

THE WAY FORWARD FROM SYDNEY'S AIRPORTS QUAGMIRE

**A PAPER PRODUCED TO ASSIST WIDE-SPREAD
COMMUNITY DEBATE ON SYDNEY'S MOST IMPORTANT
ENVIRONMENTAL AND TRANSPORT DECISION**

SYDNEY AIRPORT COMMUNITY FORUM Inc.

A Pan-Sydney Community Airport Forum

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EXECUTIVE SUMMARY

This is the first integrated position paper from Sydney Airport Community Forum Incorporated (SACF Inc). SACF Inc is an open forum representing airport community groups across the whole of greater Sydney from Randwick to the Blue Mountains, and from Hornsby to Sydney's south-west extremities (see Appendix A). It is representative of both 'old' and 'newly' affected communities, in terms of existing and proposed airport operating plans. SACF Inc. has been established as an alternative to the government-appointed committee of a similar name, that is not representative of all the communities affected.

The executive is comprised of community group representatives and convenors whose main concern is to "depoliticise"¹ the airport debate and reintroduce consideration of the human environment both in respect to development of airport operating plans and the new airport debate.

This paper is produced against the background of the long-awaited supplement to the draft Environmental Impact Statement (EIS) on the proposed Badgerys Creek Airport by environmental consultants PPK and which has just been released by Government. The major deficiency (fatal flaw) in this EIS is the failure to consider alternative sites to Badgerys Creek. Responsibility for this needs to be allocated - either to the Government for restricting the scope of the consultancy or to the consultants.

It is the view of SACF Inc. that in selecting a site for the new airport and in determining the best possible combination of flightpaths and operational procedures at KSA, the following elements are essential:

- (a) Genuine consultation;
- (b) Identification of all feasible and prudent alternatives;
- (c) Evaluation utilising objective and quantifiable criteria;
- (d) Documentation, public exhibition and submissions;
- (e) A documented response to all issues raised in the submissions;
- (f) A demonstrably 'fair decision', based on the facts, which will survive successive governments and scrutiny over time.

This paper shows that there are solutions to the current policy paralysis. Presently aircraft noise policy is still inadequate with regard to the amelioration of existing aircraft noise at KSA. In addition, the politicians and the bureaucracy have deliberately excluded any sensible options in their discussions of new airport sites, such as those recommended by previous investigations. This deliberate policy of obfuscation has now run to full course and unless corrected will result in a continuing environmental problem for Sydney.

The relevant legislation (Environmental Protection – Impact of Proposals Act) requires that all prudent and feasible alternatives be considered. By ignoring this legislation, Governments and the bureaucracy are flouting their own law with impunity and the consequences of this will be the entrenchment of a seriously sub-optimal air-transport and infrastructure system for Sydney, extending into the next millennium.

It would do great disservice to the entire population of the Sydney Basin for the Government not to consider the outside the basin airshed options which are environmentally preferable to Badgerys

¹ Whilst political parties are invited to have a representative on SACF Inc for the purpose of consultation and for putting that political party's position, these representatives cannot vote or have membership on the Executive Committee of SACF Inc.

Creek. The following outlines the major findings of this report.

1. There should be an immediate abandonment of the Badgerys Creek Airport Proposal, pending a reinvestigation of the airport options available to government.
2. The site selection process should be immediately re-opened with all probable sites investigated by a thorough EIS process.
3. The site selection process should concentrate on identifiable sites in the corridor of the proposed Very Fast Train (VFT) outside the Sydney basin airshed and within the near southern highlands region, but without excluding other available environmentally suitable sites.
4. A review of the site selection process will involve a delay, which should be recognised as being in the interest of all parties, given that the new airport site is the most important environmental and transport decision for the foreseeable future.
5. Whilst the site selection process is being conducted, a thorough reorganisation of the Long Term Operating Plan (LTOP) for Kingsford Smith Airport should be instituted in the interests of safety and proper noise sharing.
6. There is an overwhelming case for the re-affirmation of Simultaneous Opposite Direction Parallel Runway Operations (SODPROPS) as the default, preferred mode of operation so that maximum use can be made of airspace over water in Botany Bay. Associated with this, is a need to ensure that pilot requests for 'non-duty' runways are only made on safety grounds. Modes 2 and 3 should immediately be made official Modes of LTOP and not excluded for political reasons.
7. The Government and aviation industry need to rethink Sydney's airports arrival and departure tracks (including KSA and Bankstown) to reduce dangerous overflying practices, which are statistically more likely to give rise to an air disaster over densely populated areas of Sydney than over the extensive surrounding water areas.
8. Evidence is presented which shows that the LTOP principle of 'Fair and Equitable' sharing of aircraft noise has not been implemented. In particular, there has been a decrease in noise over unpopulated areas, increased noise over heavily populated areas and there appears to be evidence of politically determined flight paths. It is recommended that the Government put aside voting habits and party affiliations and use quantitative methods to implement a truly 'equitable sharing' of the aircraft noise which cannot be sent over unpopulated areas.
9. Community consultation for validation of airport operating plans should be based on representation proportional to affectation and all suburbs affected by aircraft noise should have their say.
10. The Commonwealth Parliament should develop regulations under the Airservices Act [1996] Cth. for the implementation of control over the maximum noise impact of flying aircraft on underlying residential suburbs. Similar consideration should be given to implementation of 'emission dispersion' control from overflying aircraft, taking account of local meteorological conditions.
11. The issue of what is appropriate compensation on "just terms" for loss of amenity due to aircraft impacts should be addressed by a Parliamentary Select Committee and an Airport Impacts (Residential) Compensation Bill should be enacted.
12. Privatisation of KSA and Bankstown Airports should not be allowed unless just and equitable solutions to the problems of aircraft noise and pollution have been found for Sydney's residents.

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SYDNEY AIRPORT COMMUNITY FORUM Inc.**THE WAY FORWARD FROM SYDNEY'S AIRPORTS QUAGMIRE****1. INTRODUCTION**

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The executive is comprised of community group representatives and convenors whose main concern is to "depoliticise"² the airport debate and reintroduce consideration of the human environment both in respect to development of airport operating plans and the new airport debate.

SACF Inc's affiliated community groups reject political and/or commercial manipulation of so-called 'community consultation' concerning airport issues, such as the Long Term Operating Plan for Sydney Kingsford Smith Airport (The LTOP) as well as the expansion of Sydney's existing major airports (Bankstown and Kingsford Smith).

Aircraft noise and other emissions arising from the operations of Sydney's Kingsford Smith Airport (KSA) is one of those mentally taxing subjects for which seemingly there is no solution. So technically complex appear the problems at KSA that a new airport site is proposed at Badgerys Creek in Western Sydney, which if built, is likely to give rise to community outrage the likes of which Sydney has not seen.

What many do not realise is that Badgerys is not a solution to the problems of KSA or Sydney's airport requirements. There is a serious risk of compounding the problem through selection of an inappropriate second airport site at Badgerys Creek coupled with expansion of KSA. While KSA is one of Australia's smallest capital city airports it is also the busiest, providing economic benefits to the Sydney region. Despite this the decision making process is now paralysed both in a political, bureaucratic and practical sense.

This paper is produced against the background of the long-awaited supplement to the draft Environmental Impact Statement (EIS) on the proposed Badgerys Creek Airport by environmental consultants PPK and which has just been released by Government. The Major deficiency (fatal flaw) in this EIS is the failure to consider alternative sites. Responsibility for this needs to be allocated - either to the Government for restricting the scope of the consultancy or to the consultant.

The Badgerys EIS is supposed to be an environmental impact statement; not an economic advocacy document³ promoting the position of business entities or coalitions. Many in the major political parties promote the implementation of the Badgerys proposal as a panacea for the present Sydney Airport noise, pollution and expansion problems. They see Badgerys as a "second airport" which will take most of the traffic overflow from KSA up to 500,000 movements per annum by, say 2010.

In the opinion of SACF Inc, the stated Federal Government position has apparently not being fully

2 Whilst political parties are invited to have a representative on SACF Inc for the purpose of consultation and for putting that political party's position, these representatives cannot vote or have membership on the Executive Committee of SACF Inc.

3 Much in the spate of recently released press on the issue of Badgerys Creek emphasises the economic factors that either advance or detract from an argument for Badgerys as the site for Sydney's so-called "Second Airport". See Macquarie Bank Report; UWS Report; the so-called "National Institute of Economic & Industry Research" and the Tourism Council of Australia.

thought through. In addition, the various "threats" being uttered to the effect that if the people do not accept Badgerys Creek Airport then they will have to accept expansion of KSA, are a form of duress or intellectual blackmail which in a democracy cannot be condoned.

Like the third runway project in 1994, the Badgerys proposal contains inherent flaws that still need to be properly addressed. These flaws include the fact that Badgerys is not the optimal environmental solution for air traffic in the Sydney basin and will not relieve the major burden on KSA. To implement Badgerys will probably increase the extent to which large jets inundate the Sydney residential environment with unacceptable noise and pollution. Badgerys will also increase the complexity of an already over-taxed air-space management system that is already labouring to implement the LTOP against competition from Bankstown airspace. Moreover, the fact is that Bankstown airport is itself the fifth most busy airport in the world on the basis of annual movements.

The constituent members of SACF Inc want to see government will and moral determination to ensure that airport related decisions are based on a proper assessment of the effect of aircraft noise and pollution on the environment and especially the human environment. Only in this way, can a repeat of the environmental nightmare of the Third Runway Expansion Fiasco at KSA be avoided for countless additional residents of Sydney; not to mention the problem being made worse for those already affected.

The present paper examines the following issues:

1. Current problems with KSA and other Sydney's other major airports;
2. Short term steps to ameliorate the existing environmental impact;
3. The rejection of options that permit the expansion of KSA and Sydney's other major airports;
4. The need for a new primary and/or replacement airport outside the Sydney basin airshed;
5. The criteria for selection of such an airport;
6. An outright rejection on grounds of detriment to the human environment of the viability of Badgerys as a new airport site;
7. A range of possible alternative new airport sites outside the Sydney basin airshed;

Among the short term ameliorative measures proposed for management of KSA are:

1. The maximisation of "Over-the-Water" modes of operation under the so-called LTOP;
2. The strengthening of the Environmental Regulatory Measures available to Government for effective policing of the noise and pollution impacts of aircraft over residents. At present there are no provisions for overflying aircraft equivalent to State Land Use controls such as the Noise Acts and Pollution Control Acts and Regulations. Both Federal and State politicians have completely ignored this issue while making the exemption of air traffic from environmental controls a matter of "National Interest"; and
3. Opening of the Government's Sydney Airport Community Forum to true community consultation and fair representation.

Long range issues addressed include:

1. The need for a new primary and/or replacement airport for the Sydney Region;
2. The urgent need to re-examine the Badgerys Creek proposal due to the defective nature of the Environmental Assessment Process that has been undertaken;

3. The need to put the human environment back into consideration in determining where the new airport should be located; and
4. The recommendation that the EIS process be re-opened to consider some of the less environmentally damaging airport site options previously identified in the near southern highland areas and elsewhere, together with sites not previously considered in this connection.

The imminent release of the Supplementary EIS for an airport at Badgerys Creek, under what many believe has been an inherently flawed process, presents a golden opportunity for the Government to seriously consider a more credible environmental option for a replacement 24 hour international airport. A "Near Southern Highland" or similar airport site in conjunction with the logical use of a VFT could service both the city and nearby regions, and potentially solve Sydney's Airport problems for the foreseeable future.

2. THE PROBLEMS OF SYDNEY'S KINGSFORD SMITH AIRPORT (KSA)

2.1. Operational Aspects of KSA

From an operational perspective, KSA is less than ideal as a major aviation hub. It is under legislative restraints of the curfew and the cap of 80 movements per hour. The use of airspace is constrained by the 1030m separation between the parallel runways, by the proximity of Bankstown Airport and by the operational requirements to share aircraft noise under the LTOP. On the ground, the airport has many intrinsic operational limitations, such as the requirement for aircraft to cross the main runway on the way to and from terminals during high capacity operations resulting in extensive air traffic delays in busy periods.

Expansion of the airport under these operational requirements will increasingly impact on the level of safety achievable in the airspace above and around KSA.

2.2. The Third Runway Effect (Parallel Operations)

Expansion of KSA was attempted with the introduction of the third runway in 1994, with a devastating affect on residents both north and south of the airport. These were succinctly summarised in the Parer Report entitled "Falling on Deaf Ears"⁴. The report clearly shows that attempts by EIS proponents such as the then Federal Airports Corporation (FAC) and the then Civil Aviation Authority (CAA), to predict the environmental and social consequences of the new runway were hopelessly incorrect. The FAC and CAA between them underestimated the resulting northerly traffic flow from the construction of the third runway by a factor of two⁵.

Government recognition of this came in the form of demolition of several streets of houses in the suburb of Sydenham, the provision of deplorably inadequate compensation to owners of both residences and businesses, and the promised and much vaunted home insulation program. To this day, the program has not compensated most of the most seriously affected residents as determined by the government's own Standards Organisation in its Australian Standard 2021. To date, \$300 million has been spent on insulation and while many residents have been forced to carry out their own noise insulation at personal expense, there are still additional justifiable claims for further insulation yet to be made. The total cost of the insulation program today (about 97% short of the politically promised program) amounts to more than it cost to build the third runway in the first place. This has been neither prudent nor efficient.

4 Report of the Senate Select Committee on Aircraft Noise in Sydney, AGPS, Nov 1995.

5 P. Fitzgerald "The Sydney Airport Fiasco" - Hale & Iremonger 1998, Chapter 7

2.3. The Long Term Operating Plan (LTOP)

A secondary consequence of the third runway fiasco was the introduction in December 1996 of the so-called LTOP. The LTOP was a belated response to the environmental crisis created by the Third Runway. It paid lip service to the need for environmental friendliness in airport flight path planning but, in doing so, and by the political means employed in its introduction, it has itself created an environmental and safety nightmare for the greater Sydney Region.

Whilst some Sydney residents appear happy with the outcomes of the LTOP, aircraft pollution and noise impacts have been introduced to new areas of Sydney for the very first time. A further menacing problem is the heightened possibility of crash risk caused by complex northerly departures interfering in certain circumstances with the paths of overflying arrival aircraft. This imposes an increased crash risk on densely populated areas.

Furthermore the LTOP has already been the subject of two major Federal Court challenges owing to the fact that it was introduced without any Environmental Impact Study. Government's claims to having consulted the people of Sydney, including those most recently affected by aircraft noise in relation to LTOP's introduction, is a well-acknowledged 'charade'.

2.4. Aircraft Movements & Noise Sharing at KSA

Figure 1 presents the distributions of aircraft movements over suburbs in the vicinity of Sydney Airport. It summarises the changes that the Governments have made over the past couple of years in re-distributing flight movements across Sydney.

'A' represents the historical distribution prior to 1993 and 'B' represents the domination of the north-south axis under the Parallel Operations implemented with the introduction of the third runway in 1995. 'C' indicates what has been achieved this year under LTOP while 'D' indicates the current objective as stated in the LTOP report. It is apparent that current distribution (C & D) have reduced aircraft movements over the north from 1995 levels and while movements over the east and west are approximately at levels prior to parallel runways (or will be upon full implementation of LTOP), the south is now bearing more than ever.

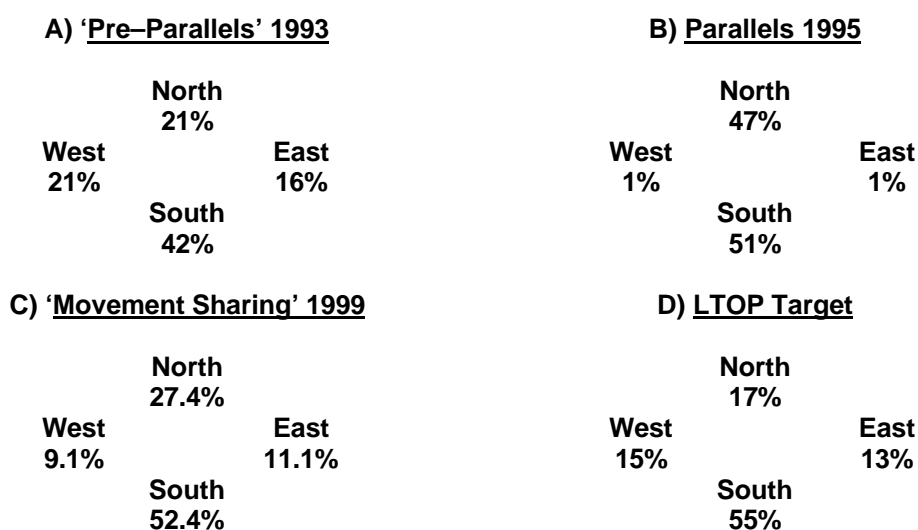


Figure 1⁶ Comparison of Movements by Airservices Australia⁷

⁶ Airservices Australia statistics.

To the novice, the figures would indicate that a 'fair' distribution of noise has now been achieved under LTOP, particularly when compared to a generally agreed 'unfair' distribution of noise under parallel operations. While the noise is now distributed over a wider number of people it is a long way from a 'fair and equitable' distribution.

The 'movement figures' above are misleading for the following reasons:

1. The definition of 'North' includes the entire North Shore as well as traditional 'north-west' suburbs of Sydney such as Ashfield, Burwood, Croydon and Strathfield through to Parramatta. While most Sydneysiders would consider the latter should be part of the 'west', the definition 'conveniently' used is the bearing of the initial departure direction, not the area of Sydney most affected by the aircraft noise. Thus while figures under 'north' in 'C' and 'D' appear to be reasonable, they hide the fact that the north-west, which traditionally received no movement is now heavily affected. If the 'north-west' were included in the 'west' figures the reduction in percentage of movements the North is receiving would be more apparent.
2. The 'movement figures' do not differentiate between departures and arrivals. Typically departures are louder than arrivals for residents at the same distance from the aircraft track and in addition they affect a much larger number of people. However for residents immediately below arrival aircraft the noise level can actually be louder, and while the noise 'comes' and 'goes' more quickly, the arrival tracks are much more concentrated than departures tracks which can be fanned across a wider area.
3. Finally the 'movement figures' do not differentiate between small and large aircraft and hence the level of noise inflicted. Similarly the figures do not indicate time of day or week that the movement occurs or the degree of 'respite' a particular area might receive.

In summary, the use of 'Movement Percentages by Compass Point' is a totally inadequate method for describing the degree of noise sharing. In addition as illustrated above, it has been used to create the appearance that noise is being shared fairly.

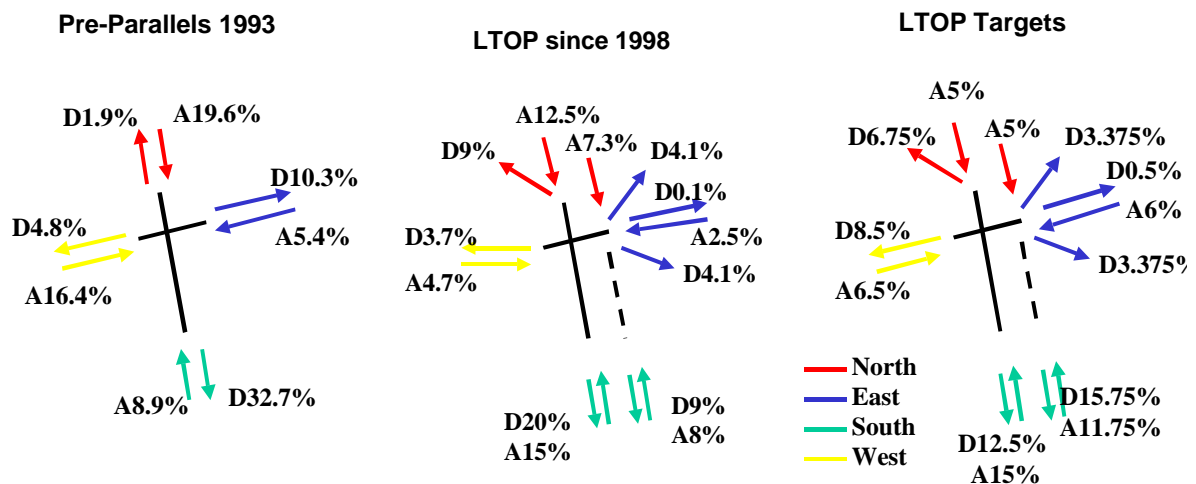


Figure 2 Comparison of Arrival (A) and Departure (D) as a percentage of total movements

While Figure 1 showed total movements, Figure 2 indicates the distribution between arrivals and departures as a percentage of total movements. See Appendix C for source data on LTOP figures. While this does not show flight tracks, it does indicate that the north-east and north-west now receive a significant number of departures with the west receiving significantly fewer arrivals. In addition

departures over water have decreased from 32.7% to 29%. As will be discussed below, SACF Inc believes that significantly more departures can be made over water using SODPROP over-the-water modes.

Figure 3 below is a typical example of how the 'movement figures' hide an unfair distribution of noise over heavily populated areas. Jet aircraft departure tracks under Mode 9 are shown, where departing planes are fanned to the north-west, apparently to avoid flying over the electorate of Bennelong, while planes to the east are kept in tight noise corridors to avoid affecting the electorate of Wentworth (see Figure 3). It is important to note that while there are large areas that receive no jet departures, some areas are affected by concentrated arrival tracks as illustrated on Figure 3 below. Generally arriving aircraft inflict noise on a relatively narrow band under the track although the level of noise can be severe.

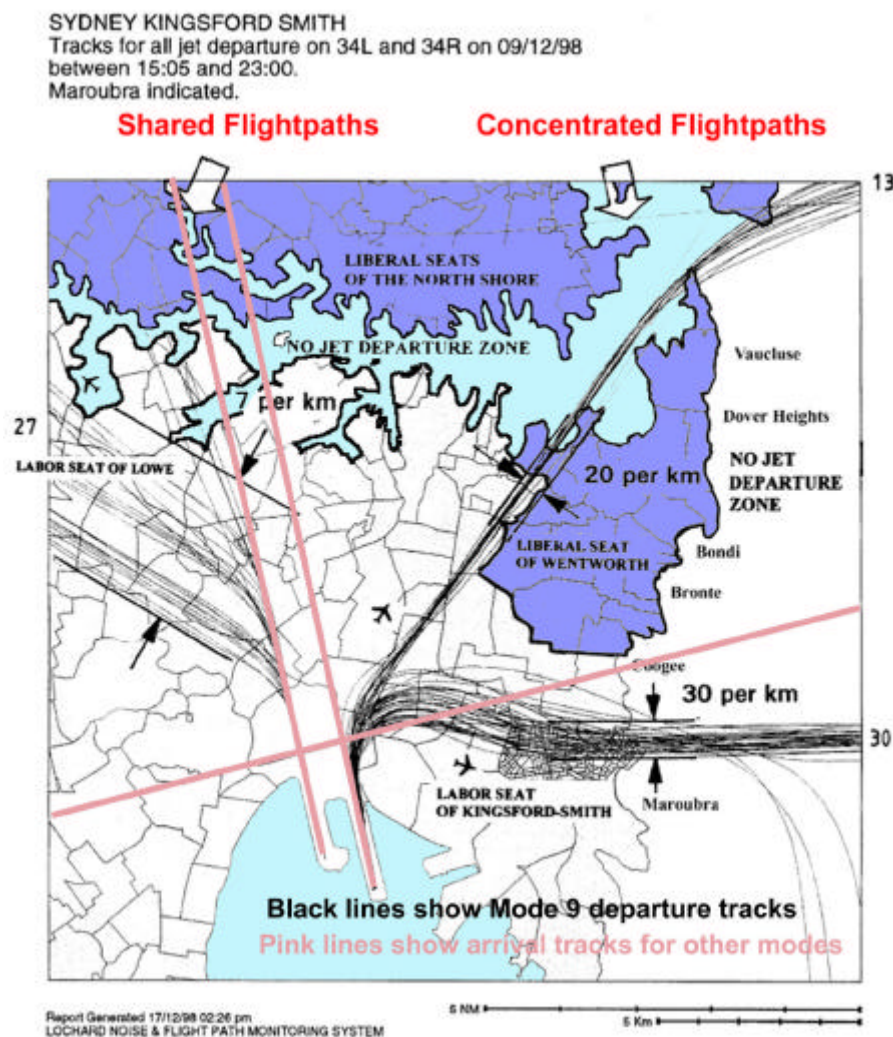


Figure 3 Typical distribution of Jet departure tracks over residential areas under Mode 9 with arrival tracks indicated.

The present Government has failed to address, in any meaningful way, what constitutes a 'fair distribution' of noise and while it is not the purpose of this paper to define what this is, Section 3 below does outlines the steps required to ensure this is achieved in the future.

Residents who find solace in the present distribution of noise should pay attention to the forecast expansion of KSA from now until 2010. Official forecasts for Sydney Airport predict that passenger numbers will double from 21 million now to 42 million and aircraft movements from 270,000 to 500,000 by 2006. This date is the soonest that a second and/or replacement major Sydney Airport could come on stream. This capacity is well beyond the capacity of LTOP noise sharing modes and

will result in a reversion to parallel runways, and a further worsening of the environmental impact of KSA upon the residents of Sydney with resultant political and community furore.

2.5. Noise Insulation & Air Pollution

The Sydney Aircraft Noise Insulation Project (SANIC) has proven an expensive and questionable solution to the long term operating problems associated with the expansion of KSA. It is slower and more expensive than first envisioned. It is moreover apparent that rather than dealing effectively with multi-dimensional problems, this is simply a short-term pragmatic "stop-gap" solution. In the short term it has hoped to reduce the number of complaints and reduce the pool of potential "trouble makers".

Moreover the original promise by government to insulate up to 14,000 seriously affected homes in the 20 ANEF area was broken and in fact only about 3 percent of the seriously affected homes have been insulated at enormous government and individual cost. The insulation program has not kept pace with the increasing numbers of houses seriously and moderately affected by aircraft noise and pollution. The Badgerys Creek scenario is one of the last available panaceas from desperate governments pressured by both the business community and the aviation industry to solve the problems at KSA.

By ignoring the facts of noise and air pollution, by attempting to mask real effects, by reducing the problem to the level of social awareness and response in the form of statistical frequency charts, the government attempts to evade responsibility to this generation and to future generations.

The social consequences of underestimating the effects of an airport situated on the edge of a highly populated urban centre are severe and potentially disastrous. And the effects of maladministration of government may be variously catalogued under: health, health costs, risk, educational costs, loss of social amenity, reduced property values, town planning crisis, class conflict, civil disobedience, loss of faith in rational political processes, undermining of the two-party system, etc. In conclusion, it is far preferable to fix the problem of noise at its origin, rather than attempt short-term ameliorations.

2.6. Absence of a Regulatory Regime Protecting the Human Environment

An examination of the statutes and regulations governing the environmental effects of aircraft shows that there are no present protective measures governing the maximum noise levels permissible at ground level from flying aircraft and the dispersional contribution to air pollution from aircraft once an aircraft leaves the ground. While the Air Navigation Act (1920), through its Regulations, controls the certification standards for aircraft engines running on the tarmac, it does not address the issue of noise levels reaching ground level once an aircraft is airborne. Similarly, the Airservices Act (1996) pays lip service to Airservices Australia carrying out activities to protect "the environment" from the operation of Commonwealth Jurisdiction Aircraft [s.8(1) (d)] and that in performing its functions [s.9(1)] it must act in a manner that ensures that, as far as is practicable, the environment is protected from the effects of (and the effects associated with) the operation and use of aircraft [s.9(2)]. However there are no regulations under this Act which specify what the maximum permissible environmental effects must be.

Elsewhere, under the National Environmental Protection Measures Act (1998) Cth., cooperative national environmental protection measures (NEPM's) agreed with the States are expressly excluded in so far as they purport to cover environmental effects of flying aircraft and this exemption is stated to be in the so-called 'national interest'.

It would appear that the beleaguered citizens of the airport-affected cities of Australia are entitled to ask why their safety and environmental interests are not 'national interests'. When Senator Campbell (WA), proponent of the NEPM Bill in its second reading before the Senate, stated that "*noise and other emissions from aircraft in flight were considered to be effectively regulated by the Air Navigation (Aircraft Noise) and the Air Navigation (Aircraft Engine Emissions) Regulations*", he was

either deluded or misleading the Senate in his representation of their protective effects. See Appendix E for further discussion.

2.7. Bankstown Airport Movements and Conflicts

Bankstown Airport is only 18 km as the crow flies from KSA, yet its 4-500,000 aircraft movements per annum (405,489 in 1997) make it the fifth busiest airport in the world. There are three tiers of aircraft movements in Bankstown airspace:

- (a) Circuit Training Aircraft at around 1000 ft;
- (b) Departing and arriving aircraft;
- (c) Crossing Jet Aircraft traffic from KSA with arrivals at 5-7000ft and departures at 2-3000ft (the position of Bankstown airport is marked with a "B" in Figure 5 Section 3.2 below).

A major concern of Bankstown residents is the perpetual noise from low-flying training aircraft doing circuits around the northern and southern sides of the airport. Moreover since the re-opening of the east-west runway at KSA, departing jets (up to B767 in size) flying west and north-west from KSA now frequently cross Bankstown airspace at heights as low as 2-3000 ft, causing significant noise disturbance to residents on the ground. These consist of LTOP Mode 7 and 13 departures and Mode 9 departures bending round to head for south-west destinations. Mode 8, when introduced will cause further aggravation in the Bankstown area. In addition conflict with Bankstown airspace is one of the reasons for the delayed introduction of Mode 8; as well as the improved 2000 ft turn over Kingsgrove.

The reason why aggravation is caused at Bankstown by aircraft from KSA is that they are travelling too low to avoid a less than 70-dB(A) noise impact on the ground; and the reason that they are flying this low at 18 km from KSA is the existence of an artificial ceiling at 5000 ft to allow for southerly flowing arrivals to pass at a higher altitude (see Figure 5 below). Why this arrivals mesh has to be so low, and why it has to cover such a large area of residential Sydney is a puzzle to the members of SACF Inc.

The interaction of the airspace requirements for Bankstown and KSA is clear from the region around "B" in Figure 5 below. It is difficult to obtain an accurate impression of the altitudes of aircraft arriving and departing at Bankstown aerodrome because many of these do not have "Radar Transponders" which are necessary for air-traffic control at KSA to be able to pin-point their position.

As discussed in Section 3.2 below in regard to Mode 9, SACF Inc believes that such airspace interactions are inherently dangerous. It is far too easy for jet aircraft trying to gain altitude after take-off, to attempt to gain their natural cruising altitude quickly, and thus interfere with the 'spaghetti-like' arrival tracks which currently exists above 6000ft (Figure 5). Moreover, the intersection of flight tracks of unpressurised arrivals and departures in the Bankstown region with traffic from KSA creates an additional potential flying hazard, which is worsened by the absence of transponders on many Bankstown aircraft.

2.8. The Illusion of Badgerys Creek

In the Third Runway aftermath the position of both major political parties is that they support the Sydney West Airport proposal at Badgerys Creek as a panacea for the environmental disease of KSA. The Badgerys Creek proposal has already been the subject of more than three Environmental Impact Statements. In their simple-minded way, the politicians appear to think that the creation of yet another airport in the Sydney basin will solve all the problems caused by the expanding nature of KSA. At least, that is what they tell the public it will do. The simple truth appears to be rather different from what the politicians and some of their supporting bureaucrats would have the public believe. This issue is taken up in greater detail later in this position paper. Some aspects of the present environmental problems at KSA have been discussed above, preparatory to a proposal which it is

hoped will create some short term (the emphasis is being on "short") improvements to the abuse of residents in the most populous regions around KSA.

2.9. The Ultimate Solution

It is the position of Sydney Airport Community Forum Incorporated that the only realistic solution to the problems of KSA is to build a new primary and/or replacement airport outside the Sydney basin airshed. In particular an airport at Badgerys Creek is seen as an interim remedy that will only speed the reversion of KSA to parallel runway operations thus facilitating its further expansion through increased use of larger jets at KSA.

The problem is not finding where to put a new airport from the perspective of where jobs are most needed, or which sectional commercial interests are to benefit most from the creation of development opportunities, it must be to produce an outcome which provides an optimum environmental benefit to the people of Sydney. Further short-term measures that do not resolve the environmental problem of KSA once and for all will not do. KSA has become a serious environmental problem, not a political one, and the best solution is to downgrade it and build a new primary and/or replacement airport outside the Sydney basin airshed.

Motivating people to choose a particular site (second or replacement airport) out of *fear* of increased noise or pollution is not the answer to the problem of KSA and should not be used by politicians as a form of blackmail against their constituents. Rather than resorting to blackmail, the resolution lies in clear thinking rational debate with an early recognition that the problem is environmental and that the answer lies in addressing this complex problem in a holistic rather than a piecemeal way.

Recommendation: Whilst the site selection process is being conducted, a thorough reorganisation of the Long Term Operating Plan (LTOP) for Kingsford Smith Airport should be instituted in the interest of safety and proper noise sharing.

3. PROPOSED SOLUTIONS FOR KSA IN THE SHORT TERM

The purpose of this section is not to apportion blame for the current situation, but to suggest how the current position at KSA can be improved until the new replacement airport is constructed. In no manner is it intended to sanction any expansion of KSA.

SACF Inc's solutions for problems associated with the current operation of KSA are dealt with in terms of (a) to (h) below. It is useful to note that (a), (c) and (d) reflect the core 'noise sharing' goals proposed within the LTOP report.

- (a) Maximisation of Noise over Water using SODPROPS;
- (b) Safety and Airspace Management Considerations;
- (c) Maximisation of Noise over Non-residential Areas
- (d) Truly Equitable sharing of Noise over Residential Areas;
- (e) Representation on the Government Community Forum (SACF) Proportional to Affection;
- (f) Regulation Of Environmental Impacts From Flying Aircraft;
- (g) Noise Compensation and
- (h) Privatisation.

Unfortunately the implementation of LTOP has failed to deliver on these principles and as discussed in Section 3.3 below, it is arguable as to whether it was ever Government policy to implement the principles.

3.1. Maximisation of Noise over Water using SODPROPS

There is now urgent need to increase what Airservices Australia call Simultaneous Opposite Direction Parallel Runway Operations (SODPROPS). Under the SODPROPS modes, most arrival and departure aircraft access the airport over Botany Bay thus minimising flights over the heavily populated areas to the north, east & west of the airport. The SODPROPS target within LTOP is up to 10% of all movements and although a capacity of 30 movements per hour was achieved in early 1998, the use of SODPROPS since has averaged less than 2%, a figure which would suggest that the mode has been abandoned. SACF Inc believes that with the suggested changes, SODPROPS could deliver well in excess of the 10% target, thereby significantly reducing the number of people affected by noise.

Mode 4 (see Figure 4) is the official LTOP SODPROPS mode where aircraft other than long-haul jets take off to the south over Botany Bay from the shorter third runway while aircraft land from the south on the main runway. Long haul jets (2-3 per hour) take off south from the main runway against the flow of other landing aircraft. Mode 4 is inherently flawed because as soon as air traffic controllers have a single 'long-haul' take off, they are forced to turn the airport around by stalling arrivals on the main runway to allow for a single 'long-haul' take-off on the main runway over the Bay. The complexity of this operation encourages controllers to opt for 'non SODPROPS' modes such as Mode 9 or 10 that inflict more noise on densely populated areas (see also Appendix D).

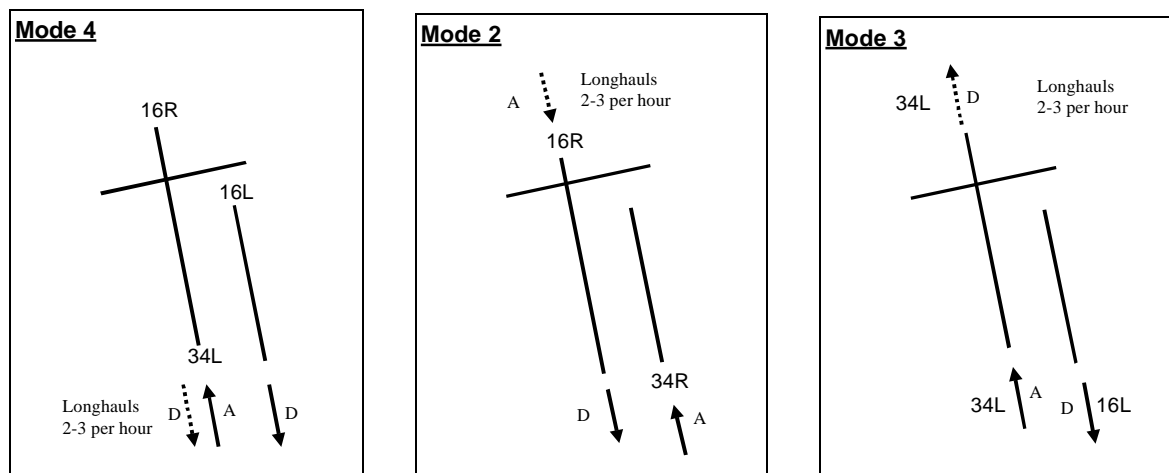


Figure 4 Illustration of SODPROPS Modes showing Arrival (A) & Departure (D) directions as well as occasional long-hauls (dashed).

The LTOP reports note that if Mode 4 is not found to work satisfactorily then Mode 2 (Figure 4) should be introduced. Mode 2 involves 'same-direction' landings and departures on the main runway with a few (2-3/hour) long-haul jets arriving from the north. The mode is called 'same-direction' because, unlike Mode 4, both landings and departures on the main runway employ the same direction of traffic flow.

A minor difficulty with Mode 2 is the need to avoid overflying houses at Wanda and North Cronulla. An appropriate separation between arrival and departure aircraft can be achieved if departing aircraft first 'bank' right at 15 degrees at 500 feet to gain height over Towra Point and then a 'bank' left at 2–3000 feet. Separation is also facilitated by the fact that departing jets climb more steeply than the angle of decent of arriving aircraft.

There should be no reason why aircraft cannot 'bank' as described above, as the current practice on northerly departures on 34R is for a 45degree 'bank' over Woollahra and an unbelievable 115 degree 'bank' over Maroubra and Coogee. The required 'bankings' and correction 'bankings' would be in the

order of only 15 degrees and certainly no more than 30 degrees. Moreover, as shown by (Appendix D, Figure D-2) banking should not be necessary to avoid Cronulla, as a 15 degree diversion of the departure track of the main north-south runway passes over uninhabited land.

The additional benefit of Mode 2 is that on landing it bypasses the oil refinery, flying over uninhabited land to the immediate south and west of the refinery, whereas Mode 4 puts planes directly over the refinery on final approach.

With Mode 2, planes can only land on the "third" runway in southerly winds when it is not wet [LTOPFR p.71]⁸. A SODPROPS alternative to Mode 2 is its reciprocal Mode 3 (Figure 4), which effectively overcomes this problem in moderate southerly to northerly winds by having landings on the main runway with a few long hauls (2-3/hour) departing north of the main runway. In addition, under the LTOP Mode 3 Kurnell is minimally affected [LTOPFR p.80].

3.1.1. Pilot Discretion

One of the issues relating to acceptance of Modes 2 and 3, is the fear that pilots will request permission to land or take-off over the north to a greater extent than the 2 to 3 per hour proposed in the LTOP report. Pilots are responsible for the safety of their passengers and as such they have a need to request, on safety grounds, an alternate runway to the assigned or 'duty runway' (typically they request the main runway). However experience to date of other noise sharing modes indicate that pilots request 'non-duty' runways (the main runway) on a regular basis.

While safety cannot be compromised, effective use of SODPROPS (and other noise sharing modes) can only be achieved by ensuring that non-duty runway requests are ONLY made for safety reasons. One method of solving this problem would be to require airlines to lodge a report each time a 'non-duty' runway was requested, outlining the reasons for the request. Where airlines repeatedly request 'non-duty' runways by failing to address the underlying reasons for the requests, additional fees could be charged by Airservices Australia.

3.1.2. SODPROPS Availability

It is stated in the LTOP reports that the three SODPROPS modes would only be available 45% of the time based on meteorological conditions but can accommodate up to 56 movements per hour, assuming a maximum 5 knot downwind condition. However given the advice of the Head of Sydney Operations (Airservices Australia), at the February 1999 SACF meeting, that the 5 knot downwind condition has now been lifted (see Appendix D), SODPROPS modes should be available more often, with a possible maximum availability of up to 67%. It is important to note that the 10 knot downwind condition has been in operation during the Curfew (Mode 1) for a long period and thus it is legitimate to ask why it has not been applied to SODPROPS modes to date.

3.1.3. SODPROPS Capacity

It is often argued by Airservices Australia that SODPROPS is only suitable for times of low traffic levels. However, Mode 4 with its contra-directional⁹ runway allocation has achieved over 40 movements/hour, and the Head of Sydney Operations (Airservices Australia) advised the March 1998 SACF meeting that if long-hauls could use the long runway for take-offs, then the capacity would reach 48 movements per hour. The number of jet movements at KSA rarely exceeds 40/hour, so it would be possible in all quiet times to have all jets using Modes 2, 3 or 4. In addition it has been proposed¹⁰ that if propeller aircraft were to use the east-west runway, with jets using Mode 2 and given the reduction of the downwind condition (see Section 3.1.2), a capacity of up to 74 movements/hr

8 There were two "LTOP Reports" produced by Airservices Australia in December 1996, a Full Report [LTOPFR] and a Summary Report [LTOPSR].

9 Runway allocation is "contra-directional" in Mode 4 because long-haul jet departures over the bay must displace general arrivals over the Bay whenever a long-haul jet is scheduled to depart.

10 Tony Williams, Independent Noise Consultant.

could be achieved, which is equivalent to Mode 9.

Recommendation: There is an overwhelming case for the re-affirmation of Simultaneous Opposite Direction Parallel Runway Operations (SODPROPS) as the default, preferred mode of operation so that maximum use can be made of airspace over water in Botany Bay. Associated with this, is a need to ensure that pilot requests for 'non-duty' runways are only made on safety grounds. Modes 2 and 3 should immediately be made official Modes of LTOP and not excluded for political reasons.

3.2. Safety and Airspace Management Considerations

Sydney has an enviable record of air safety but even with world's best practice methods now coming on stream there is the greater statistical chance of a crash under the current modes of operation.

Under Mode 9, departing aircraft take-off to the north-west and east and are restricted to a ceiling of approximately 5000 feet. At the same time and over the same area, arriving aircraft are traversing Sydney from the north, west and east and are restricted to stay above approximately 6000 feet, giving a 1000 feet separation between arrivals and departures. This simultaneous traverse creates a 'spaghetti-like' flight path configuration especially over the north-west and to some extent over the east during the operation of Mode 9 as shown in Figure 5 below. In an effort to minimise an inherently unsafe 'criss-cross' of arrival and departing aircraft under Mode 9, departing pilots stay well below the 5000 feet ceiling (typically 2500 to 3500 feet). In doing so they inflict a greater level of noise over densely populated areas of Sydney all the way from KSA to Kuringai, via Parramatta and Penrith. Evidence is also available showing that large departing jets are flying at 3-3500 feet over Bankstown and Horsley Park. A similar situation applies in the east.

In essence, Sydney's airspace has not been planned for the present practice of taking off north over residential areas under Mode 9 as described above. Because of this stupidity there is both an unacceptable crash risk and unnecessary noise over a vast expanse of residential areas.

The overriding noise minimisation objective should be to get departures to climb as high as possible as soon as possible after take-off. SACF Inc believes the appropriate solution to this problem is to redesign the arrival tracks to ensure that they do not interfere with the departure tracks. Of course increased use of SODPROPS modes such as Modes 2 and 3 would reduce the problem further.

SYDNEY KINGSFORD SMITH

Tracks for all aircraft on 03/04/98 between 06:00 and 13:00.
Ashfield indicated.

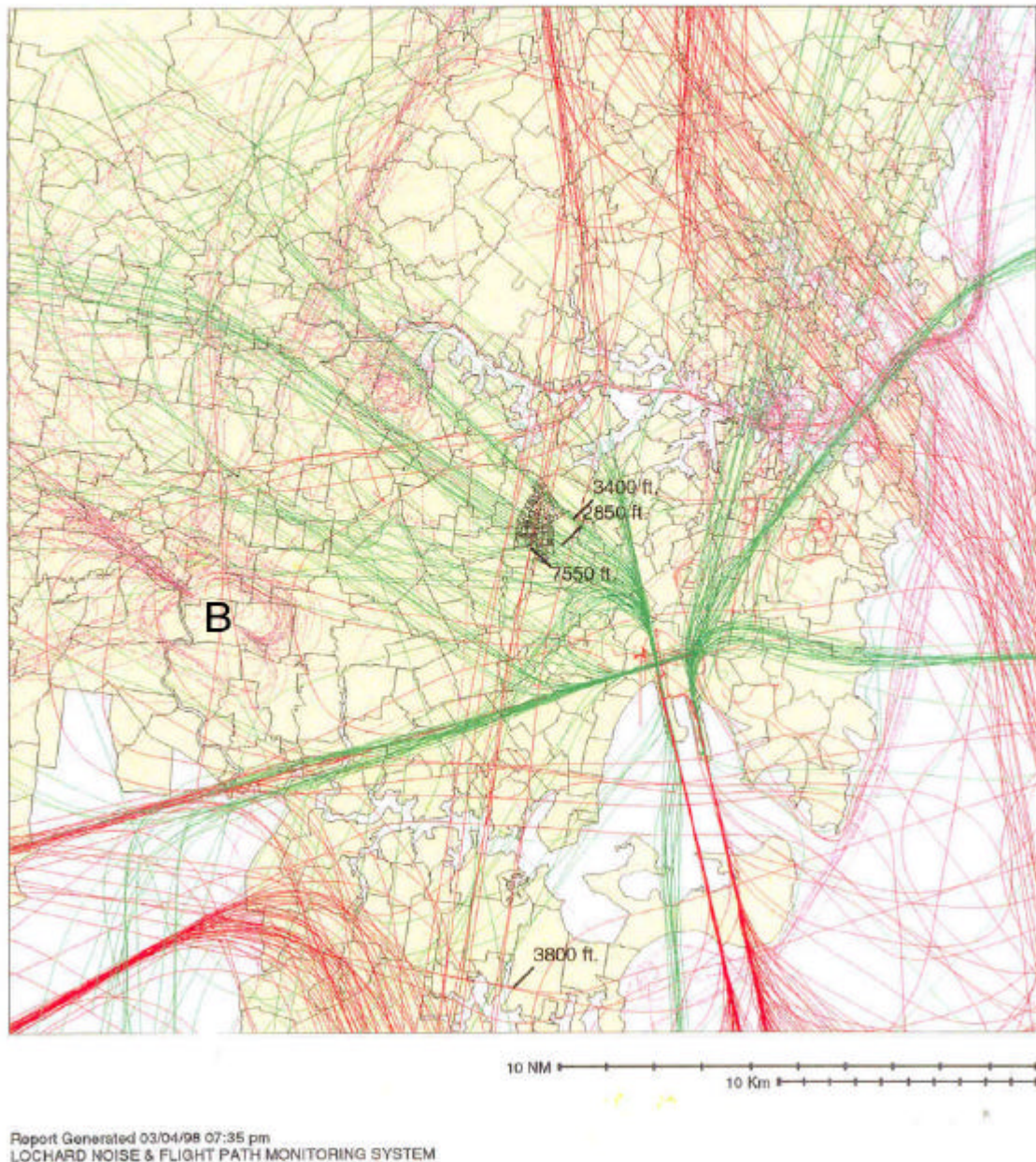


Figure 5 Typical example of dangerous criss-crossing of arrival (red) & departure (green) tracks

Airservices Australia has already admitted that Bankstown and KSA are too close together to enable comfortable implementation of noise sharing modes at KSA (ie. under the LTOP). The addition of the proposed Badgerys Creek airport would further complicate this¹¹.

If the arrivals were instead tracked widely out to sea in a wide semi-circle for the southern approach to

¹¹ See Summary Draft PPK EIS for Badgerys Creek 1997; Kinhill Stearnes Draft EIS 1985.

KSA, then all but the largest departing jets could take off more steeply and be at 7-10,000 feet at a six km radius, as they are during the operation of Mode 10 off Cronulla. Moreover, it is more efficient for long distance jets to gain the stratosphere as quickly as possible because the air resistance factor there is less and fuel economy is increased. It is simple stupidity for so much of residential Sydney to be exposed to greater than 70dB(A) levels of departing jet noise when a sensible rearrangement of Sydney's airspace would ensure that this problem could be avoided.

In summary, if the government and aviation authorities had deliberately set out to devise a plan to decrease noise over the unpopulated Wanda sand-hills, increase aircraft noise over heavily populated areas, provide a basis for politically inspired flight paths and significantly increased the risks of aircraft disaster, it would be difficult to conceive a plan more successful than LTOP.

Recommendation: The Government and aviation industry need to rethink Sydney's airports arrival and departure tracks (including KSA and Bankstown) to reduce dangerous overflying practices, which are statistically more likely to give rise to an air disaster over densely populated areas of Sydney than over the extensive surrounding water areas.

3.3. Maximisation of Noise over Non-residential Areas

There are options to use non-residential land for overflying aircraft to reduce noise over populated areas. Three Eastern Suburbs Councils have formally requested adjustment of tracks associated with runway 34R to maximise use of airport land and adjoining non-residential areas before planes turn over populated residential areas. The only safety issue was the requirement to have 15° separation from the other runway, which was supported by the councils in their submission. This would affect no group outside the Eastern Suburbs but has been refused, even though it would assist in achieving the stated noise minimisation goals of LTOP.

3.4. Truly Equitable Sharing of Noise over Residential Areas

To the extent that some noise over residential areas is unavoidable, it should be shared fairly without regard for the voting habits and party affiliations of those affected. While the LTOP plan [Proponent's Statement¹² P.3-3] states that "the noise be shared as equitably as practicable between communities", it is arguable as to whether the government really ever intended to achieve this outcome. The Government's real objective is perhaps outlined in the then Minister's (Robert Hill) 'Determination and Recommendations' under the Environment Protection (Impact of Proposals) ACT 1974. In this document¹³, signed by Hill, the policy is explained as "new operating procedures designed to *more equitably* share noise generated by Sydney Airport". While many assume that LTOP and the Proponents Statement represent Government policy, their real commitment was only to share the noise '*more equitably*' than before. As will be shown below, this is precisely what has happened and is a far cry from a truly equitable sharing of the unavoidable noise.

While recognising the merit of distributing noise and flights paths over suburbs based on principles of justice and equity, without regard for voting habits and party affiliations (see Section 2.4 above), there are some fundamental limits that should be addressed.

Although some would argue, and with merit, that "newly affected suburbs" are negatively impacted by increasing levels of noise, SACF Inc. asserts that no suburb should be subjected to noise levels above 20 ANEF or to repetitive events greater than 70 dB(A). Any proposed redistribution of flight paths should aim to reduce the new levels of affectation, particularly for communities in established

¹² Sydney Airport Long Term Operating Plan, Proponent's Statement, Dept of Transport & regional development, June 1997.

¹³ "Administrative Procedures, Determination and Recommendations in Regard to Proposal by the Department of Transport and Regional Development to put in place, on a Long Term Basis, New Operating Procedures for Sydney (Kingsford Smith) Airport, 22 July 1997.

residential areas, which have been rendered technically uninhabitable in terms of noise exposure despite the noise insulation program.

In addition, arrival flight paths (see Figure 3 above) are generally aligned with the direction of the runway for operational reasons and this means that noise generated from arrival aircraft cannot, in general, be fanned as is done for departures. The LTOP did propose a form of 'fanning' of arrival aircraft over the North under the so called 'Trident System', however this has not yet been implemented. Such a system would bring relief to those areas in the northern suburbs subjected to arrival aircraft noise. Where residents are subject to significant arrival noise by virtue of flightpath concentration, they should not also be subjected to significant departure noise wherever possible. Ultimately however, unavoidable noise over residential areas needs to be fairly shared using objective measures as discussed below.

From the Australian Standard 2021 it is clear that even in the 20 to 25 ANEF noise zone, residential occupation is, at best, conditional. Furthermore, no residents should be exposed to over 25 ANEF, as identified by the 1982 NAL¹⁴ survey. Until such time as a new or replacement airport is built, the noise needs to be shared equitably, within limits, and not manipulated for political expediency or corporate profit. SACF Inc. argues, moreover, that protective legislation needs to be put in place prior to any proposed sale of the airport. This is a minimal government responsibility. There is also an argument for restricting the number of 70dB(A) incidents per hour that a residential area should endure [LTOPSR p.92]. An appropriate measure of limitation should be based on appropriate research and be in line with State Land Use Pollution and Noise Act requirements.

3.4.1. Use of Independent and Objective Measures

There needs to be a commitment to use independent and objective measures to achieve the stated goals of LTOP as listed in sections (a), (c) and (d) in section '3' above. Only quantitative methods will ensure a proper minimising of impact and sharing of unavoidable effects. Presently there is no methodology employed in decision making, other than the composition of the government appointed SACF, introducing clear bias. Given the long history of obvious manipulation of flightpaths by both major parties (as evident in Figure 3 above), the community groups wish to see a proper methodology developed and to elevate the decision-making process above partisan political issues.

An Australian Standard (AS 2021) specifies the minimum acceptable exposure to aircraft noise in a habitable residential dwelling as being 50 dB(A) in a typical bedroom. Further it specifies a standard of aircraft noise exposure forecasting called the "Australian Noise Exposure Forecast" (or ANEF) which was developed by the National Acoustic Laboratories (NAL) in 1982. Under the present regime the ANEF criteria in this Australian Standard was exceeded after opening of the third runway for about 14,000 homes, yet compensation and/or promised noise insulation has been provided to only about 400 residences to-date. Moreover in the Senate inquiry into the Third Runway EIS, after the Third Runway was opened, the Standard was severely criticised as being insufficiently protective of residents affected by aircraft noise and the Inquiry recommended that the government fund NAL to produce a more up-to-date assessment of noise impacts⁴. Funding has never been provided for this work.

Recommendation: Evidence is presented which shows that the LTOP principle of 'Fair and Equitable' sharing of aircraft noise has not been implemented. In particular, there has been a decrease in noise over unpopulated areas, increased noise over heavily populated areas and there appears to be evidence of politically determined flight paths. It is recommended that the Government put aside voting habits and party affiliations and use quantitative methods to implement a truly 'equitable sharing' of the aircraft noise which cannot be sent over unpopulated areas.

¹⁴ National Acoustic Laboratories.

3.5. Representation Proportional to Affection

It is imperative that the representation on the government appointed Sydney Airport Community Forum (government SACF) and the Implementation and Monitoring Committee (IMC) be modified from government appointees to community representatives. All areas affected should have representation proportional to affection (see Appendix F for an example of how this could be objectively achieved), because under the current arrangements many areas that suffer the most noise are not represented. Democracy should prevail, with all areas having an inalienable right to be appropriately represented.

The present north-south axis gerrymander of the Government SACF is unacceptable because some affected areas have multiple representatives, while others have none at all.

Recommendation: Community consultation for validation of airport operating plans should be based on representation proportional to affection and all suburbs affected by aircraft noise should have their say.

3.6. Regulation Of Environmental Impacts From Flying Aircraft

As mentioned in Section 2.6, there is no regulatory regime under which maximum noise and pollution from flying aircraft are regulated on the ground (see Appendix E). This is in stark contrast to State land use laws, developed since the industrial and automobile revolution, which attempts to protect people in both residential areas and in industrial premises from the injurious effects of excessive noise and chemical and/or gaseous pollution.

SACF Inc proposes that it is high time that our parliamentarians (both Federal and State) seriously reviewed their obligations to protect their constituents from the noxious effects of aircraft operation (including crash risk). It is one thing for a parliamentarian to achieve representation for his or her constituents and to enjoy the political power that the position can sometimes confer. However, it is a breach of trust and an abnegation of moral duty for parliamentarians *'en masse'* to exempt their constituents from protection from aircraft impacts in the so-called 'national interest' (see Appendix E).

Recommendation: The Commonwealth Parliament should develop regulations under the Airservices Act [1996] Cth. for the implementation of control over the maximum noise impact of flying aircraft on underlying residential suburbs. Similar consideration should be given to implementation of 'emission dispersion' control from overflying aircraft, taking account of local meteorological conditions.

3.7. Noise Compensation

Once an adequate SODPROPS formula is found it may be necessary to review the position of Kurnell residents.

It is glib to talk in terms of the greater good, but when only one thousand residents will increasingly be affected, compensation of a generous kind and offers of a Government buy out become imperative. It is not the purpose of this paper to specify the exact form of compensation and, at the very least the Constitutional Requirement for property acquisitions and compensation on "just terms" [s.51(xxxi) - Australian Constitution] must be adhered to, but the following could be considered:

1. Government to be generous buyer of last resort at a Sydney-wide average price;
2. A generous once only reimbursement for each property; and
3. Reimbursement for historical financial loss based on the period of residence.

Recommendation: The issue of what is appropriate compensation on “just terms” for loss of amenity due to aircraft impacts should be addressed by a Parliamentary Select Committee and an Airport Impacts (Residential) Compensation Bill should be enacted.

3.8. Privatisation

There needs to be a commitment to not allow privatisation of any Sydney airport, at the minimum until a truly long-term solution is agreed. Under privatisation the commercial imperative for profits would override any environmental considerations, unless there were sufficiently strong government controls.

Recommendation: Privatisation of KSA and Bankstown Airports should not be allowed unless just and equitable solutions to the problems of aircraft noise and pollution have been found for Sydney's residents.

4. PROPOSAL FOR A NEW PRIMARY AND/OR REPLACEMENT AIRPORT

SACF Inc asserts that the construction of a second airport at Badgerys Creek to operate in tandem with KSA will cause an **increase** in the environmental impact of KSA. This is the logical consequence of air-space conflicts between KSA, Bankstown and the proposed new airport at Badgerys Creek. These conflicts will obviously tend to force uni-directional operations at all airports and reduce those flight-path-spreading opportunities at KSA, which assist in the implementation of effective noise sharing. It will also make the already hazardous ‘spaghetti-fashion’ arrivals at KSA even more dangerous and restrictive for aircraft departing over land, than it is at present.

While it may directly service small niche markets, a second airport at Badgerys Creek would inevitably be used primarily for peak load shedding to facilitate expansion of the mainstream passenger and freight operations at the primary (KSA) site. Experience at all other comparable cities clearly shows that airline operators are willing to endure delays, costs and charges and other inconveniences for the opportunity to raise load factors that are only available by operating out of a primary field. The reasons why this is the case are clearly set out in the Second Sydney Airport Site Selection Program Draft EIS (1985), the Proposed Third Runway Sydney (Kingsford Smith) Aircraft Draft EIS (1990), and in the Draft Environment and Impact Statement Second Sydney Airport Proposal (1997). All past and present statements that a secondary airport will alleviate the impact of operations at KSA are void.

It is proposed that the new primary international and domestic Airport be situated so that in the future it could become a replacement airport to allow unlimited use for large jet aircraft on a round the clock basis. To do less would be to allow people with the most short-term interests to control Sydney's long-term future. We cannot afford to make the air-quality mistakes made at New York, London and Los Angeles, but rather solve this problem in the manner already achieved at Washington DC, Munich, Hong Kong and Oslo. Also Athens and Berlin are in the process of moving their primary airports outside their respective basins. A decision for the Western Sydney Airport at Badgerys Creek will lock in a ‘three airport system’ within our own highly restricted basin environment. That means at least three major noise footprints (including Bankstown), at least three major sources of air pollution, a major new source of road traffic shuttling between the three airports and all this happening inside the Sydney Basin Air-Shed.

4.1. Criteria for a New Primary and/or Replacement Airport

The following discussion and recommendation should be regarded as a test platform for the elaboration of practical designs and for their assessment. That is, it may be taken as a dynamic model against which **all** proposed sites may be developed and should be compared.

The airfield site must be unlimited in potential capacity to service the Sydney region for all scheduled airline operations. There must be ample space for the development of the services and commercial activities that will associate themselves with the airport. Some of this will occur on the airport site or adjacent to it, some will most suitably be developed around the nearest road/rail nexus and some will establish in nearby townships. Coordinated planning at the municipal and state level will be essential.

4.1.1. Air Pollution

Airports rank as high as smokestack industries such as large petro chemical refineries and steel mills as point sources of hydrocarbon emissions¹⁵. Sydney's major airport has the potential to produce 5–10% of the Sydney basin air pollution and up to 40% on still days in the region within 20 sq km from the airport¹⁶. The siting of a new airport should be in such a position that emissions do not enter the Sydney Basin i.e. outside the Sydney basin airshed.

4.1.2. Human Impact & Environmental Factors

It is our strong view that a full evaluation of the new site will find that the human impact and environmental factors will not be so severe that they cannot be overcome within a reasonable budget. By overcome we mean a combination of appropriate measures to ameliorate, indemnify, replace and compensate for all losses to those affected by negative impacts. Clearly the site so chosen will contain the minimum number of people. We also propose that those individuals, firms and communities, so affected by the new airport, be given some form of priority to the regional economic benefits of the airport development which it would bring.

4.1.3. Continuous Operation

Provided the site chosen does not cause deprivation of sleep to any residents, the new airport should run 24 hours per day with no curfew. Airline operations in the economy of the vibrant Sydney region should ideally not be constrained by curfews. In this manner the tourist and freight potential and hence airline profits could be legitimately maximised with flow on effects to the wider economy.

4.1.4. Surface Transport

This is crucial to the project. Acceptable surface travel time for passengers and freight handlers is an important objective. Good road and rail access must be available or able to be upgraded to meet the needs of the new airport and associated development. If airport-specific road traffic pollution, which is already a severe problem in the Sydney region is to be reduced, the site should be in the corridor of any future Very Fast Train (VFT) proposal. Viability of a VFT would be increased substantially if it links Sydney to the airport site, especially if the Government were to pay a shadow toll for the patrons using the VFT to travel to and from the airport. Also a spin-off of high-speed travel to Canberra and Melbourne is the promotion of much needed development in the regions beyond the airport.

While the synergy associated with locating the airport on the Sydney-Canberra VFT route is significant, it is SACF Inc's view that fast rail access just to a medium distance airport such as Wilton could be justified on its own.

4.1.5. Elevated Tableland or otherwise Environmentally Acceptable Position

The site should be situated on an elevated tableland type position, preferably not in a basin or otherwise environmentally constrained position. This is elementary geography. The elevated position provides relief from the noise contours in the footprint by virtue of its position if for no other reason; but elevation will also provide additional air dispersion of gaseous pollution from the site.

¹⁵ J. Stenzel, et al "Flying off Course", Natural Resources Defence Council Inc., New York, NY, October 1996.

¹⁶ P. Fitzgerald, "The Sydney Airport Fiasco", Hale & Iremonger, Sydney p. 92.

4.1.6. Useability of Airport

The new airport should be sited in a position that is accessible to the majority of the population. The temptation should be resisted to site an airport far enough away to be out of sight and hearing, but in fact so far away that few people and airline operators will use it. A number of more distant sites have been suggested, but even with new very fast train technology these sites may actually increase the movements at KSA. This is particularly so if regional airlines were to move more international passengers to Sydney. The international experience of the Lyons Satolas airport 300 km south of Paris has not caused any diminution in the two Paris airports where airport movements have increased. The cost of travel to the airport should be minimal with clear evidence of no disincentive to travel.

4.1.7. Minimal Disruption to Aircraft and Aviation Industries

It is generally recognised that KSA is directly responsible for the employment of about 30,000 people. It is equally recognised that indirectly it is responsible for a similar additional number. Clearly those people who derive their livelihood from the operations at KSA have a right to see minimal disruption to their employment or business. Provided a proper site is chosen and new technology high-speed rail is installed the disruption to aircraft industry workers can be minimised. In all likelihood employment prospects can be enhanced, particularly for those in employment-scarce parts of Sydney and Wollongong.

4.1.8. Availability of Basic Services and Fuel Installation

The new site should be accessible for the installation of fuel pipelines to a port facility without large amounts of aviation fuel being transported by rail or road tanker with the increased chance of fire or fuel explosion resulting from an accident. Likewise the new site should be in the general vicinity of a natural gas pipeline and an electricity grid; but not so as to compromise infrastructure, residential and passenger safety in a airliner crash scenario, as is the case with Badgerys.

4.1.9. Airspace Management

Ideally there should be no airspace conflicts with any of the nearest neighbouring airports. This is to permit maximum altitude clearance by departing jets so as to minimise environmental impacts at ground level. This would not be the case with Badgerys Creek, which would impact on the airspace of both Bankstown and KSA.

4.1.10. Runway Requirements for New Aircraft Technology

It is envisaged that the new generation of jets to be commercially available by 2003 will carry up to 850 people. The existing runways at KSA cannot be cost-effectively upgraded to take the higher wheel loadings. The runway and taxiway separations at KSA are also not suitable for the wider wingspans of such new generation jets. New runways will be required in any event to handle Sydney's international air traffic requirements into the next century. This new wave of technology necessitates planning now so that the new standards for tarmacs can be incorporated into a suitable location outside the Sydney basin airshed.

4.1.11. Financial

We make no comment about the project proponent. Options include the Federal Government, the NSW Government, Sydney Airport Corporation, a commercial consortium or some combination of these. In the interim of selecting a new airport site it is vital that there be no privatisation of Sydney Airport Corporation or any of its subsidiaries until the noise problem at KSA is resolved by the site selection and building of a new primary and/or replacement airport. Once privatised the commercial imperative will override environmental issues. It is essential that a cost/benefit analysis be done to embrace all of the long-term costs and benefits of the new airport. This analysis should also be done on the "do nothing" option and against the full costs of the secondary airport proposal. We fully expect on the completion of the cost/benefit analysis that the positive economic benefit of the nominated new airport site will become so clear as to make it a no contest.

4.2. Previous Studies

The most recent extensive review of sites for a new airport to replace and/or supplement KSA was the Kinhill-Stearnes EIS of 1985. In the preliminary Draft EIS, Kinhill-Stearnes reviewed a number of sites on the basis of wide ranging criteria. These included 'access to Sydney', 'numbers of residents displaced', 'aircraft noise impact on useable land', 'effect on air quality in the Sydney basin', 'the environment overall', 'the incidence of fog affecting operations' and 'Air-space interaction effects restraining 24 hour access or otherwise safe operation'.

Table 1 below summarises the outcome of the 1985 preliminary study for a range of options, including some of those considered above as being still potentially viable by SACF Inc.

In Table 1 the sites identified by Kinhill-Stearnes are listed in order of environmental suitability (according to Kinhill-Stearnes), rather than in order of cost of site creation or commercial benefit to be obtained by the Aviation Industry, or other interest groups. It is interesting to note that those with the most suitable environmental rating (Goulburn, Darkes Forest and Wilton) are also those with the least effect on Sydney Basin air pollution; and of these Wilton was ranked second in the whole process. Badgerys Creek (against which Wilton came second in overall ranking) was ranked seventh in terms of its environmental desirability. Moreover, Wilton and Darkes Forest were also considered by Kinhill-Stearnes to be less expensive to implement than Badgerys Creek.

Given the above review, the previously identified sites in the 'Near-Southern Highlands', or similar sites outside the Sydney basin airshed, appear preferable to SACF Inc as locations for Sydney's new airport. In the area to the south of Sydney is located the so called Nepean Ramp, which gently rises from the flat-lands of the County of Cumberland to the Southern Highlands, at altitudes of 1,000 to 2,000 feet. Within the 'Near-Southern Highlands', there are two potential sites, south of Wilton and Darkes Forest, both of which were considered in the Draft 1985 Kinhill-Stearnes EIS (see Table 1).

SACF Inc does not have the means to carry out a full EIS on any site; this is the responsibility of government for the benefit of the citizens of Australia who often seem to be forgotten. However the comparison in Table 1 below shows that sites outside the Sydney basin airshed are patently preferable, in terms of human and environmental impacts, to Badgerys Creek which only rated seventh overall both in environmental terms and in its predicted contribution to pollution in the Sydney Basin. In comparison, in terms of contributions to air pollution in the Sydney basin Wilton came fourth against Goulburn (1) and Darkes Forest and Somersby (equal 2nd). As will be mentioned below, Mandemar has been suggested as a potential site because the environmental impact of developing it would be almost negligible, as SACF Inc is informed that the land there is already maximally degraded due to soil erosion, etc. However, Mandemar has not been considered in any previous study.

It is obvious that these more eligible sites should be exhaustively investigated, as they compare far more favourably in almost every respect with Badgerys Creek, with the exception of distance by road from the Sydney CBD. In an attempt to quantify these favourable features in the case of Wilton, Table 2 has been prepared by SACF Inc to give a clear comparison of the advantages of Wilton. The data for Table 2 is substantially derived from the 1985 Full EIS of Kinhill-Stearnes.

As noted previously, SACF Inc does not endorse a particular site for a new airport, but merely the principles involved in site selection. It wishes to emphasise that for comparative purposes, Wilton is the only other site for which, at present, there is any complete documented technical data available. SACF Inc believes that given the proposed high-speed rail corridor between Sydney and Canberra, there may be a number of sites that would be theoretically suitable along, or near, this route which should be investigated.

The government and the Department of Transport and Regional Services should produce a comparison for all feasible sites in the corridor of the proposed VFT, in addition to any other eligible site.

Table 1 KINHILL-STEARNES DRAFT EIS April 1985

SITES 1985 EIS KINHILL – STEARNES	OVERALL RANKING	RESIDENTS DISPLACED 1981 Census	ENVIRONME NT OVERALL RANKING (1=least impact]	AIR QUALITY FACTOR (1 = Least effect on Sydney Basin]	ANEF 25 AFFECTED Land Use hectares	ACCESS KM FROM SYDNEY	OPERATIONS - FOG BOUND Days (D) Closures (C) per year	OPERATIONS- AIRSPACE EFFECTS - PRE 3RY & LTOP	COST -RANK (0=Most Expensive]
GOULBURN	10	20 pp	1	1	70	210 km - furthest	50 C/YR & turbulence effects	NO EFFECTS ON SYDNEY REGION	2
DARKES FOREST	8	30 pp	2	=2	375	57 km - moderate	14 D/YR & Rain & Wind Shear Effects	MINIMAL ON EXISTING A/Ps BUT SAFETY CONCERNS	9
WILTON	=2	310 pp	3	4	2,414	71 km - medium	15 - 20 C /YR & turbulence in strong winds	Camden	8
HOLSWORTHY	9	1230 pp	4	6	2,095	33 km - Good	Not stated	REQUIRES COOR- DINATION WITH KSA; BANKSTOWN CLOSURE	1
SOMERSBY	7	860 pp	5	=2	3,274	74 km – medium	Some Effects	MINIMAL EFFECTS	7
WARNER VALE/ WYONG	6	380 pp	6	5	5,337	94 km – far	Nil persistent adverse	MINIMAL EFFECTS	6
BADGERYS	1	1350 pp	7	7	7,525	48km - Good	12-25 D /YR	BANKSTOWN & HOXTON PARK	4
BRINGELLY	=2	4250 pp	8	8	6,743	47 km – Good	Max 25 D /YR	CAMDEN; BANKSTOWN & KSA	3
LONDON DERRY	4	1700 pp	9	9	4,789	62 km - medium	Max 100 C/ YR	RAAF RICHMOND	5
SCHEYVILLE	5	3160 pp	10	10	6,948	49 km – Good	25 - 60 D/YR	Richmond & Schofields	0

Table 2 COMPARISON OF THE TWO HISTORICALLY SHORT-LISTED SITES (Kinhill-Stearnes]

CRITERION	BADGERYS CREEK SITE	SOUTH OF WILTON SITE
Population Adversely Affected/Noise factor Rank 1	Badgerys was rated in 1984 as having fourteen fold the number of people affected as Wilton. Since 1984 residential development has occurred right up to the boundary fence of the proposed site at Badgerys. The EIS predicts a tripling in passenger movements by 2025 – requiring expansion of Badgerys. Score: Inverse proportion to population (7)	Wilton remains relatively undeveloped at the eastern edge of the Southern Highlands. Less than one-fourteenth the number of people would be adversely affected compared to Badgerys. From EIS figures, more people would smell kerosene from Badgerys than would hear planes at Wilton. World's best practice is to locate new airports away from people. Score (inverse proportion to population) 93
Air Pollution/Health factors Rank 2	Badgerys is the worst part of the basin, the EIS noting "air currents tend to carry pollutants towards western Sydney, where they can be slow to disperse". By 2020 the airport may have grown from accounting for 5% of Sydney's total hydrocarbon emissions to 8-10%. Score: Poor (20)	Wilton is on top of a plateau and has good air dispersion factors (1984 study). Any such outside-the-basin site can relocate at least 5% of Sydney's smog away from 3 million people. Badgerys EIS noted "Most respondents expressed the view that the Second Sydney Airport should not be located within the Sydney basin" Score Very Good(80)
Passenger Convenience/Access factor Rank 3	48 min by train & 60-74 min by car to/from CBD. Badgerys is 48km from the CBD by road & 68km by rail assuming the 2015 networks (source 1984 study which also calculated relative travel times). Score – Inverse proportion to person-hours (58)	Wilton is 71km from the CBD by road. With M5 East due soon, KSA to/from Wilton connection will be all expressway. 15km further by rail, but right on Very Fast Train route, so could be quicker trip than Badgerys! Score: Inverse proportion to person-hours (42)
Suitability as KSA Replacement Rank 4	Badgerys residents will also deserve a curfew, so Badgerys will eventually be environmentally-constrained like KSA. Extensive night fogs will force planes to land at KSA, effectively removing KSA's curfew. Score: Poor (20)	Wilton could support true 24 hour operation and be an eventual replacement for KSA, for well through the next century. Aviation industry could continue its rapid expansion without this growth always being at the expense of residents. Score: Very Good (80)
Air Space Conflict with Other Airports Rank 5	Badgerys will close Hoxton Park, conflict with the 500,000 movements/year at Bankstown, and affect Camden. As to KSA, the EIS notes Badgerys will have "significant impact, potentially reducing the capacity of both airports". Badgerys will prevent noise-sharing modes at KSA. Score: Fair (40)	Wilton will not have any substantial impact on any Sydney basin airports (affecting only Camden) and would allow independent operation of the two major airports (ie any mix of modes at KSA to be used at any time). Planes using Wilton need never fly over greater Sydney metro area. Score: Good(60)
Employment Effects	Sydney's job-hungry west and SW suburbs would be the main job beneficiaries of the construction and operation of Badgerys. Score: Excellent (100)	Sydney's equally job-hungry south-west corridor (Liverpool to Campbelltown) would be the main job beneficiaries of an airport at Wilton. Score" Excellent (100)
Costs – Site Construction	1984 study put site work at \$94m. Tens of millions spent on land acquisition to date could be recouped by selling site for residential development.	1984 study put site work at \$103m (ie only \$9m more than Badgerys in overall \$3-4b project). Wilton has far lower total land acquisition and subsequent expansion costs.
Costs – Road	Badgerys would require a new expressway (as proposed by the government) to link it to KSA.	Wilton is only 3km from existing SW freeway that is currently being extended (M5 East) to directly link KSA.
Costs – Rail	Badgerys would need a new rail line (optional in EIS) connecting the western line via Badgerys to the Macarthur line. The trip to the CBD would be circuitous, with suburban track most of the way.	Wilton has an existing rail line crossing the site, and is only a few kilometres from the proposed Very Fast Train line to connect Sydney to Canberra, thereby affording the opportunity of high speed rail access.
Costs – Overall	Badgerys requires slightly less earthworks on site, but has far higher value land tied up/impacted and requires more new infrastructure (road & rail). Overall Cost: Fair (40)	Wilton requires slightly more earthworks, but far less acquisition costs (non-residential land) and far less in new road and rail infrastructure (located on existing infrastructure corridor). Overall Cost: Fair (40)
Safety – Aviation// Suitability of Site	Badgerys will suffer windshear in winter, with SW and west winds blowing over the Blue Mountains causing disturbance. Rising land beyond each end of proposed runways (Horsley Park escarpment is much higher than runway) adds crash risk. EIS notes 2,500 residents above EPA-approved risk. Wetland bird-life brings bird-strike risk.	Wilton has some river gullies within 10km but any turbulence in strong winds would be limited to a very low near-ground effect. No "Blue Mountains crash risk". Likely number of fog/poor visibility days far lower than Badgerys Creek adding to overall safety, as well as operation away from mountains and other airports.
Safety – Fuel Transport	Unless a new fuel pipeline is built (proposed), Badgerys will require fuel to be transported by road on the F4 or by rail on the suburban network.	Wilton has existing rail route allowing fuel to be transported from Shellharbour through primarily uninhabited bush areas. New pipeline is also just as viable.
Safety – Crash Risk to Infra-structure	A crash could not only kill a larger number of residents than at Wilton, but could also disable Sydney's water supply or electricity grid (critical components of Sydney's water, electricity and gas supply being very close). Overall Safety: Poor (20)	A crash at Wilton would affect primarily bush and farmland. Gas pipeline risk is same. One open creek feed (downstream of dam) may need to be converted to a pipeline, but this affects less than 20% of Sydney's water supply capability. Overall Safety: Very Good (80)
Grand Total	Grand Total Score 305	Grand Total Score 575 (88% above Badgerys)

Table 2 shows that with respect to the key issues of population directly affected, air-pollution influences on the Sydney basin, the absence of critical air-space interactions with other airports and the minimisation of crash risk over present residential areas, Wilton compares more than favourably with Badgerys Creek. In the view of SACF Inc, Wilton deserves a closer look along with other eligible sites outside the Sydney basin airshed.

Most other proponents of airport sites are presenting positions supported by economic arguments designed to support the commercial interests of particular interest groups (Macquarie Bank, Pacific Waste Management [Principal of PPK], UWS MacArthur, and the "National Institute for Economic Research") or that of the aviation industry itself.

SACF Inc therefore requests the government to take a closer look at what an Environmental Impact Assessment process is all about, namely "the environment". Issues such as air pollution in the Sydney basin, noise impacts on the residential population, minimisation of crash risk as aircraft increase in size¹⁷ are all factors directly or indirectly affecting the health and safety of the residents of greater Sydney. In the view of SACF Inc, these issues need to be factored into the site selection process.

The Wilton site is located downstream of the main Sydney Water catchment, but within the area required to protect the water supply system feeders at Pheasants Nest and Broughton Pass. Water pollution at Wilton is traditionally cited as a reason for not using the area as an airport. However reservoirs would not be subject to aircraft emissions as flight paths do not cross water catchments – only the open channels and watercourses. The solution to this problem, the cost of which is small, is to enclose the pipelines feeding directly from each reservoir.

According to the 1985 EIS, most surface waters could be diverted from entering the Metropolitan Catchment. Given the present problems of Sydney Water, enclosing the open channels may well improve the quality of Sydney Water. The Commonwealth should assist in providing funds for Sydney Water to enclose the open water channels. In comparison, Badgerys Creek's flightpaths require the direct overflight of Sydney's main Warragamba water catchment area and, more importantly, the main feeder reservoir at Prospect.

A criticism of the Wilton site is that it would disturb good quality wilderness and may affect some species. It should be pointed out that some areas, which are fenced off from polluted urban areas, have been remarkably successful in maintaining wildlife diversity, such as the rare frog found in the middle of the previously polluted Homebush Olympic site. Also, relocation of larger jets from KSA to Wilton would restore the amenity of high quality bushland areas, which are frequently used by bushwalkers around Cook's Landing and Royal National Park.

SACF Inc has not sought to hide the imperfections of sites such as Wilton (as has been done with Badgerys Creek) and does not intend to say that Wilton is the only site that should be considered in a proper EIS. However it is worth highlighting the widespread increase in environmental damage that would occur if a site inside the Sydney basin airshed, such as Badgerys Creek, were chosen ahead of, say Wilton or Darkes Forest.

The Sydney –wide community groups within SACF Inc are unanimous in demanding a site outside – the –Sydney basin airshed. Some groups have suggested the near Southern Highlands, some further out while others do not wish to advocate a specific option. Of the sites considered by Kinhill-Stearnes in the 1985 EIS Darkes Forest and Wilton most closely met the requirements of a new international airport as well as being outside the Sydney basin airshed. Badgerys Creek was ranked only marginally ahead of Wilton in 1985 on the basis of the overall criteria considered but was rated only seventh on environmental criteria as against Wilton (3rd) and Darkes Forest (2nd) and Goulburn (1st). However, the environmental comparison may be different today.

¹⁷ The next generation of Boeing jet airliners are reportedly going to seat more than 800 passengers and needless to say will carry more than twice as much fuel as a 747 on take-off.

Since then, the development of Western Sydney has dramatically increased. The number of residents adversely affected by Badgerys Creek is now likely to be more than the 14-fold higher figure than Wilton (of 1985). Wilton was only 15km further by road from the CBD than Badgerys Creek. But with the VFT the travel time to Wilton will be significantly less than Badgerys Creek and with Darkes Forrest travel times would be even less. Additionally, road travel to Wilton by the M5 is free flowing compared with an already clogged road network to Western Sydney, which is unlikely to improve when spur roads to Badgerys Creek are constructed. Even 15 years ago, at the time of the original EIS, the effective trip times to Wilton were on a par or less than trip times to Badgerys Creek.

Recommendation: The site selection process should be immediately re-opened with all probable sites investigated by a thorough EIS process.

Recommendation: The site selection process should concentrate on identifiable sites in the corridor of the proposed Very Fast Train (VFT) outside the Sydney basin airshed and within the near southern highlands region; but without excluding other available environmentally suitable sites.

4.3. Rejection of the Badgerys Creek Proposal

Based on consideration of the above criteria, the SACF Inc rejects the proposition that the building of a second (Sydney West) airport at Badgerys Creek will alleviate the noise and environmental problem of KSA.

The following are the reasons identified:

4.3.1. *Flawed Nature of the EIS Process*

- (a) There is a clear conflict of interest for the company PPK, which has been contracted by the Federal Government to carry out the EIS on the proposed airport for Badgerys Creek Airport. PPK has admitted that its parent company is a very large land-holder around the proposed site at Badgerys Creek.
- (b) The Government and its contractor have, contrary to the Administrative Procedures of the Environmental Protection (Impact of Proposals) Act 1974 (Cth), refused to consider prudent and feasible alternative sites to Badgerys Creek. One obvious site for consideration would be Wilton which was formally announced along with Badgerys Creek as two sites which warranted further study by the then Minister on 18 September 1984 (See SACF Inc comparison of Wilton & Badgerys Creek above).
- (c) Contrary to the above Act, the input of various community groups to the EIS process was ignored. There were also misrepresentations in the draft EIS as to noise impacts; the collections of fog incidence data only between 9am and 3pm and major apparent favouritism towards local big business interests.
- (d) There has been exhibited a clear and obvious bias towards the Badgerys Creek proposal in the PPK EIS¹⁸.

¹⁸ See p.13-15, PPK 'Purple' Draft EIS summary, October 1997.

4.3.2. Air Quality Effects In the Sydney Basin

- (a) The Government has failed to consider the fundamental air quality issue of locating the airport outside the Sydney Basin instead of in the deepest part of the smog sink. This is not a new concept as the Draft EIS entitled "Second Sydney Airport Site Selection Program" prepared by Kinhill-Stearnes in April 1985 noted of Wilton: "The site is located on the margin of the Sydney air basin and has relatively good air dispersion characteristics compared to the closer sites". In fact Badgerys was rated 7th both for total environmental impact and air quality impacts as against only 2-4 for the nearest southern highland options in the 1985 EIS.
- (b) Subsequent US research has highlighted that airports rank with petrochemical refineries among the top ten of single emission sources¹⁵, resulting from the impact of aircraft generated pollution alone.

With the replacement airport site, there is the potential to relocate up to 40% of Sydney's total air pollution within 20 square km of KSA to a location where emissions do not enter the Sydney basin¹⁶. Three million additional residents will breathe the emissions from a Badgerys site, compared to any site outside the Sydney basin airshed.

4.3.3. Operational Factors

The Draft EIS did not consider major detrimental aspects such as, wind-shear from the Blue Mountains and potential crash-risk disruption to Sydney's electricity grid, water supply and gas pipeline with major infrastructure concentrations close to Badgerys.

4.3.4. Residential Impact

The Government's own figures of fifteen years ago confirm that (even then) the number of residents adversely affected by Badgerys Creek would be several hundred-fold compared to alternative sites such as Wilton in the near southern highlands. Since then there has been extensive residential development up to the very boundary fence of the Badgerys site. Every working morning, and every working evening in particular, all of the west-leading roads towards Badgerys Creek come to a first gear crawl. Each of the major arterial roads, namely Horsley Drive, the M4, Great Western Highway, Elizabeth Drive, Cowpasture Road and Mamre Road experiences major congestion in both morning and afternoon peak hours. At the time Badgerys Creek was short-listed just ahead of Wilton, it was proposed that the site selection be for a relatively small 'overflow' airport only.

4.3.5. Not a Long Term Primary and/or Replacement Airport

Due to space limitations, Badgerys Creek is not capable of being a long-term replacement for KSA, nor will it provide long-term relief for the over one million residents currently affected by noise from KSA. Badgerys will have limited capacity and be environmentally constrained.

4.3.6. The Distance Factor by Rail

The Government has used obfuscation in attempting to portray that only long distance sites are alternatives, and has ignored the middle distance sites. Transport Minister Anderson has been reported as saying "Sites outside the Sydney basin will suffer from the disadvantage of distance from Sydney Airport and the city centre, with associated costs and inconvenience for passengers" [SMH 16/4/99]. The 1985 study noted Badgerys would be 68km from the CBD by rail (48 km by road assuming the 2015 road network), whereas Wilton would be 15km farther away by rail. However the rail trip to Wilton would be much faster as it would be on the route of the proposed VFT, where Badgerys would be serviced by suburban train travelling through 34 stations.

These road distances take no account of the inherently shorter travel time to Wilton compared to Badgerys by virtue of an existing clogged road network outlined under "RESIDENTIAL IMPACT", compared with the M5 expressway to Wilton.

4.3.7. The Employment Factor

The Government and other proponents for Badgerys Creek have used intentionally misleading information on the creation of jobs as a result of a second airport at Badgerys Creek. Whether the second/replacement airport is built at Badgerys or Wilton, the construction workers would be sourced primarily from Sydney's south-west or Western Suburbs. It is a moot point whether Sydney's south-west or western suburbs are more deserving of such jobs.

4.3.8. Interoperability

There is the problem of interoperability of the Sydney airports, in that sites such as Wilton would only impact Camden airport¹⁹ whereas Badgerys would clearly restrict the half-million annual aircraft movements at Bankstown and any noise sharing of the quarter-million annual aircraft movements at KSA. With forecasts of continued strong growth in air travel, it is inappropriate to intentionally invite a conflagration of aircraft above Sydney residents, and the (soon) million-plus annual aircraft movements in the Sydney Basin will introduce avoidable crash risk as well as having a serious detrimental impact on air quality.

4.3.9. Flying Hazards

Badgerys Creek, being near the bottom of the Cumberland Plains part of the Sydney basin has a number of swampy areas, which naturally attract bird life such as ducks, not to mention larger high flying birds including pelicans, eagles and hawks. This may have severe safety consequences for bird strike.

Recommendation: There should be an immediate abandonment of the Badgerys Creek Airport Proposal, pending a reinvestigation of the airport options available to government.

5. ALTERNATIVE SITES TO BE INVESTIGATED

SACF Inc has conducted a wide-ranging review of *previous* EIS statements on the merits of the available sites including the Badgerys Creek option. In respect of the Sydney West Airport at Badgerys Creek the site fails almost every criteria previously discussed in detail; and especially on environmental grounds on which it ranked seventh least favourable in the Kinhill-Stearnes Draft EIS of 1985. We consider the more distant sites such as Canberra and Goulburn to be at a disadvantage due to the distance from Sydney which would actually cause an expansion at KSA and its entrenchment forever. Since these communities have made formal and passionate requests within their locales, these proposals should be allowed the courtesy of being given formal consideration.

5.1. Sites Remote From the Sydney Basin

5.1.1. Canberra

If Canberra Airport were to be upgraded to handle international aircraft with provision for customs and immigration, it could save 20% of all movements at Sydney. In 1996 Canberra had an average of some 35 large jet movements a day, compared to Sydney's 120. People from Canberra, flying to international destinations, land and take-off again at KSA. Canberra represents a high international travel propensity, due to its concentration of embassies, foreign affairs, trade and similar posting of Australia's international community. With a small upgrade in runway length, Canberra could accept large jets, and from a purely safety perspective, it makes sense to have another runway not too far from Sydney that can take 747s with all the normal safety margins, rather than having to travel to Melbourne. Combined with VFT link to Sydney, the feasibility of international flights to Canberra

¹⁹ 1985 Full EIS.

would be further enhanced. Transport Minister Anderson has publicly supported this VFT link [2GB Radio 16/6/99].

A factor that could even out air traffic between major airports is to actively encourage the airlines to 'hub' more of their linked flights out of Canberra, because there are significantly fewer residents who would be affected by the noise with Canberra approaches and take-offs (compared to Sydney).

5.1.2. Newcastle Region

A similar argument can be developed to expand the RAAF base at Williamtown or Kooragang Island Newcastle, to provide direct connections for the Central Coast and mid-north Coast and hinterland areas, without requiring people to come to Sydney for travel to other domestic destinations. Additionally, the provision of customs and quarantine facilities at Williamtown would allow a certain number of international flights to use this facility, allowing regional development.

The provision of customs and quarantine facilities at both Canberra and Williamtown would be a pre-requisite for the development of a regionally based export activity from the vast hinterland which both regional cities service.

5.1.3. Parkes

Parkes (through its Inland Marketing Corporation) has been seeking an international freight airport for some time. This would offer a sizeable relocation of freight and road transport activities presently involving KSA. Parkes would not in the immediate future impact on significant passenger traffic through KSA. Parkes intersects a major road and rail network connecting Dubbo and Wellington in Central Western New South Wales.

The possibility of direct to flight transport for perishable horticultural products would significantly decrease so-called "B-Double" semi-trailer road transport which presently has to travel to Sydney for transfer at Flemington prior to on-shipment to KSA by ordinary semi-trailers. This is a time and fuel-expensive exercise and the delays involved presently prevent certain types of perishable product being profitably exported from the central west of NSW. SACF Inc is informed that the elimination of the resulting direct air-traffic through KSA would result in a significant decrease of cargo traffic handled by B-747's at KSA; as well as promoting hitherto impossible agricultural business opportunities for exports from the central western New South Wales. Also if a proposed inland rail network connecting Melbourne, Mt. Isa and Darwin through Parkes were ever to transpire; even further possibilities for expansion of international air travel could be considered.

5.1.4. Newnes

The Newnes Plateau Airport Promotions Committee (Lithgow City Council) is actively promoting Newnes Plateau as an appropriate site for a second Sydney airport. Newnes has the advantage of being in an elevated tableland position and is just 5 km from the main western railway line. An area of around 60 sq km is reportedly available for airport development.

Newnes plateau sits on a solid sandstone basement that would enable future 800 seater aircraft to land without the extensive earthworks required at other sites (M. Collins Secretary Lithgow council Airport promotions Committee). Newnes, however, is 153 km by road from Sydney CBD (Bells line of Road) and the present Cityrail journey from Sydney to Lithgow takes 2.5 hours. Like Goulburn, Newnes may be too far away, in the absence of a high-speed rail upgrade, to permit consideration as a viable passenger replacement for KSA, but probably needs further investigation.

5.1.5. Goulburn

Goulburn is an 'outer-southern highlands' option to meet Sydney's airport needs. The site is well over 200km from Sydney which virtually rules out car transport from the Sydney CBD and hence useability, unless cheap VFT arrangements can be put in place by way of a government subsidy. Whilst Goulburn is in an elevated tableland position, the Gundarry Plains site is on the same altitude as Goulburn itself. The residents of Goulburn may experience significant noise disturbance in still

wind conditions, even though the city is over 30km from the proposed site. The local community itself is irretrievably split on the issue. Additionally estimates for the use of Goulburn are no more than 15,000 movements/year, which is not even the annual growth predicted for KSA. Goulburn is likely to entrench the unbridled expansion of KSA.

5.2. Medium Southern Highlands

5.2.1. Mandemar

In the medium southern Highlands is Mandemar, about 12km west of Mittagong. This site was not mentioned in the 1985 Draft EIS but is deserving of investigation due to the elevated tableland position, low population affected and close proximity to the proposed VFT. Whilst an improvement on Goulburn, the site's distance from Sydney in terms of road travel time could be problematic, and to a lesser extent in terms of VFT travel times. SACF Inc is reliably informed that the site at Mandemar is already maximally environmentally degraded due to soil erosion resulting from past human activities, and the environmental impact of the airport would thus be low.

5.3. Near Southern Highlands

5.3.1. Darkes Forest

Darkes Forest is just inland from Stanwell Tops, where the aviation pioneer Hargraves first experimented with kites. An airstrip already exists on the site, having been a wartime emergency arrangement in the event that KSA was bombed. Information is not current in respect of the number of people that would be affected, but it is believed to be small. The useability of the airport site would be good with the Sydney Wollongong expressway nearby and the site being sufficiently close to the VFT to allow interconnection. The site is in an elevated position and was excluded from the 1985 Draft EIS because of adverse operational factors associated with wind shear. These conditions only occur with strong north-easterly winds in the daytime in summer. Further investigation of the site should be undertaken as part of any valid EIS. Darkes Forest was rated second to Goulburn on environmental grounds in the 1985 EIS while Wilton was rated 3rd (Badgerys Creek was 7th!).

5.3.2. Wilton

Like Darkes Forest, Wilton was one of the sites considered in the 1985 site selection process. The Wilton site is essentially virgin forest, very accessible to Sydney and Wollongong, with good potential VFT connection to Canberra. It is also located on the M5 Motorway. The 1985 draft EIS stated that the population within the 20 ANEF contour at Wilton was 130 compared to 1951 at Badgerys Creek. The number of 'seriously affected' people at Wilton was 18 versus 364 at Badgerys Creek. The number of moderately affected people at Wilton was 68 compared to 1,115 at Badgerys Creek. There has been substantial urban population growth in Western Sydney since 1985 but not in the Wilton area. The 1985 draft EIS described two wide spaced parallel runways at Wilton in an ENE-WSW orientation. Flight paths from these runways do not pass over existing or planned urban areas. Wilton was one of the sites considered in the 1985 site selection process and it was eventually short-listed with Badgerys Creek as the two most likely sites, before Badgerys was favoured if the airport was to be a small one.

6. CONCLUSION

This paper has shown that there are solutions to the current policy paralysis. Presently aircraft noise policy is still inadequate with regard to the amelioration of existing aircraft noise at KSA. In addition, the politicians and the bureaucracy have deliberately excluded any sensible options in their discussions of new airport sites, such as those recommended by previous investigations. This deliberate policy of obfuscation has now run to full course and unless corrected will result in a continuing environmental problem for Sydney.

The relevant legislation (Environmental Protection – Impact of Proposals Act) requires that all prudent and feasible alternatives be considered. By ignoring this legislation Governments and the bureaucracy are flouting their own law with impunity and the consequences of this will be the entrenchment of a seriously sub-optimal air-transport and infrastructure system for Sydney, extending well into the next millennium.

It would do great disservice to the entire population of the Sydney for the Government not to consider the options outside the Sydney basin airshed which are environmentally preferable to Badgerys Creek.

Appendix A About SACF INC.

Sydney Airport Community Forum Inc (SACF Inc) is an open forum representing airport community groups across the whole of greater Sydney from Randwick to the Blue Mountains, and from Hornsby to Sydney's south-west extremities. It was established as an alternative to the government-appointed committee of a similar name that is not representative of all the communities affected.

MEMBERSHIP OF SACF INC AS AT 16/6/99

Association for an Airport Located Outside Sydney (AFALOS)
Blacktown Association Against Aircraft Noise (BAAAN)
Bankstown Airport Out - Tourism In (BAOTI)
Bligh Communities Against Airport (Paddington – Woollahra)
Community Advisory Committee (CAC)
Coogee Residents Against Aircraft Noise
Cranebrook Residents Against Airport Noise
Fairfield Residents Against Airport Noise (FRAAN)
Hornsby Resident Against Aircraft Noise (HRANG)
Kensington Precinct
North West Resident Airport Group (NWRAG)
Randwick Airport Action Forum (RAAF)
Save Our Skies (SOS)
St Clair Residents Against Airport Madness (SCRAM)
St. Peters/Tempe/Sydenham Neighbourhood Centre
Strathfield Residents Airport Group

Affiliated Groups

Coalition of Airport Action Groups (CAAG)

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Peter Hicks - Coalition of Airport Action Groups [CAAG]
Melinda Keresztes - Hornsby Residents Aircraft Noise Group [HRANG]
Alister Simington – 'Save our Skies' - an inner north west grouping
Philip Lingard - North West Residents Airport Group [NWRAG]
Henri Richard - Coogee Residents Against Aircraft Noise
Raymond Smith - St Peters/Tempe /Sydenham Neighbourhood Centre
Richard Tanner – Association For Airport Location Outside Sydney [AFALOS]

Acknowledgements

Janette Barros - Leichhardt Airport & Urban Environment Research Group [LAUERG]
Sonya McKay – Convenor of Bankstown Airport Community & Environment Forum
Tony Williams – Independent expert in air-space management.

Appendix C KSA Runway Statistics & Comparison with LTOP Targets - 4 Dec 1997 to 28 April 1999

	Departures							Arrivals							Movements by Region (see notes)						SOD- Props
	East 07	East 34R	West 25	N. West 34L	South 16L	South 16R	Total	East 25	West 07	North 16L	North 16R	South 34L	South 34R	Total	East 07,34R,25	West 25,7	Nth Land 16L,16R	Nth & NWest 16L,16R,34L	South 16L,16R	Total	
FE 17-12-97	1	1,209	271	1,321	807	1,866	5,475	16	331	777	1,221	1,934	1,199	5,478	1,226	602	1,998	3,319	5,806	10,953	145
07-01-98	112	1,395	110	1,563	1,275	2,692	7,147	125	537	1,157	1,975	2,284	1,069	7,147	1,632	647	3,132	4,695	7,320	14,294	113
FE 21-01-98	106	1,027	121	1,147	791	1,694	4,886	141	510	669	1,095	1,633	833	4,881	1,274	631	1,764	2,911	4,951	9,767	110
FE 04-02-98	11	926	368	965	872	1,981	5,123	323	668	610	1,089	1,583	861	5,134	1,260	1,036	1,699	2,664	5,297	10,257	131
FE 18-02-98	69	962	279	1,069	909	1,966	5,254	303	526	703	1,167	1,648	912	5,259	1,334	805	1,870	2,939	5,435	10,513	201
FE 04-03-98	-	1,095	421	1,184	828	1,777	5,305	105	607	618	976	1,813	1,182	5,301	1,200	1,028	1,594	2,778	5,600	10,606	181
FE 18-03-98	-	485	75	526	1,333	2,882	5,301	219	586	1,177	2,002	846	453	5,283	704	661	3,179	3,705	5,514	10,584	73
FE 01-04-98	-	936	305	993	950	2,173	5,357	94	695	824	1,255	1,503	956	5,327	1,030	1,000	2,079	3,072	5,582	10,684	125
FE 15-04-98	1	1,011	257	1,144	948	1,783	5,144	163	561	604	1,048	1,820	951	5,147	1,175	818	1,652	2,796	5,502	10,291	416
FE 29-04-98	-	752	663	965	976	2,028	5,384	297	384	808	1,250	1,606	1,026	5,371	1,049	1,047	2,058	3,023	5,636	10,755	367
FE 13-05-98	38	426	505	610	1,243	2,490	5,312	352	523	994	1,568	1,201	641	5,279	816	1,028	2,562	3,172	5,575	10,591	614
FE 26-05-98	-	518	645	710	1,185	2,217	5,275	466	117	953	1,633	1,355	750	5,274	984	762	2,586	3,296	5,507	10,549	713
FE 10-06-98	-	333	667	543	1,184	2,458	5,185	270	187	1,076	1,777	1,179	694	5,183	603	854	2,853	3,396	5,515	10,368	406
FE 24-06-98	-	952	923	1,202	712	1,455	5,244	383	81	629	905	1,926	1,324	5,248	1,335	1,004	1,534	2,736	5,417	10,492	366
FE 08-07-98	63	901	862	1,064	729	1,697	5,316	579	197	557	975	1,837	1,145	5,290	1,543	1,059	1,532	2,596	5,408	10,606	206
FE 22-07-98	-	938	1,093	1,110	662	1,601	5,404	670	171	525	924	1,792	1,304	5,386	1,608	1,264	1,449	2,559	5,359	10,790	154
FE 05-08-98	-	1,163	780	1,344	554	1,474	5,315	585	51	501	849	2,001	1,308	5,295	1,748	831	1,350	2,694	5,337	10,610	110
FE 19-08-98	2	446	276	475	1,203	2,808	5,210	347	339	1,115	2,041	847	510	5,199	795	615	3,156	3,631	5,368	10,409	103
FE 02-09-98	1	772	401	871	974	2,336	5,355	293	613	807	1,354	1,426	829	5,322	1,066	1,014	2,161	3,032	5,565	10,677	126
FE 16-09-98	33	1,297	556	1,427	631	1,449	5,393	662	182	295	620	2,273	1,340	5,372	1,992	738	915	2,342	5,693	10,765	301
FE 30-09-98	3	1,430	239	1,446	696	1,601	5,415	150	359	570	903	2,201	1,216	5,399	1,583	598	1,473	2,919	5,714	10,814	81
FE 14-10-98	-	896	621	963	876	2,017	5,373	638	651	552	1,013	1,578	931	5,363	1,534	1,272	1,565	2,528	5,402	10,736	
FE 28-10-98	1	1,073	712	1,112	719	1,736	5,353	486	328	600	1,042	1,841	1,034	5,331	1,560	1,040	1,642	2,754	5,330	10,684	
FE 11-11-98	-	949	199	961	925	2,222	5,256	124	306	867	1,594	1,514	854	5,259	1,073	505	2,461	3,422	5,515	10,515	
FE 25-11-98	1	577	212	611	1,412	3,214	6,027	114	463	1,239	2,070	1,058	535	5,479	692	675	3,309	3,920	6,219	11,506	
FE 09-12-98	-	835	133	838	1,071	2,490	5,367	132	661	959	1,581	1,275	741	5,349	967	794	2,540	3,378	5,577	10,716	
FE 23-12-98	1	1,083	84	1,080	908	2,206	5,362	128	696	759	1,231	1,640	911	5,365	1,212	780	1,990	3,070	5,665	10,727	
FE 06-01-99	10	1,296	265	1,339	549	1,107	4,566	164	783	177	366	1,975	1,102	4,567	1,470	1,048	543	1,882	4,733	9,133	
FE 20-01-99	32	1,110	103	1,080	763	1,773	4,861	173	406	669	1,147	1,601	862	4,858	1,315	509	1,816	2,896	4,999	9,719	
FE 03-02-99	14	508	79	482	1,188	2,724	4,995	1	987	998	1,749	862	390	4,987	523	1,066	2,747	3,229	5,164	9,982	
FE 17-02-99	-	677	172	676	1,113	2,655	5,293	83	884	956	1,597	1,148	609	5,277	760	1,056	2,553	3,229	5,525	10,570	
FE 03-03-99	-	388	140	398	1,369	3,055	5,350	142	891	1,146	2,000	806	363	5,348	530	1,031	3,146	3,544	5,593	10,698	
FE 17-03-99	1	898	322	941	944	2,193	5,299	82	850	758	1,219	1,507	853	5,269	981	1,172	1,977	2,918	5,497	10,568	
FE 31-03-99	3	1,431	234	1,410	662	1,688	5,428	183	209	603	1,098	2,107	1,216	5,416	1,617	443	1,701	3,111	5,673	10,844	
FE 14-04-99	-	423	351	423	1,212	2,730	5,139	266	1,119	842	1,521	883	525	5,156	689	1,470	2,363	2,786	5,350	10,295	
FE 28-04-99	29	410	516	423	1,114	2,678	5,170	395	418	944	1,794	940	654	5,145	834	934	2,738	3,161	5,386	10,315	
Average	15	864	382	943	939	2,107	5,250	264	490	768	1,305	1,519	879	5,226	1,143	872	2,074	3,017	5,445	10,476	235
Daily	1	62	27	67	67	151	375	19	35	55	93	108	63	373	82	62	148	215	389	748	17
Annual	380	22,520	9,971	24,583	24,491	54,940	136,885	6,896	12,769	20,027	34,035	39,602	22,916	136,246	29,796	22,741	54,062	78,645	141,949	273,131	6,114

KSA Runway Statistics & Comparison with LTOP Targets - 4 Dec 1997 to 28 April 1999

	Departures %							Arrivals %							Movements by Region (see notes)						SOD-Props
	East 07	East 34R	West 25	N. West 34L	South 16L	South 16R	Total	East 25	West 07	North 16L	North 16R	South 34L	South 34R	Total	East 07,34R,25	West 25,7	Nth Land 16L,16R	Nth & NWest 16L,16R,34L	South 16L,16R	Total	
FE 17-12-97	0.0%	11%	2%	12%	7%	17%	50%	0.1%	3%	7%	11%	18%	11%	50%	11%	5%	18%	30%	53%	100%	1.3%
07-01-98	0.8%	10%	1%	11%	9%	19%	50%	0.9%	4%	8%	14%	16%	7%	50%	11%	5%	22%	33%	51%	100%	0.8%
FE 21-01-98	1.1%	11%	1%	12%	8%	17%	50%	1.4%	5%	7%	11%	17%	9%	50%	13%	6%	18%	30%	51%	100%	1.1%
FE 04-02-98	0.1%	9%	4%	9%	9%	19%	50%	3.1%	7%	6%	11%	15%	8%	50%	12%	10%	17%	26%	52%	100%	1.3%
FE 18-02-98	0.7%	9%	3%	10%	9%	19%	50%	2.9%	5%	7%	11%	16%	9%	50%	13%	8%	18%	28%	52%	100%	1.9%
FE 04-03-98	0.0%	10%	4%	11%	8%	17%	50%	1.0%	6%	6%	9%	17%	11%	50%	11%	10%	15%	26%	53%	100%	1.7%
FE 18-03-98	0.0%	5%	1%	5%	13%	27%	50%	2.1%	6%	11%	19%	8%	4%	50%	7%	6%	30%	35%	52%	100%	0.7%
FE 01-04-98	0.0%	9%	3%	9%	9%	20%	50%	0.9%	7%	8%	12%	14%	9%	50%	10%	9%	19%	29%	52%	100%	1.2%
FE 15-04-98	0.0%	10%	2%	11%	9%	17%	50%	1.6%	5%	6%	10%	18%	9%	50%	11%	8%	16%	27%	53%	100%	4.0%
FE 29-04-98	0.0%	7%	6%	9%	9%	19%	50%	2.8%	4%	8%	12%	15%	10%	50%	10%	10%	19%	28%	52%	100%	3.4%
FE 13-05-98	0.4%	4%	5%	6%	12%	24%	50%	3.3%	5%	9%	15%	11%	6%	50%	8%	10%	24%	30%	53%	100%	5.8%
FE 26-05-98	0.0%	5%	6%	7%	11%	21%	50%	4.4%	1%	9%	15%	13%	7%	50%	9%	7%	25%	31%	52%	100%	6.8%
FE 10-06-98	0.0%	3%	6%	5%	11%	24%	50%	2.6%	2%	10%	17%	11%	7%	50%	6%	8%	28%	33%	53%	100%	3.9%
FE 24-06-98	0.0%	9%	9%	11%	7%	14%	50%	3.7%	1%	6%	9%	18%	13%	50%	13%	10%	15%	26%	52%	100%	3.5%
FE 08-07-98	0.6%	8%	8%	10%	7%	16%	50%	5.5%	2%	5%	9%	17%	11%	50%	15%	10%	14%	24%	51%	100%	1.9%
FE 22-07-98	0.0%	9%	10%	10%	6%	15%	50%	6.2%	2%	5%	9%	17%	12%	50%	15%	12%	13%	24%	50%	100%	1.4%
FE 05-08-98	0.0%	11%	7%	13%	5%	14%	50%	5.5%	0%	5%	8%	19%	12%	50%	16%	8%	13%	25%	50%	100%	1.0%
FE 19-08-98	0.0%	4%	3%	5%	12%	27%	50%	3.3%	3%	11%	20%	8%	5%	50%	8%	6%	30%	35%	52%	100%	1.0%
FE 02-09-98	0.0%	7%	4%	8%	9%	22%	50%	2.7%	6%	8%	13%	13%	8%	50%	10%	9%	20%	28%	52%	100%	1.2%
FE 16-09-98	0.3%	12%	5%	13%	6%	13%	50%	6.1%	2%	3%	6%	21%	12%	50%	19%	7%	8%	22%	53%	100%	2.8%
FE 30-09-98	0.0%	13%	2%	13%	6%	15%	50%	1.4%	3%	5%	8%	20%	11%	50%	15%	6%	14%	27%	53%	100%	0.7%
FE 14-10-98	0.0%	8%	6%	9%	8%	19%	50%	5.9%	6%	5%	9%	15%	9%	50%	14%	12%	15%	24%	50%	100%	
FE 28-10-98	0.0%	10%	7%	10%	7%	16%	50%	4.5%	3%	6%	10%	17%	10%	50%	15%	10%	15%	26%	50%	100%	
FE 11-11-98	0.0%	9%	2%	9%	9%	21%	50%	1.2%	3%	8%	15%	14%	8%	50%	10%	5%	23%	33%	52%	100%	
FE 25-11-98	0.0%	5%	2%	5%	12%	28%	52%	1.0%	4%	11%	18%	9%	5%	48%	6%	6%	29%	34%	54%	100%	
FE 09-12-98	0.0%	8%	1%	8%	10%	23%	50%	1.2%	6%	9%	15%	12%	7%	50%	9%	7%	24%	32%	52%	100%	
FE 23-12-98	0.0%	10%	1%	10%	8%	21%	50%	1.2%	6%	7%	11%	15%	8%	50%	11%	7%	19%	29%	53%	100%	
FE 06-01-99	0.1%	14%	3%	15%	6%	12%	50%	1.8%	9%	2%	4%	22%	12%	50%	16%	11%	6%	21%	52%	100%	
FE 20-01-99	0.3%	11%	1%	11%	8%	18%	50%	1.8%	4%	7%	12%	16%	9%	50%	14%	5%	19%	30%	51%	100%	
FE 03-02-99	0.1%	5%	1%	5%	12%	27%	50%	0.0%	10%	10%	18%	9%	4%	50%	5%	11%	28%	32%	52%	100%	
FE 17-02-99	0.0%	6%	2%	6%	11%	25%	50%	0.8%	8%	9%	15%	11%	6%	50%	7%	10%	24%	31%	52%	100%	
FE 03-03-99	0.0%	4%	1%	4%	13%	29%	50%	1.3%	8%	11%	19%	8%	3%	50%	5%	10%	29%	33%	52%	100%	
FE 17-03-99	0.0%	8%	3%	9%	9%	21%	50%	0.8%	8%	7%	12%	14%	8%	50%	9%	11%	19%	28%	52%	100%	
FE 31-03-99	0.0%	13%	2%	13%	6%	16%	50%	1.7%	2%	6%	10%	19%	11%	50%	15%	4%	16%	29%	52%	100%	
FE 14-04-99	0.0%	4%	3%	4%	12%	27%	50%	2.6%	11%	8%	15%	9%	5%	50%	7%	14%	23%	27%	52%	100%	
FE 28-04-99	0.3%	4%	5%	4%	11%	26%	50%	3.8%	4%	9%	17%	9%	6%	50%	8%	9%	27%	31%	52%	100%	
Average	0.1%	8.2%	3.7%	9.0%	9.0%	20.1%	50%	2.5%	4.7%	7.3%	12.5%	14.5%	8.4%	49.9%	10.9%	8.3%	19.8%	28.8%	52.0%	100.0%	
LTOP Target	0.5%	6.75%	8.5%	6.75%	15.0%	12.5%	50%	6.0%	6.5%	5.0%	5.0%	15.75%	11.75%	50.0%	13%	15%	10%	17%	55%	100.0%	8.0%
Variance	-72%	22%	-57%	33%	-40%	61%		-58%	-28%	47%	149%	-8%	-29%		-18%	-44%	98%	72%	-6%		

Notes Based on "Summary of Briefing Notes on Sydney Airport". 'Average', 'Daily', 'Annual', 'Variance' all refer to airport statistics from 4 December 1997 which are NOT shaded.

"Regions" are as defined by LTOP Targets. 'Nth Land' only shows landings from North. 'Nth & NWest' is classified as 'North' under LTOP. Also note that 34R departures are classified as 'East'.

Appendix D SACF Inc Submission On "Over the Water Options Analysis" at KSA

By Philip Lingard for SACF Inc 23/5/1999

1. Introduction

The so-called "Long Term Operating Plan for Kingsford Smith Airport" (the LTOP or "Noise Sharing Plan"] put forward by Airservices Australia was predicated on the following principles.

Airport capacity should be "maintained to the maximum practicable extent" consistent with "noise sharing objectives", and with "Movements" capped at 80 per hour with the following noise minimisation directives:

- (i) Safety not to be compromised;
- (ii) All three runways to be used;
- (iii) Maximum use of flight paths over water and non-residential areas;
- (iv) Where not practicable to employ over-the-water modes that overflight of residential areas should be "minimised" and that noise arising from such flight paths is "fairly shared;"
- (v) Areas subject to unavoidable noise close to the airport should be provided with "respite" periods, which are totally free of aircraft noise;
- (vi) Areas overflowed by arriving aircraft to a particular runway should not also be overflowed by aircraft departing from that runway; and
- (vii) Arrival flight paths should ensure that descent profiles are commensurate with "low-power", "low noise" operations. There is no corresponding statement about the noise from departing aircraft.

Since the commencement of the LTOP in mid-1997, over the water modes have not been maximised. Indeed the utilisation of the only available daytime over-the-water Mode (Mode 4] during the course of operation of LTOP has apparently never exceeded **2%** overall; although peak operational movements of around 30 per hour were achieved early in 1998: KSA Briefing Notes. There are four theoretical over-the-water modes outlined within the LTOP Full Report, namely Modes 1, 2, 3 and 4.

Mode 1 is the "Curfew Mode " at present operating from 11:00pm to 6:00am and involves use of only the main north south runway (R16R - 34L] by aircraft reaching specified minimum noise standards and under 34,000 kg weight. All movements are over Botany Bay and the operational capacity is 23 Movements per Hour [LTOPSR p.25].

Although three day-time over-the water modes were proposed in the LTOPFR [LTOPFR Modes 2 - 4: see pp 71-82], only Mode 4 made it to the LTOP Summary report stage and was given final "approval" by the governments consultative body, the Sydney Airport Community Forum (or "SACF").

Numerous attempts have since been made by community groups and politicians from areas newly-affected by noise under Airservices Australia and SACF's LTOP to have Mode 2, in particular, considered for application, but without success. The increased use of 'over-the-water' Modes is always opposed by a majority of politicians and so-called community representatives on the government SACF.

One is left to speculate the reason behind the resistance to consideration of greater use of 'over-the-water' Modes given the professed objective of Airservices Australia LTOP to maximise over-the-water operations and minimise operations over residential areas. One view is that the reason is to

avoid increased use of operations over Botany Bay and nearby suburbs heavily represented on the government SACF (eg. Kurnell; Cronulla and Rockdale], since there is a relatively small affectation to the north for the over-the-water modes. An alternative explanation, perhaps, is that the reportedly increased workload on Air Traffic Controllers is too great (See below).

2. General Description of Over-the-Water Modes

This description will be conducted with reference to the following figures.

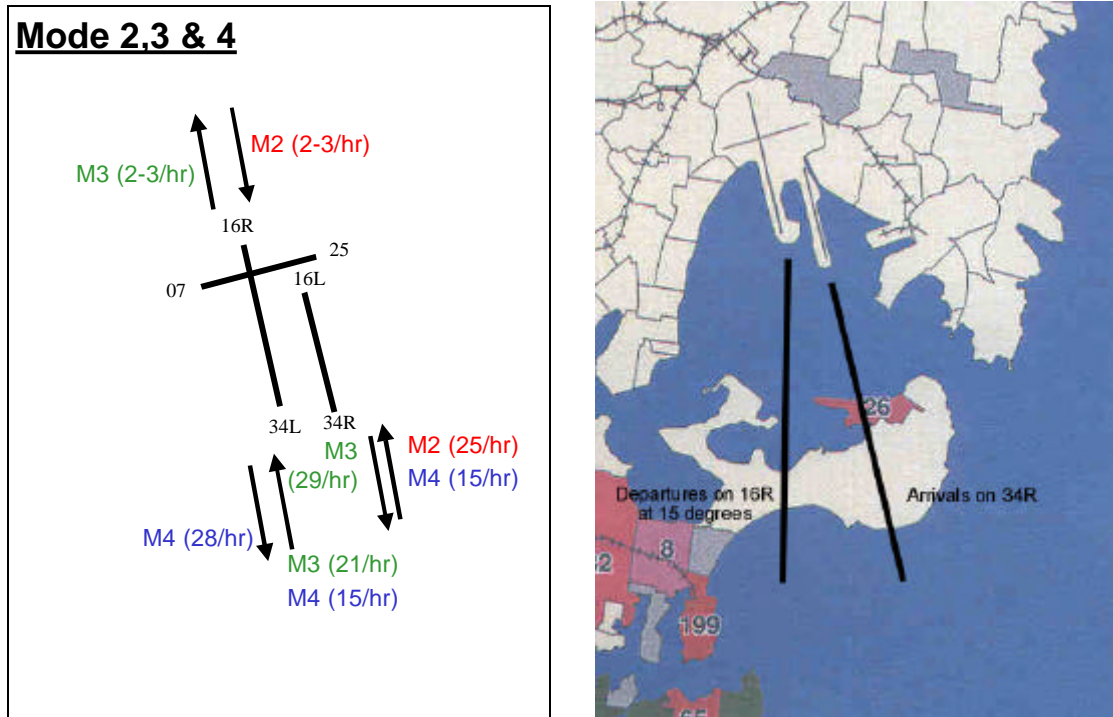


Figure D-1 LTOP SODPROP Mode diagram showing Predicted Movements Capacity

Figure D-2 Schematic Airport Runway Layout with directions of aircraft movements

Airservices Australia documentation states that all the 'over-the-water Modes' (Modes 2,3 & 4) are theoretically available, given the Bureau of Meteorology's "50 year all months average prevailing weather conditions", for 46% of the time with a minimum of 26% in a typical January to a maximum of 56-57% between May to July [LTOPFR p.31, 71&77]. The operational capacity of these Modes is theoretically between 43 and 56 movements per hour for Modes 2,3 and 4²⁰, with approximately but not exactly equal numbers of arrivals and departures (See Table D-1). Mode 4 is the only daytime over-the-water Mode to have been given any sort of trial and has been shown to be capable of at least 30 movements per hour²¹. The LTOP Reports state [LTOPSR p.31, LTOPFR p.71, 77] that Modes 2-4 are theoretically available throughout the year, but "mainly in the morning and late evening".

20 Quoted Sabre SIMMOD modelling by ASA, LTOPFR p.71,77 and LTOPSR p.31.

21 KSA "Briefing Notes Jan - May 1998.

Table D-1 KEY OVER-THE-WATER MODE OPERATIONAL DATA

	MODE 2	MODE 3	MODE 4	MODE 1
ALL MONTHS AVERAGE AVAILABILITY (BOM)	46%	46%	46%	No data – Mode Ordained 23:00-06:00 hrs
OPERATIONAL AVAILABILITY	Downwind < 5 knots ²²	Downwind < 5 knots ²²	Downwind < 5 knots ²²	Downwind < 5 knots ²²
SUSTAINED CAPACITY Movements /hour	56	49	43	23
Peak Capacity Movements /hour	59	51	44	25
Arrivals Capacity Movements /hour	27	21	15	13
Departures Capacity Movements /hour	30	29	28	14
Cloud Base Limitation (feet)	3,000	3,000	3,000	3,000
Visibility Limitation (km)	10	10	10	10
Number of People affected by 70dBA impacts B747-200				
Arrivals from North	134,400	Nil	Nil	Nil
Arrivals from South	700	700	700	700
Departures to South	40,000	5,800	9,800	4,000
Departures to North	Nil	606,300	Nil	Nil

3. Details of Individual Modes

3.1 Mode 1 - The "Curfew " Mode

When Mode 1 is in use all arrivals and departures take place over the water off and onto the main "north-south" runway (Runway 34L and 16R). The runway capacity is limited in operation due to the simultaneous use of a single runway for arrivals and departures, during which arriving aircraft are separated by 40nm.

An interesting comment by ASA in the LTOP Reports is that "the availability of this Mode, other than when it is mandated by legislation, is limited to when the downwind does not exceed 5 knots" [LTOPSR p.26]. Does this mean that down-winds in excess of 5 knots are tolerated during curfew, when visibility is reduced and they are not tolerated during daytime operation, and if so for what reason?

3.2 Mode 2

With Mode 2 departures all head south off Runway "16R" (the main north-south runway). All arrivals excepting "long haul jets" land on Runway 34R (the "third runway") from the south-south-east, and can do so except in wet weather when there is a southerly wind [LTOPFRp.71]. This is presumably because of the danger of overruns caused by skidding in the wet due to the shortness of the third runway that terminates close to the Domestic Terminal Building. Mode 2 is suitable for use in low-to moderate southerly winds when otherwise Mode 10 would need to be employed: LTOPSR p. 64ff. With the reported "relaxation" in the downwind component requirement (to around 10 knots), landings from the south should be possible with Mode 2 as long as this criterion is not exceeded.

Table D-1 shows that this is the optimum capacity "over-the-water" Mode; but this is partly achieved by landing long-haul 747 and similar aircraft from the north. Elsewhere in the LTOPSR it is stated

²² The downwind component limitation has reportedly been abolished. SACF 26/2/1999 per K. McLean ASA.

that long haul jets comprise about 15% of total movements at KSA [LTOPSR p.2]. This suggests that during operation of Mode 2 a maximum of 7.5% of the arrivals might need to land on the main north-south runway representing about three arrivals from the north per hour according to the ASA data in Table D-1. (Arrivals equal approx. half of the 15% ie. 7.5% of the 27 shown in Table D-1 to represent arriving aircraft movements with Mode 2).

Thus the affectation to the north can be expected to be about 7.5% compared with that in strong southerly winds during Mode 10 operation when all aircraft land from the north (3/40 ie. up to 40 aircraft per hour: LTOPSR p.65). However in considering residential impact one must have regard to the fact that the LTOP states that Mode 2 availability would be predominantly in the early morning and late evening [LTOPFR p.71]. Presumably this is determined by prevailing weather conditions.

In addition there must also be a 15 degree horizontal "divergence" between over-the-bay arrival and departure flight paths, which according to the LTOPFR puts departing aircraft from the main north-south runway on a flight path over Cronulla; though why this is necessarily so is not entirely clear (See Figure D-2).

3.3 Mode 3

Mode 3 is the inverse of Mode 2, that is all departures except for 'long-hauls' take place to the south-south-east over Botany Bay from Runway 16L (The "third" runway). According to Airservices Australia it would be available in wind conditions complementary to those suited for Mode 2, ie light to moderate northerly winds.

Long Haul departures (ie. overseas bound B747's; 767's, DC9's & 10's) would take off to the north from runway 34L (the main north-south runway) in a manner presumably similar to Mode 9. All landings would be on runway 34L from the south heading approximately NNW.

Like Mode 2 this mode requires simultaneous arrivals and departures from the same runway. However according to the LTOP Full Report in connection with Mode 2 such use of the same main runway for simultaneous landings and departures will not cause significant delays because the departures and arrivals are in the same direction [LTOPFR p.73].

Table D-1 shows that this is a "medium capacity" over-the-water Mode shown by the 'SIMMOD' modelling to be capable of 49 movements per hour. This is partly achieved by departing long-haul 747 and similar aircraft over the north.

As mentioned earlier, elsewhere in the LTOPSR it is stated that long haul jets comprise about 15% of total movements at KSA: [LTOPSR p. 2]. This suggests that during operation of Mode 3 a maximum of 7.5% of the arrivals might need to take off north from the main north-south runway representing a little over 2 departures per hour according to the ASA data in Table D-1. (Departures equal approx. half of the 15% ie. 7.5% of the 29 shown in Table D-1 to represent departing aircraft movements with Mode 3).

Thus the affectation to the north can be expected about 6% of that in stronger northerly winds during Mode 9 operation when all aircraft take off to the north (ie. up to 35 aircraft per hour: LTOPSR p. 58; $2/35 = 5.7\%$). In considering residential impact Mode 3 availability is predominantly in the early morning and late evening [LTOPFR p. 77] and that the 15% long-haul movements implies only about two aircraft per hour would be required to take off over the north with this mode.

According to Airservices Australia there must also be a 15 [or is it 30?] degree horizontal "divergence" between over-the-bay arrival and departure flight paths in the use of this Mode, as with Mode 2: See general comments LTOPSR p.21, but according to the LTOPFR in the description of Mode 3 "all operations in the initial departure phase and the final approach phase of flight are over water with the minimum impact on Kurnell achievable" [LTOPFR p.80].

3.4 Mode 4

With Mode 4, departures to the south are from both "north south" runways 16L (third) and 16R (main). Arrivals are onto runway 34L (main north south heading north). Airservices Australia state that this is the "preferred Mode" during all none curfew hours subject to weather and traffic conditions [LTOPSR p.106] and that failing the availability of this mode then Mode 2 should be reconsidered [LTOPFR p.75].

In the context of runway utilisation Mode 4 appears compatible with the use of Mode 3 when the wind direction strengthens from the north forcing northerly take-offs by long haul jets; when the Summary Report states that Mode 4 will be unsuitable and that Mode 3 "covers this operation" [LTOPSR p.34]; although despite this apparent endorsement by ASA it should be noted that Mode 3 is also not included in the final LTOP!

Table D-1 shows Mode 4 to be the "least capacious" over-the-water Mode shown by the "SIMMOD" modelling to be capable of 44 movements per hour. It has similar weather and operational restrictions to modes 2 & 3 yet is the only one included in the LTOP. Its obvious advantage is that no aircraft overfly the north during the operation of this Mode, and clearly there are advantages to the majority of Sydney residents in this.

Like Modes 2 and 3 Mode 4 is theoretically available throughout the year, but usually in the "early morning" [from ca. 07:30am] and late evening under low wind conditions [LTOPSR p.31 cf. 106]. The maximum stated downwind tolerance of 5 knots may now be greater due to the reported "relaxation" of the downwind component requirement reported by Ken McLean to the government SACF on 26 /2/1999.

However, Airservices Australia state [LTOPSR p. 106] that Mode 4 cannot be used on weekdays between 06:00 and 07:30 and it suggests that in that period "a cross runway Mode should be used (Modes 5,7 or 14A)" [LTOPSR p.106].

No reason is provided for this statement though one suspects it could be related to the significant density of overseas "long-haul" arrivals in the early morning post-curfew period; but in its typical self-contradictory manner the Summary Report goes on to state that its proposed use will be "in the early morning, immediately following the curfew and during light traffic periods in the middle of the day or at weekends" [LTOPSR p.34].

There are obvious "synchronisation problems" with this Mode due to the use of runway 16R for both landings and departures in opposite directions and Airservices Australia state that "significant aircraft spacing was required on the take-off and final approach tracks, limiting the capacity of the runway" [LTOPSR p.31].

As with Mode 3 all operations are stated to be over the water and there is minimal impact on Kurnell [LTOPSR p.34].

4. Airservices Australia Critique of Over-the-Water Modes

The critiques provided by Airservices Australia of all the "over-the-water" Modes are similar and so are bundled together in the following discussion for the purpose of providing a basis from which critical questions may be directed back to Airservices Australia.

4.1 Airspace Management Complexity

Both LTOP Reports state that "operational complexity" is greater for the "over-the water" modes than for "normal" Modes, and that arrivals and departures must be "segregated on the traffic circuit" [LTOPSR p.31], [LTOPFR pp.72&78]. It is not clear whether this means on the airfield itself or in the air, but either way one would expect some sort of necessary segregation between arrivals and departures both in the air and on the tarmac otherwise there would be collisions between aircraft whichever Mode was being used.

Both Reports [LTOPFR p.73,78 & LTOPSR p.32] also state that there must be "clear" and "distinct" division of "airspace responsibility" between "tower" and "radar" controllers, and that there "is extra coordination required" between aerodrome controllers in the SODPROPS modes, at which one shudders to think that there is not ordinarily any "clear" and "distinct" division of responsibility and coordination in this way.

There is also an "increased monitoring load on final approach and after departure" and controller workloads are increased with the over-the-water Modes [eg. LTOPFR p.73], presumably because of the need to ensure that departing and arriving aircraft do not stray onto each others flight paths. One of the reasons for this is the inability of controllers to simultaneously monitor the over-the-water modes and "helicopter arrivals".

One is led to ask whether this could be minimised using some kind of radar system to track aircraft and warn of intrusions into relevant airspace; or perhaps whether helicopters should be mixed in the same air-space as general traffic at KSA?

4.2 Disadvantages

These are stated to be a 15 degree divergence requirement which puts aircraft over Cronulla and which "defeats the purpose of the opposite direction operation" ie. to maximise operations over water. Sometimes this is referred to as a 30 degree divergence and is stated in both reports without justification and avoids any consideration of the relative numbers of people affected by operations "over Cronulla" than in the use of the "parallel" Modes.

The Reports also state without justification that "only low traffic levels" are available "with safety" with mixtures of arrivals and departures in the same airspace [LTOPFR pp.73, 78 & 80 & LTOPSR p.32]. Whilst one would not ask Airservices Australia to conduct operations in an unsafe manner, a legitimate question is whether the 43- 56 movements per hour projected by the SIMMOD modelling for these Modes is inherently unsafe?

4.3 Advantages

The most obvious advantage for Sydney residential communities is the reduction compared to Mode 9 and 10 operations in the frequency to which people in residential areas are exposed to 70dBA noise impacts. Although this is not quantified in terms of number of impacts per person per hour in the LTOP reports, the exposure to landing noise of the 134,400 people affected from the north is between ten and twenty times less than with Modes 9 & 10. The reason for this is that long haul jets are using the north for arrival (Mode 2) and departures Modes 3) at the rate of only 2 - 3 per hour. This is very significantly less than the exposure of 1.5m people to the north, north-west and north-east under Mode 9 operations. There is, of course, no northerly exposure during the operation of Mode 4.

Similarly significantly fewer people overall are affected by both arrival and departure noise with the bulk of the traffic being over the water, affecting a total of around 41,100 people [LTOPFR pp.74&79 & LTOPSR p.33] compared with potentially 1.5m people with departures north [LTOPSR p.93 & Table D-1].

Departing aircraft can reach much greater altitude more quickly flying south than with the northern departure modes [LTOPFR p.74; LTOPFR p.79; LTOPSR p.33 where a typical B747-200 is projected to reach 10,000 ft "over water" - ie. offshore from Cronulla]. This is to be compared with the only 3000ft altitudes achieved in practice over Ashfield/Croydon/Strathfield²³ –(an equivalent distance after take-off) during take-offs to the north north-west.

5 Questions that should be asked about Over-the Water Modes:

²³ Note this is in contradiction to the LTOP prediction of around 6,500 ft at Wetherill Park in the North west.

- Q 5.1 Do the "safety" considerations which "limit" the use of this Mode really amount to limitations or do they simply reflect an aversion to change in modus operandi and thus greater complexity for air traffic controllers?
- Q 5.2 Is the coordination requirement between "tower" and "radar" controllers any greater than should exist in practice anyway?
- Q5.3 Could "coordination" be assisted by greater reliance at the airport on "machine controls" such as automated tracking radar [perhaps this is heretical in view of the controversy over PRM, but it is a question worth putting]?
- Q5.4 The description in the LTOP reports [LTOPFR p.72 cf. p.73], as to whether a 15 or 30 degree divergence is required between arrival and departure tracks over the Bay is unclear (which in practice could make the difference between departures having to fly over Cronulla or not). What is the true required divergence?
- Q5.5 If safety is a limitation then why does the report state that "Risk associated with this mode is provided for in the procedures employed and in the development of the operating standard." While this is a "stock in trade" expression throughout the LTOP summary and full Reports and is repeated for all Mode descriptions, does this not suggest that the risk is controllable for all Modes and therefore that safety is not the consideration alluded to?
- Q5.6 Can one assume that these Modes are now more available given the relaxation of the downwind condition referred to by Mr McLean at the 26/2/99 meeting of the government SACF?; and if the relaxation is to say 10knots, [??] as applied during parallel operations under the Labour government, does this mean that these Modes might be available for significantly more of the time twice as much as than predicted in the LTOP Reports?
- Q5.7 If noise minimisation over residential areas is a core objective, the criterion as suggested by the preambles to the LTOP Reports, then why was not a greater emphasis given to consideration of Modes 2 and 3 in the implementation of LTOP? Why were the modes left out of the final recommendation, and why is Mode 4 utilised so infrequently if at all?
- Q5.8 The LTOP Reports imply that Mode 4 with its opposite direction take-offs and landings on the same runway and limited over-the-water capacity is inherently preferable to either of Modes 2 or 3 [LTOPR p. 106]; and in denying Sydney residents the availability of Modes 3 & 4 it contradicts itself in saying that Modes 3 & 4 "provide maximum over-the-water tracking and should be used whenever weather conditions permit [LTOPSR p.21]. Why is this not being allowed to happen?
- Q5.9 The LTOP Reports state that among the reasons for resistance to Modes 2 & 3 is the "divergence of a minimum of 15 degrees" which is required between simultaneous arrival and departure tracks which "places aircraft very close to or over Cronulla and would negate any initiatives discussed to move aircraft further to sea off Cronulla". Is this actually the case; and is the limitation only applied in two dimensions? [See also below].
- Q5.10A In practice, achievement of a 15 degree separation between departing and arriving aircraft only requires 7.5 degrees from straight-ahead for both arriving and departing aircraft. This does not put departures over Cronulla [see Figure D-2]. In fact even fifteen degrees applied only to jets heading south off Runway 16R provides the necessary clearance in three dimensions. What is the answer of Airservices Australia to this criticism?
- Q5.10B Indeed, departing jets take off much more steeply than arriving craft [20-30 degree climbs are not uncommon; cf. 5 degrees mandated for landing]. It is suggested that this inherently provides the necessary safety clearances for jets departing and arriving in SODPROPS modes, and voids the objection in the LTOP report that Modes 2 & 3 are void simply because they will put departing aircraft over Cronulla. What is the answer of Airservices Australia to this criticism?

Q5.11 Mr Tony Williams, independent expert in air-space management (member of the LTOP Taskforce in the capacity of 'community representative'), has stated that with purely over-water modes (Mode 2 or a mixture of Modes 2 and 4) the SODPROPS throughput could be increased to 65 movements an hour. Given that the airport only operated above this volume for limited amounts of time (ie 1% of time during first quarter 1998), why is Airservices Australia not maximising the use of these modes to minimise noise over highly populous suburbs?

Q5.12A SODPROPS

Mr. G. Harrison [Randwick Forum] has suggested that the noise impact of KSA could be reduced by 40%-70% using combinations of SODPROPS modes, with some modifications. The lower figure would be possible by getting Mode 2 implemented in all suitable downwind conditions, and running SODPROPS for at least all non-peak periods in light and variable winds, especially very early morning and late at night. As shown above this should be possible with all northerly down-winds less than at least 10 knots. Why is Airservices Australia not maximising the use of these modes to minimise noise over densely populated residential suburbs?

Q5.12B SODJETS

Mr. Harrison claims that the higher of the above figures could be achieved with a configuration that has been called "SODJETS". This involves confining jets to Mode 2 and putting propeller craft on the EW runway thus increasing the availability of Mode 2 to jets with greater over-the-water capacity. This would result in still fewer jets going over people (excluding Kurnell who should be compensated) when the downwind was less than critical [ie. in all but bad weather]. An addition to the options available with this suggestion could be to include Mode 3 - the true reciprocal of Mode 2 [See above], This would further expand the availability of SODPROPS /SODJETS into moderate southerly downwind conditions. Why cannot Airservices Australia pursue these options?

Q5.13 SODPROPS utilisation in IMC Report

Airservices Australia and Mr. Lidbetter should be asked whether the alleged SODPROPS utilisation of 5.1% in the IMC Report dated 26/2/99 distributed by Mr. Lidbetter to SACF includes the curfew operations. If it does it is incorrect to say that the curfew mode is a "simultaneous opposite directions on parallel runways" [ie. SODPROPS] mode, and is a misrepresentation of the true utilisation of SODPROPS which is very small - indeed, it is so small as to be unreported in recent KSA Briefing Notes.

In any case the combined utilisation of Modes 1 (Curfew) and 4 (SODPROPS 1) should be up to 14% by now: See LTOPSR Fig. 10 p. 105.

Appendix E Statements on Aircraft Environmental Controls

ENVIRONMENTAL PROTECTION FROM OVERFLYING AIRCRAFT

Once aircraft are airborne over any airport in Australia, existing State Government and Commonwealth environmental legislation provides no protection for residents on the ground. The relevant legislation controlling aircraft use in general [other than safety aspects] are the Airservices Act (1996) Cth; and the Air Navigation Act (1920) Cth.

Aircraft certified to fly in Australia must comply with the Air Navigation Act (1920) Cth. and Regulations. While the maximum noise emission from an aircraft engine at 650m from the engine on the tarmac is specified in the Act, there is no comparable restriction of noise impacts from overflying aircraft experienced by people on the ground. Thus the Air Navigation Act (1920) does not regulate, other than indirectly, the effects of aircraft engine noise and emissions on the ground, which depend on the flight path chosen and the height of the aircraft above the ground.

The Airports Act (1995) and its associated Regulations regulate the use of airport property by the airport operator and the noise and pollution emissions from the airport in general terms. However contrary to the expectation of many, the Act does not purport to regulate the compliance with land use regulations pertaining to noise and pollution impacts of aircraft after take-off, or even when idling on the tarmac under their own power. Indeed Regulation 1.03 of the Airport (Environment Protection) Regulations specifically excludes their application to (a) pollution generated by an aircraft; or (b) noise generated by an aircraft in flight or when landing, taking off or taxiing at an airport²⁴.

The Airservices Act (1996) and Regulations under it control the manner in which aircraft are operated after take off, including the flight path selected by air-traffic control. One of the functions of Airservices Australia prescribed in the AA Act is the *"carrying out [of] activities to protect the environment from the effects of, and the effects associated with, the operation of Commonwealth jurisdiction aircraft"* [s.8(1)(d)].

Commendably the Airservices Act requires Airservices Australia to regard the safety of air navigation as the most important consideration in exercising its powers and performing its functions [s.9(1)]. However it must act in a manner that ensures that, as far as is practicable, the environment is protected from the effects of the operation and use of aircraft; and the effects associated with the operation and use of aircraft [s. 9(2)].

However, the Act in practice provides no such protection because Parliament has not seen fit to enact any regulations under the Act to cover the protection of the environment (including the human environment) from aircraft impacts (whether of the noise or pollution kind); although by s.77 the Act gives "The Governor-General" power to make regulations prescribing matters: *"regulating the environmental effects of the operation of Commonwealth jurisdiction aircraft"*: s.77(2)(f). The Governor General in this context is generally understood to mean "the parliament", the Minister by Direction; or the relevant department.

By s.19 (1) of the Airservices Act, Airservices Australia is also exempted from the obligation to comply with State and Territory "land use laws", which include State Noise Acts and laws regulating gaseous emissions. So unless the Commonwealth parliament explicitly prescribes the maximum effects on land of overflying aircraft, there is no reason to expect Airservices Australia to consider this aspect without a direction from the appropriate government authority.

This abnegation of responsibility for the impacts on land of overflying aircraft is continued in the more recently enacted National Environment Protection Measures (Implementation) Act 1998 [The NEPM

²⁴ This is not to say that under section 116 of the Airports Act, the airport operator may not have an obligation to prepare a draft environmental strategy, including the affects of overflying aircraft, for submission to the Minister.

Act]. This Act is the Act empowering State and Federal cooperation in the area of environmental protection through the use of so-called "National Environmental Protection Measures [NEPMs] which are implemented under the National Environment Protection Council Act (1994) Cth.

In Parts 2 and 3, the NEPM Act has exempted National Environmental Protection Measures [NEPM's] cooperation with the States under "Intergovernment Agreements on the Environment " [IGAEs] for matters of "national interest" which is defined as:

"(a) a matter concerning:

- (i) *Australia's relations with another country or Australia's international obligations; or*
- (ii) *-(iv) [national security; defence; or emergency -paraphrased]; or*

(b) a prescribed matter relating to:

- (ii) *the management of aviation airspace or airports, including aircraft emissions, aircraft noise and on-ground airport management, but not including matters specified in sub-regulation 1.04(2) of the Airports (Environment Protection) Regulations; or*

(c) any other matter agreed between the Commonwealth, the States and the Territories."

[Note sub-regulation 1.04(2) of the Act (EP) regulations only applies to provisions about motor vehicle pollution; occupational health and safety matters; emissions of substances that deplete stratospheric ozone; or the use of pesticides].

It appears from the Senate second reading speech, for the introduction of the NEPM Act, that noise and other emissions from aircraft in flight are regulated effectively by the Air Navigation (Aircraft Noise) and the Air Navigation (Aircraft Engine Emissions) Regulations²⁵. However there is in fact no such regulation under the Air Navigation Act specifying the minimum impact at ground level of noise and emissions from aircraft when in flight.

From the standpoint of the protection of residents underlying flight paths over Australia's towns and cities, this appears to be a serious omission from the regulatory protections afforded to Australia's citizens. Regulatory protections could be satisfied by prescribing, for different aircraft, the maximum noise impact they may impose at given radial distances following take-off, or prior to landing. This would need to take into account climbing, heights and approach characteristics of aircraft optimised both for noise and emissions impact at ground level, with exemptions for emergency operations etc. In conclusion there seems to be no good reason at all for exempting overflying aircraft the norms of environmental controls which are applied to land-based activities and it is high time that our politicians were made to realise this.

²⁵ Senator Campbell, WA 21/10/1997 Hansard p.7721.

Appendix F 'Possible' Methodology for Equitable Community Representation

The aim of the exercise is to determine an equitable and justifiable distribution of 'Sydney Airport Representatives' based on the affectation by Local Government Area (LGA)¹⁰. To do this Australian Noise Exposure Forecast (ANEF) levels were calculated²⁶ for the centroids of all 5020 Census Collectors Districts (1991 census) which are within 40 km of the airport and with an ANEF level such that 10% or more of the population would be 'moderately' affected. The definition of 'moderately affected' is based upon work done²⁷ by the National Acoustic Laboratory (NAL) and takes into account a dose response relationship between ANEF and the percentage moderately affected. The results, illustrated below, are aggregated by Local Government Area (LGA) and are expressed both as a raw number and as a percentage of the LGA.

Community SACF' vs 'Government SACF'

Proposed Community Representatives	22
Population analysed	3,105,299
Population 'moderately' affected	369,702
Average no. of 'moderately' affected residents per Representative	16,805

Area	Residents by LGA	Residents 'Moderately' Effected by Noise ¹	% 'Moderately' Affected	Proposed Community SACF Representation	Current Government SACF Representation
North					
Marrickville	77,991	37,393	48%	2.2	Cotter, Albanese 2
Leichhardt	58,472	15,480	26%	0.9	
Ryde	90,249	13,111	15%	0.8	
Ku-ring-gai	99,147	9,235	9%	0.5	
Drummoyne	30,180	7,783	26%	0.5	Lidbetter 1
North Sydney	50,438	4,182	8%	0.2	Hockey 1
Lane Cove	28,927	3,331	12%	0.2	Chikarovski, Rawlings 2
Hunter's Hill	11,960	2,944	25%	0.2	Sheerin, Saul 2
Willoughby	51,454	2,160	4%	0.1	Clarke 1
Sydney	13,528	1,916	14%	0.1	Nori 1
Hornsby	125,308	1,877	1%	0.1	
Warringah	170,793	1,152	1%	0.1	
Total North	808,447	100,564	12%	6.0	
				Proposed: 6	Current: 10
South					
Sutherland	184,402	13,290	7%	0.8	Mutch, Schreiber, Hill 3
Wollongong	6,728	0	0%	0.0	
Total South	191,130	13,290	7%	0.8	
				Proposed: 1	Current: 3
East					
Randwick	115,231	32,378	28%	1.9	Finn 1
Botany Bay	34,449	16,424	48%	1.0	
South Sydney	77,802	15,177	20%	0.9	Grusovin 1
Woollahra	49,909	9,202	18%	0.5	Medcraft 1
Waverley	59,117	7,817	13%	0.5	
Manly	34,893	0	0%	0.0	
Mosman	25,309	0	0%	0.0	
Total East	396,710	80,998	20%	4.8	
				Proposed: 5	Current: 3
West					
Rockdale	84,075	33,996	40%	2.0	Holroyd, McClelland 2
Hurstville	63,707	18,273	29%	1.1	Olah 1
Canterbury (2)	129,254	15,374	12%	0.9	Patrinis 0.5
Bankstown	153,867	13,658	9%	0.8	
Kogarah	46,506	8,893	19%	0.5	
Fairfield	175,145	597	0%	0.0	
Liverpool	95,780	12	0%	0.0	
Campbelltown	137,337	0	0%	0.0	
Penrith	29,520	0	0%	0.0	
Camden	5,031	0	0%	0.0	
Total West	920,222	90,803	10%	5.4	
				Proposed: 5	Current: 4
North West					
Canterbury (2)	129,254	15,374	12%	0.9	Patrinis 0.5
Ashfield	40,566	15,278	38%	0.9	Zammit, Bonanno 2
Parramatta	132,810	14,353	11%	0.9	
Burwood	28,353	9,761	34%	0.6	
Concord	23,131	6,744	29%	0.4	
Auburn	48,553	6,665	14%	0.4	
Strathfield	25,837	6,551	25%	0.4	
Blacktown	172,612	4,279	2%	0.3	
Baulkham Hills	108,529	3,456	3%	0.2	
Holroyd	79,145	1,584	2%	0.1	
Total Nth West	788,790	84,047	11%	5.0	
				Proposed: 5	Current: 2

1. Residents 'moderately' effected by Noise as per NAL report based on ANEC 2 input data (1995 traffic levels)

2. Canterbury has been divided across North West & West.

26 Using the inputs to ANEC 2.

27 National Acoustic Laboratories (NAL) 1982. *Aircraft noise in Australia: A survey of community reaction*, eds A. J. Hede and R. B. Bullen. Report No. 88. Canberra: Socio Acoustic Research Section, National Acoustic Laboratories, Commonwealth Department Health.

Appendix G SACF Inc.'s Media release On the Badgerys Creek Decision

AIRPORT COMMUNITY GROUPS REJECT BADGERYS WHITEWASH

The peak body for community airport groups, Sydney Airport Community Forum Inc (SACF Inc), this week unanimously rejected the Government's pre-emptive support for the Badgerys Creek proposed airport site. SACF Inc represents over thirty airport community groups from Randwick to the Blue Mountains, and from Hornsby to Sydney's south-west extremities. It was established as an alternative to the government-appointed committee of a similar name which is not representative of the communities affected.

Mr John Dale VP of SACF Inc is both a representative of residents north of KSA and the communities' representative on the Standards Australia committee for fixed wing noise emissions. Mr Dale said "Given the threat of privatisation for a 99 year lease, without protective legislation, it makes a mockery of the whole EIS process to have the Minister responsible coming out before the report is completed and saying the Government will proceed with the site, regardless of the fact that there are less damaging sites and his Government's reports highlight significant problems. Previous EIS assessments of Badgerys Creek have described the site as an environmental disaster. The Minister's statement demonstrates a further wasting of taxpayers' money, abuse of privilege and contempt for the plight of people affected by the damaging impact of airport operations for decades. The record of government dealings with those affected by KSA's operations has been dramatically exposed in various enquiries with no redress."

Graeme Harrison, VP of SACF Inc representing groups east of KSA said "The community should have no faith in the EIS process when the Government announces that it already knows the recommendations that will appear in the final report and instructs us to 'read between the lines'. The community deserves better than an EIS where non-independent contractors were instructed to ignore alternatives, contrary to the legislative requirements of an EIS. The Government is now seeking to diminish its responsibility by saying it will proceed even if Badgerys is a 'near-disaster'. We've seen just how corrupt the Government can be in its management of KSA."

The peak community group has unanimously rejected the Badgerys Creek site because of the clear lack of independence in the contractor, because of the refusal to consider alternatives in the EIS process, because the communities' submissions to the EIS were ignored, because the Government has failed to consider the fundamental air quality issue of locating the airport outside the Sydney Basin instead of at the deepest part of Sydney's smog sink, because the government has refused to consider major detrimental aspects, because the number of people affected will be an order of magnitude greater than for other sites, and because the site cannot provide long-term relief for residents adversely affected by KSA, as those living around Badgerys Creek will be as deserving of a curfew as those affected by KSA (refer attached sheet).

Mr Tanner said "The Badgerys Creek site just doesn't stack up against the alternatives such as Wilton, which are located outside the basin and no further by road or train. That is the reason the Minister directed the contractor to ignore in the EIS the most prudent and feasible alternative. The Government has spent millions on this pro-Badgerys EIS work, but refuses to mention the site short-listed with Badgerys Creek by the Minister in 1984. The EIS work has compared Badgerys to only the seventh-ranked site (Holsworthy – since dropped) and a 'do nothing' option. The Minister is engaging in complete obfuscation by saying that the alternatives to Badgerys are the very distant sites of Goulburn etc."

Mr Harrison said "The official 1985 study noted that the rail distance to locate the airport at a suitable site outside the Sydney Basin was 71km from the CBD – only 15km more than for Badgerys, but Wilton is right on the proposed Very Fast Train route. An outside-the-basin would be much better for Sydney's smog. If the Government proceeds with its plan, Badgerys will stand as a permanent reminder to countless future generations of Sydney voters of the crass disregard for their welfare by a coalition Government. The air quality decrease, aircraft noise problems and crash risk will forever come back to haunt the Liberal Party at future elections when people say 'Remember, these are the

people who forced the airport to be located in the worst smog area so that three million people could breath the emissions, when it would have cost no more to put the site outside the Sydney Basin'."

Contact Mr Dick Tanner, President Sydney Airport Community Forum Inc, Phone: (02) 9953-8250, -2250, (02) 6377-4534 Email: tanner5678@hotmail.com

Mr John Dale, VP Sydney Airport Community Forum Inc, Phone: (02) 9519-1035 Email: jpdale@ozemail.com.au

Mr Graeme Harrison, VP Sydney Airport Community Forum Inc, Phone: (02) 9349-7470, (0500) UGETME Email: me@mypostbox.com

Supporting information for SACF Inc's rejection of the Badgerys Creek site:

1. The clear lack of independence of the contractor (Rust-PPK has admitted that its parent company is a very large landholder around the proposed site at Badgerys Creek).
2. The refusal by the Government and its contractor, contrary to the Environmental Protection (Impact of Proposals) Act 1974 (Cth), to consider prudent and feasible alternatives including the other site (south of the hamlet of Wilton) which was formally announced (with Badgerys Creek) as short-listed by the then Minister on 18 September 1984 as being the two sites warranting further study.
3. Contrary to the above Act, the community groups' input to the EIS was ignored.
4. The Government has failed to consider the fundamental air quality issue of locating the airport outside the Sydney Basin instead of in the deepest part of the smog sink. This is not a new concept as the Draft EIS entitled "Second Sydney Airport Site Selection Programme" prepared by Kinhill Stearns in April 1985 noted of Wilton: "The site is located on the margin of the Sydney air basin and has relatively good air dispersion characteristics compared to the closer sites." Subsequent US research has highlighted that airports rank number one with petrochemical refineries as the largest point sources of hydrocarbon emissions. With the replacement airport site, there is the potential to relocate 5-10% of Sydney's total air pollution to a location where emissions do not enter the Sydney Basin. Three million additional residents will breathe the emissions from a Badgerys site, compared to any site outside the Sydney Basin air-shed.
5. The Government has refused to consider major detrimental aspects including wind-shear from the Blue Mountains and potential crash-risk disruption to Sydney's electricity grid, water supply and gas pipeline, with major infrastructure concentrations close to Badgerys.
6. The Government's own figures of fifteen years ago confirm that (even then) the number of residents adversely affected by Badgerys Creek would be fourteen-fold compared to Wilton (say). Since then there has been extensive residential development up to the very boundary fence of the Badgerys site.
7. Badgerys Creek does not offer the ability to be a long-term replacement for KSA, nor will it provide long-term relief for the over one million residents currently affected by noise from KSA. Badgerys will have limited capacity and be environmentally constrained.
8. The Government has used obfuscation to portray that only long distance sites are alternatives, ignoring the middle distance sites. The Minister was reported in last week's SMH as saying "Sites outside the Sydney basin will suffer from the disadvantage of distance from Sydney Airport and the city centre, with associated costs and inconvenience for passengers." But the 1985 study noted Badgerys was 68km from the CBD by rail (assuming the year 2015 network), whereas Wilton was 83km away (using the same assumption of a 2015 network) but Wilton is on the Very Fast Train route, so the trip time may actually be less than for Badgerys.

9. The Government has used intentionally misleading information on jobs creation. Whether the second/replacement airport is built at Badgerys or Wilton, the construction workers would be sourced primarily from Sydney's south-west and/or Western Suburbs. It is a moot point whether Sydney's south-west or Western suburbs are more deserving of such jobs.
10. There is the problem of interoperability of the Sydney airports, in that Wilton would only impact Camden airport (source: 1985 study) whereas Badgerys will clearly restrict the half-million annual aircraft movements at Bankstown and any noise sharing of the quarter-million annual aircraft movements at KSA. With forecasts of continued strong growth in air travel, it is inappropriate to intentionally have a conflagration of aircraft above the heads of the residents of Sydney, and the (soon) million-plus annual aircraft movements in the Sydney Basin will introduce avoidable crash risk as well as having a serious detrimental impact on air quality.
11. The community is justified in rejecting any moderate population density site, due to the aviation bureaucracy's long history of pandering to aviation interests above the interests of the community. The bureaucracy has continually refused to provide data to allow community groups to monitor the operations of Sydney's existing airports. A more open and accountable approach is required to restore credibility.

Media Release of The Greens

BADGERYS OPPOSED BY INNER SYDNEY TOO

A meeting of the peak community organisation representing over thirty anti-aircraft noise groups from across Sydney has condemned the Government's proposal for an airport at Badgerys Creek. Last night (Wednesday night) a meeting at Sydenham of groups from the Eastern Suburbs, the Inner west, the north Shore, Bankstown and Western Sydney unanimously called for the Government to abandon the Badgerys Creek site and to begin a search for a location that could one day be a replacement for Sydney Airport.

The Greens have welcomed the community groups' decision. Lee Rhiannon, newly elected member of the NSW Upper House said "It's great to see residents rejecting the 'divide and conquer' tactics of the major parties. Badgerys has been falsely portrayed as the solution to the problems of Kingsford-Smith Airport, but it never was and never will be." Ms Rhiannon said "An airport at Badgerys Creek will exacerbate KSA's problems and then duplicate them."

Dick Tanner, President of the Sydney Airport Community Forum Incorporated, as the alliance of the airport groups is called, said "Three EISs since 1985 have said that Badgerys Creek airport will worsen the environmental impacts of Kingsford-Smith." Mr Tanner went on to say "The groups were united in their resolve to pressure the Federal Government to find a genuine solution to the noise, air pollution and crash risks of KSA. The government is intensifying the use of KSA, intensifying the use of Bankstown airport and now wants to inflict a third airport blight on Sydney. The only long-term solution is a replacement airport outside the Sydney Basin air-shed." Mr Tanner said "The government was ignoring the legislative requirements that all prudent and feasible alternatives be considered." "The Government is flouting its own law," he said.

Contact: Ms Lee Rhiannon, MLC Elect Phone (02) 9519-0877 (018) 976707
Mr Dick Tanner, President Sydney Airport Community Forum Inc, Phone (02) 9953-8250,
(02) 9953-2250, (02) 6377-4534

Appendix H SACF Inc's Submission to PPK re The Supplementary EIS On Badgerys

PO Box 104, Summer Hill 2130
Tel/Fax (02) 9953-8250 [Chair] (02) 9798-9606 [Secretary]

24 May 1999

Denis White
Chief Executive Officer,
PPK Environment & Infrastructure Pty Ltd
9 Blaxland Street,
Rhodes NSW 2138

Dear Mr White,

Comparison of Badgerys Creek and Wilton Potential Sites for Sydney's Second Airport

Sydney Airport Community Forum Inc (SACF Inc) represents around thirty airport community groups from Randwick to the Blue Mountains, and from Hornsby to Sydney's south-west extremities. It was established as an alternative to the government-appointed committee of a similar name which is not representative of the communities affected. SACF Inc is the peak community body in respect of airport matters, with other 'groups of groups', such as the Coalition of Airport Action Groups and the Eastern Coalition of Airport Groups, recognising SACF Inc as the community's true 'peak representative body'.

Last month, in response to the Minister for Transport's public statements that he was aware of the results of your yet-to-be-completed EIS supplement, we put out a media release addressing some of our concerns with the corruption of process involved with the Badgerys Creek EIS. That document is attached.

Our member organisations do not believe PPK is capable of conducting an independent EIS as required by the Environment Protection (Impact of Proposals) Act 1974 (C'th) and its Administrative Procedures by virtue of the fact that your parent organisation is one of the largest private landholders in the environs of the proposed airport site, and hence your group of companies has a direct multi-million dollar interest in the outcome of the decision. Hence we believe that you are not independent. Furthermore, the fact that a number of key public sector positions regarding environmental management/control of the aviation industry within Sydney are filled with staff seconded from your organisation (rather than the technically independent public sector) further compromises your independence.

In 1984-5 the then Minister for Transport publicly announced that consideration of future airport sites for Sydney would henceforth be limited (from the larger number considered to that time) to just Badgerys Creek and Wilton. That decision and public announcement clearly put Wilton on the public record as the most feasible alternative to Badgerys Creek. In the opening paragraph of the Summary Draft EIS you acknowledge that "detailed environmental assessments" were done for Badgerys Creek and Wilton, though you elected to not explicitly advise of the formal short-listing of these two sites. But in any event it is clear that Wilton was the prudent and feasible alternative, and that such information was available to your firm at the time of the EIS.

As you know, the government and the 1997 EIS was severely criticised by the government-appointed auditor of the process in the following respects:

1. Failure by government to include sites previously short-listed by the 1985 EIS [eg Wilton];

2. Initial inclusion by government of the “red-herring” site of Holsworthy, which had ranked 7th out of 10 in the 1985 EIS;
3. Failure by PPK to properly consider the following major problems in its draft EIS:
 - (a) Failure to state objectives clearly;
 - (b) Failure to discuss previously considered alternative sites from the 1985 EIS;
 - (c) Inadequate flight path forecasting for impact assessment having regard to the interactions with airspace of the other Sydney Airports;
 - (d) Failure to consider noise contours below 20 ANEF and the entire range of noise impacts according to the guidelines – which followed the Parer Report of 1995;
 - (e) Failure to employ an adequate Airshed model for prediction of air-quality effects;
 - (f) Under-estimation of airport hazard risk;
 - (g) Failure to address the cumulative impacts of support infrastructure on noise, risk and air quality in the Sydney Basin;
 - (h) Failure to properly assess the impact of not proceeding with Badgerys and the range and scale of its interactions with existing airports, especially KSA;
 - (i) Inadequate economic analysis.
4. The auditor also criticised the lack of co-operation it had received from the Department of Transport, which resulted in it having to proceed with less information than was available to PPK. [Source: SMEC Auditor's Report Jan 1998]

The larger size airport now being considered and the subsequent residential development of Western Sydney has made Wilton even more feasible in the 15 years which have elapsed since its formal equal ranking with Badgerys Creek. Further, as the air quality study promised at the time of the Third Runway EIS was never undertaken by the Federal government, we must rely on overseas information in respect of air quality issues pertaining to aviation. The knowledge gleaned over the past 15 years as to airports and their attendant ground transportation (ie effects considered as a whole) has highlighted that an airport is one of a city's largest point sources of hydrocarbon emissions. This means that an outside-the-basin site is now even more critical than when Badgerys Creek and Wilton were ranked equal 15 years ago. Moreover, your Summary Draft EIS noted “Most respondents expressed the view that the Second Sydney Airport should not be located within the Sydney basin”. This desire for an outside-the-basin site reflects a clear change in public opinion since the time of the earlier detailed environmental assessments (refer paragraph 1.3.25 of SMEC Auditor's Report). Finally, the decision to have a very fast train route pass right past Wilton is a very pertinent infrastructure decision not known at the time of the 1984-5 studies, and again this knowledge (if it were to be appropriately considered by you) would tip the scale significantly in favour of an outside-the-basin site in the near Southern Highlands.

All of your work on the EIS for Badgerys Creek is to-date silent on the issue of a comparison of Badgerys Creek to Wilton, because the government of the day has instructed you as contractors to not consider Wilton, which is in the middle of the electorate of the Minister for Finance, John Fahey. The peak community group seeks your assurance that the attached comparison (in its entirety) of Badgerys Creek and Wilton will be included in your Summary Supplementary EIS, in accordance with your statutory obligations.

Clearly your work has simplistically compared Badgerys Creek to only a ‘do nothing’ alternative. Even a patently bad site proposal will compare favourably to the continued expansion of Kingsford-Smith airport. But clearly that is not the question an EIS is intended to address. The question is “Is this site proposed by the proponent the most suitable of all feasible and prudent alternative sites?” In this regard, a few sections of the SMEC Auditor's Report are worth noting:

“23.2.1 The key requirements of the EIS Guidelines for the economic aspects were:

‘An economic analysis should be undertaken to establish the net economic effect of carrying out the proposal to the broad community **relative to alternatives** (including the do nothing option)...’

25.4.15 This lack of community confidence in the process can be attributed to:

- the exclusion from assessment of other airport sites;...

Final Page - Extract from the Administrative Procedures under the Environment Protection (Impact of Proposals) Act 1974: ... an environmental impact statement shall - ...

- (a) examine any feasible and prudent alternative to the proposed action;
- (b) describe the environment that is likely to be affected by the proposed action and by any feasible and prudent alternative to the proposed action;
- (c) assess the potential impact on the environment of the proposed action and of any feasible and prudent alternative to the proposed action;
- (d) outline the reasons for the choice of the proposed action..."[emphasis added]

The question you address in detail - which runway configuration to use at Badgerys Creek - is only assisting the proponent with its planning. It adds nothing to the fundamental question of whether the project at Badgerys Creek stacks up against prudent and feasible alternatives. You state in the EIS that it is being done in accordance with the Act, yet you have accepted the proponent's instructions as to which sites to not consider for comparative analysis. Your analysis to date is analogous to considering only the alternative of people having to keep all human waste inside their homes, when considering a particular sewage treatment works proposal/site. Your earlier work also considered a site at Holsworthy, as instructed by the government, even though this site was only ever ranked 7th of possible sites. But even if that was a lame excuse then (refer SMEC Auditor's Report paragraph 1.3.13), once the government ruled out Holsworthy, it made it even more nonsensical for you to fail to consider options the government of the day (indeed particular ministers) would prefer not be considered. It is not as if the relevant material was not available, as comparative work was conducted in the earlier studies. If one simply updated the census data relevant to the respective areas, one would be in a position to update the population impact, which is clearly one of the major determinants. The relative air pollution clearance attributes of both sites has not changed since the analysis of 1984-5 (though the overall level of pollution has) and hence it would be just as valid to republish these facts as to each site's major attributes.

We believe you as the consultants have a moral and professional obligation under the Environment Protection (Impact of Proposals) Act and its Administrative Procedures to consider all feasible and prudent alternatives. Indeed the whole purpose of an EIS is to ensure that such alternatives as the government of the day may not wish to consider are considered, for reasons of public interest. The EIS process is meant to be the primary means of ensuring against governments making unsound environmental decisions. Your actions and printed material available to date paints your organisation as a willing accomplice to the government's defective decision-making process, rather than as a protector of the public's position.

The following summary of major points of differentiation shows that Wilton is a site that any proposal needs to be compared against in a proper EIS. Where there are valid metrics (eg number of people affected, relative hours of travel time), our group agreed to use the ratio of such metrics to derive a relative score for each site. For example with a 1:14 ratio of numbers of people affected, one site received a score of $1/15^{\text{th}}$ of 100, while the other received a score of $14/15^{\text{th}}$ s of 100. As you have not provided current population numbers affected for Wilton in your work, we have used the 1984 figures for relative population levels. Current figures would exacerbate the ratio, showing Badgerys Creek is now significantly more than 14 times worse than Wilton. However, we have used the 1984 figures in the attached analysis. The 1984 study shows Wilton as being 3km further from the city by road using the 2015 road network. This also may have changed, but without comparative figures, we need to rely on the last work done considering both sites, and have used the figures of 5,000 people-hours travel time for Badgerys versus 7,000 people-hours for Wilton, despite the fact that the announced Very Fast Train would actually deliver a shorter travel time from the city to Wilton (compared to conventional rail from the city to Badgerys). Accordingly, we believe the relative travel time figures of 1984 (as used in our analysis) would be less favourable to Badgerys if now updated.

With factors which defy direct metrics, we surveyed the representatives of our constituent group members (representing the whole range of Sydney's airport community groups) to derive values from Excellent (100%), Very Good (80%), Good (60%), Fair(40%) and Poor(20%). This is actually a six-value ranking system, as there was the implicit potential value of 'no value(0%)' even though this was not used. We decided that it was not possible to use any greater precision, yet we believed it was very necessary (due to past/continuing obfuscation) to explicitly score the sites' relative merits.

Before making any alterations to our work, please write to us with your opinions or suggested corrections or email them to me at me@mypostbox.com. If there is some error of fact, we are more than happy to correct it. However, the attached table must be included in the Summary Supplemental EIS, both because it is the comparative site summary otherwise omitted, and because it represents the final feedback of the peak community group on the issue of the Badgerys Creek EIS.

Yours faithfully

Graeme Harrison BE(Syd), BSc(VUW), MBA(Harvard), FAIM, MNIA, MIEAust, MACS, MIEEE, MAIE, MACM, MIREE, AMAusIMM, JP

Vice-President – New Airport Site Selection

cc: The Managing Director, Snowy Mountains Engineering Corporation

Note: The 'Comparison of the two Historically Short-Listed Sites has been reproduced in Table 2 above.

Appendix I R. Tanner Letter to Ministers Hill and Anderson 25/5/99***SYDNEY AIRPORT COMMUNITY FORUM INC.*****PO Box 104 SUMMER HILL NSW 2130**

Office of the Chairman
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Tel. 02/9953-8250
02/6377-4534
Secretary: 02/9798-9606

25 May 99

Mr John Anderson MP
Minister for Transport and Regional Development
Parliament House
CANBERRA ACT 2600

AND Senator Robert Hill
Minister for the Environment
Parliament House
CANBERRA ACT 2600

Dear Sirs

**SUPPLEMENTARY ENVIRONMENTAL IMPACT STATEMENT
SECOND SYDNEY AIRPORT PROPOSAL (BADGERYS CREEK)**

I have taken the opportunity of writing this letter addressed jointly to you both as the environmental and transport issues are inseparable and should be considered by both you and your departments. You will receive identical letters.

Sydney Airport Community Forum (SACF Inc) represents over thirty community based groups from all over the Sydney region. It was established as the peak community representative body to speak on all matters relating to the existing operations at Sydney Airport (KSA) and to find a solution outside the Sydney Basin airshed acceptable to all communities.

The Management Committee of SACF Inc and its constituent members have become increasingly alarmed at the prostitution and corruption of the EIS process in respect of airport matters. We have consulted the Draft EIS of 1997 and the Auditors Report by SMEC Australia Pty Ltd of January 1997. We are gravely concerned at the unbelievable inadequacies of the Draft EIS expressed by the Auditor SMEC. These include:

1. The abject failure of the Draft EIS to even mention let alone discuss feasible alternative sites previously mentioned as required by law to do so.
2. Multiple failures to consider major problems of the Draft EIS.
3. Lack of co-operation from the Department of Transport and Regional Development.
4. Unexplained inadequate funding for the proponent consultant PPK Environment and Infrastructure Pty Ltd to purchase data reasonably required for them to furnish a complete EIS.
5. Unacceptable conditions placed on the auditor by the proponent's department.
6. Continued delays by the Department of Transport Regional Development in producing information to the Auditor on the spurious grounds of confidentiality.
7. The Auditor being denied access to basic data and technical files.

This represents a totally unacceptable and scandalous state of affairs to such an extent that SACF Inc has written a letter to PPK expressing the view that PPK remove itself as the independent consultant to the proponent. A copy of that letter is enclosed which discloses a conflict of interest by virtue of land holdings held in the general vicinity of Badgerys Creek by PPK's parent company. SACF Inc believes that the role of the independent consultant to the proponent should not only be independent but be seen to be independent.

Even if the role of the consultant to the proponent was independent (which it is not) the audit report by SMEC on

the Draft EIS reveals widespread and alarming deficiencies, which are summarised below. The list is by no means exhaustive.

1. Chapter 5 - General Requirements
No well defined flight operations.
The likelihood of the airport becoming a purely overflow airport.
2. Chapter 6 - Project Justification and Need
No indication of how the proposed total annual movements have been arrived at.
3. Chapter 7 - Options and Alternatives
No assessment of the interaction of the three Sydney Airports as the Government has yet to decide how the Airport at Badgerys Creek would operate.
4. Chapter 8 - Airport Planning and Airspace Management
Flight paths have not been determined and even if determined they would have changed under the Long Term Operating Plan at KSA.
No analysis of interaction with KSA.
5. Chapter 9 - Airport Noise
There is silence on the range of noise impacts.
The general inadequacy on the impact of noise on hospitals and schools.
There is no reference to the noise levels at KSA and how these would be replicated if not amplified.
6. Chapter 10 - Air Quality
EIS consultant has not purchased data so that air quality can be measured.
Detailed meteorological data not used.
General doubt expressed in the accuracy of conclusion in the Draft EIS.
7. Chapter 11 - Airport Hazards and Risk
Inadequate assessment of the chance of fatal accidents especially of operations in tandem with KSA.
Calculation checks could not be carried out.
Adverse meteorological and seismic activity not considered.
8. Chapter 12 - Health Impacts
No assessment of effect on vulnerable members of community.
Lack of relevant data.
9. Chapter 13 - Land Transport
Traffic control measures not addressed.
No identification of travel times and conditions.
10. Chapter 14 - Planning and Land Use
Effect of new options involving a cross-runway on certain villages not discussed.
11. Chapter 15 - Social/Community Issues
Generally inadequate as conclusions are based on unrealistic assumptions.
12. Chapter 16 - Ground and Surface Water
No attempt to quantify runoff or- assess consequences of flooding.
13. Chapter 22 - Cumulative Impact
No attempt made to address combined effects and opts out by stating that it is not possible to quantify these even though it would be difficult
14. Chapter 23 - Economic Analysis
No cost benefit analysis is provided nor even a cost effectiveness analysis.
15. Chapter 25 - Consultation
The community consultation process has not built confidence in the EIS process.
Considerable cynicism following third runway experience at KSA for a multitude of reasons.

16. Chapter-26 - Overall compliance

- project definition
- intersection with KSA
- assessment of do nothing option
- interpretation of known information
- air quality issues
- land use planning
- assessment of surface water
- visual assessment
- economic evaluation
- assessment of project in relation to ecological sustainable development
- mitigation measures for construction and operation.

In addition as outlined in our letter of 24 May there is a complete dearth of reference let alone discussion of matters required by law and reasonably expected by citizens to be included in the EIS and Public Environment statement. These are outlined in Appendix A of the SMEC Audit.

In view of the serious deficiencies in the Draft EIS we seek your immediate undertaking that no supplementary EIS be released until all the matters have been addressed by PPK and to the satisfaction of the Auditor.

The sighting of the Second airport is the most important environmental decision for NSW for this generation with effects perhaps for the next two hundred years. We therefore seek your further undertaking that the supplementary EIS will be available for full public discussion for a period of three months prior to any ministerial or government decision.

Unfortunately for the Government the press statements of 30 Jan 98 copies of which are enclosed by you Senator Hill and the former Minister for Transport and Regional Development Mr Vaile paint a picture of the Government being willing accomplices in the prostitution and corruption of the whole EIS process. The most charitable interpretation of these press releases shows that the Department of Transport and Regional Development has no hesitation in lying about the unbelievable inadequacies of the Draft EIS and at worst that Government Ministers will actively collude with the propagation of these lies in promoting the notion that the auditor has been given access to all necessary information for SMEC to complete its task.

The matters raised in this letter are perhaps the most serious that could possibly be raised by citizens against the government and the bureaucracy. The public has lost total confidence in the EIS process which is meant to be the primary means of ensuring against Government's making unsound environmental decisions. The behaviour of all parties paints an alarming picture of a thoroughly defective decision making process rather than ensuring that the public position is protected.

This deceptive and duplicitous conduct was clearly enunciated by the Judge investigating the New Zealand Government's behaviour in the tragic Mt Erebus air disaster in 1980 where at the subsequent inquiry the now famous line of "an orchestrated litany of lies" was used to describe the cover up of that tragedy. Whilst that description was applied to Government and Bureaucratic behaviour in New Zealand it would be regrettable if future generations in Sydney were able to use the same strong words about Badgerys Creek in respect of environmental disasters and safety matters.

So seriously does this organisation view the current situation involving Badgery's Creek that we have briefed a prominent Sydney QC to advise on the appropriate course of legal action in all jurisdictions should the undertakings sought not be given. We trust this action will not be necessary.

Whilst the tone of this letter may be construed by you to be unduly confrontational this organisation is finalising a position paper entitled "The Way Forward from Sydney's Airport Quagmire". A copy will be sent to you on its release and we trust you will find it useful in your deliberations.

We look forward to your giving this organisation the undertakings sought so that we can pass them on to our constituent members.

Yours faithfully

RICHARD J TANNER
CHAIRMAN