber found that the increase would be less than one decibel on all of the surrounding roads – an imperceptible change. They found that future road traffic's contribution to background noise was very small.

HOW CAN THIS NOISE BE REDUCED?

OBJECTIVE

8.15 BAA Gatwick is committed to reducing the noise generated from the airport's operation and will work to achieve the following objective and maintain it thereafter:

To reduce airport ground noise at community locations, especially at night and where operationally practicable by 2010 on a base of 1997.

TARGETS

8.16 This objective will not be easily achieved and will require continual action between 2000 and 2005. BAA Gatwick will therefore set annual targets to act as stepping stones to achieving the overall objective.

ACTION PLAN

8.17 In order to achieve the objective and targets, BAA Gatwick commits to undertaking the following actions:

SOURCES

AIRCRAFT – OPERATIONAL PROCEDURES

GN1/AQ1 Retrofit FEGP to all existing stands which currently do not have access to a supply by 31/03/05, subject to any approvals necessary to maintain the required number of operational aircraft stands.



GN2/AQ2 Fit FEGP to all new common user aircraft stands, (except maintenance parking areas).

GN3/AQ3 Review by 31/03/01 and thereafter ensure compliance with rules:

- ▶ limiting the use of ground power units (GPUs) to times when FEGP is not serviceable; and
- ▶ setting out optimum usage times of APUs satisfying operational requirements.

GN4/AQ4 Review charging structures for FEGP to minimise the use of APUs and consult with airline users by 31/03/01.

GN5/AQ5 Maintain the FEGP supply in good working order and restore 98% of faults within four hours.

GN6/AQ6 Work with NATS, Eurocontrol and airlines to investigate the advantages of introducing varied taxiing times for different stand areas to reduce emissions and the duration of ground noise on departure.

GN7 Investigate and introduce opportunities for preferential use of stands during the night quota period (2330 – 0600) where it would reduce noise at those community locations where benchmarks are exceeded.

GN8 Introduce and enforce rules identifying the specific (noise-optimum) routes by which aircraft will taxi to and from the new permanent stands during the night quota period.

AIRCRAFT – ENGINE TESTING

GN9 Subject to obtaining planning permission for a Ground Run Pen (GRP) with an operating regime that meets reasonable airline needs, linked to permission for taxiway and apron facilities in the North West Zone, BAA Gatwick will build and commission the GRP within 24 months of the date of the said permission.

BARRIERS

GN10 When preparing planning applications for developments that materially affect the ground noise from aircraft operations:

- ▶ identify on-airport sites where such noise barriers as might reasonably and feasibly be constructed could, in the context of any achievable noise reductions at source, further and perceptibly reduce the levels of aircraft ground noise exposure at community locations; and
- ▶ propose and, subject to planning permission, construct such barriers as may thus be identified as appropriate to the development.

NOISE INSULATION

GN11 /AN2 Complete a study, in consultation with neighbouring local authorities to:

- ▶ establish whether there is a case for a future BAA-funded noise insulation scheme for existing residential properties; and
- ▶ if a case is established to identify the details of such a scheme; within six months of signing the proposed legal agreement with West Sussex County Council and Crawley Borough Council.

LANDSIDE ROAD TRAFFIC

8.18 The demand-management initiatives set out in the Transport Strategy will help to reduce noise from road traffic associated with Gatwick by managing movement numbers.

GN12 Encourage the Highways Agency or appropriate authority to make appropriate use of noise reducing materials when laying new surfaces as part of junction improvements associated with the Development Strategy, where this would offer a significant reduction in noise.

MONITORING AND MEASUREMENT

GN13 Repeat background noise monitoring and the modelling of taxiing, APU and mobile equipment noise every three years by 31/03/02 and 31/03/05.

REPORTING

GN14 The following indicators will be reported annually to the local community:

- ▶ availability and serviceability of FEGP;
- ▶ FEGP/GPU use;
- ▶ engine testing (time, location, duration).





9 LANDSCAPE AND ECOLOGY

9.1 This chapter of the Strategy relates to landscape and ecology, and embraces the issue of the airport's visual impact. It is supplemented by *Appendix X*, containing our landscape and ecological evaluation, and *Appendix Y*, containing our Landscape Strategy.

WHAT DOES LANDSCAPE AND ECOLOGY ENCOMPASS?

9.2 This Strategy's consideration of landscape and ecology focuses on three principal issues:

- changes in view which local residents and other users of the area, such as walkers and those driving through, may experience as a result of airport development occurring by 2008/09;
- potential light pollution which may be experienced by local residents; and
- changes in the landscape character and ecology of the area, both on and off airport, including reference to UK legislation on ecology.

9.3 Environmental Resources Management (ERM) Ltd were employed to undertake the majority of the evaluation while Chris Blandford Associates undertook the assessment of light pollution and development of the on-airport landscape strategy, mentioned below.

WHAT CHANGES HAVE BEEN IDENTIFIED?

9.4 For **changes in view**, ERM established that people around Gatwick already

experience views of airport structures, including Hangar 7 (the current northside maintenance zone), the control tower, terminal buildings, track transit system, southside hangars and hotels. Different elements of the airport are visible depending on the location of the viewer, whether it be glimpses through trees or elevated views of the whole airport and the more extensive adjacent urban areas of Crawley and/or Horley.

9.5 ERM's assessment was prepared at a time when British Airways were first describing how they might consolidate their entire aircraft maintenance activity into the 11 hectare northern maintenance zone depicted in the draft Development Strategy. ERM accordingly assumed, for the purposes of their report on visual impact, that the zone would contain a single four-bay hangar, which is a 'worst case' so far as visual impact is concerned. Their assessment also contemplated the construction of the 'cruciform' midfield satellite that featured in Concept 2 in the draft Development Strategy, whereas this Strategy has reduced the size of that Satellite (Concept 2a).

9.6 There will be changes in view from the escarpment to the north and west of Gatwick, which allows elevated (but comparatively distant) views from roads and public footpaths, across open farmland, into the airport. However, viewers from the escarpment will experience the new structures in the context of the existing airport and ERM's advice is that the addition of the mid field satellite/new piers, and sight of the top

of a single large hangar, would not represent a significant change.

9.7 From shorter distances from the west, for example from Charlwood village, ERM advised that, although the majority of a new hangar would be hidden behind tree cover or glimpsed through boundary screening, the upper part of its structure would be visible above the tree line. Farmfield Cottages are the closest houses to the new Northside maintenance zone, and their residents will potentially experience the greatest change of view. From the north, the top of the cargo sheds and of any bridges between North Terminal and its Satellites will in some cases be seen, although existing boundary planting will hide most views. Views from the south and east will be largely screened by existing structures and the boundary planting.

9.8 Studies by British Airways later confirmed ERM's conclusions about the visual impact of aircraft hangars, and discussions with representatives of nearby communities revealed the strength of peoples' feeling about that impact on views of the airport's north western boundary. There were indications from those discussions that near views of hangarage are potentially of greater concern than those from higher ground to the north and northwest.

9.9 In terms of **light pollution**, Chris Blandford Associates found that current levels of illuminance and luminance around the North Terminal area and the long stay car park were lower than recommended levels. They did, however, identify a number of opportunities to improve the directivity of the light through fittings to the lamps and also to turn off lights when not required.

9.10 In terms of **ecology**, the North West Zone, which is the main area for the expansion of airport facilities, is formed of small fields, strong hedgerows and established woodland. Although some of the hedges meet hedgerow regulations standards for species diversity, the remainder of the area lacks any features of wider significance. As a result the change in use will constitute a local nature conservation impact. The retention of Brockley Wood, the feature of greatest ecological value, is an important aspect of the proposed layout design; the creation of eight habitat types along the diverted River Mole, with varied tree and shrub planting, has done much to



enhance the ecological value of the area. In terms of **landscape character**, ERM concluded that there would not be a significant change.

WHAT WILL BAA GATWICK DO TO REDUCE THE SIGNIFICANCE OF CHANGES IN VIEW AND ENHANCE THE CHARACTER AND ECOLOGY OF THE AREA?

OBJECTIVES

9.11 In order to direct our work over the next ten years, BAA Gatwick has set the following objectives:

Reduce the visual impact of the airport and its operations through reducing light pollution, high quality urban design and the use of off and on-airport landscape features and planting, where detailed visual assessments and consultation with residents deem it suitable.

Support local authorities in the implementation of their bio-diversity action plans, to enhance the ecological quality and habitat diversity of the local area, where relevant to Gatwick Airport and having regard to bird hazard management.

TARGETS

9.12 Annual targets will be set to measure performance against the objectives.

ACTION PLAN

9.13 BAA Gatwick commits to the following actions, which will be undertaken in order to achieve the foregoing objectives.

ON-AIRPORT

9.14 BAA Gatwick has employed Chris Blandford Associates to develop an on-airport landscaping strategy, to screen/enhance views of the airport where required and to create a pleasant airport environment for passengers, staff and other airport users. The Strategy (*Appendix Y*) is based on the zoning of the airport and guidance as to landscaping options. Building and lighting design are also important aspects in achieving the above and are accordingly also covered by Commitments in this action plan.

LANDSCAPING

LE1 In association with development proposals, prepare and implement landscape schemes for the airport zones identified as key for visual impact management of the airport.

LE2 Evaluate, in liaison with key stakeholders, the visual, landscape, ecological, drainage, acoustic and land use benefits and implications of raising the height of the bund alongside the 1999 diversion of the River Mole to a maximum of 13 metres above airport level (to 73 metres AOD).

URBAN DESIGN

LE3 Continue to have regard to high quality urban design in our proposals for airport development.

LIGHT POLLUTION

LE4 Seek to minimise the potential occurrence of annoyance in neighbouring communities as a result of any light pollution associated with new developments.

BIO-DIVERSITY

9.15 In supporting local authorities in their enhancement of biodiversity, BAA Gatwick will focus on hedgerows, woodland and water courses, the key features of the area.

HEDGEROWS AND WOODLAND

9.16 The strategy focuses on enhancing the land east of the railway which contains two ancient woodlands, identified in the Crawley Borough Local Plan, plus a pond with crested newts, a protected species. In addition Brockley Wood to the west of the airport is an important habitat.

WATER COURSES

9.17 The key feature on airport is the River Mole, for which detailed management and monitoring plans have been developed with the Environment Agency following the river's diversion and enhancement. BAA Gatwick is also a member of the Environment Agency's Local Environment Action Plan (LEAP) for the River Mole catchment area.

LE5 Develop bio-diversity enhancement and management plans for:

- ▶ BAA's 'off-airport' land east of the railway;
- ▶ Brockley Wood;
- ▶ Gatwick's water courses, such as Mans Brook and Crawter's Brook (in conjunction with the Environment Agency);

and thereafter implement these plans, and the management and monitoring plans for the diverted River Mole, including appropriate arrangements for access on foot.

OFF-AIRPORT

9.18 In specific circumstances, landscaping could be used off airport to screen airport views from specific locations. However, a greater level of detail than is currently available is required to identify what off-airport planting could be used and where.

LANDSCAPING

LE6 Develop a landscape strategy identifying appropriate opportunities for off-airport planting to screen views from specific locations in association with proposals for particular airport developments.

BIO-DIVERSITY

LE7 In association with particular airport developments, investigate the opportunities for and benefits of the translocation of woodland/hedgerows to on or off-airport locations.

LE8 Replace on a two for one basis any established trees lost as a result of airport development, and on a one for one basis any replacement trees that are subsequently lost.

LE9 Support the work of the Horley/Crawley Countyside Management Project to achieve habitat improvements in Gatwick's locality and, in particular, to provide until 31st March 2004 (and then review) annual core funding based on the lesser of:

- ▶ 20% of the aggregate monetary contributions by local authorities in the preceding financial year;
- ▶ £12,500.



10 WATER QUALITY MANAGEMENT

10.1 This chapter of the Strategy relates to BAA Gatwick's means of managing the quality of surface water outflows from the airport into local streams and the Rive Mole.

WHAT IS WATER QUALITY?

10.2 The term water quality refers to the purity of water in watercourses, covering such matters as pollution and the 'load' of suspended solids in the water.

WATER VOLUME

10.3 The volume of water discharged into local water courses is governed by rainfall. Gatwick Airport has a large impermeable surface area and thus rainfall runs off quickly, rather than gradually sinking into the soil and either recharging groundwater or percolating slowly into rivers and streams. In order to ensure water courses are not flooded at times of heavy rainfall, BAA Gatwick has a number of storage reservoirs (balancing ponds), connected to an airport-wide drainage system which collects and transfers the rainfall. The Environment Agency sets discharge consent limits for the volume of water which may be discharged and thus the reservoirs are used to enable rainwater to be released into water courses in a controlled manner to avoid flooding.

POLLUTION CONTROL

10.4 There are a number of airport activities which have the potential to cause pollution of local water courses if those activities are not properly managed:

- ▶ de-icing of aircraft and airside areas;
- ▶ vehicle and aircraft washing;
- ▶ aircraft and vehicle maintenance – spillages/venting;
- ▶ run-off from construction sites;
- ▶ spillage of cargo products;
- ▶ fire training.

10.5 BAA Gatwick's surface drainage system and reservoirs are also used to ensure water quality is maintained:

- ▶ firstly, a number of interceptors are located in the drainage system;
- ▶ secondly oil separation tanks and settlement tanks are installed in reservoir D to remove any oil;
- ▶ finally, water passes through an aeration pond where, if pollution levels are above the discharge consent levels set by the Environment Agency, the water is diverted to a holding lagoon for treatment at the Crawley Sewage Treatment Works rather than being discharged into the River Mole.

10.6 The fire training ground has a separate system encompassing a below ground storage tank and two balancing ponds.

WHAT WILL BE THE EFFECT OF DEVELOPMENT AT GATWICK?

10.7 This Strategy sees the inclusion of the North West Zone of the airport into the aircraft apron and movement area – up to an additional 44 hectares of impermeable surface. It has been estimated that this will equate to an additional 240 litres per second of additional run-off from the airfield. The

area is designated for use as stands and aircraft maintenance, both of which could result in potentially polluting activities.

HOW WILL BAA GATWICK MANAGE THIS IMPACT?

OBJECTIVE

10.8 The following objective has been set:

To manage the surface water control systems and activities which impact on it to ensure discharge consents are met.

TARGETS

10.9 Annual targets will be set to measure performance against this objective.

ACTION PLAN

10.10 BAA Gatwick's Commitments in relation to Water Quality Management are as follows.

FACILITIES MANAGEMENT

WQ1 Use computer modelling of run-off from the North West Zone to fully understand the impact of the increased impermeable area.

WQ2 Agree discharge consents with the Environment Agency for the North West Zone.

WQ3 Work with the Environment Agency to develop the detailed plans for water quality management from the new zone.

POLLUTION REDUCTION

WQ4 Finalise, implement and enforce the Company's pollution prevention best practice guide through issuing rules to all airport users.

WQ5 Develop and implement a communications plan to improve understanding and awareness amongst the airport community.

WQ6/AQ2 Maintain guidance on the storage of fuel and the reporting of spillages, thereby encouraging best practice.

MONITORING AND MEASUREMENT

WQ7 Undertake monitoring of BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand).

WQ8 Monitor water volumes to ensure avoidance of flooding downstream.

COMMUNICATION AND REPORTING

WQ9 The following indicators will be reported annually:

- ▶ number of Environment Agency reports of non-compliance;
- ▶ average Biochemical Oxygen Demand (BOD) discharged at the outfall.





11 RESOURCE USE

11.1 This chapter of the Strategy addresses BAA Gatwick's use of resources, dealing in turn with waste management and energy.

WASTE MANAGEMENT

WHAT IS WASTE MANAGEMENT?

11.2 BAA Gatwick's strategy for waste is based on the Government's sustainable waste management strategy 'A way with Waste' and its three core principles:

- ▶ Best Practicable Environmental Option (BPEO) – the option which provides the most benefit/least damage to the environment as a whole, at acceptable cost, in the long and short term;
- ▶ the waste hierarchy – reduce, reuse, recover (recycle, compost or energy recovery), dispose;
- ▶ the proximity principal – the disposal of waste should be as near to its place of production as possible.

11.3 Waste is generated from a number of sources at Gatwick:

- ▶ aircraft operations and maintenance, eg on stand, hangars;
- ▶ terminals, eg retailing, passenger areas, security;
- ▶ property accommodation, eg offices, first class passenger lounges, cargo sheds;
- ▶ engineering, eg vehicles, buildings;
- ▶ hotels;
- ▶ construction.

11.4 These sources generate several categories of waste:

- ▶ inert (soils, hardcore, concrete, glass);
- ▶ general non-putrescible (paper, cardboard, plastic etc);
- ▶ scrap metal (electronic equipment);
- ▶ general putrescible (food waste, vegetable matter, trees and bushes);
- ▶ difficult (lamps and fluorescent tubes);
- ▶ special (used oils, flammable liquids, batteries).

FACILITIES MANAGEMENT

11.5 BAA Gatwick employs a waste contractor, currently SITA, to collect and recover/dispose of waste from the terminals, aircraft operations, engineering and property accommodation. Other waste producers (primarily tenants with ground leases) employ separate contractors. Waste generated from airside sources – aircraft operations, terminal airside areas and some property buildings is taken to the Central Airport Recycling Enclosure (CARE) where a degree of segregation is possible. For aircraft waste, waste centres have been created to which aircraft cleaning companies bring their waste. All aircraft food waste is classified as international waste by the Ministry of Agriculture Fisheries and Food and is thus kept separate from other cabin waste and is returned to the aircraft catering companies for disposal. For landside areas – terminals and property, waste and recycling facilities are located at the loading dock areas to which cleaning companies and retail tenants bring their waste. Waste for disposal is then transported directly to the landfill site in Warnham, West Sussex.

HOW MUCH WASTE DOES/WILL BAA GATWICK HANDLE?

11.6 In 1998/99 SITA handled 13,193 tonnes which equates to 0.45 kg per passenger. 16.7% was recovered, with the remainder being sent for disposal. By 2008/09, if waste generation per passenger remains unchanged, the total annual quantity of waste will increase to around 18,000 tonnes.

HOW WILL THIS AMOUNT BE REDUCED?

OBJECTIVE

11.7 BAA Gatwick is committed to reducing the waste generated from the airport's operation. BAA plc has set an overall waste objective for its UK airports to improve corporate focus on the issue:

By using its influence and practical measures within its control BAA Gatwick aims to achieve:

- ▶ producer responsibility for waste minimisation in line with the Government's vision for sustainable waste management through;
- ▶ reductions in overall waste which is generated per passenger by airport operators and managed through BAA contracts by 2005 on 1999/2000 base;
- ▶ reduction in waste sent to landfill by increasing waste recycled to 30% by 2010, with an interim objective to 15% by 2005 on a 1999/00 base.

TARGETS

11.8 These objectives provide a challenging focus and annual targets will be set as stepping stones to 2010.

ACTION PLAN

11.9 To mirror the government's encouragement of ownership of waste, BAA Gatwick has established a Project Board with responsibility for developing the Action Plan which will seek to achieve the above



objectives. BAA Gatwick's Commitments, derived from that Action Plan, are to:

MONITORING AND MEASUREMENT

WM1 Develop and implement a process to accurately measure waste from all sources to enable identification of the waste producer and introduce incentives to encourage airlines and tenants to reduce and segregate waste.

FACILITIES MANAGEMENT

WM2 Provide waste management infrastructure that ensures legislative compliance, and facilitates producer identification and waste segregation, eg:

- ▶ larger on-airport CARE facility to increase recycling ability;
- ▶ refurbish terminals' goods-in/waste away areas;
- ▶ segregated bins in public areas of terminals (subject to security requirements);
- ▶ investigate the potential for composting non-MAFF regulated waste;
- ▶ investigate the potential for a central retail delivery warehouse to rationalise packaging waste.



COMMUNICATIONS

WM3 Develop a communications process with airlines, business partners and airline servicing companies to improve performance, for example through waste minimisation clubs such as Retail Catering Golden Bin Award, to gain ownership and heighten understanding.

SUPPLY CHAIN

WM4 Manage waste through the supply chain, including the development of performance indicator/targets for waste minimisation with commercial penalties/incentives.

NEW DEVELOPMENTS

WM5 Implement BAA's five year construction waste strategy at Gatwick.

WM6 Incorporate waste minimisation into new build projects to address 'back of house' issues.

REPORTING

WM7 The following indicators will be used annually to measure performance:

- ▶ total waste arising (tonnes);
- ▶ waste per passenger;
- ▶ percentage recovered – recycled/energy recovery;
- ▶ percentage disposed.

ENERGY USE AND CLIMATE CHANGE

WHAT IS CLIMATE CHANGE?

11.10 There is now world wide acceptance that the climate is becoming warmer; issues such as sea level rise and more extreme weather events are well documented, although the future impacts of change are less well understood. In the south east of England the Government has predicted that there will be an increased likelihood of droughts interrupted by intense thunderstorms, causing severe flooding. Carbon dioxide has been identified as the main gas responsible for global warming although five other gases have also been identified. In response to the risks, the international community has set targets to reduce these gases and the EU has an 8% reduction target on 1990 levels by 2008/12. The UK has set a 12.5% reduction target for the same period and also set a voluntary objective of 20% by 2010.

11.11 BAA Gatwick's strategy focuses on carbon dioxide emitted as a result of heating/cooling and providing electrical power to buildings on the airport. Emissions from transport are another source and BAA Gatwick's air quality strategy has measures to reduce transport-related emissions, although there is a trade-off between local and global issues which requires further consideration (for example catalytic converters which reduce local pollutants but increase emissions of carbon dioxide).

- 11.12** The building-related activities which use energy on airport are:
- ▶ terminals – eg heating and ventilation and cooling systems (HVAC); fans, pumps and building management systems; baggage systems; track transit systems; lighting; passenger movement equipment; office equipment etc;
 - ▶ other operational buildings (eg coaching gates, APV) – HVAC etc;
 - ▶ retail outlets – eg lighting;
 - ▶ tenanted property – offices etc;
 - ▶ external areas – eg lighting, advertising etc;
 - ▶ airfield – FEGP; lighting etc;
 - ▶ new developments/construction – eg architectural design; HVAC etc.

HOW MUCH CO₂ DOES/WILL GATWICK EMIT?

11.13 In 1999 Gatwick emitted 90,500 tonnes of CO₂ from the total site and consultants WSP Ltd forecast that this could grow to 161,000 tonnes by 2010 given the increase in building area on the airport and without the strategy set out below.

WHAT WILL BAA AND BAA GATWICK DO TO REDUCE THIS?

OBJECTIVES

11.14 As part of BAA's overall aim to align company strategies with those of the Government, it has set group objectives of which Gatwick's share is:

to achieve a reduction in CO₂ emissions associated with airport site energy consumption of 51% per passenger by 2010 on 1990

to increase the use of renewable energy through a renewable energy demonstration project

TARGETS

11.15 Annual targets will be set to act as stepping stones to achieving these objectives.

ACTION PLAN

11.16 BAA Gatwick has established a Project Board which has developed an Action Plan to achieve our objectives. The plan does, however, recognise that further work is required to evaluate the best methods of achieving the objectives, in terms of cost and benefit. In its initial years, the action plan therefore focuses on investigation of alternatives before turning to actual emission reduction actions. In line with the Action Plan BAA Gatwick makes the Commitments set out in the remainder of this chapter.

MONITORING AND MEASUREMENT

CC1 Complete the installation of energy meter-readers ('meter tree' project) to enable business units to manage energy-consuming equipment,

FACILITIES INFRASTRUCTURE

CC2 Investigate the opportunities and costs associated with the installation of a central combined heat and power station (CHP) on airport, as opposed to conventional supplies and CHP for individual developments

CC3 Investigate the potential for renewable energy either through procurement or through installation of renewable technology at Gatwick, following the recommendations made by Forum for the Future (BAA).

NEW DEVELOPMENTS

CC4 Identify the costs and benefits of energy saving measures on a life-cycle basis and include CO₂ reduction targets in the project process.

EXISTING BUILDINGS

11.17 Our objective in relation to existing buildings is to achieve by 2005, on a 1999/2000 base, a 12.5% reduction in CO₂ emissions associated with energy consumption within BAA Gatwick's control.

CC5 Identify methods for reducing CO₂ emissions including:

- ▶ the opportunities and cost of each potential energy saving measure to identify the best business solutions;
- ▶ development of energy plans for appropriate projects;
- ▶ performance indicators for electrical contractors;
- ▶ temperature change trials.

BUSINESS PARTNERS/TENANTS

11.18 Our objective in relation to other parties is to achieve by 2010, on a 1999/2000 base, a 5% reduction in CO₂ emissions associated with energy consumption by retail and property tenants (excluding ground lessees).

CC6 Establish baselines emissions for best practice energy consumption in retail outlets and tenanted areas and work with tenants to reduce CO₂ emissions.

COMMUNICATIONS AND REPORTING

CC7 Develop and implement an awareness plan to change the culture of the airport community to one of 'switching off when not in use'.

CC8 Report externally on the energy consumption and CO₂ emissions data, in our annual performance report.



12 IMPLEMENTATION

12.1 The foregoing chapters of this Strategy, supported by the appendices, have described how BAA Gatwick envisages that it will develop and manage Gatwick Airport over the period to 2008/09. This chapter concludes the Strategy, dealing principally with the issues of implementation and monitoring.

12.2 So far as actual development within the airport boundary is concerned, it would be misleading were this Strategy to suggest that we have perfect knowledge of the precise scale and character of the various buildings and facilities that will be constructed over the coming years, in some cases by companies other than ourselves. The civil aviation industry is dynamic and its physical manifestations at airports are not wholly predictable, with changes to development requirements potentially being triggered by such initiatives as, in recent years, the emergence of global airline alliances and of low-cost carriers.

12.3 The element of uncertainty in our planning is exemplified by the fact that two layout Concepts have been presented in the Strategy, albeit that they display considerable similarity in terms of the disposition of land uses. Further study of the two concepts will focus on such matters as operational efficiency, service levels, cost and the phasing of investment; we anticipate being in a position, probably by the end of 2001, to select a preferred layout.

12.4 Precise details of individual developments will be set out in planning applications or consultations, some of which

will undoubtedly need to be accompanied by environmental assessments. We anticipate that these applications/consultations will be considered by Crawley Borough Council in the context of the Supplementary Planning Guidance which the Council expects to adopt in Autumn 2000, following consultation with interested parties – notably other local authorities. When reaching a decision on applications/consultations we anticipate that the Council will, inter alia, be looking for clear evidence of the need for a particular development, and for the need for the development to be precisely of the character proposed. When planning permissions are granted we envisage that they will if appropriate be subject to such environmental safeguards as the Council may reasonably seek, in the form of planning conditions or Section 106 Agreements.

12.5 The nature of BAA Gatwick's entitlement to permitted development, entailing the submission of a consultation rather than a planning application to the local planning authority, is explained in *Appendix E*. It is clear that permission is required for:

- ▶ any runway extension (were one to be proposed);
- ▶ extensions to the passenger terminals (since the entitlement to extend them has been fully exercised); and
- ▶ the development of sites wholly or partly on non-operational land (which principally comprises the North West Zone, west of the former course of the River Mole).

Elsewhere a key consideration will be whether a development's character falls within the scope of the Environmental Assessment

Regulations; if it does, planning permission will be required.

12.6 It is BAA Gatwick's intention to maintain a partnership approach to working with local authorities over the coming years. Not only will we be seeking to develop the airport, and manage its impacts, in a manner acceptable to them and other interested parties, but we will be monitoring its growth and effects and sharing data with those to whom it is of interest. If the need for additions or amendments to our strategy should arise, we will wish the case for change to be considered openly and thoroughly.

THE DEVELOPMENT PROGRAMME

12.7 The planning, construction and commissioning of most of Gatwick's new facilities is likely to take a minimum of two years to complete, with a time horizon of at least four years being likely in the case of major projects requiring some relocation of existing facilities from their development sites. BAA Gatwick's programme of submissions to the local planning authority will necessarily allow for such lead times, with most major projects likely to be the subject of planning applications or consultations within around five years.

12.8 BAA Gatwick's immediate priorities in terms of development are:

- ▶ to provide additional check-in desks and associated baggage facilities at South Terminal, to redress operational shortcomings that have emerged in the wake of (i) the EU requirement to introduce a third handling agent and (ii) mergers and acquisitions amongst Inclusive Tour operators. The project is comparatively small in scale, makes substantial use of existing floorspace, and has a construction programme of around six months;
- ▶ to remedy the shortfall in pier service for North Terminal's passengers, by constructing a satellite pier abutting Stands 104-108 and 120-125, to the south of North Terminal. The scheme, which is common to both layout Concepts 1a and 2a, adds pier service to stands that are already intensively used in peak hours, but which rely on the use of buses to convey passengers to and from the terminal; as such it is unrelated to any expansion of Gatwick's capacity since we would expect



to be building the satellite during the next 2-3 years even were Gatwick's annual passenger throughput not expected to increase above its current level.

12.9 The programme for other development is currently tentative, but a general indication of the possible timescale for ten projects is set out in the tabulation below.

CONSTRUCTION IMPACT

12.10 Construction projects such as those in prospect at Gatwick have the potential to create impacts associated with construction itself – impacts that will increase in significance if more than one project is in progress at any one time. Detailed assessments of the potential impacts will be undertaken as part of BAA Gatwick's specification of project plans and timescales, and appropriate information will be made available to the local planning authority. It is, however, noteworthy that:

DEVELOPMENT	COMMENCE	COMPLETE
1. NW ZONE DRAINAGE INFRASTRUCTURE	2001	2002
2. RELOCATION OF BAA MT FACILITIES, CONTRACTORS' COMPOUNDS, ETC	2001	2002
3. TAXIWAYS, STANDS & GROUND RUN PEN	2001	2003
4. SOUTH TERMINAL ARRIVALS EXTENSION	2001	2003
5. APRON RECONFIGURATION TO SOUTH OF '120s' SATELLITE	2003	2004
6. NORTH TERMINAL EXTENSIONS	2002	2005
7. CARGO REDEVELOPMENT	2003	2005
8. REPLACEMENT OF HANGAR 7	2003	2005
9. SOUTH TERMINAL PIER 1 REDEVELOPMENT	2003	2006
10. PIER FACILITIES FOR NORTH TERMINAL	2005	2008

- the logistics of undertaking major construction projects at Gatwick are complex, given the need to minimise impact on existing operations, and the tendency is to maximise opportunities to smooth out the scale of construction activity in progress at any one time, which will tend to flatten the peakiness of such external impacts as procurement/delivery of materials and the size of the construction workforce;
- Gatwick's direct access from the Motorway and Trunk Road network enables construction deliveries to be kept clear of the local road network, except where it serves particular local suppliers.

12.11 Archaeological considerations will be taken into account when detailed project planning is in progress, although the historic record, and the experience of past construction activity at Gatwick, suggests that there will be few if any finds of archaeological interest in the areas that are to be newly developed at the airport. We will, however, ensure that an appropriate level of expertise is brought to our projects, including any necessary involvement of the County Archaeologist.

MONITORING AND LIAISON

12.12 Various chapters of this Strategy have referred to BAA Gatwick's intention to monitor its performance against its environmental and transport targets and action plans, and in other respects. Our annual Sustainability Reports will detail our performance in each financial year (April – March) and will cover such key performance indicators as are tabulated below.

EMPLOYMENT	DATA FROM ANNUAL 'CENSUS'
SURFACE ACCESS	PASSENGER MODAL SPLIT STAFF TAKE-UP OF INITIATIVES
AIR QUALITY	NUMBER OF EXCEEDANCES OF NAQS GUIDELINES FOR NO2 AND PM10
AIR NOISE	LATEST DETR ANNUAL ACTUAL LEQ CONTOURS AIRCRAFT MOVEMENTS BY TYPE NIGHT FLIGHTS AND USAGE OF 'QC' NOISE QUOTA DEPARTURES NOISE INFRINGEMENTS DEPARTURES TRACK-KEEPING PUBLIC COMPLAINTS
GROUND NOISE	AVAILABILITY AND SERVICEABILITY OF FEGP USE OF FEGP AND GPUS AIRCRAFT ENGINE TESTS
WATER QUALITY	NUMBER OF ENVIRONMENT AGENCY REPORTS OF NON-COMPLIANCE AVERAGE BOD DISCHARGED AT OUTFALL
WASTE MANAGEMENT	TOTAL WASTE ARISING AND WASTE PER PASSENGER PERCENTAGES RECOVERED (FOR RECYCLING OR ENERGY RECOVERY) AND TO LANDFILL
RESOURCE USE	ENERGY CONSUMPTION AND CO ₂ EMISSIONS



12.13 BAA Gatwick will report more frequently on some issues, as part of our programme of liaison and dialogue with key stakeholders.

12.14 The local planning authorities (West Sussex County Council and Crawley Borough Council), and a number of neighbouring local authorities, are the key external stakeholders on most issues, since it is they that will wish for confirmation of our compliance with our commitments, and for information on our degree of success in meeting our environmental and other targets.

12.15 There will be a parallel programme of dialogue with our business partners, much of it focused on study and debate of operational issues on which the pro-active involvement of airlines and National Air Traffic Services will be essential to progress on various Commitments in this Strategy.

12.16 The Gatwick Airport Consultative Committee (GATCOM) brings these various interests together and provides an opportunity for wide-ranging debate, embracing all stakeholders' viewpoints, that does not readily exist elsewhere. GATCOM's measured advice on many issues is invaluable and it will be a key recipient of information about our performance, both annually and on some matters more frequently.

12.17 Given these various interests, BAA Gatwick intends to report to the various stakeholders through the 'fora' identified on page 53, which we also intend should provide the opportunity for discussion on the matters within their particular remit.

12.18 For the avoidance of doubt, these arrangements are not intended to preclude other forms of liaison, for example with airlines through the Airline Operators Committee (AOC) or with individual local authorities in whatever manner they may feel appropriate.

*TABLE REF: 12.17

FORUM	REMIT	MEMBERSHIP ¹	FREQUENCY
GATWICK AIRPORT CONSULTATIVE COMMITTEE (GATCOM)	ALL ISSUES	ALL INTERESTS	4 P A ²
GATWICK AIRPORT PLANNING & ENVIRONMENT LIAISON GROUP ('GAPELG')	PRIMARILY AIRPORT LAND USE AND DEVELOPMENT ISSUES, AND ENVIRONMENTAL OVERVIEW	LOCAL AUTHORITY OFFICERS	3-4 P A
GATWICK AIRPORT EMPLOYMENT FORUM	EMPLOYMENT AND ITS INTERFACE WITH HOUSING	STAKEHOLDERS (TO BE AGREED)	ANNUAL
GATWICK AREA TRANSPORT FORUM ('GATRAF')	SURFACE ACCESS	STAKEHOLDERS (IN LINE WITH DETR GUIDANCE)	2 P A
'GATRAF' CO-ORDINATION AND WORKING GROUPS	SUPPORT FOR GATRAF (BUS & COACH; RAIL; CYCLING & WALKING)	LOCAL AUTHORITY AND 'INDUSTRY' SPECIALISTS	VARIES, BUT GENERALLY 3+ P A
AIR QUALITY LIAISON GROUP	AIR QUALITY	LOCAL AUTHORITY OFFICERS	ANNUAL
NOISE & TRACK MONITORING ADVISORY GROUP ('NATMAG')	DEBATING AND ADVISING THE FLIGHT EVALUATION UNIT ON AIR NOISE AND AIRCRAFT TRACK ISSUES	STAKEHOLDERS (IN LINE WITH DETR ADVICE)	4 P A
FLIGHT OPERATIONS PERFORMANCE COMMITTEE ('FLOPC')	IDENTIFYING BEST PRACTICE FLYING PROCEDURES FOR GATWICK	AIRLINES, NATS, DETR	APPROX 10 P A
GROUND NOISE LIAISON GROUP	GROUND NOISE	LOCAL AUTHORITY OFFICERS	ANNUAL

NOTES:

- 1: BAA GATWICK WILL BE A MEMBER OF ALL FORA SAVE GATCOM, (TO WHICH IT IS AN ADVISOR)
- 2: BAA GATWICK'S PERFORMANCE REPORTING TO GATCOM WILL GENERALLY BE ON AN ANNUAL BASIS



**STRATEGY, PLANNING AND
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